



The Document *Mexico's Vision on REDD+* constitutes a platform to build the National REDD+ Strategy. Because the involvement of different stakeholders nationwide is indispensable in the design process, this is a dynamic document that will remain in the consulting phase, with the depth and breadth that demands.

First Edition: 2010

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Printed in México

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INTRODUCTION

In response to the phenomenon of climate change, as on other issues that affect the international community, Mexicans remain committed to taking actions that contribute to its mitigation and adapting to its effects. Mexico's Vision on Reducing Emissions from Deforestation and Forest Degradation (REDD+) contained in this document, reaffirms that commitment.

Conservation and sustainable management of the planet's forests, as well as their restoration, are imperatives that cannot be postponed.

Forest ecosystems are producers of environmental services on which cities and villages depend, in addition to representing the livelihood of millions of rural communities, the unquestionable foundation to maintain biodiversity, and the guarantee of our abilities to adapt to the phenomenon of climate change.

This document represents a first step toward a National REDD+ Strategy. It is the product of the shared efforts of various stakeholders who have contributed with their vision and experience. This document presents our long-term aspirations based on our recognition of the complex problems associated with deforestation and forest degradation. We present strategic lines and first steps and commitments to design and consolidate, in the short term, a National REDD+ Strategy.

This initiative is the product of a shared effort – still under construction and consolidation – between civil society and government, which has entailed the emergence of groundbreaking patterns of dialog in which leading specialists in the field also take part.

This Vision comprises the principles and aspirations that will guide the REDD+ initiative in Mexico and with which we will work on developing it; it also discusses challenges and goals that will further the development of the institutional and human capabilities needed to confront the structural processes that influence deforestation and forest degradation.

We have found that the way to reduce deforestation and forest degradation is through sustainable rural development, which offers a means of combining and harmonizing the variety of policies and actions that converge on the ground. Thus, the challenge before us demands that we turn into reality the long thought-over and defended postulate that it is possible to make conservation and development compatible by embracing sustainability as the core principle of our approach.

Our nation's goal is to have a zero balance of emissions associated with changes in forest land use and start increasing our carbon reserves for the year 2020. It is no small challenge and the tasks it entails require creativity, political and social determination, and a firm awareness that responsibility for the future is in our hands.

This Vision affirms that the experience and institutional structure of the environmental sector and other sectors provide a basic and solid platform that needs to be reinforced at the different levels of government while promoting closer coordination of instruments. This in turn will help to more effectively ease the pressures that drive deforestation and forest degradation, while boosting growth of our forests' carbon reserves.

In particular, a special acknowledgement is due to the efforts and experiences of Mexican forest communities, owners of the majority of our forest lands, who have been, and will continue to be, key players in the decision making process on issues of rural development.

The design of the Strategy focuses on the need to define five lines of action in the next two years: a) Institutional agreements and public policy, b) Financing schemes, c) Forest reference level and measurement, reporting, and verification system, d) Capacity building, and e) Communication, social participation, and transparency. To this end, we have received the support of the World Bank's Forest Carbon Partnership Facility, and initiated dialog among sectors and received offers of technical and financial support from the international community, in



particular from Norway, France, Spain, the United States, Canada, the UK, the European Union, the United Nations Development Program and the Food and Agriculture Organizations of the United Nations.

With this outlook, we stand firm in our decision to revert deforestation and forest degradation in Mexico,

Ing. Juan Rafael Elvira Quesada
Minister of Environment and Natural Resources

create conditions that improve the quality of life of forest owners and users, and preserve the biodiversity and integrity of forest ecosystems and their environmental services.

Thus, society and government will undertake the actions that this aspiration demands of us.



ACKNOWLEDGEMENTS

This document is the product of a collective effort that brings together diverse voices in Mexican society. The persons named below wrote texts, shared their libraries, and volunteered their time for discussion in workshops or bilaterally in interviews or meetings, while others drafted, revised, and fine-tuned ideas under construction. The result is not a finished product, but rather the start of a process that aspires to be inclusive, as building ideas that seek to improve a nation's choices demands. To each and all out gratitude for their effort and willingness to participate.

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We appreciate the support of the Spanish Government, through its Ministry of Foreign Affairs and Cooperation, and the project "Climate Policy 2012" implemented by the United Nations Development Program, as well as the United States Agency for International Development and the British Embassy in Mexico.





I. FORESTS AND CLIMATE CHANGE

Climate change has, and will continue to have, a major impact on Mexico's forest resources and the environmental services they provide. Alterations in temperature and rainfall patterns, and in the frequency of extreme events, will hasten the loss of habitats and extinction of species, impacting ecosystem services such as regulation of water cycles and the very stability of forest carbon reserves.

The pressure on Mexico's forests is reflected in rates of deforestation and degradation which, although slower than in decades past, from a qualitative standpoint are still highly significant. In the international context, these processes of forest transformation, which are extensive to most developing countries, further exacerbate the problem of climate change, accounting for nearly 20% of total greenhouse gas (GHG) emissions. In Mexico's case, a preliminary estimate of total GHG emissions from land use, land-use change and forestry between 1990 and 2002 reported a figure of 89.85 MtCO₂e, which represents 14% of total emissions. Later, in 2006, such emissions were estimated at 70.20 MtCO₂e, equivalent to 9.9% of the national total.

Thus, forests represent a vulnerable resource whose conservation, management, and restoration offer a huge opportunity to produce benefits, both by reducing emis-

sions resulting from deforestation and degradation and by conserving environmental goods and services on which we all depend.

1.1. THE INTERNATIONAL CONTEXT

The 2007 Assessment Report issued by the Intergovernmental Panel on Climate Change (IPCC) states that the weight of greenhouse gas emissions associated with forest land use (17.4%) exceeds all GHG emissions from the global transportation sector (13.16%) and is the third largest global source of GHG emissions, after energy (25.9%) and industry (19.4%). The report found, in addition, that the largest volume of GHG emissions associated with forests in the last two decades has come from processes of tropical deforestation associated with changing land use.²

Forests capture around 5 billion tons of carbon dioxide of the 32 billion emitted annually as a result of human activities.¹

¹ CIFOR, 2009.

² Denman, et. al., 2007.





If we consider that tropical forests contain approximately 40% of the carbon accumulated in the Earth's biomass, it is clear that any disruption of their ecosystems can trigger a significant change in the global carbon cycle.³ Consequently, preventing deforestation and forest degradation and increasing carbon reserves are essential mitigating measures needed to slow the advance of global warming.

Forests are also fundamental guarantees to facilitate actions to adapt to climate change, because they help minimize its negative effects on biodiversity and quality of life for humans, in general, and in particular for rural and indigenous communities that depend on them. In many countries, such communities are also repositories of the knowledge and experience needed to preserve ecosystem functions and diversity, making forests, alongside their inhabitants and possessors, a shared heritage of humanity which represents a solid solution for climate change.

1.1.1. The international response to deforestation and forest degradation

Before the signing of the Kyoto Protocol, the issue of forests and forest lands was afforded little weight in the negotiations of the United Nations Framework Convention on Climate Change (UNFCCC). Although these issues were excluded from the Protocol, the forest sector was included later as part of the forestation and reforestation projects eligible for the Clean Development Mechanism (CDM). However, their methodological difficulty and a lack of demand, especially in the European market, have relegated the sector to a minimal number of projects undertaken to date.

Conference of the Parties (COP) 13, held in Bali in 2007, approved the Bali Action Plan, which recognized the issue's importance and took the initiative of establishing a scheme for Reducing Emissions caused by Deforestation and Forests Degradation (REDD) within the Long-Term Action Plan.

The debate started in 2005 as part of the UNFCCC discussions of forest issues originally focused on gaining recognition for the potential in reducing global emissions caused by deforestation (RED). Later it was acknowl-

edged that the process of forest degradation also represented a significant source of GHG emissions, which led to the addition of a second "D" and the coining of the term REDD. Also, the role of conservation, sustainable forest management, and enhancement of carbon stocks was incorporated, referring to those elements with the symbol "+" and creating the notion of REDD+. Some proposals focus on the need to broaden the group of actions beyond REDD+ and consider a comprehensive territorial approach that includes agriculture, forestry, and other land uses.

In view of the importance of acting immediately to halt the destruction of forests and jungles, added to the technical and practical challenges of preparing for REDD+, which would eventually delay the start of the initiative, it has been suggested that REDD+ be executed in phases:⁴

An initial phase, focused on preparing a national strategy or action plan, developing institutional capabilities, monitoring and verification, and implementing preliminary or pilot actions. A second phase, which would involve adopting specific policies and measures in the short term that offer REDD+ results measured by proxys indicators and not precise carbon measurements. Finally, a third phase identified with full UNFCCC compliance, in which countries are compensated strictly on the basis of their REDD+ performance, which would be monitored and verified in relation to reference emission levels and carbon stocks.

1.2. THE NATIONAL CONTEXT

In Mexico, the category of land use, land use change, and In Mexico, the category land use, land-use change and forestry (LULUCF) represents the fourth largest individual source of GHG, accounting for nearly 10% of the total in 2006, behind motor vehicles (transportation), generation of electricity, and emissions produced by waste. Of those, in the period 1990-2006, changes from forest land to farmland and from forest land to pasture, as well as processes of degradation, have been a major source of emissions, according to the 2006 National Emissions Inventory (Figure 1).⁶ Between 2003 and 2006, Mexico reported a reduction of emissions due to slowing rates of change in

³ Phillips, et al., 1998. Stephens, et al., 2007.

⁴ Angelsen, A., Brockhaus, M., Kanninen, M., Sills, E., Sunderlin, W. D., and Wertz-Kanounnikoff, S. (eds.). 2009.

Recommendations for countries to develop REDD+⁵

- Implement general guidelines to establish reference emission levels.
- Define the role of communities and indigenous groups in developing REDD+.
- Generate criteria on monitoring systems and their implications for the emissions accounting system.
- Identify the causes of deforestation and forest degradation. Countries with high forest cover and low rates of deforestation will be able to reflect such “national circumstances” when establishing their reference emission levels, addressing the concern that the mechanism could be inequitable by benefiting or “rewarding” those that have overexploited their forest resources.
- Develop voluntarily and based on national capabilities and respect for national sovereignty.
- Be consistent with the needs and goals of sustainable national development.
- Facilitate sustainable development, reduce poverty, and respond to local climate change.
- Promote broad social participation.
- Be consistent with the country’s needs for adaptation.
- Qualify for financing and technological support, including capacity building.
- Take a results-oriented approach.
- Promote sustainable forest management.

land use in the category forest land to pasture and in degradation from intact forests to degraded forests.

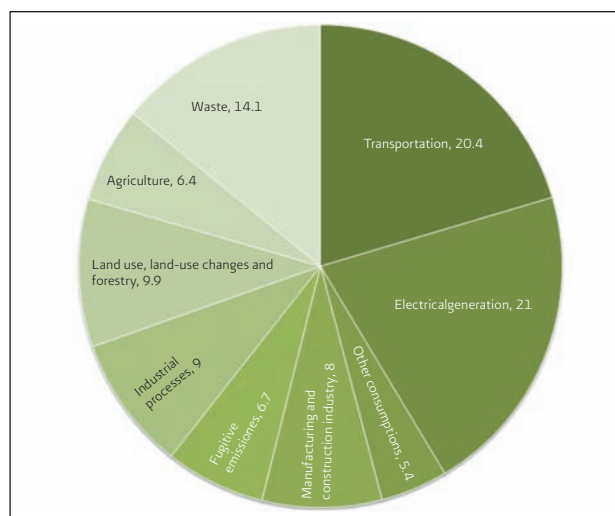
In light of the scientific evidence of its implications for health, development, and natural processes, among other effects, and in the spirit of collaboration with local and global efforts to tackle climate change, Mexico launched the 2009-2012 Special Climate Change Program (PECC), bringing together 10 government ministries.⁷

The Program integrates actions in the area of mitigation implemented from the different sectors of the fed-

⁵ CMNUCC, 2009d.

⁶ SEMARNAT-INE, 2009.

FIGURE 1. 2006. GREENHOUSE GAS (GHG) INVENTORY. CONTRIBUTION BY SECTOR.



Source: SEMARNAT-INE, 2009. *Fourth National Communication to the UNFCCC.*

eral government, in the period 2009–2012, seeking to mitigate 50.7 million tons of CO₂e. The sectors involved include agriculture and forestry (Table 1).

Projected mitigation through 2012 in the sector Agriculture, Forests, and Other Land Uses represents 30% of the total, equivalent to 15.3 Mt CO₂e (Figure 2). In the case of adaptation, the sectors agriculture, forestry, livestock, fisheries, and ecosystems account for 50% of the PECC’s total goals.

The Mexican agriculture and forest sectors are especially important, because they concentrate a substantial part of the rural population who, in addition to being possessors of the forest, perform a wide variety of economic activities. In 2007, this segment of the population numbered 24.2 million, equal to 23.5% of the country’s total population.⁸

These territories, which are home to 6.79 million indigenous people, also encompass Mexico’s primary centers for conservation of biodiversity and around 23% of the nation’s water entrapment.⁹

On the other hand, in Mexico community based management of forests certified as sustainable has made con-

⁷ SEMARNAT, 2009.

⁸ SRA, 2007.

⁹ Boege, 2008.

TABLE 1. EMISSIONS REDUCTION GOALS ESTABLISHED IN PECC 2009-2012.

Category	Mitigation Goals (MtCO ₂ e)	
	2008-2012	2012
Energy generation	51.78	18.03
• Oil and y gas	40.83	10.33
• Electricity	10.95	7.70
Energy use	22.21	11.87
• Transportation	11.35	5.74
• Residential and commercial sector and municipalities	8.80	5.53
• Industry	1.82	0.52
• Federal Government	0.25	0.08
• Other uses	--	--
Agriculture, forests and other land uses	46.46	15.29
• Agriculture	2.52	0.95
• Livestock	2.14	0.91
• Forests	30.20	9.96
• Agricultural forest border	11.60	3.48
Waste	8.58	5.46
• Urban solid waste disposal	7.56	4.44
• Waste water discharge and treatment	1.02	1.02
Total	129.03	50.65

siderable headway, with 717,326 hectares of certified forest lands, in both temperate and tropical zones.

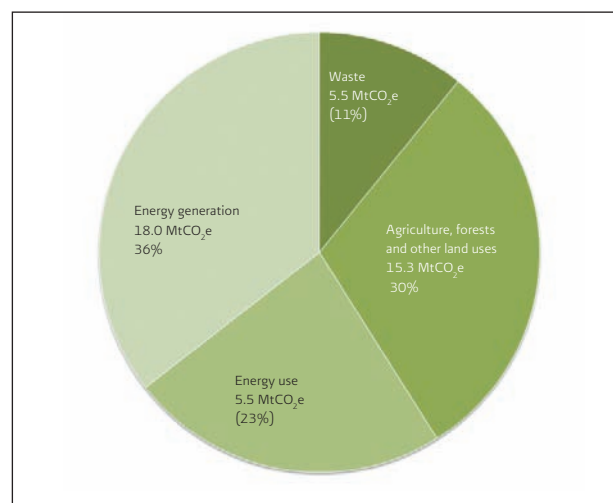
Also, there are an estimated 8.4 million hectares of timber land under forest management, with production levels of over six million cubic meters for forests in temperate zones and nearly 600 thousand cubic meters for forests in tropical zones.¹⁰

1.2.1. The situation of forest ecosystems in Mexico

The area of forest ecosystems in Mexico (taking into account Mexico, in the year 2007, the surface area of forest ecosystems (counting only ecosystems of temperate forests and jungles) was estimated at 65.3 million hect-

¹⁰ Forest Development Bureau, CONAFOR..

FIGURE 2. EMISSIONS REDUCTION THROUGH 2012. GOAL ESTABLISHED IN PECC 2009-2012.



Source: SEMARNAT 2009. PECC 2009-2012.

ares, which represents a substantial loss compared with the 69.2 million hectares reported in 1993. In the past decades forest cover has diminished notably; however, the rate of loss has slowed (Table 2).

According to reports Mexico has presented before the Food and Agriculture Organization (FAO) of the United Nations, deforestation of forests and jungles went from 354,035 hectares a year in the period 1993-2002 to 155,152 hectares a year in the period 2002-2007. It is important to mention that, for reasons of method and differentiation, FAO combines primary and secondary forests as a single category in these figures.¹¹

Breaking down these categories, primary forests show a loss of 219,546 hectares between 2002 and 2007 (Table 3).

Despite having its basis in the methodology for estimating land-use changes, this approach recognizes the need to advance both in building a consensus on quantification and qualitative assessment of these processes, and to improve instruments of evaluation that increase the accuracy of estimates. To achieve these ends, institutions such as INEGI, INE, CONAFOR, CONABIO, and other academic centers are working to coordinate their efforts through the Technical Committee Specialized in Information on Land Use, Vegetation, and Forest

¹¹ CONAFOR, 2010.

TABLE 2. FOREST AND BRUSHLAND AREA IN MEXICO (HECTARES). 1993, 2002 AND 2007.

	1993	Loss 1993-2002 (ha annually)	2002	Loss 2002-2007 (ha annually)	2007
Conifers	8,101,347	-29,498	7,835,867	928	7,840,507
Conifers and deciduous trees	13,331,923	-35,190	13,015,211	-8,889	12,970,766
Deciduous trees	13,308,954	-42,920	12,922,674	-1,167	12,916,839
High and medium jungle	15,591,325	-111,170	14,590,797	-84,782	14,166,886
Low jungles	17,913,438	-131,373	16,731,083	-70,153	16,380,316
Other wooded forest assoc.	982,317	-3,885	947,355	8,912	991,914
Subtotal Forests	69,229,304	-354,035	66,042,987	-155,152	65,267,228
Brushland, semiarid zones	21,214,983	-57,451	20,697,928	-33,852	20,528,670
Brushland, arid zones	37,189,951	-44,245	36,791,749	-49,757	36,542,963
Other forest areas	17,587,258	-44,173	17,189,701	-91,947	16,729,965
Subtotal Brushland	75,992,192	-145,868	74,679,378	-175,556	73,801,598
TOTAL FORESTS	145,221,496	-499,903	140,722,365	-330,708	139,068,826

Source: Prepared with data from INEGI, Cartography of Land Use and Vegetation, Series II, III and IV (1993, 2002, 2007).

TABLE 3. DEFORESTATION IN MEXICO (HECTARES) 2002-2007.

Forest formation	Primary		Secondary	
	2002	2007	2002	2007
Conifers	5,547,621	5,537,623	2,288,247	2,302,883
Conifers and deciduous trees	8,987,660	8,906,451	4,027,552	4,064,314
Deciduous trees	7,897,002	7,858,030	5,025,671	5,058,809
High and medium jungles	3,590,829	3,584,406	10,999,967	10,582,480
Low jungles	7,745,460	7,631,998	8,985,623	8,748,318
Other wooded forest associations	894,923	925,441	52,432	66,473
Subtotal Forest	34,663,495	34,443,949	31,379,492	30,823,277
Change in forests	-219,546		-556,215	
Brushland, semiarid zones	18,221,515	18,103,812	2,476,414	2,424,857
Brushland, arid zones	34,056,814	33,805,316	2,734,935	2,737,647
Other forest areas	12,863,326	12,585,468	4,326,375	4,144,497
Subtotal Brushland	65,141,655	64,494,596	9,537,724	9,307,001
Change in brushland	-647,059		-230,723	
Change, total forest	-821,605		-786,938	

Source: Prepared with data from INEGI, Cartography of Land Use and Vegetation, Series III and IV. 2002 and 2007.

Resources, which will further the shift toward more effective and reliable measurement systems.

The leading causes, of both deforestation and forest degradation in Mexico, are related to diverse structural problems that vary among different regions of the country. In the first place, changes in forest land use have tended to favor agriculture and livestock, followed by urban and industrial uses, favored, in many cases, by deficiencies in control and ineffective or inexistent coordination among sectors operating in a given territory.

Such land use changes are driven by the difficult economic conditions prevailing in many rural areas. On the one hand, Mexican forest products compete at a disadvantage on markets due to high transaction costs and low productivity. On the other hand, the need to satisfy basic needs pressures them to engage in unsustainable productive activities that offer better short-term value.

The situation is further exacerbated by difficulties related to property rights, which – while they are well defined in most of the country, are still the cause of disputes over boundaries, internal divisions, illegal subdivisions, etc., in some regions, raising the need for careful analysis and solutions on the party of institutions and stakeholders.¹²

Over the course of many years, the different sectors and the different branches of government (federal, states, and municipalities) have shaped these conditions through the design of policy instruments and day-to-day decision making. In part, this is because each sector has different diagnoses that propose different goals, often contradictory even within the same territory, leaving it fragmented from an instrumental and sectoral standpoint and in need of a consensus on causes and trends in deforestation and degradation for the different regions of the country, which helps to prioritize and shape coordination agreements.

I.2.2. Institutional framework for forest management and rural development in Mexico

Over the last decades, Mexico has advanced in the design and consolidation of a variety of legal and public policy

¹² Bray D. and L. Merino, 2004.

instruments in the areas of forests and forestry.¹³ We acknowledge, however, the need to enhance and intensify our efforts of inter-institutional coordination in applying such instruments, and achieve the proper alignment with the REDD+ strategy being developed and, when needed, perfect them or develop new instruments.

Institutions, such as the Ministry of Environment and Natural Resources (Spanish acronym SEMARNAT), are charged with formulating and executing national policy on sustainable forest development and assuring consistency between national policy on the environment and natural resources with rural development policy.¹⁴ SEMARNAT in turn oversees the National Forestry Commission (Spanish acronym CONAFOR), whose powers are defined in Article 22 of the General Law on Sustainable Forest Development, and include participating in the formulation and application of national policy on sustainable forest development, and organizing and applying instruments of forest policy. It is also the focal point for REDD+ in Mexico.

Other instruments of environmental policy that seek to reduce deforestation and ecosystem degradation and promote conservation are headed by institutions in the environmental sector such as the National Commission on Protected Natural Areas (Spanish acronym CONANP), the National Commission for Knowledge and Use of Biodiversity (Spanish acronym CONABIO), the National Ecology Institute (Spanish acronym INE), the Federal Environmental Protection Agency (Spanish acronym PROFEPA), the National Water Commission (Spanish acronym CONAGUA), and the National Forestry Commission (Spanish acronym CONAFOR), as well as substantive areas in SEMARNAT such as the Under-Ministry of Environmental Planning and Policy, all of which form an

¹³ General Law on Ecological Balance and Environmental Protection (Spanish acronym LGEEPA), General Law on Sustainable Forest Development (Spanish acronym LGDFS), Law on Sustainable Rural Development (Spanish acronym LDRS) and agrarian legislation. Sectoral Program on Environment and Natural Resources, CONAFOR Institutional Program 2007-2012, and Strategic Forest Program (Spanish acronym PEF) 2025.

¹⁴ Article 16, Items I, III and IV, of the General Law on Sustainable Forest Development.



Main policy instruments in the areas of forests and climate change

1. ProArbol
 - a) Forest plantations (PRODEPLAN)
 - b) Reforestation and restoration (PROCOREF)
 - c) Forest development (PRODEFOR)
 - d) Payment for environmental services (PSA)
 - e) Prevention of forest fires
2. Community Forest Development Program (PROCYMAF)
3. National Water Program
4. National Program of Protected Natural Areas
5. Program "Toward gender equality and environmental sustainability" 2007-2012
6. Program of Indigenous Peoples and Environment 2007-2012
7. Conservation Program for Sustainable Development (PROCODES)
8. System of Management Units for Wildlife Conservation (SUMA)
9. Program to Promote Social Organization, Planning, and Regional Forest Development.
10. Special Program on Climate Change
11. Climate Change Strategy for Protected Areas
12. Special Program for Restoration of the Patzcuaro and Zirahuen Lake Basins, Michoacan
13. Special Program for Restoration of Microbasins in Priority Zones for the Cutzamala and La Marquesa System
14. Integral Program for Conservation of Natural Resources in the Southwest Federal District
15. Program of Local Mechanisms of Payment for Environmental Services through Concurrent Funds
16. Sustainable Development Project for Rural and Indigenous Communities of the Semiarid Northwest (PRODESNOS)
17. Community Program for Conservation of Biodiversity (COINBIO)



important basic structure of complementary efforts whose experiences of success and failure can enhance the implementation of REDD+.

On the other hand, the Ministry of Agriculture, Livestock, Rural Development, Fisheries, and Food (SAGARPA) also plays an important role in forest territories through various programs and components specifically focused on rural development. In recent years, SAGARPA has incorporated sustainability actions to favor conservation and restoration of land and water, and even productive reconversion to perennial crops and reforestation.

Programs and Activities of Agricultural Policy related to REDD+

1. Acquisition of Productive Assets Program
Components: Agriculture, Livestock, Rural Development, Aquaculture and Fisheries.
2. Program of Direct Support for the Countryside (PROCAMPO para Vivir Mejor)
3. Program of Sustainable Use of Natural Resources for Primary Production
Components: Conservation and Sustainable Use of Soil and Water (COUSSA), Biogenetic Resources and Biodiversity, Productive Reconversion, Aquaculture and Fisheries, Livestock Program (PROGAN).
4. Support Program
Components: Sanitation and Inoculation, National System of Information for Sustainable Rural Development (SNIDRUS), Technical Assistance and Training, Innovation and Technology Transfer, Fisheries, Aquaculture Inspection and Vigilance.
5. Program of Attention to Climate Contingencies (PACC)
6. Technification of irrigation
7. Strategic Plan for Food Security (PESA)
8. National System of Plant Genetic Resources
9. Creation and conservation of germplasm banks
10. Development of arid zones
11. Special Program for the Humid Tropics

Commission on Climate change (Spanish acronym CICC)¹⁵ and the Inter-Ministerial Commission for Sustainable Rural Development (Spanish acronym CIDRS).¹⁶ Both are in the process of strengthening and consolidation to fulfill the purposes for which they were created. Advances achieved in this context include designing the National Strategy on Climate Change, the Special Program on Climate Change 2009-2012, and the Concurrent Special Program for Sustainable Rural Development (Spanish acronym PEC),¹⁷ all of which seek to achieve horizontal integration of public policies to address climate change, on the one hand, and sustainability in rural areas, on the other.

1.2.2.1. Contribution of Mexico's Vision on REDD+ to the *National Development Plan* (Spanish acronym PND)

Mexico's Vision on REDD+ contributes to the aims of the PND and coincides both in its specific objectives and its axes of public policy (Table 4).

1.2.2.2. The process of building the Vision

We have before us a great opportunity to design a groundbreaking framework of public policy in the area of REDD+. To this end, key events in the cycle of public policy have

¹⁵ Composed of the heads of the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food, Ministry of Economy, Ministry of Environment and Natural Resources, Ministry of Finance and Public Credit, Ministry of Communication and Transportation, Ministry of Health, Ministry of Social Development, Ministry of Agrarian Reform, Ministry of Public Education, Ministry of Energy and the agencies and entities of the executive branch that are considered necessary in accordance with the topics that are addressed (DOF, 2001).

¹⁶ Made up by the Ministers of Agriculture, Livestock, Rural Development, Fisheries, and Food; Economy, Environment and Natural Resources; Finance and Public Credit; Communications and Transport; Health; Social Development; Agrarian Reform; Public Education; and Energy and the heads of agencies and entities of the executive branch deemed necessary, depending on the issues in question (DOF, 2001).

¹⁷ DOF, 2001.

TABLE 4. CORRESPONDENCE BETWEEN MEXICO'S VISION ON REDD+ AND THE NATIONAL DEVELOPMENT PLAN (2007-2012).

Components and Objectives of the PND	Guiding Principles, Core Components, and Strategic Lines of Action of Mexico's Vision for REDD+
<p>AXIS 2. COMPETITIVE, JOB CREATING ECONOMY</p>	
<p>OBJECTIVE 7. Raise the level of human and equity development of Mexicans living in rural and coastal zones.</p>	<p>Guiding principles: Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Guiding axes: Quality of life and sustainability. Strategic lines: IV.2. Financing schemes. IV.4. Capacity building.</p>
<p>OBJECTIVE 9. Improve producers' income by expanding our presence in global markets, linking them with value-added processes.</p>	<p>Guiding principles: Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Competitiveness. Guiding axes: Quality of life and sustainability. Strategic lines: IV.2. Financing schemes. IV.4. Capacity building.</p>
<p>OBJECTIVE 10. Revert ecosystem deterioration, through actions to preserve water, soil, and biodiversity.</p>	<p>Guiding principles: Transversality: integrality, coordination, and complementarity (sectoral and among branches of government). Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Sustainable use of natural resources. Guiding axes: Preservation of environmental services and reduction of risks. Quality of life and sustainability. Strategic lines: IV.1. Institutional agreements and public policy. IV.2. Financing schemes. IV.3. Reference level and measurement, reporting, and verification system (MRV). IV.4. Capacity building.</p>
<p>OBJECTIVE 11. Conduct the harmonious development of rural areas through concerted actions, making agreements with all stakeholders in rural society and promoting actions that raise legal certainty in rural affairs.</p>	<p>Guiding principles: Inclusion and equality (territorial, cultural, social, and gender). Plurality and citizen participation. Transparency and legality. Guiding axes: Quality of life and sustainability. Strategic lines: IV.4. Capacity building. IV.5. Communication, social participation and transparency.</p>
<p>OBJECTIVE 13. Overcome regional imbalances maximizing the competitive advantages of each region, through coordination and cooperation with political, economic, and social stakeholders within each region, among regions, and nationwide.</p>	<p>Guiding principles: Inclusion and equality (territorial, cultural, social, and gender). Cross-cutting: integrality, coordination and complementarities (with other sectors and among branches of government). Guiding axes: Quality of life and sustainability. Strategic lines: IV.4. Capacity building. IV.5. Communication, social participation and transparency. IV.6. Early actions</p>
<p>AXIS 3. EQUALITY OF OPPORTUNITIES</p>	
<p>OBJECTIVE 1. Significantly reduce the number of Mexicans in conditions of poverty with public policies that go beyond a welfare based approach, so that people can acquire capabilities and create work opportunities.</p>	<p>Guiding principles: Inclusion and equality (territorial, cultural, social, and gender). Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Sustainable use of natural resources. Guiding axes: Quality of life and sustainability. Strategic lines: IV.2. Financing schemes. IV.4. Capacity building.</p>
<p>OBJECTIVE 2. Help the poorest segments of the population raise their income and improve their quality of life, promoting and supporting the development of productive projects.</p>	<p>Guiding principles: Inclusion and equality (territorial, cultural, social, and gender). Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Sustainable use of natural resources. Guiding axes: Quality of life and sustainability. Strategic lines: IV.2. Financing schemes. IV.4. Capacity building.</p>

TABLE 4. CONTINUED.

Components and Objectives of the PND	Guiding Principles, Core Components, and Strategic Lines of Action of Mexico's Vision for REDD+
Objective 15. Fully integrate indigenous peoples and communities in the nation's economic, social, and cultural development with respect for their historic traditions and enriching all society with their cultural heritage.	<p>Guiding principles: Inclusion and equality (territorial, cultural, social, and gender).</p> <p>Plurality and citizen participation. Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners.</p> <p>Guiding axes: Quality of life and sustainability.</p> <p>Strategic lines: IV.4. Capacity building. IV.5. Communication, social participation and transparency.</p>
Objective 17. Reduce marginalization and need in vulnerable social groups to provide equal opportunities for their independent and integral development.	<p>Guiding principles: Inclusion and equality (territorial, cultural, social, and gender).</p> <p>Transparency and legality. Plurality and citizen participation.</p> <p>Guiding axes: Preservation of environmental services and reduction of risks.</p> <p>Quality of life and sustainability.</p> <p>Strategic lines: IV.2. Financing schemes. IV.4. Capacity building.</p>
<p>AXIS 4. ENVIRONMENTAL SUSTAINABILITY</p>	
Objective 3. Halt deterioration of forests and jungles in Mexico.	<p>Guiding principles: Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Sustainable use of natural resources.</p> <p>Free, prior, and informed consent of communities.</p> <p>Guiding axes: Preservation of environmental services and reduction of risks.</p> <p>Quality of life and sustainability.</p> <p>Strategic lines: IV.1. Institutional agreements and public policy. IV.2. Financing schemes. IV.3. Reference level and measurement, reporting, and verification system (MRV). IV.4. Capacity building. IV.5. Communication, social participation and transparency. IV.6. Early actions.</p>
Objective 4. Conserve Mexico's ecosystems and biodiversity.	<p>Guiding principles: Sustainable use of natural resources. Guiding axes: Preservation of environmental services and reduction of risks.</p> <p>Strategic lines: IV.1. Institutional agreements and public policy. IV.3. Reference level and measurement, reporting, and verification system (MRV). IV.4. Capacity building. IV.6. Early actions.</p>
Objective 5. Integrate conservation of Mexico's natural capital with its social and economic development.	<p>Guiding principles: Equitable distribution of benefits, certainty and respect for property rights of inhabitants and landowners. Sustainable use of natural resources. Competitiveness. Guiding axes: Preservation of environmental services and reduction of risks.</p> <p>Quality of life and sustainability.</p> <p>Strategic lines: IV.4. Capacity building. IV.5. Communication, social participation and transparency. IV.6. Early actions.</p>
Objective 10. Reduce Greenhouse Gas (GHG) emissions.	<p>Guiding axes: International co-responsibility. Quality of life and sustainability.</p> <p>Strategic lines: IV.3. Reference level and measurement, reporting, and verification system (MRV).</p>
Objective 11. Promote measures for adaptation to the effects of climate change.	<p>Guiding principles: Sustainable use of natural resources.</p> <p>Guiding axes: Preservation of environmental services and reduction of risks.</p>

TABLE 4. CONTINUED.

Components and Objectives of the PND	Guiding Principles, Core Components, and Strategic Lines of Action of the Mexico's Vision for REDD+
Objective 14. Develop a solid environmental culture in Mexican society, focused on valuing and acting with a strong sense of respect for natural resources.	Guiding principles: Sustainable use of natural resources. Plurality and citizen participation. Guiding axes: Preservation of environmental services and reduction of risks. Strategic lines: IV.4. Capacity building. IV.5. Communication, social participation and transparency.
AXIS 5. EFFECTIVE DEMOCRACY AND RESPONSIBLE FOREIGN POLICY	
OBJECTIVE 3. Develop a civic and political culture that promotes citizen participation in the design and evaluation of public policy.	Guiding principles: Plurality and citizen participation. Transparency and legality. Strategic lines: IV.4. Capacity building. IV.5. Communication, social participation and transparency.
OBJECTIVE 6. Support Mexico's economic, social, and political development based on effective insertion of Mexico in the world.	Guiding principles: Transparency and legality. Transversality: integrality, coordination and complementariness (sectorial and among branches of government). Competitiveness. Guiding axes: International co-responsibility. Strategic lines: IV.2. Financing schemes.
OBJECTIVE 8. Promote Mexico's projection on the world stage	Guiding principles: Transparency and legality. Competitiveness. Guiding axes: International co-responsibility. Strategic lines: IV.2. Financing schemes. IV.6. Early actions.

been intertwined, such as defining a social problem, in this case reducing emissions from deforestation and degradation; defining criteria to identify viable options, evaluating options and choosing instruments of public policy (legal, technological, economic, cultural, or ideally a combination), in which monitoring and evaluation will be crucial to confirm that the social problem defined at the outset is being addressed. Thus, we are building a frontline, real time public policy on REDD+, with an effective process of public and social intervention based not only on traditional consulting methods, but above all on practices of involvement in policy from the initial phase of conceptualization, design, and trial,¹⁸ making it a challenge, but also a vital opportunity for Mexico. In this sense, we face the circumstance and the opportunity of building a public policy at the national level, at the same time as there are ongoing territorial experiences and actions, and in parallel with processes of international negotiation under the UNFCCC.

In this context, the first steps have been taken to define courses of action in the short and long term to design and implement REDD+.

¹⁸ Provencio, 2010

As part of this process of institutional construction, in 2009 the CICC decided to create the REDD+ workgroup (Spanish acronym GTREDD+), with the mandate of expediting the confluence of the lead players involved in developing the REDD+ initiative for Mexico and developing the National REDD+ Strategy.

Also, the Advisory Technical Committee of the Program of Payments for Environmental Services (Spanish acronym CTCPSA), promoted by the CONAFOR, created the Advisory Technical Committee on REDD+ (Spanish acronym CTC-REDD+), made up by social organizations, representatives of landowners, academics, and government institutions. One of the products of this group's coordinated efforts is specialized support for CONAFOR in elaborating the Readiness Preparation Proposal for REDD+ (R-PP) to be presented to the World Bank's Forest Carbon Partnership Facility (FCPF).

Since then CTC-REDD+ has promoted social, academic, and institutional involvement in the issue and constitutes a fundamental space for deliberation to orient efforts related to designing a strategy for Mexico. Today it is formally recognized as an advisory body to the GTREDD+.



Through this process, and with this background, we hope to define the best possible instruments to fulfill the objectives of this Vision, which will be consolidated in the National REDD+ Strategy (Spanish acronym ENAREDD+) in 2012 (Figure 3).

In the development and subsequent implementation of the Strategy, Mexico will promote REDD+ domestically with the involvement of numerous social and organizations and academic institutions which, for many years, have supported, promoted, built capabilities, evaluated processes, and documented experiences related to forest conservation and management.

Stages of work to build ENAREDD+

- a) 2010-2012: Design and construction of conditions to define ENAREDD+, including designing a baseline for impact assessment.
- b) 2012-2020: Implementation of the Strategy with intermediate evaluations, tentatively in 2017 and 2022.

FIGURE 3. ENAREDD+ PROCESS IN MEXICO.





II. VISION 2020

Mexico's Vision on REDD+ is focused on adjusting, strengthening, and expanding national efforts to reduce deforestation and forest degradation, conserve biodiversity and promote sustainable rural development, and thereby contribute to the stabilization of GHG concentrations.

This document is the first step toward designing a National REDD+ Strategy. Herein, proposals are harmonized with the main guiding axes of planning for national development, and with programs and actions related to REDD+ which are already ongoing in Mexico.¹⁹

¹⁹ In SEMARNAT: Special Climate Change Program; COIN-BIO (Program for Community Conservation of Biodiversity); PROCYMAF (Program for Community Forest Development); PRODESNOs (Sustainable Development Project for Rural and Indigenous Communities in the Semiarid Northwest); Cutzamala Special Program; Program on Local Mechanisms of Payment for Environmental Services through Concurrent Funds; Integral Program for Conservation of Natural Resources in the Southwest Federal District; Special Program for Restoration of Microbasins in Priority Zones for the Cutzamala and La Marquesa System; Michoacan; ProArbol (PSA, PRODEFOR and PROCOREF); Program to Promote Social Organization, Planning, and Regional Forest Development. In SAGARPA: Program for Sustainable Use of

Our approach adheres to the postulate that a nation's progress is based on the effective justice provided by the rule of law, and consequently seeks to strengthen effective governance of forest lands, respecting social property rights and promoting communal forest management, safeguarding the legal regime of ejidos, communities, and small forest producers, in relation to both ownership and possession of their lands and the benefits obtained from managing them, as the fundamental guarantee of access to their livelihood.

In this sense, the actions associated with this Vision, and those to be established in ENAREDD+, will not alter the land ownership regime in Mexico, as established in the Federal Constitution and international conventions signed by Mexico, such as the convention on Biological Diversity.²⁰

Consistent with this approach, the Vision acknowledges the importance of the participation of indigenous communities, and rural communities in general, in design-

Natural Resources in Primary Production (Productive Reconstruction); Program for Sustainable Use of Natural Resources in Primary Production (Biogenetic Resources and Biodiversity); Program for Sustainable Use of Natural Resources in Primary Production, Livestock Program (PROGAN) and Ecological PROCAMPO.

²⁰ UNCED, 1992.

ing and implementing ENAREDD+, and consequently the importance of broad dissemination of information on the issue, designing schemes for consultation and direct participation to support the effective exercise of the right to free, prior, and informed consent.

II.1. ON THE VISION OF MEXICAN FORESTS TOWARD 2020

The three aspirations of this Vision, as presented below, take as their referent the goals and scenarios defined in the Special Program on Climate Change 2009-2012 and the Strategic Forest Program for Mexico 2025.

- **In 2020 Mexico will have a zero balance of emissions associated with land use change and in addition, will raise the quality of carbon reserves**, to conserve the biodiversity and integrity of ecosystems through actions such as sustainable forest management, conservation, and increase of carbon reservoirs.
- **By 2020 the national rate of forest degradation in Mexico will have fallen significantly in relation to the reference level.** Sustainable use of resources and natural and induced regeneration will have spread; actions will be taken to discourage uncontrolled burning, improve practices to prevent, combat, and control disruptive agents in ecosystems and create incentives for sustainable land use practices. Also, Mexico recognizes the imperative to strengthen law enforcement, education, and participation in forest evaluation, to contribute to the enormous challenge of eradicating illegal markets for lumber and other forest and non-forest products.
- **By 2020 Mexico will have maintained the biodiversity of its territory, strengthened the social capital of rural communities, and promoted their economic growth** through sustainable rural development.

II.2. ON THE VISION OF SUSTAINABLE RURAL DEVELOPMENT

Sustainable rural Development (DRS) constitutes the Sustainable rural development (Spanish acronym DRS) represents the best means of implementing REDD+ in

Mexico, considering that only a comprehensive approach will succeed in removing the pressures contributing to deforestation and forest degradation, and promoting forest management and conservation, and raising the quality of life of the communities that inhabit the nation's forests.

There are three lines of argumentation that support DRS in Mexico:

- Successful experiences of forest management seen in numerous Mexican communities, which highlight the potential of DRS.²¹
- The important commitment to respect and defend property rights, and by extension not exclude forest owners and inhabitants, as well as the need to improve living conditions in those groups.
- The acknowledgement that processes of deforestation and forest degradation extend beyond the frontiers of forest ecosystems, which implies adjusting and harmonizing an array of actions and policies in the territory which involve and affect the different activities of all sectors and social life in general.

The first step toward DRS is aligning policies, as it refers to the convergence of actions among the institutions responsible for forest management and conservation and those that drive agricultural and livestock activities, to strike and maintain a balance between food production and forest conservation. This first step will be taken through convergence and teamwork between the Inter-Ministerial Commission on Climate Change (Spanish acronym CICC) and the Inter-Ministerial Commission for Sustainable Rural Development (Spanish acronym CIDRS), taking the lead from their presidencies, SEMARNAT and SAGARPA respectively.

This coordination will promote an alignment with other sectors that also influence forest land, such as infrastructure development (SCT), energy (SENER, PEMEX, CFE), the agency that oversees landholding (SRA), the social sector (SEDESOL and CDI), tourism (SECTUR), and civil protection (SEGOB).

The priority actions identified as central to this alignment are: promotion and stimulation of sustainable forest management, support for regeneration (natural and

²¹ Sarukhan, 2009.



Mexico will promote a review of its public policy instruments and programs, as well as the quality and efficiency of their application, promoting sustainable forest management, considering that managed use has proven to be an excellent path to conserving forest ecosystems, raising the quality of life of forest owners and users, and showing that it is possible to combine conservation and development.

induced) of important biological corridors and areas marginal to forests and towns, former farming areas now abandoned and with major problems of degradation and risk of disasters.

Also, it will be necessary to prioritize areas of attention and define or design institutions that will promote, operate, and supervise the operation of projects in the territory.

In this context, the federal government will play act as promoter and regulator, coordinator, arbiter, and – in some cases – agent of REDD+ actions, exploiting and encouraging opportunities that are offered or created in Mexico and abroad. Its role will also include guaranteeing

respect for property rights of rural and indigenous forest communities and anticipating future development needs the nation may face.

For their part, the states and municipalities must play a proactive part in designing and promoting REDD+ actions, both because they fall within their sphere of authority and can use their influence to slow causes of deforestation arising from contradictory definitions and actions among different branches of government, and because it will be through them, precisely, that sub-national actions will be implemented. Such sub-national actions should be coordinated with the federal government to ensure their consistency and promote synergies.

In the same sense, community and civic organizations and academic institutions need to play an active role as functional players in the process, creators of knowledge and promoters of initiatives for change.

Defining institutional instruments and actions is part of the work to be undertaken in the years ahead, but it is evident that the primary tasks include ensuring the complementariness of policies, strengthening existing instruments that have had good results, creating incentives for sustainable productive practices, and reducing





incentives that increase agricultural profit to the detriment of conservation of forest resources and biodiversity, among others.

To offer technical, operational, and negotiating support, five strategic lines of action have been identified as starting points for efforts to be undertaken over the next two years, in order to: 1) adapt or innovate institution-

al agreements and public policy; 2) define, adjust, and/or create financing schemes; 3) develop a system that helps to establish a reference level that can also be used to assess advances and impacts of the strategy and forest conditions; 4) build capacities, and 5) design and execute communication strategies for social participation, transparency, and accountability.





III. CORE ORIENTATION ELEMENTS

Mexico's Vision on REDD+ is framed by three main axes of national policy, set forth in the National Development Plan 2007-2012 (Spanish acronym PND) and *Visión 2030, el Mexico que queremos*:

- International Co-Responsibility.
- Preservation of environmental services and reduction of risks.
- Quality of life and sustainability

III.1. INTERNATIONAL CO-RESPONSIBILITY

One of the biggest challenges in the today's world is the protection of our environment and natural resources, especially in the face of climate change. The Mexican government has proactively joined international efforts to Protecting the environment and natural resources, especially against the challenge of climate change, has emerged as one of the greatest challenges facing the global community. The Mexican government has enthusiastically embraced international efforts, subscribing and implementing emerging agreements to contain and revert the processes of environmental deterioration.

The Bali Action Plan points the way to an agreement among the UNFCCC parties that allows "the complete, effective, sustained implementation of the UNFCCC through cooperative, long-term action, now and beyond 2012". A global commitment is crucial because climate change has emerged as the single most daunting environmental problem of our century, which crosses the frontiers of specific sectors or nations. Confronting it requires a global approach and underscores the need for long-term planning. In this sense, Mexico is committed to the principle of shared but differentiated responsibilities in the international context.

Mexico voluntarily and unilaterally assumes the aspirational goal of reducing its GHG emissions by 50% by 2050 in relation to emissions from the year 2000. This goal is contingent, in the context of a new international institutional accord, upon the industrialized countries' providing financial and technological aid to complement local efforts.

In addition, in the context of the negotiations of COP 15, Mexico stated its intention to intensify its emissions reduction by up to 30% in 2020, equally contingent on its receiving international aid to meet the challenge, both in mitigation and in adaptation.²²

²² Communication from Mexico to the UNFCCC Secretariat dated 31 January 2010. http://unfccc.int/files/meetings/application/pdf/mexicophaccord_app2.pdf.



III. 2. PRESERVATION OF ENVIRONMENTAL SERVICES AND REDUCTION OF RISKS

Forest ecosystems provide goods and services of inestimable value for the survival and development of the population. They provide, among others, raw materials, food, and medicines; they improve infiltration of rainwater held in rivers, lakes, and wetlands; they produce and maintain fertile land, they are the habitat for multiple animal species and capture carbon dioxide from the atmosphere, thereby attenuating the potential for global warming.²³

In response to these circumstances, reverting processes of environmental deterioration is fundamental when facing droughts, heat waves, intense rainfalls, and what they entail: shortage of water, forest fires, and

²³ Sarukhán, op cit.

flooding, among other phenomena. Similarly, such environmental services are recognized as the guarantee of urban water supplies.

The impact of extreme hydrometeorological events, with the resulting considerable human and economic losses, has been met with institutional responses to prevent and mitigate natural disasters, with the awareness that effective management of natural resources and conservation of ecosystems constitute measures of adaptation to climate change.²⁴

In this context, the application of measures for prevention, early warning, and response to disasters based on natural systems will help reduce the impact of extreme hydrometeorological phenomena and provide better protection for civilian populations.

III. 3. QUALITY OF LIFE AND SUSTAINABILITY

The PND proposes improving living conditions and opportunities in Mexican society, especially in communities living in poverty and in conditions of marginalization, which include rural and indigenous groups and communities.

REDD+ will seek to boost economic performance; provide better conditions to implement financing schemes, both public and private; and by extension help create jobs that raise the quality of life of stakeholders in forest management and rural development in Mexico.

Similarly, the PND recognizes the importance of making environmental sustainability a transverse axis of public policy to raise competitiveness and foster economic and social development, guaranteeing the quality and integrity of ecosystems.

III. 4. GUIDING PRINCIPLES

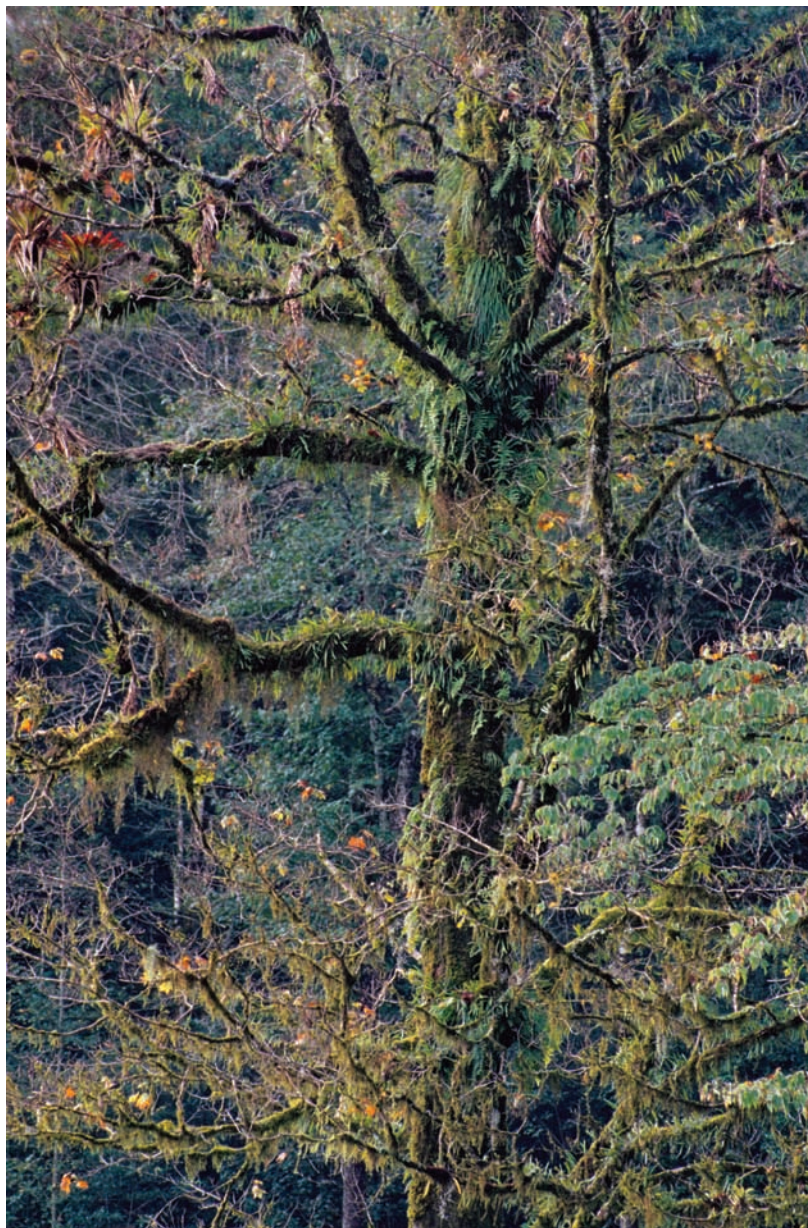
Mexico is embarking on the construction of ENAREDD+ in a process that seeks to be participative and inclusive, to ensure the union and convergence of perspectives, without detriment to differences and favoring identities on an equal basis with the convergence of legitimate interests.

²⁴ Manson, et al., 2009.

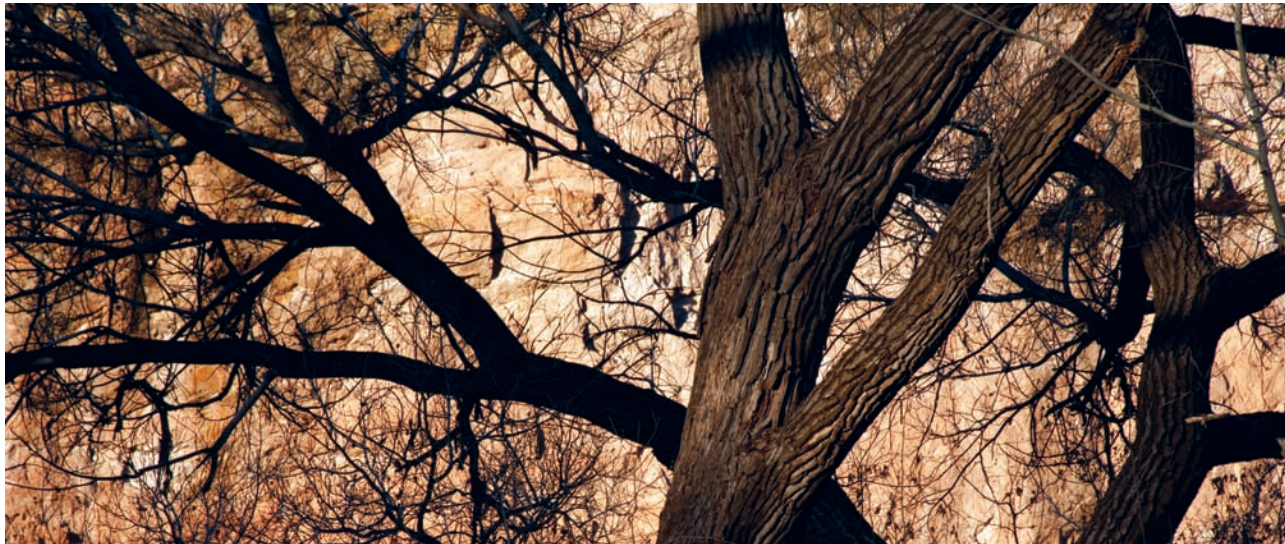


This Vision and its subsequent expression in ENAREDD+ is based on a framework of principles that will orient its lines of action and help to maintain the safeguards the initiative proposes. These principles are:

- Inclusion and equity (territorial, cultural, social, and gender).
- Plurality and grassroots participation.
- Transparency and legality.
- Cross-cutting: comprehensiveness, coordination, and complementarities (with other sectors and among branches of government).
- Equitable distribution of benefits.
- Certainty and respect for property rights of landholders and owners and sustainable use of natural resources.
- Free, prior, and informed consent of communities.
- Promote the competitiveness of rural economies associated with forests, including that of communal forest businesses.







IV. STRATEGIC LINES

The goal for 2012 is to have a national REDD+ strategy that addresses the causes of deforestation and forest degradation under an integral and environmental perspective that maximizes co-benefits in biodiversity, assuring improved conditions of natural ecosystems and their services.

The five strategic lines that will help provide the knowledge and preparation for the final design of ENAREDD+ are:

- Institutional agreements and public policy
- Financing schemes
- Forest reference level and measurement, reporting, and verification (MRV) system.
- Capacity building
- Communication, social participation, and transparency

These strategic lines will constitute simultaneous and concatenated actions that favor sectoral dialog with communities and local stakeholders, and correspondence and communication with international institutions.

To this end, studies and actions will be undertaken to define specific modes for each one, based on its viability and relevance for Mexico.

Given that Mexico needs to adapt various policies and programs that influence rural development, the line of institutional agreements and public policy will analyze and define adjustments or new approaches that eliminate undesired effects of sectoral programs and maximize synergies in the territory to confront deforestation and forest degradation.

Establishing the reference level and institutionalizing the measuring, reporting, and verification system constitute the strategic line that will provide the foundation to build a national accounting system with which to assess and report progress. This information will serve as a platform to build a common metric and a shared diagnosis on the basis of which to plan joint actions among diverse sectors. Monitoring and shared perspectives will make possible and give meaning to financing schemes (national and international) based on the availability of information and certainty regarding forest conditions and available carbon volumes.

Mexico needs to invest large quantities of effort and financial and human resources in capacity building, both local and institutional, because each of the strategic lines is based on and needs the development and strengthening of human and institutional capabilities, at the local, regional, and national levels. This investment, combined





with actions of communication and transparency, should be seen as transverse actions that will permit social par-

ticipation by providing guarantees of access to information, dissemination, and exchange nationwide.



IV.1. INSTITUTIONAL AGREEMENTS AND PUBLIC POLICY

Institutional agreements and policy instruments for REDD+ will be created by coordinating measures, policies, and players in the sectors involved in environmental and forest issues, as well as those focused on agricultural production, sustainable rural development, and civil protection, to maximize synergies and minimize potential negative effects. The agenda also calls for improving existing measures and instruments and, when necessary, designing and implementing other complementary ones that broaden their scope through the use of financing and incentive-based mechanisms for REDD+. This strategic line rests on the following five pillars:

IV.1.1. Enhanced inter-sector coordination

Although the causes of deforestation are multifaceted and regionally differentiated, a common factor is the lack of coordination among players and policies governing land use and land use change. A diagnosis prior to the design of the National REDD+ Strategy will help, among other things, to more specifically identify the causes of deforestation, the role of public policy, barriers to coordinated inter-sector action, and the implementation of policies and programs, as well as possible actions to prevent contradictory effects that result in loss or degradation of forest resources. This diagnosis will form the foundation for the CICC and the CIDRS to set an agenda for cooperation and, as needed, to design and implement new schemes of coordination and planning among sectors and with the three branches of government.

IV.1.2. Identification and implementation of institutional agreements for REDD+

Promoting REDD+ in Mexico entails addressing a variety of causes in vastly disparate geographic, socioeconomic, and environmental contexts. For this reason, a key element in designing an effective National REDD+ Strategy is to have a variety of institutional agreements that

respond to the specific needs of each context and permit broad coverage and a flexible design of policy instruments.

Possible agreements in designing ENAREDD+ include:

- Development and establishment of sub-national forest reference levels that are nationally consistent within a nested scheme.
- Identification of ad-hoc institutional agreements that have proven successful to implement REDD+ at different scales and which, considering their context, allow broad application and the design of new schemes to implement interventions at both the national and sub-national levels.
- The institutional agreements required to promote and incorporate REDD+ projects and actions implemented in the context of the voluntary carbon market and those initiated as REDD+ demonstrative actions.
- Successful models of municipal, regional, and state collaboration which open institutional spaces for the development of local initiatives at different territorial and temporal scales.

IV.1.3. Review, improvement, and escalation of existing programs

It would be mistaken and counterproductive to think that REDD+ will start from zero in Mexico, or that its role is to replace existing programs and instruments. As we have remarked, Mexico has accumulated vast experience in policies on conservation, protection, and sustainable forest management. Consequently, as inputs for ENAREDD+ and tied to the aforementioned diagnosis of the causes of deforestation, a thorough analysis will be conducted of instruments, programs, and policies in place, identifying weaknesses, duplicities, barriers, and opportunities to improve and escalate them..

IV.1.4. Toward a comprehensive legal framework for REDD+

Over the next two years, a comprehensive analysis will be conducted of legal instruments that are directly and

Mexico acknowledges the importance of articulating and improving policies and instruments within the sector, and accordingly proposes to strengthen and adapt the general regulatory framework and programs that stimulate sustainable forest management, to focus action on areas of greatest deforestation and forest degradation and make significant progress.

indirectly related to environmental management, forest management, and land use, in order to generate proposals for reforms or regulations to ensure that legislation enacted and public programs established are consistent..

Reform proposals will be the subject of promotion and insertion in legislative cycles and agendas, to in turn crystallize them in legal instruments that favor the implementation of REDD+ in Mexico.

Mexico is a signatory of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), and therefore negotiations and proposed schemes for REDD+ should guarantee fulfillment of international and national commitments in the area of gender equality.

Thus, the aim is to ensure compliance with relevant laws in implementing actions for REDD+ and create the necessary legal framework to regulate and foster in-

vestment and allocation of incentives under a variety of complementary and transparent economic schemes that provide flexibility and guarantee the rights of individuals and communities and at the same time offer certainty to investors and sources of financing

IV.1.5. Compliance with the law and environmental law enforcement

Mexico's challenges include consolidating and strengthening the institutions charged with environmental justice and law enforcement. REDD+ offers the opportunity to ensure the continuity of efforts to bolster the powers of the Federal Environmental Protection Agency (Spanish acronym PROFEPA), and to improve methods and techniques of inspection and oversight in the forest sector.

For this purpose, the PROFEPA will have to operate from a more decentralized position and in coordination with local and state governments, and have access to additional resources that will allow it to account for its actions to communities and regional organizations, and modify its strategy, acting on the basis of diagnoses of illegal forest activities at all levels of the chain, placing special emphasis on distribution centers, which are often the sources of funding for illegal logging. The agency needs to improve its legal processes and establish and

TABLE 5. INSTITUTIONAL AGREEMENTS AND PUBLIC POLICY. GOALS FOR 2012.

Establish mechanisms of territorial coordination SEMARNAT-CONAFOR and SAGARPA (in their capacity as chairs of the CICC and CIDRS respectively) for implementation of REDD+ actions (including monitoring and application of sector programs).
Have territorial level REDD+ implementation organs in coordination with the different branches of government.
Develop REDD+ actions in priority zones with high risk of deforestation and forest degradation, defined by SEMARNAT, CONAFOR, and SAGARPA (in their capacity as chairs of the CICC and CIDRS), considering social and environmental criteria.
Test REDD+ operating models in priority zones and with varied institutional agents and mechanisms that may prove relevant and replicable through specific operating rules and public policies.
Develop proposals that identify opportunities to create synergies among existing instruments, programs, and policies, and align incentives to reduce deforestation and forest degradation.
Present a joint initiative among environmental and agriculture authorities to slow and revert forest and soil degradation.

deploy new technologies for surveillance and monitoring, and favor community intervention with effective mechanisms of participation in inspection and control actions.

IV.2. FINANCING SCHEMES

In building ENAREDD+, Mexico will seek to strengthen and complement ongoing national efforts through optimization and coordinated combination of domestic and international mechanisms and sources of financing.

Mexico will work to promote institutional agreements and financing mechanisms to slow the forces driving deforestation and forest degradation at the national and regional levels. And although such adjustments will help eliminate contradictions and maximize synergies, achieving the nation's goals for the forest sector will require additional financing.

Negotiating REDD+ within the UNFCCC focuses on the idea of creating a system of international payments or transfers in exchange for effective results in reducing emissions or increasing carbon reserves. In view of the challenges associated with the design and implementation of REDD+ strategies or action plans, initiatives for technical and financial support have been created that will help to build capabilities in countries to design and implement REDD+.

Mexico has taken advantage of various opportunities for financing and technical cooperation.

Today, Mexico is party to the Forest Carbon Partnership Facility (FCPC), is an observer in the program UN-REDD, and is one of the pilot countries in the Forest Investment Program (Spanish acronym PIF). Also, it has obtained financing to promote REDD+ through multiple bilateral agreements and from other sources.

Private involvement through mechanisms based on carbon markets is emerging as an important potential source of financing for REDD+. In implementing the National Strategy on Climate Change, Mexico will promote domestic emissions markets which include the forest sector, recognizing the potential, institutional experi-



ence, and growing contribution of the voluntary carbon market, both domestic and international, in which some Mexican communities and organizations have already made inroads. This market offers a valuable launching platform for the domestic market.

Another aspect of financing involves mechanisms that will be used to attract REDD+ funds. In implementing actions to reduce deforestation and promote forest conservation, Mexico has developed a wide range of financing schemes to channel funds and operate incentive systems already in place. These include federal and state public funds and other private instruments. Analyzing the financial potential of REDD+ and the implications for its administration is one of the tasks to be undertaken in developing ENAREDD+.



Mexico's Vision on REDD+ acknowledges that financing has two tangents. One is related to sources or forms of fundraising for REDD+, and may include public or private funds, development aid programs, fiscal instruments (i.e. possible taxes on fossil fuels), carbon markets, or a combination of funds and markets, among others.

The second focuses on the mechanisms to be used to distribute available funds and the uses to which they will be put, in other words how the benefits will be allocated.

It is our purpose to identify and effectively gain access to international sources of financing and make ready instruments for optimal, cost-effective and transparent application of the funds obtained to create and strengthen institutions and capabilities, implement REDD+ activities, and ensure fair distribution of incentives based on results.

These resources will complement domestic sources of financing, which range from the public budget intended for programs relevant to REDD+ to private contributions, including those made by social organizations and foundations operating in Mexico.

The distinction of resources described in the preceding paragraphs to differentiate type of international funding is also relevant in the domestic context, given that, although still incipient, the domestic market for environmental services is operational and represents a potential source of domestic and private financing for REDD+ activities, where rural development and urban development are shaped and benefit. Designing and creating this new and emerging financial architecture will require developing criteria for performance and management of funds. And that is where we need to find ways to reduce transaction costs, such as creating capabilities, and to ensure the transparency and oversight of safeguards.

Recognizing the diversity of incentives necessary to eliminate the causal factors of deforestation and degradation, and to stimulate increases in carbon reserves, Mexico anticipates the need to use multiple funds and financing mechanisms that help assure greater stability and financial sustainability in the long term.

Thus, REDD+ demands an institutional architecture that will complement and make use of existing mecha-

nisms, in which national, regional, or local trusts will have a role as key operators who will have the capacity to efficiently and opportunely administer and disburse funds to promote REDD+ and monitor and evaluate the transparent use of budgetary resources, based on reliable monitoring and verification schemes.

Trusts may be public, private, or mixed and may manage from multilateral funds, carbon markets – in due course – or other earmarked fiscal funds, aiding the participation of governments, companies, landowners (ejidos, communities, individuals, or businesses), organizations in civil society, and financial brokers, among others.

To make REDD+ actions a reality, Mexico may create a fund to facilitate and guarantee development decisions that affect forests (infrastructure, productive reconversion). It is understood that an additional financing platform like this would help to reach goals faster by channeling funds to the direct causes of deforestation and degradation.

Such funds would target re-engineering of programs and their territorial expression, to implement local offsetting and encourage regions and communities not only to conserve, but to actively practice sustainable forest management.

To support the emissions reduction proposed by Mexico it will be necessary to conduct an in-depth analysis of the nation's economy, its sources, domestic emissions stocks, and the marginal costs of mitigation in different sectors and activities. Recent findings suggest that REDD+ represents one of the most attractive opportunities to achieve emissions reduction at competitive costs and with highly significant collateral ecological, economic, and social benefits. Hence, proposals for sustainable forest management along its two tangents, of both stimulus

Mexico has strong potential to stimulate, enhance, and reinforce natural regeneration of its ecosystems. Studies show that natural regeneration may be the issue of greatest additionality, obtaining more efficient forms of carbon sequestration than other options.²⁵

²⁵ Klooster, 2003; Kaimowitz, D. personal com.



and harmonization with other subsidies and programs for rural lands, are crucial.

To address the issue of forest degradation and take advantage of the potential associated with regeneration of natural ecosystems, it is proposed to implement institutional actions that allow funding to be channeled directly to communities. This will offer them seed capital for development of regeneration and restoration projects.

As a supporting instrument for REDD+, it is necessary, on the one hand, to promote and strengthen management organs already in place (inter-municipal agencies, rural development agencies, producers' associations, institutional programs, trusts, state funds, etc.), capable of offering alternatives to attract local and international funds and promote low-carbon rural development, and on the other hand anticipate national needs in the context of a global carbon market. Such funds, agencies, and

trusts are the portal needed to ensure that local realities – whether regions, municipalities, states, or communities – can express themselves.

Because REDD+ phase three (see Chapter I) will require sophisticated financial intermediaries to bridge the time gap between investment needs for REDD+ and the start of cash flows from commercialization of REDD+ credits and public-private partnerships for granting of government guarantees, risk management instruments must be designed that help raise investor confidence.

Although regulated forest carbon compliance markets do not yet exist, in Mexico we can analyze the possibility, for which we need to design a system of unique registration of emissions reduction certificates that offers certainty, transparency, and efficiency for emissions transaction mechanisms.

TABLE 6. FINANCING SCHEMES. GOALS FOR 2012.

Define and generate institutional adjustments that facilitate procurement of domestic or international financing from public and private sources.
Enable a network of national and regional funds to administer REDD+ financing.
SAGARPA and SEMARNAT joint initiative to raise financial efficiency through coordination of programs.
Develop an inter-institutional proposal to stimulate restoration of degraded areas.
Design instruments for management of risks associated with sub-national actions, including the permanence and displacement of emissions. This may include the use of reserves and/or guarantees.
Design financial instruments in collaboration with development banks, which foster private investment in alternatives for sustainable forest management and conservation.
Design a unique registration system for emissions reduction certificates that lends certainty to emissions transaction mechanisms.
Develop a proposal for a domestic market mechanism and its legal framework (including basic criteria such as transparency, verification, guarantees, credits, definition of carbon ownership, definition of distribution of benefits, and common currency).

IV. 3. FOREST REFERENCE LEVEL AND SYSTEM FOR MEASUREMENT, REPORTING, AND VERIFICATION (MRV)

Forest reference levels refer to the quantity of GHG emissions and removals for a given region and for a given period. Such levels are critical elements to determine net emissions or removals resulting from REDD+ measures. In building them, the cost-efficiency and equity of mechanism are decisive.

Tracking the performance of measures and comparing it with the reference level requires that Mexico establish, operate, and maintain a verifiable measurement and reporting system for REDD+ (MRV System). Such a system will also produce information necessary to design land use policy, help in obtaining results-based incentives, and facilitate fulfillment of Mexico's data reporting commitments before international forums.

The system will also document information on compliance with safeguards and transparency in financing.

IV.3.1. Forest reference level

The determination of reference levels in this country will require a combination of recent historical data about deforestation and forest. The construction of a forest reference level in Mexico requires a combination of recent historical data on emissions associated with deforestation and/or forest degradation, and those from other relevant land uses, as well as an estimate of expected future emissions and sequestration, absent additional incentives for REDD+.

This in turn requires collection and review of historical data on coverage and land use, and accurately identifying the causal processes behind deforestation and forest degradation, as well as the use of remote sensors to calculate carbon and emissions densities. Also, a broad national consensus is needed on the definition of forest, in view of the implications for recording and evaluating achievements inherent in different definitions of forest.

Developing reference levels requires, among other things, that we assess the feasibility of the timeframe options to be used. Accounting for national condi-

tions will require transparency in the criteria to be used. Although reference levels will be national in scope, they may be built on an interim basis at the sub-national level, ensuring consistency with the national scale in all events. In Mexico's case, defining this reference level is part of the studies to be supported by the Forest Carbon Partnership Facility (FCPC) of the World Bank and by Norway. As a result of these activities, we can expect to gain information on:

- Historical trends in deforestation and forest degradation and the resulting changes in carbon density.
- Areas likely to be deforested and degraded in the future based on the analysis of incentives in existing programs.
- Analysis of the impact of recent land use policies (forest, agriculture, livestock) on deforestation and forest degradation.
- Expected effects of continuing the land use policy, as proposed in the *National Development Plan 2007-2012*, the *Special Climate Change Program 2009-2012*, and the *Strategic Forest Program for Mexico 2025*, among others.

IV.3.2. Measurement, Reporting, and Verification (MRV) System

The process of measurement, reporting, and verification has been identified as a core element to assure the transparency of the climate regime. With REDD+ as a central element in the regime, actions in that area should be measurable under a consistent and transparent system.

Mexico has proposed a comprehensive strategy to implement this mechanism. On the one hand, the national MRV system will be developed on the basis of the international agreements of the UNFCCC, maintaining the principles clearly defined in the negotiations. On the other hand, the system will constitute the foundation to implement a broader national policy, coordinated in accordance with the assumed goals for mitigation and adaptation.

At the national level, Mexico needs to develop a solid MRV framework, which demands a high degree of strengthening capabilities in the areas of infrastructure,

human resources, monitoring annual change in forest areas, forest degradation, and carbon measurements.²⁶

A relevant issue is the balance between the degree of precision in measurements and monitoring and the associated cost: the more costly the monitoring and verification system is, the more onerous it will be for the country to develop a REDD+ mechanism and the lesser the benefits obtained will be. On the other hand, if MRV is deficient, the mechanism's environmental integrity is compromised. In this sense, Mexico will advance, through successive approximations, toward a consolidated MRV, which is capable of providing rapid response in the short term and greater precision as institutional, local, and technical capabilities are developed.

The investment Mexico has made in its National Forest and Land Inventory represents a response designed to ensure that the country has the needed inter-institutional diagnostic and monitoring instruments. However, it cannot be overlooked that to meet the challenges associated with REDD+, the actions taken to date are insufficient, and will be complemented by definition and consensus building on reference levels and design and implementation of an MRV system that lends certainty to forest and agricultural policy, and to the relevant international commitments.

Mexico has the capacity, in the short term, to develop a robust system for measurement and monitoring of forest carbon, in particular because it has a National Forest and Land Inventory and constantly evaluates its forest resources, all of which constitutes a valuable platform to build an effective MRV, with reasonably small margins of error.

To broaden the spectrum of forests to encompass the entire sector of agriculture, forestry, and other land uses (AFOLU) as a landscape concept, SEMARNAT, CONAFOR, and SAGARPA have made progress in cooperative efforts to merge their land monitoring systems with data from the National Forest and Land Inventory. Such inter-institutional cooperation should in turn allow for much broader coordination among programs and ac-

²⁶ Herold, 2009.

tions to ensure conservation of forest use on forest lands and generate more sustainable land use at the local level.

Thus, the MRV system will fulfill one of its primary functions, which is to provide accurate and timely feedback for policymakers and other stakeholders on the effectiveness of REDD+ strategies to control the factors that promote deforestation and forest degradation.

Bilateral and multilateral cooperation with Mexico

Mexico has participated actively in the principal multilateral initiatives related to MRV for REDD+, including the FCPF and the Group on Earth Observation's Forest Carbon Tracking (GEO-FCT) Initiative. Also, Mexico has developed important bilateral projects, including a joint effort with Canada on the carbon accounting model, technical experiments with Germany for use of radar technology, and work with the USA and Finland to strengthen the forest inventory, among others. Norway shares Mexico's interest in and need for solid and proven MRV systems as part of the REDD+ regime. Norway's technical and financial support will allow Mexico to accelerate the development of its own MRV systems and help achieve better and wider communication of the lessons learned.

IV.3.2.1. Scale of MRV systems

Mexico shares the opinion that MRV systems and protocols should be national, but flexible enough to incorporate sub-national and local activities within a coherent strategy, which allows for consistent and transparent presentation of reports.

The national level emissions accounting approach allows the system to consider most of the "emissions leak" explicitly, although it is clear that the capacity for regional planning and management is primarily sub-national and the implementation of actions occurs locally. At the same time, the compatibility and consistency of scales and stakeholders (national, state, and municipal governments; NGOs, academic institutions, producers' organizations, communities, etc.) are also essential elements in a reliable and transparent system. Relevant sub-national

spatial scales include states, basins, municipalities, local communities and their associations, and private owners, among others.

Local level implementation of REDD+ poses several challenges: land use trends, leaks, local implementation capabilities, and local appropriation of the mechanism. At this level (at least at the ejido scale), regulation of communal lands presents its own unique challenges, associated with the issue of emissions leaks which may occur at individual plot level or between landscapes.

Experiences that may offer potential solutions in this regard include the lessons learned from programs such as PROCYMAF and COINBIO, which have helped strengthen local regulation of communal resources, as have norms and regulations adopted in the target communities.

The consolidation of sub-national level management bodies that strengthen forest governance will be an important referent in developing the MRV system, in view of their relevance for land planning.

In all these actions, we hope to achieve varied results in the short term, among which we can mention development of multi-scale and multifunctional protocols for MRV implementation, from the local to the national level, and a unified national monitoring system, development of a national database of GHG emission factors in the AFOLU sector, the application of protocols at pilot sites, the development of protocols for community monitoring, and the development of a program to present the results of MRV implementation and South-South cooperation and cooperation with states, among others.

Finally, Mexico is considering developing a hybrid MRV deployment scheme (academia, civil society, private initiative, and government) that is cost-effective and at the same time offers transparency and confidence at the national and international level. The system's reporting scheme will be national, in line with the international best practices for GHG inventories in the AFOLU sector.

TABLE 7. REFERENCE LEVEL AND MEASUREMENT, REPORTING, AND VERIFICATION SYSTEM. GOALS FOR 2012.

Have a national reference level for area, type of vegetation/ecosystem, and emissions, as well as sub-national levels in priority zones and in other regions of Mexico.
Establish an operative definition of forest for REDD+.
Make adjustments in the powers of key instances (SEMARNAT, CONAFOR, INEGI, SIAP, CONABIO, INE), including the role of state entities, to build a monitoring and reporting system for REDD+.
Develop and test methodologies for a cost-effective, multi-scale (from national to local and from local to national), and multifunctional (REDD+, safeguards, adaptation and monitoring of programs) MRV system that supports integration of information at sub-national scales and can be integrated with community monitoring schemes.
Define guidelines on each sector's contributions to designing the national system for unique registration of emissions and the process of certifying emissions reductions.
Promote the design and publication of a Mexican Standard on measuring carbon for the AFOLU sector.

IV. 4. CAPACITY BUILDING

The capacity building for REDD+ in Mexico is one of the key pillars to promote an effective process of communication and broad participation based on free, prior, and informed consent on the part of the different stakeholders, with special attention on incorporating community groups. It represents, in turn, a central condition to establish a suitable institutional platform for design and implementation of ENAREDD+ and its particular deployment in technical training and awareness raising for public officials and within the different sectors of federal, state, and municipal government involved in ENAREDD+.

Accordingly, the construction of capabilities will have to focus on:

- Dissemination of information, communication with feedback, and ongoing coordination among stakeholders and institutions based on the development of specific educational actions for leaders and functionaries at different levels and in different fields of REDD+ and its concrete expression in Mexico (ENAREDD+).
- Joint construction or co-production of mechanisms for governance of REDD+ (institutional agreements [and] guidelines for work and dialog for agreement among the parties involved like those offered by CTC-REDD+).
- Establishing technical conditions for the implementation of REDD+ initiatives, which involve technical and administrative capabilities for large-scale implementation of ENAREDD+, in other words, capabilities of organization, design, development, administration, monitoring, and evaluation of specific projects, and in particular for measurement, reporting, and verification (MRV).

The design and implementation of these actions requires: 1) analyzing the present situation with regard to the knowledge and capability of the different stakeholders (institutional or communal) on which core actions for REDD+ depend; 2) defining and prioritizing – among owners and institutions involved – the necessary capabilities, and based on the results; 3) develop curriculum for different work levels and thematic areas; and 4) generate

assistance schemes for the development of the capabilities identified.

Women have emerged as agents of change and have been leaders in revitalizing their communities and managing natural resources. Consequently, the process of strengthening capabilities should give women and men equitable treatment.

Although Mexico has experience in tasks associated with management and monitoring of forests, the particularities of REDD+ create the need to conceive a specific training program in the field, targeting key federal and local government personnel who will be charged with implementing and overseeing REDD+, both in its operation and in monitoring and evaluation of results.

Understanding of the issues involved and acquisition of elements and tools on the part of functionaries involved, as well as the possibility of permanent disposition among them to exchange REDD+ experiences in their different fields will allow for more efficient and effective application of planned actions.

Key topics to consider in capacity building include:

- Participative intra- and inter-community processes, based on the recognition of existing spaces and instances for action.
- Development of financial and advisory instruments, including aspects of fundraising, administration of funds, and fiscal issues.
- Legal and agrarian aspects suited to the development of forest initiatives and REDD+ at the local and regional level.
- Development of organizational and administrative instruments of programs and activities.
- Prevention and resolution of disputes.
- Communication and institutional coordination.
- Capacity building for the development and use of standards and methodologies for forest monitoring.
- Design, oversight, evaluation, and monitoring of community projects.
- Safeguards and strategies to maximize co-benefits.
- Analysis of deforestation and forest degradation and their causes.
- Establishment of reference levels.



On the other hand, concrete actions at the operational level, such as providing elements to identify causes and processes of deforestation and forest degradation, creation of markets for sustainable forest products, and evaluation of transaction and opportunity costs will demand that development of such capabilities place special emphasis and attention on the specific needs of the organs and functionaries charged with putting REDD+ into practice at the state and/or local level.

REDD+ will require more capacity, not only among forest technicians, but also among social and/or private agents involved with forest and land management units (forest owners, communities, producers). This in turn will require identifying the types of capabilities to be developed.

As a complement to formal actions to promote development of capabilities at the national level, a strategy of “horizontal learning” needs to be deployed, based on independent and self-perpetuating initiatives by the vari-

ous stakeholders. Such horizontal learning requires the use of alternative means of supporting the development of capabilities that respond to the needs of the different stakeholders and regions, among which we can identify: learning communities, peasant training, exchanging experiences, advisory committees – sectoral, thematic, or regional – on REDD+ issues that permit the effective transfer of knowledge and lessons learned with less investment of resources and effort.

TABLE 8. CAPACITY BUILDING. GOALS FOR 2012.

Design a strategy for capacity building, based on the principle of equality, to promote the strategic lines of REDD+ considering Mexico's heterogeneity.
Document and disseminate the results and lessons learned from models of implementation of REDD+ actions.
Develop a program for updating REDD+ targeting functionaries and communities jointly with various academic institutions and social organizations.



IV. 5. COMMUNICATION, SOCIAL PARTICIPATION, AND TRANSPARENCY

Designing a communication strategy so that REDD+ can reflect and adhere to the guiding principles that Mexico has adopted is an action that requires in-depth knowledge of the different parties involved and what they think and their aspirations in relation to REDD+ in particular, and forests in general. This in turn will make it possible to provide feedback to modes of communication, adapt them, and achieve the needed exchange.²⁷

Key elements to design the communication strategy for REDD+

- Know the different stakeholders' interests, concerns, and expectations for REDD+, forests, and their role in sustainable management of forest ecosystems.
- Diversify and adapt information and means of communication for different audiences, considering that the target groups have diverse values, interests, languages, and information.
- Define and design channels of communication that favor dialog among the parties.
- Convey messages with credibility and transparency in public information.
- Identify alternative forms and means of communication and participation appropriate and suggested by interest groups.
- Assume communication as a dynamic process that demands constant feedback.

It will also be necessary to develop and use new, bolder pathways of communication different from established traditional formats, favoring the emergence and consolidation of informal and formal networks for communication among agents in transportation of commodities or persons, and virtual and live social networks, among others.

On the issue of social participation, it is important to grasp the complexity of the process, because stakehold-

²⁷ SEMARNAT, 2008.

Initial forms of communication for REDD+ in Mexico

With the support of the British Government, through the World Wildlife Fund Mexico (WWF) and several NGOs, an internet portal on REDD+ Mexico (www.reddmexico.org) and a virtual social network known as the REDD+ Mexico online community (<http://reddmexico.org>) have been created.

These virtual platforms were created to provide a catalyst for access and exchange of information and promote collective participation and learning.

ers the sectors they represent have varied interests, differentiated means of access to information, and different forms of organization, culture, and educational levels.

Likewise, acknowledging that men and women participate differently in managing forest resources and land obliges the gender perspective considered in the REDD+ strategy in Mexico to seek to ensure that the projects implemented incorporate the perspective of the least represented social sectors. This entails planning and implementing strategies that account for these conditions and generate an exchange of positions, for discussion and to build consensuses and commitments. Only then will it be possible to accomplish a participation that becomes an instrument of development by significantly and authentically furthering empowerment and social equality that embrace all the stakeholders, differentiating their roles²⁸ and synchronizing joint actions.

Achieving this entails renewing and coordinating several of the nation's social instruments and institutions, which represent channels for participation and communication that have opened and strengthened the process of democratization in Mexico.

One of the proposed means of observing the principle of transparency in REDD+ in Mexico is the design and creation of a platform for public access to the monitoring and information system on forest carbon and financing of REDD+ in Mexico, which will help create an agile and opportune system of accountability.

²⁸ Torres, 2001.



REDD+ renews the opportunity to reposition the importance of forests and their communities and make a positive impact on people's perceptions.

It is important to disseminate and instill the idea of the value of the environmental services forests offer, which support the development of towns and cities and their productive activities.

REDD+ is part of an international framework in which there are already consensuses on indicators to measure and verify transparency and access to information. Mexico may use as the basis for the design and ex-

ecution of forms of communication for REDD+ those of the Federal Institute for Access to Information and Protection of Data (Spanish acronym IFAI), the System for Evaluation of Federalism, or the Municipal System for Evaluation of Transparency.

Thus, the forms of communication designed for REDD+ should take and exercise the ultimate objectives for which it was conceived: to interact, dialog, inform, develop capabilities, and promote participation, so that it can serve as an important arm of action in the process this initiative demands.

TABLE 9. SOCIAL COMMUNICATION, SOCIAL PARTICIPATION AND TRANSPARENCY. GOALS FOR 2012.

Lines of attention for social participation

- Regionalization of consultation with diagnostic elements of specific issues. This element will help causistically identify a suitable mechanism to promote participation and deliberation (e.g. Forum, Network, Advisory Board).
- Definitions of sectoral representativity under the principle of equitable distribution based on a map of stakeholders: Who are they? What interests do they represent? Are those interests in conflict?
- A plan for participation must be adapted to the particularities and socioeconomic context of the local stakeholders involved in the initiative, taking into consideration different cultural aspects, and preferably should be developed with the involvement of the same local stakeholders.
- Social participation should be expressed in all stages of a public policy: planning, execution, evaluation, and oversight of public policy and government programs in all branches of government.

Design a strategy for communication, social participation and transparency that favors inclusion of all stakeholders in consensus building, and the reliability of processes.
Develop a national consultation with rural and indigenous communities on the design of ENAREDD+.
Design and create a platform for public access to the measurement and information system on forest carbon and financing of REDD+.
Communicate REDD+ principles and criteria to all sectors so that they are taken into consideration in designing newly created public policies.
Consolidate emerging spaces for participation.



IV.6. EARLY ACTIONS

As part of the emergence of REDD+, in Mexico several initiatives have been developed that help to reduce deforestation and forest degradation. They all must be promoted actively, in a context of early actions. This will help test institutional actions and creation of capabilities without waiting for the consolidation of international mechanisms at the ENAREDD+ implementation stage. Such early actions constitute empirical trial experiences that encourage international investment, both from development aid agencies and NGOs and different levels of government.

Mexico needs to test, through various territorial initiatives, the proposals for institutional agreements and financing schemes, so that it can build a long-term strategy. In this sense, it is important to revisit the experience obtained in developing projects that already participate in voluntary carbon sequestration markets and favor communal forest management.

These experiences will help test strategic lines of action at different scales and under different conditions – environmental, social, and economic – in Mexico, and in turn will offer enhanced opportunities to fulfill the aspirations of REDD+ for the nation.

On the other hand, it will also be advisable to explore the development of chains of custody to track the cycle of carbon stored in highly durable timber products.

Ongoing institutional models

Some examples of ongoing initiatives that may offer valuable lessons are:

The Program for Sustainable Regional Development of Biological Corridors in Chiapas, in operation since the year 2008, is an experiment in inter-sector integration between SAGARPA, CONAFOR, the Mesoamerican Biological Corridor – Mexico and the Chiapas State Government.

Programs in the Cutzamala River Basin, the Program for Sustainable Use of Natural Resources for primary production and some elements of sustainability introduced in the Program for Sustainable Livestock Production and Cattle and Poultry Ordering, both overseen by SAGARPA, and others with broader content, such as the Conservation Program for Sustainable Development and the Community Forest Development Program.

The Intermunicipal Environmental Board for Integral Management of the Lower Ayuquila River Basin (Spanish acronym JIRA) is a decentralized public agency unique in Mexico, made up by ten municipalities in the regions Amula Mountain Range, Southern and South Coastal Jalisco, which provides the municipalities in question technical support for management and implementation of projects and programs for environmental protection and natural resource management.

At regional scale, the public-private model promoted by the Mexican Fund for Nature Conservancy, the World Wildlife Fund (WWF), the governments of the states of Mexico and Michoacan and SEMARNAT, CONANP, and CONAFOR.

Other initiatives from which valuable lessons can be learned include those implemented in the coastal river deltas of Jalisco; in the Lacandon Jungle, in Chiapas; in the Ticul Mountains, in Yucatan; in the SianKaan–Calakmul Biological Corridor, in the Calakmul zone of influence, and in the Cutzamala River Basin.





GLOSSARY OF RELEVANT TERMS FOR REDD+

Additionality: anything that would not have happened had a given mechanism (in this case REDD+) not been implemented.

Forest: (this concept has different meanings depending on the source):

1. Minimum area of one hectare (ha), minimum aerial cover 10% and height at maturity of timber plants 2 meters (m). This definition of forest adds between 20 and 30 million additional hectares to those classified by the INEGI as forests or jungles (per resolution of the Advisory Technical Committee of the project on Payment for Forest Environmental Services, in its session of March 2, 2009).
2. Lands that cover more than 0.5 hectares populated by trees more than 5 m high and with canopy cover over 10% or trees capable of attaining such height in situ. Does not include land under a predominantly agricultural or urban use (CONAFOR 2010a).
3. Forest vegetation, mainly in temperate climate zones, in which spontaneously growing perennial timber species predominate, with canopy cover of more

than 10% of the area it occupies, provided they form masses in excess of 1,500 square meters. This category includes all types of forest listed in the National Institute for Statistics and Geography classification (per Regulations to the LGDFS).

4. Minimum land surface of 1 hectare, with canopy cover exceeding 30% and trees that can reach a minimum height of 4 meters at maturity in situ (per agreement between INEGI and SEMARNAT for CDM).
5. Minimum land surface of 0.05-1 hectares, with minimum canopy cover of 10-30% and trees with minimum height of 2-5 m (ranges established by UNFCCC for CDM).

Carbon sequestration: sequestration and storage of carbon. Trees absorb carbon dioxide and part of it is stored as biomass.

Co-benefits: additional benefits from implementing REDD+ different from reduction of GHG emissions, such as reduction of poverty, protection of biodiversity, and improvement in forest governance.

Conference of the Parties (COP): a decision-making



body made up by the Parties that have ratified the UNFCCC.

Deforestation: induced conversion of forest areas to other uses (per Marrakech agreements, UNFCCC, 2002).

Land degradation: reduction of the present or future capacity of lands, vegetation, or water resources (per Regulations to the LGDFS).

Reference level or baseline: starting conditions, before beginning any project or intervention; also known as reference emissions level or no project scenario (CIFOR 2009).

Drivers: primary causal processes that move and produce the phenomena observed (in this case deforestation and forest degradation).

Emissions leak: what happens when the reduction of emissions in one area leads to an increase in emissions in another (for example, a REDD project that protects forests in one area, but results in an increase in deforestation activities in other places); also known as emissions displacement.

Fungibility: exchange capacity or value (equivalence) with other carbon bonds; interchangeability of REDD+ credits with other credits.

Forest management: process comprising the set of actions and procedures that have as their object ordering, cultivation, protection, conservation, restoration, and use of forest resources in a forest ecosystem, considering ecological principles, respecting the functional integrity and interdependency of resources, and without diminishing the productive capacity of its ecosystems and resources (LGDFS).

Carbon markets: financing entities and mechanisms that can exchange carbon credits from verified emissions reduction activities. This transaction can be effected by means of voluntary markets (created by means of bilateral mechanisms between the parties making the exchange) or compliance markets (which are legally regulated to achieve emissions reduction goals under multilateral agreements).

REDD or Reduction of Emissions from Deforestation and Forest Degradation: mechanism to reduce global greenhouse gas emissions by compensating countries that prevent deforestation or forest degradation (COP 13 UNFCCC).

REDD+: expansion of the REDD frameworks to include forest conservation, sustainable management, and increase of carbon stocks or reservoirs in forests, which has the potential to produce significant social and environmental co-benefits, and promote greater participation in REDD and compensate countries that are already protecting their forests (COP 14 UNFCCC).

Reforestation: induced establishment of forest vegetation on forest lands (LGDFS).

Induced regeneration: recovery of ecosystems through dynamic human intervention or assisted establishment of shoots and seeds to expedite successional ecological processes.

Natural regeneration: process of autonomous recovery of ecosystems from the spread of shoots and seeds and the establishment of successional ecological processes.

Carbon reserves, stocks, or reservoirs: system capable of emitting or accumulating carbon. Measured in tons of equivalent carbon (emissions imply a reduction of stocks, whereas sequestration or carbon sinks imply an increase of stocks).

Forest restoration: set of activities related to the rehabilitation of a degraded forest ecosystem, to partially or totally recover its original functions and maintain conditions that favor its persistence and evolution (LGDFS).

Safeguards: policies and criteria that must be observed to ensure compliance in each phase of the REDD+ mechanism, including: transparency, participation and representation, platforms for different stakeholders, social and environmental audits, legal and governance audits, free, prior, and informed consent of indigenous peoples, MRV system, financial audits and guidelines for accounting (The Forest Dialogue).

Jungle: forest vegetation in tropical climate zones, in which spontaneously growing perennial timber species predominate, with canopy cover exceeding 10% of the area it occupies, provided they form masses of more than 1,500 square meters, excluding grasslands. This category includes all kinds of jungle, mangrove swamps and palm groves in the INEGI classification (Regulations to the LGDFS).

Environmental services: benefits that forest ecosystems produce naturally or through sustainable manage-



ment of forest resources, such as: provision of water in quality and quantity; sequestration of carbon, pollutants, and natural components; production of oxygen, buffering of the impact of natural phenomena, climatic modulation or regulation; protection of biodiversity, ecosystems and ways of life; soil protection and recovery; landscape and recreation, among others (LGDFS).

Carbon sink: any process or mechanism of carbon dioxide absorption and retention of carbon stocks in organic matter as found in forests, oceans, and soil.

Fragile lands: areas in forest or preferentially forest lands that are prone to degradation and loss of their natural productive capacity as a result of elimination or reduction of their natural plant cover (Regulations to the LGDFS).

Cap and trade: regulatory system made up of two parts, in which the cap is a limit on carbon emissions imposed by the government and trade is a market created by the government for purchase and sale of greenhouse gas credits. Companies that produce emissions at below permissible levels may sell credits to others so that they can emit more gases than the cap permits (CIFOR 2009).

Forest vegetation in arid zones: vegetation that grows spontaneously in arid or semiarid climate zones, forming masses of over 1,500 square meters. Includes all kinds of brush, spiny low jungle, and chaparral in the INEGI classification, as well as any other type of spontaneous arboreal or arbustive vegetation found in zones with mean annual precipitation under 500 mm (Regulations to the LGDFS).







ABBREVIATIONS AND ACRONYMS

The alphabetical order follows that of abbreviations and acronyms used in Spanish, although some are taken directly from the English..

AFD	French Development Agency	CIFOR	Center for International Forestry Research
AFOLU	Agriculture, Forestry, and other land uses	CIGA	Center for Research in Environmental Geography
AMUMA	Multilateral Agreements on Environment	UNFCCC	United Nations Framework Convention Convention on Climate Change
ANP	Natural Protected Areas	UNCED	United Nations Conference on Environment and Development
WB	World Bank	COINBIO	Program for Community Conservation of Biodiversity
CBM	Mesoamerican Biological Corridor	COLPOS	College of Postgraduates
CC-CDI	Advisory Board of the National Commission for Development of Indigenous Peoples	CONABIO	National Commission for Knowledge and Use of Biodiversity
CCMS	Mexican Civil Counsel for Sustainable Forestry	CONAFOR	National Forestry Commission
CDI	National Commission for Development of Indigenous Peoples	CONAGUA	National Water Commission
CEDAW	Convention for Elimination of all forms of Discrimination Against Women	CONANP	National Commission on Protected Natural Areas
CEDEC	Consultores en Educacion, Desarrollo y Capacitacion, SC	COP	Conference of the Parties [to UNFCCC]
CEGAM	Centro de Especialistas en Gestion Ambiental, SC	CRIM	Regional Center for Multidisciplinary Research
CEIBA	Centro Interdisciplinario de Biodiversidad y Ambiente, AC	CTC-PSA	Advisory Technical Committee [of the project] on Payment for Forest Environmental Services
CEMDA	Centro Mexicano de Derecho Ambiental, AC	CTC-REDD+	Advisory Technical Committee for REDD+
ERC	Emissions Reduction Certificates	DIVIP	Desarrollo Institucional de la Vida Publica, AC
CFE	Federal Electricity Commission	DOF	Official Gazette of the Federation
CI	I Conservation International	DRS	Sustainable Rural Development
CICC	Inter-Ministerial Commission on Climate Change	EBM	British Embassy in Mexico
CIDRS	Inter-Ministerial Commission for Sustainable Rural Development	ECOSUR	El Colegio de la Frontera Sur
		ENAREDD+	National REDD+ Strategy (Mexico)
		FAO	Food and Agriculture Organization of the United Nations





FCPC	Forest Carbon Partnership Facility [of the World Bank]	PROCAMPO	Direct Farm Aid Program
FIF/P	Forest Investment Fund/Program	PROCYMAF	Community Forest Development Program
FIRA	Trusts Instituted in Relation to Agriculture	PROFEPA	Federal Environmental Protection Agency
FMCN	Mexican Fund for Nature Conservancy	PROGAN	Program for Sustainable Livestock Production and Cattle and Poultry Ordering (formerly Livestock Productivity Incentives Program)
FRA	Global Forest Resources Assessment, of the FAO		
GAIA	Autonomous Environmental Research Group	PSA	[Program of] Payment for Environmental Services
GEA	Grupo de Estudios Ambientales, AC	RED	Reduction of Emissions from Deforestation
GEF	Global Environmental Fund	REDD	Reduction of Emissions from Deforestation and Forest Degradation
GHG	Greenhouse Gases		
GEO	Group on Earth Observation	REDD+	Reduction of Emissions from Deforestation and Forest Degradation in developing countries + conservation, sustainable forest management, and increase of forest carbon reserves
GTREDD+	REDD+ Working Group		
IFAI	Federal Institute for Access to Information y and Data Protection		
		Red MOCAF	Red Mexicana de Organizaciones Campesinas Forestales, AC
INE	National Ecology Institute		
INEGI	National Institute of Statistics and Geography	RITA	Red Indigena de Turismo de Mexico, AC
IPCC/PICC	Intergovernmental Panel on Climate Change	R-PP	Readiness Preparation Proposal for REDD+
JIRA	Ayuquila River Inter-Municipal Counsel	SAGARPA	Ministry of Agriculture, Livestock, Rural Development, Fisheries, and Food
LGDFS	General Law on Sustainable Forest Development		
LDRS	Law on Sustainable Rural Development	SAO	Cooperativa de Servicios Ambientales de Oaxaca, AC
LGEEPA	General LAW on Ecological Balance and Environmental Protection	SCT	Ministry of Communications and Transport
		SE	Ministry of Economy
LULUCF	Land Use, Land Use Change, and Forestry	SECTUR	Ministry of Tourism
[sector]		SEDESOL	Ministry of Social Development
CDM	Clean Development Mechanisms	SEGOB	Ministry of the Interior
MRV	[Systems for] Measurement/ Monitoring, Reporting, and Verification	SEMAHN	Ministry of Environment and Natural History
		SEMARNAT	Ministry of Environment and Natural Resources
Natura/CP	Natura/Conciencia Planetaria, AC	SENER	Ministry of Energy
Natura Mexicana	Natura y Ecosystems Mexicanos, AC	SHCP	Ministry of Finance and Public Credit
WMO	World Meteorological Organization	SIAP	Agro-Alimentary and Fisheries Information Service
NGO	Non-Governmental Organizations	SRA	Ministry of Agrarian Reform
PA	Agrarian Law Enforcement Agency	SRE	Ministry of Foreign Affairs
PEC	Concurrent Special Program	TNC	The Nature Conservancy
PECC	Special Program on Climate Change 2009-2012	UNAM	Universidad Nacional Autónoma de México
PEMEX	Petroleos Mexicanos	UN-REDD	United Nations Program for Cooperation on Reduction of Emissions from Deforestation and Forest Degradation in Developing Countries
PEF	Strategic Forest Program for Mexico 2025		
PND	National Development Plan	USAID	United States Agency for International Development in Mexico
UNDP	United Nations Development Program		
UNEP	United Nations Environment Program	WWF	World Wildlife Fund





BIBLIOGRAPHY

- Angelsen, A. (ed.). 2008. *Moving ahead with REDD: Issues, options and implications*. CIFOR, Bogor, Indonesia.
- Angelsen, A. 2009. *Arborvitae*. *The IUCN Forest Conservation Programme Newsletter*, Issue 40.
- Angelsen, A., et al. (eds.). 2009. *Realizing REDD+: National strategy and policy options*. CIFOR, Bogor, Indonesia.
- Angelsen, A., et al. 2009. *Reducing Emissions from Deforestation and Forest Degradation (REDD): An Options Assessment Report*. The Meridian Institute. <http://www.REDD-OAR.org>.
- Arias, D. and K. Covarrubias. 2006. *Agricultural insurance in Mesoamerica: an opportunity to deepen rural financial markets*. InterAmerican Development Bank, Economic and Sector Study Series, RE2-06-006.
- Bland, S. 2010. "A private sector role in REDD?" In: *Environmental Finance*. July-August 2010.
- Boege, E. 2008. *El patrimonio biocultural de los pueblos indígenas de México. Hacia la conservación in situ de la biodiversidad y agrobiodiversidad en los territorios indígenas*. INAH, CDI, Mexico.
- CCAR. 2010. *Forest Project Protocol*. California Climate Action Reserve.
- CEIBA-AID. 2010. *Aplicación de mecanismos de REDD en ejidos y comunidades de México*. Contract: EEM-I-00-07-00004-00.
- CICC. 2007. *Estrategia Nacional de Cambio Climático*. Intersecretarial Commission on Climate Change, Technical Secretariat. SEMARNAT, Mexico. www.semarnat.gob.mx/queessemarnat/politica_ambiental/cambioclimatico/Pages/estrategia.aspx.
- CIFOR. 2009. *Simply REDD: CIFOR's Guide to forests, climate change and REDD*. Indonesia. www.cifor.cgiar.org.
- Climate Investment Funds. 2010. FIP Expert Group: Recommendations for Additional Pilots under the FIP. Washington, D.C. FIP/SC.4/7. June 24, 2010.
- CMNUCC. 2002. Report of the Conference of the Parties on its seventh session. Addendum. Part 2: Action taken by the Conference of the Parties. Marrakech, Morocco, October 29 – November 10, 2001. FCCC/CP/2001/13/Add.1. Bonn, Germany.
- CMNUCC. 2006. Report from a seminar on reducing emissions from deforestation in developing countries. FCCC/SBSTA/2006/10.
- CMNUCC. 2007. Decision 1/CP.13, Bali Plan of Action. FCCC/CP/2007/6/Add.1. <http://unfccc.int/resource/docs/2007/cop13/spa/06a01s.pdf#page=3>.
- CMNUCC. 2008a. Report of the Conference of the Parties on its 13th period of sessions, held in Bali on December 3-15, 2007. FCCC/CP/2007/6/Add.1. March 14, 2008.
- CMNUCC. 2008b. Report of the workshop on methodological issues related to reducing emissions from defo-

- restoration and forest degradation in developing countries.
- CMNUCC. 2009a. Fact sheet: The need for mitigation. November 2009. http://unfccc.int/files/press/backgrounders/application/pdf/press_factsh_mitigation.pdf.
- CMNUCC. 2009b. Report of the meeting of experts on methodological issues related to reference emissions levels and other reference levels. FCCC/SBSTA/2009/2.
- CMNUCC. 2009c. Cost of implementing methodologies and monitoring systems relating to estimates of emissions from deforestation and forest degradation, the assessment of carbon stocks and greenhouse gas emissions from changes in forest cover, and the enhancement of forest carbon stocks. Technical paper. FCCC/TP/2009/1.
- CMNUCC. 2009d. Decision 4/CP.15. Methodological orientation for activities to reduce emissions due to deforestation and forest degradation and the function of conservation, sustainable forest management and increase of forest carbon reserves in developing countries.
- CMNUCC. 2010. Report of the Conference of the Parties on its 15th period of sessions, held in Copenhagen on December 7-19, 2009. Addendum part two: measures adopted by the Conference of the Parties in its 15th period of sessions. FCCC/CP/2009/11/Add.1.
- CNUMAD. 1992. *Convention on Biological Diversity*. Rio de Janeiro, Brazil, June 3-14, 1992.
- CONAFOR. 2001. *Strategic Forest Program for Mexico 2025*. Mexico.
- CONAFOR. 2008. *Institutional Program 2007-2012 of the National Forest Commission*. Mexico.
- CONAFOR. 2010a. *National Report Mexico, 2010 (FRA, 2010) presented to the United Nations Food and Agriculture Organization (FAO)*.
- CONAFOR. 2010b. Readiness Preparation Proposal (R-PP) Template (2010), World Bank, CONAFOR-SEMARNAT.
- CONANP. 2010. *Climate Change Strategy for Protected Areas*. SEMARNAT-FMCN. USAID-USFS-Spanish Development Aid Agency.
- Davis, C. 2008. *Protecting Forests to Save the Climate: REDD Challenges and Opportunities*. World Resources Institute. EarthTrends, April 2008 Monthly Update. <http://earth-trends.wri.org/updates/node/303>.
- De Jong, B., et al. 2009. Inventario nacional de emisiones de gases de efecto invernadero 1990-2006, uso del suelo, cambio de uso del suelo y silvicultura. Report prepared for the National Ecology Institute. Mexico.
- Denman, K.L., et al. 2007. "Couplings between Changes in the Climate System and Biogeochemistry." In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, United Kingdom, USA.
- Dischel, R. (Ed.). 2002. *Climate risk and the weather market*. Risk Books, London.
- DOF. 2001. *Law on Sustainable Rural Development*. December 7, 2001. www.diputados.gob.mx/LeyesBiblio/pdf/235.pdf.
- DOF. 2005. *Regulations to the Law on Sustainable Rural Development*. February 21, 2005. <http://www.ordenjuridico.gob.mx/Federal/PE/APF/APC/SEMARNAT/Reglamentos/21022005.pdf>.
- DOF. 2005. *Resolution creating the Inter-Ministerial Commission on Climate Change*. April 25, 2005. www.dof.gob.mx/PDF/280809-VES.pdf.
- DOF. 2008. *General Law on Sustainable Forest Development. House of Deputies of the Mexican Federal Congress*. Last reform published in the DOF, 24-11-2008.
- EcoSecurities. 2009. *The Forest Carbon Offsetting Survey 2009*. Oxford.
- Ecosystem Marketplace. 2010. *Building bridges: state of the voluntary carbon markets 2010. A Report by Ecosystem Marketplace & Bloomberg New Energy Finance*. Washington, D.C.
- FAO. 2010. *The Global Forest Resources Assessment 2010*. FAO, Rome.
- Federal Government, Mexico. 2007. *National Development Plan 2007-2012*.
- Federal Government, Mexico. *Visión 2030. El México que queremos*. <http://www.vision2030.gob.mx>.
- Federal Government, Mexico. 2009. *Economía del Cambio Climático en México*. SHCP, SEMARNAT.
- Gonzalez G., E. 2003. Lecture given at the First Colloquium on Perception and communication of environmental risks. Mexico City. UNAM School of Psychology, September 2-4.
- Grassi, G., et al. 2008. Applying the conservativeness principle to REDD to deal with the uncertainties of the estimates. *Environ. Res. Lett.* 3: 1-12
- Habrouk, A. 2001. *Regeneración natural y restauración de la zona afectada por el gran incendio del Bages y Bergueda de 1994*. Doctoral thesis. Unit of Ecology-CREAF,



- Department of Animal and Plant Biology and Ecology, School of Sciences. Autonomous University of Barcelona. http://www.tdr.cesca.es/TESIS_UAB/AVAILABLE/TDX-1010102-142125/ah1de4.pdf.
- Harvey, C.A., et al. 2010. *What is needed to make REDD+ work on the ground? Lessons learned from pilot forest carbon initiatives*. Executive Summary and Recommendations. Conservation International. USA.
- INEGI. Cartography of Land Use and Vegetation, Series II, III y IV (1993, 2002, 2007).
- IPCC. 2000. *IPCC special report on land use, land-use change and forestry*. Cambridge University Press. United Kingdom.
- IPCC. 2001. *Third Assessment Report. The scientific basis. Group I of the Third Intergovernmental Group on Climate Change*. Cambridge University Press. United Kingdom.
- IPCC. 2003. *Good Practice Guidance for Land Use, Land-Use Change and Forestry*. Institute for Global Environmental Strategies (IGES), Japan. http://www.ipcc-nggip.iges.or.jp/public/gpoglucf/gpoglucf_contents.html.
- IPCC. 2007a. *Fourth Assessment Report: Climate Change 2007, (AR4)*. http://www.ipcc.ch/publications_and_data/publications_climate_change_2007_the_ar4_synthesis_report_spanish.htm.
- IPCC. 2007b. *Climate Change 2007: Synthesis report. Contribution of Work Groups I, II and III to the Fourth assessment report of the Intergovernmental Group of Experts on Climate Change*. Switzerland. http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_sp.pdf.
- IPCC. 2007c. *Climate change 2007: mitigation contribution of working group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. USA.
- IPCC, 2009. Expert Meeting on Detection and Attribution Related to Anthropogenic Climate Change. The World Meteorological Organization. Switzerland. <http://www.ipcc.ch/pdf/supporting-material/expert-meeting-detection-anthropogenic-2009-09.pdf>.
- Johns, T., et al. 2009. *An Overview of Readiness for REDD: A compilation of readiness activities prepared on behalf of the Forum on Readiness for REDD Multilateral and Bilateral Support for REDD (Version 2)*. The Woods Hole Research Center. USA.
- Klooster, D. 2003. "Forest Transitions in Mexico: Institutions and Forests in a Globalized Countryside". *The Professional Geographer*, 55(2):227-237.
- Kreimer, A., et al. 1999. *Managing disaster risk in Mexico: market incentives for mitigation investment*. Disaster Risk Management Series, Disaster Management facility, The World Bank. USA.
- Manson, R.H., et al. 2009. Perturbaciones y desastres naturales: impactos sobre las ecoregiones, la biodiversidad y el bienestar socioeconómico." In: *Capital natural de México*, vol. II: Estado de conservación y tendencias de cambio. CONABIO, Mexico.
- Neeff, T. and F. Ascui. 2009. *Four Lessons from Existing Carbon Markets for the Design of an Effective REDD Architecture*. EcoSecurities.
- NRCS. 1997. *National range and pasture handbook*. Natural Resources Conservation Service, United States Department of Agriculture. USA.
- ONU. 1992. *Rio Statement on Environment and Development*. UN.
- Parker, C., et al. 2009. *The Little REDD+ Book*. Global Canopy Foundation. Oxford, United Kingdom.
- Peña, A., et al. 2010. *Mapeo general de actores REDD en México*. Article under revision. PRISMA. El Salvador.
- Phillips, O.L., et al. 1998. "Changes in the Carbon Balance of Tropical Forest: Evidence from Long-Term Plots." *Science*, October 16: Vol. 282, No. 5388: 439-442.
- Plantinga, A. and K. Richards. 2008. *International Forest Carbon Sequestration in an International Agreement*. In *The Harvard Project on International Climate Agreements*. Harvard Kennedy School of Government. USA.
- PNUD. 1994. *Global Report on Human Development 1994. A new form of cooperation for development*. <http://indh.pnud.org.co/files/rec/nuevaformacooperacion1994.pdf>.
- Provencio, E. (coord.). 2010. *Aplicación de mecanismos de REDD+ en ejidos y comunidades de México*. CEIBA-US-AID.
- Robles G., M. 2009. *Percepción, comunicación y medio ambiente: argumentos y escenarios para el diseño de políticas de comunicación ambiental*. Doctoral thesis. Doctorate program in Environment and Development. Autonomous University of Baja California. Mexico.
- Rodríguez-García, E., et al. 2007. *Análisis de la regeneración natural de Pinus pinaster Ait. en los arenales de Almazán-Bayubas (Soria, España)*. In *Investigación Agraria: Sistemas y Recursos Forestales*, 16(1), 25-38. <http://recyt.fecyt.es/index.php/IA/article/viewFile/2222/1630>.
- SAGAR PA. 2007. Resolution Establishing Operating Rules for Programs in the Ministry of Agriculture, Livestock, Rural



- Development, Fisheries, and Food. *Official Gazette of the Federation*, December 31, 2007.
- Saldaña, S.O. 2006. *Stakeholders' views in reducing rural vulnerability to natural disasters in southern Mexico: hazard exposure, coping and adaptive capacity*. Advanced Institute on Vulnerability to Global Environmental Change, International Institute for Applied systems Analysis, Risk and Vulnerability Program, Laxenburg, Austria.
- Samuelson, P. 1954. "The Pure Theory of Public Expenditure." In: *Review of Economics and Statistics*. The MIT Press. USA.
- Sarukhán, J., et al. 2009. *Capital natural de México. Síntesis: conocimiento actual, evaluación y perspectivas de sustentabilidad*. National Commission for the Knowledge and Use of Biodiversity, Mexico. http://www.biodiversidad.gob.mx/pais/pdf/CapNatMex/Capital%20Natural%20de%20Mexico_Sintesis.pdf.
- Seagel, R., et al. 2007. *Model projections of an imminent transition to a more arid climate in Southwestern North America*. In *Science*, 316: 1181-1184.
- SEMARNAT. 2008. *National Strategy for Citizen Participation*. SEMARNAT. Mexico.
- SEMARNAT. 2008. *Sectoral Program on Environment and Natural Resources 2007-2012*. DOF, Section Four, January 21, 2008.
- SEMARNAT. 2009. *Special Program on Climate Change 2009-2012*. www.dof.gob.mx/nota_detalle.php?codigo=5107404&fecha=28/08/2009.
- SEMARNAT-INE. 2009. *Fourth National Communication on the UNFCCC*. Mexico. <http://cc2010.mx/assets/001/5140.pdf>.
- Serrada H., R. 2003. *Regeneración natural: situaciones, concepto, factores y evaluación*. *Cuad. Soc. Esp. Cien. For.* 15:11-15. <http://dialnet.unirioja.es/servlet/articulo?codigo=2976231>.
- SRA. 2007. *Programa Sectorial de Desarrollo Agrario 2007-2012*. Mexico.
- Stephens, B.B., et al. 2007. Weak Northern and Strong Tropical Land Carbon Uptake from Vertical Profiles of Atmospheric CO₂. *Science*, Vol. 316. no. 5832, pp. 1732-1735. DOI: 10.1126/science.1137004.
- Stern, N. 2006. *Stern Review on the Economics of Climate Change*. www.sternreview.org.uk.
- Sunderlin, W., et al. 2005. *Livelihoods, Forests, and Conservation in Developing Countries: an Overview*. *World Development* 33: 1383-1402.
- Terrestrial Carbon Group. 2008. *How to Include Terrestrial Carbon in Developing Nations in the Overall Climate Change Solution*. July 2008. www.terrestrialcarbon.org.
- Terrestrial Carbon Group. 2009. *Stated Positions of Countries and Country Groups*. October 2009. <http://www.terrestrialcarbon.org/site/DefaultSite/filesystem/documents/Country%20Stated%20Positions%20091103.pdf>.
- Torres R., M. 2001. Document commissioned by the Unit for Social Development and Education (UDSE) of the OEA for presentation at the Second Meeting of Ministers of Education of the InterAmerican Council for Integral Development. Uruguay. September 24-25, 2001.
- UNDP/FIELD. 2003. SIDS workshop on insurance and climate-related extreme weather events, Final Workshop Report. United Nations Development Program and Foundation for International Environmental Law and Development. Italy.
- UNFCCC. 2008. Challenges and opportunities for mitigation in the agricultural sector. Technical Paper. Advance Version. FCCC/TP/2008/8.
- Verchot, L. and Petkova, E. 2009. *The state of REDD negotiations: Consensus points, options for moving forward and research needs to support the process. A background document for the UN-REDD Programme sponsored support to regional groups*. Center for International Forestry Research. Indonesia.
- WRI. 2003. *Millennium Ecosystem Assessment, Ecosystems and Human Wellbeing: A Framework for Assessment*. Island Press, Washington, D.C.
- Yale University. *The Forests Dialogue*. http://unfccc.int/files/methods_science/redd/application/pdf/tfd_investing_in_redd-plus_es_recommendations.pdf.





