



# Manuel Estrada

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## Summarized bio

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I started working on climate change in 1996, as Chief of the Climate Change Department at the Climate Change Direction of the International Affairs Unit of the Ministry of Environment, Natural Resources and Fisheries (SEMARNAP) of Mexico. During this 4-year period I was in charge of putting together Mexico's first National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), as well as of designing and operating the Voluntary Challenge and Registry of Actions, focused on promoting voluntary emission reduction activities and Activities Implemented Jointly (AIJ) under the UNFCCC's pilot phase. Other outstanding activities were the review of Mexico's National Greenhouse Gas Emissions Inventory for 1990, together with the review and analysis of UNFCCC negotiating texts and country positions during the negotiation of the Kyoto Protocol.

Between 2000 and 2001 I worked as an independent consultant and as Academic Section Chief at the Research and Development Secretariat of the National Autonomous University of Mexico (UNAM). During these years I explored the potential for the implementation of Clean Development Mechanism (CDM) and voluntary markets projects, including by carrying out feasibility assessments in various sectors, as well as analyses on the opportunities of the forest and iron and steel sectors, and I contributed to the development of the National GHG emissions inventory of Mexico included in the country's second National Communication to the UNFCCC estimating the emissions from the industrial processes and agriculture sectors.

At the end of the year 2001 I became part of the International Affairs Coordination Unit of the Ministry of Environment and Natural Resources (SEMARNAT) of Mexico as Deputy Director on Climate Change, although after a few months I obtained the position of Director on Climate Change, Hemispheric Affairs and Forests. My main function was to coordinate SEMARNAT's position on international climate change negotiations (particularly those taking place under the UNFCCC) and to take part in them, as well as to negotiate alliances and agreements on the subject. My main achievements in this position were the establishment of a system for following up the UNFCCC negotiations that allowed for the identification of priority issues, the distribution of responsibilities among SEMARNAT and the generation of position documents for such issues. Furthermore, I was able to lead the production and negotiation of numerous joint submissions to the UNFCCC with a number of Latin American countries, which whom a permanent working group was established. I was the lead negotiator for Mexico in the UNFCCC negotiations on a number of issues including the modalities and procedures for the CDM and the other Kyoto Protocol flexibility mechanisms. In addition, I was responsible for negotiating bilateral cooperation agreements for the promotion of CDM projects in Mexico with nine countries, as well as for designing, negotiating and establishing the Mexican Committee for Emission Reduction and GHG Sequestration Projects, which originally acted as the National Designated Authority of Mexico for the CDM.

In 2005 I began working as external advisor to the President of the National Institute of Ecology of SEMARNAT, supporting the preparation of country position documents and providing advice to the Mexican Delegation during the UNFCCC negotiations until 2008 (after the 13 Conference of the Parties in Bali), particularly regarding the development of CDM projects in HFC-22 plants, the establishment of an incentives mechanism to avoid emissions from deforestation and forest degradation in developing countries (which would later become REDD+), future commitments and compliance, among other. A number of joint

submissions between Mexico and other Latin American countries, for instance on HFC-22 CDM projects and REDD+, were one of the results of this work.

From 2005 to date, I provide consultancy and advisory services on climate change as independent consultant. During this period, I have collaborated with several regional organizations working in Latin America, including the Tropical Agricultural Research and Higher Education Center (CATIE), the Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), the North American Commission for Environmental Cooperation (CEC) and the Interamerican Development Bank (IDB), and I have been involved in projects in a number of areas (going from climate policy, low carbon economies and the G8+5 Gleneagles Dialogue to energy and forestry CDM) with a variety of firms and organizations including Energeias, DEFRA, the Organisation Nationale des Forests (ONFi), TerraCarbon, Climate Focus, Silvestrum, the Verified Carbon Standard (VCS, now VERRA), the Center for International Forestry Research (CIFOR), the World Wildlife Fund (WWF) and the Rainforest Alliance, among others. I have provided advice to the Mexican Delegation and other Latin American countries in the preparation of national and regional submissions and during several sessions of the UNFCCC negotiations and have performed capacity building activities to enhance the participation of Latin American countries in the climate change negotiation process.

Furthermore, I have been part of the expert groups in charge of developing the Verified Carbon Standard requirements for AFOLU project activities, in particular, REDD, ARR and Wetland Rewetting and Conservation, as well as in the design of its Jurisdictional and Nested REDD and the elaboration of the associated Good Practice Guidance. I have participated in the validation of several methodologies under the VCS, as well as in the development and revision of a number of methodologies in the AFOLU sector.

I have also advised the Mexican Government on the design of its financial architecture for REDD+, including on the design of a national REDD+ fund and of a benefit distribution program, as well as on a strategy to promote the participation of the private sector in REDD+ activities and on the development of a proposal to obtain REDD+ funding from the Green Climate Fund. I also contributed to the methodological aspects of Mexico's Emissions Reduction Initiative (IRE) submitted to the FCPF Carbon Fund, by developing the analyses that served as the basis for the sections of the Emissions Reduction Program Document (ER-PD) on reversals and emissions displacement. Moreover, I participated in the review of the Climate Investments Funds' Forest Investment Program in Mexico.

Likewise, I have engaged in the assessment of Ecuador's, Colombia's and Mexico's capacities to obtain results-based incentives under KfW's REDD Early Movers Program, as well in the needs assessment for the participation of Peru in REDD+ results-based initiatives, and in the design of REDD+ registries in Ecuador and Perú.

In addition to my work as independent consultant, I am a member of the Roster of Experts of the UNFCCC and have participated in the review of national GHG emissions inventories from Annex I Parties to the UNFCCC and the Kyoto Protocol, in the LULUCF sector, as well as in the review of their National Communications and Biennial Reports (BR) with regards to the provision of financial support, technology transfer and capacity building to developing countries. I have also been involved in the UNFCCC technical assessment of the Forest Reference Emission Levels/Forest Reference Levels of Guyana, Costa Rica, Uganda and Madagascar, and in the technical analysis of the REDD+ technical annex to the Biennial Update Report (BUR) of Ecuador.

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## Summary of professional experience by topic

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### International climate change negotiations

#### International negotiation

- Advisor to the Mexican Delegation during the 16<sup>th</sup> Conference of the Parties to the UNFCCC held in Cancún, Mexico. Under contract with the National Forestry Commission of Mexico (CONAFOR).
  - Participation in the 28<sup>th</sup> session of the UNFCCC Subsidiary Bodies and Ad Hoc Working Groups (UNFCCC and KP) as advisor of the Delegation of Paraguay, particularly on issues related to, inter alia, REDD, Mechanisms, Article 9 of the KP. Bonn, Germany, June 2008.
  - Participation in the 27<sup>th</sup> session of the UNFCCC Subsidiary Bodies, the 13<sup>th</sup> session of the COP and 3<sup>rd</sup> session of the COP/MOP of the Kyoto Protocol as advisor to the
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Mexican Delegation. Bali, Indonesia, December 2007.

- Participation in the 25<sup>th</sup> session of the Subsidiary Bodies, the 12<sup>th</sup> session of the COP and the 2<sup>nd</sup> COP/MOP to the Kyoto Protocol as advisor to the Mexican Delegation. Nairobi, Kenya, November 2006.
- Participation in the 24<sup>th</sup> session of the Subsidiary Bodies of the UNFCCC as advisor to the Mexican Delegation. Bonn, Germany, 2006.
- Participation in the 23<sup>rd</sup> session of the Subsidiary Bodies of the UNFCCC, the 11<sup>th</sup> session of the COP and the 1<sup>st</sup> COP/MOP as advisor to the Mexican Delegation. Montreal, Canada, 2005.
- Participation in the 22<sup>nd</sup> session of the Subsidiary Bodies of the UNFCCC as advisor to the Mexican Delegation. Bonn, Germany, 2005.
- Participation in the 21<sup>st</sup> session of the Subsidiary Bodies and the 10<sup>th</sup> session of the COP. Buenos Aires, Argentina, 2004. Responsible for negotiating the aspects related to the simplified modalities and procedures for small-scale afforestation and reforestation projects under the CDM.
- Participation in the 20<sup>th</sup> session of the Subsidiary Bodies as Head of the Mexican Delegation and responsible for negotiating, among other, issues related to the Clean Development Mechanisms. Coordination of the work of the Latin America and the Caribbean Group (GRULAC) during the session. Bonn, Germany, 2004.
- Participation in the 19<sup>th</sup> session of the Subsidiary Bodies and 9<sup>th</sup> session of the Conference of the Parties as member of the Mexican Delegation in charge of negotiating, among other agenda items, Clean Development Mechanism-related issues (e.g. definition of modalities for small-scale modalities and procedures afforestation and reforestation projects). Milan, Italy, 2003.
- Participation in the 18<sup>th</sup> session of the Subsidiary Bodies as Head of the Mexican Delegation in charge of negotiating, among other agenda items, the definition of modalities and procedures for CDM projects in the forest sector. Bonn, Germany, 2003.
- Participation in the 17<sup>th</sup> session of the Subsidiary Bodies and the 8<sup>th</sup> session of the COP as a member of the Mexican Delegation in charge of negotiating, among other issues, the definition of modalities and procedures for CDM projects in the forest sector. New Delhi, India, 2002.
- Participation of the 16<sup>th</sup> session of the Subsidiary Bodies as Head of the Mexican Delegation in charge of negotiating, among other issues, the modalities and procedures for CDM projects in the forest sector. Bonn, Germany, 2002.
- Participation in the 15<sup>th</sup> session of the Subsidiary Bodies and the 7<sup>th</sup> session of the COP as a member of the Mexican Delegation in charge of negotiating, among other items, the modalities and procedures for the Clean Development Mechanism.

[Preparation and contribution to national and regional UNFCCC submissions](#)

- Elaboration of proposals for a Latin American submission to the United Nations Framework Convention on Climate Change (UNFCCC) on views on modalities and procedures for financing REDD+ results-based actions and considering activities related to decision 1/cp.16, paragraphs 68-70 and 72, which served as the basis for the document submitted to the UNFCCC by Colombia, Costa Rica, Honduras and Mexico. Under contract with the UN Economic Commission for Latin America and
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the Caribbean. February 2012.

- Participation, as SEMARNAT representative, in the VIII Latin American Seminar on Forest Projects and Avoided Deforestation, organized by the government of Costa Rica, and contribution to, and negotiation of, the joint submission resulting from it by Costa Rica on behalf of the Dominican Republic, Guatemala, Honduras, Mexico, Panamá, Paraguay and Perú, and later supported by Ecuador. 2007.
- Preparation of background papers on REDD for to facilitate definition of a Latin American submission to the UNFCCC for the UN Economic Commission for Latin America and the Caribbean (ECLAC). March 2008.
- Elaboration of a draft submission proposed by the National Institute of Ecology of Mexico on incentives for the reduction of GHG emissions from deforestation in developing countries, which later was accepted by the Ministry of Environment and Natural Resources (SEMARNAT) and submitted to the UNFCCC Secretariat. 2007.
- Preparation and coordination of the position of SEMARNAT on agenda items from the 24<sup>th</sup> session of the Subsidiary Bodies of the UNFCCC (among others, the development of CDM projects in HCFC-22 plants, incentives to reduce emissions from deforestation in developing countries, future commitments and compliance), as Advisor to the President of the National Institute of Ecology. 2006.
- Preparation and negotiation, as SEMARNAT representative, of the joint submission by Peru on behalf Colombia, Costa Rica, Ecuador, Mexico, Nicaragua and Panama on incentives to avoid GHG emissions from deforestation in developing countries. 2006.
- Preparation and coordination of the position of the National Institute of Ecology of SEMARNAT on agenda items of the 23<sup>rd</sup> session of the Subsidiary Bodies, the 11<sup>th</sup> session of the COP and the 1<sup>st</sup> COP/MOP of the Kyoto Protocol, including the reform of the CDM, CDM projects in HCFC-22 plants, incentives to reduce emissions from deforestation in developing countries, future commitments and compliance). 2005.
- Preparation, coordination and negotiation of the joint submission by Mexico, Argentina, Nicaragua and Panama on CDM projects for the destruction of HFC-23 in new plants. 2005.
- Contribution and negotiation of the joint submission by Peru on behalf of Bolivia, Colombia, Costa Rica, Chile, Guatemala, Mexico, Nicaragua, Panamá and Uruguay on simplified modalities and procedures and facilitation of small-scale afforestation and reforestation projects under the CDM. 2004.
- Coordination of the contribution of SEMARNAT to the Mexican positions on UNFCCC negotiations for all sessions between 2001 and December 2004.
- Elaboration of the submission by Mexico to the UNFCCC on modalities and procedures for LULUCF projects under the CDM. 2002.
- Review and analysis of submissions from key countries and negotiation documents during the negotiations of the Kyoto Protocol from 1996 on.

#### Analysis

- Co-author of the document *LULUCF in a future climate regime* with Donna Lee, Bryan Murray, Jim Penman, Charlotte Streck and Robert O'Sullivan. Published by the Meridian Institute. Under contract with Winrock. June 2014.
  - Elaboration of the analysis document *Latin American countries' climate diplomacy*
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*before and after COP15*. Under contract with ENERGEIAS. December 2013.

- Analysis and proposals for Latin American countries on verification processes applicable to the results of REDD+ activities and on methodological aspects related to non-carbon benefits in the context of the UNFCCC. Under contract with the UN Economic Commission for Latin America and the Caribbean. April 2013.
- Elaboration of the chapter *Options for nested approaches* as part of the *Latin American Sectoral Approach Project*, under contract with the Department of Environment, Food and Rural Affairs of the United Kingdom (DEFRA) and Energeias. August 2009.
- Preparation of discussion papers and participation as expert in the II Regional Latin American Seminar on Scaling up the Response to Climate Change organized by Energeias and ONFI. Panama City 11-13 of February 2009.
- Preparation of discussion papers and participation as expert in the XI Regional Latin American Seminar on AR CDM projects and in the 1<sup>st</sup> Regional Seminar on Scaling up the Response to Climate Change- program-based approaches and finance. Bogota, Colombia, 12-14 November 2008.
- Elaboration of the document *The Role of Regional Responses in the Context of the Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development and Other Climate-Relevant International Processes* and of a *Call to Bi-regional Action*. Under contract with Energeias. March 2008.
- Elaboration, for the Ministry of Environment of Mexico, of the *Background paper for the Second Ministerial Meeting of the Dialogue on Climate Change, Clean Energy and Sustainable Development of the G-8+5*, in collaboration with the Department of Environment, Food and Rural Affairs of the United Kingdom (DEFRA). September 2006.
- Analysis of the implications of the entry into force of the Kyoto Protocol for the operations of SEMPRA in Mexico. 2006.
- Review and collaboration to the elaboration of the document *Principles and Elements for the Position of Mexico in the negotiations of the Third Conference of the Parties to the UNFCCC*, prepared by Consultores en Decisiones Gubernamentales for the National Institute of Ecology of SEMARNAP. As Chief of the Climate Change Department of the National Institute of Ecology. 1997.

#### Capacity building

- Training for Peruvian negotiators on the history and current status of land use issues under the UNFCCC. Under contract with Conservation International. March 2014.
  - Participation, as expert on climate change financing, REDD+ and international climate change negotiation processes, in the GIZ project to strengthen the negotiating capacities of Honduras climate change delegation to the United Nations Framework Convention on Climate Change. Under contract with Carbon Decisions. September 2010.
  - Participation as expert and *Faculty Member* in the Seminars of the *Climate Leadership Programme* of Cambridge University carried out in Mexico City and Monterrey. Under contract with Cambridge University. September-October 2009.
  - Design and implementation of a Permanent Follow-up Scheme for the international climate negotiations within SEMARNAT, as external advisor to the President of the
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## REDD+

### Financial architecture

- Development of elements for the elaboration of a REDD+ Benefit Sharing Plan for the Emissions Reduction Initiative of Mexico. For the National Forestry Commission of Mexico (CONAFOR) under contract with the M-REDD+ Alliance.
- Support to the Mexican Government (CONAFOR) for the development of an operational proposal for a national financial forest carbon instrument to channel REDD+ results-based payments in the framework of rural sustainable development. 2015
- Diagnosis of the status of existing finance and investment sources and instruments in the rural sector in Mexico and alternatives for integrating and managing REDD+ funding – background study for the development of the financing chapter of the Mexican Strategy on REDD+. Under contract with Factor Económico Integral for the National Forestry Commission of Mexico (CONAFOR). 2011.

### Methodological issues

- Identification and assessment of emissions displacement and reversals risks in the framework of Mexico's Emissions Reduction Initiative (Mexico's ER-PD for the FCPF Carbon Fund). For the National Forestry Commission of Mexico (CONAFOR) under contract with UNDP Mexico. 2015.
- Expert review of the documents describing the methodological protocols and the results of Chile's Forest Reference Emission Levels and Forest Reference Levels (FREL/FRL). Under contract with Winrock International. 2015.

### REDD+ Registries

- Peru's REDD+ Registry: conceptual technical support for the design of the national REDD+ registry and elaboration of an operative proposal for its implementation. Under contract with Climate Focus. 2014.
- Design of an interim national REDD+ registry and forest carbon accounting rules for Ecuador. Under contract with GIZ. July 2014.

### Strategy

- Analysis, advice and development of a strategy to involve the private sector in REDD+ activities in Mexico in the framework of the Binational Cooperation Project Mexico-Chile on forests and climate change. Under contract with CONAFOR. 2017-2018.

### Assessments

- Development of a pre-feasibility study on the opportunities to implement a REDD Early Movers Program in Mexico. For KfW. 2017.
  - Peru: Assessment of needs to participate in REDD+ results-based payments (KfW's REM, the FCPF's Carbon Fund, the UNFCCC and Norway's NICFI). Under contract with FAO. 2016.
  - Participation in the feasibility study on results-based payments for REDD+ activities in Colombia under the de KfW Entwicklungsbank program REDD Early Movers, particularly regarding the aspects related to reference emission levels, MRV, leakage, non-permanence, emission reductions estimations and country
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contribution and registries. For KfW under contract with Climate Focus. July 2014.

- Participation in the feasibility study on results-based payments for REDD+ activities in Ecuador under the de KfW Entwicklungsbank program REDD Early Movers, particularly regarding the aspects related to reference emission levels, MRV, leakage, emission reductions estimations and country contribution and registries. For KfW under contract with Climate Focus. August 2013.

#### Analysis

- Review of the Forest Value Chains country case studies and business cases Mexico, Colombia and Peru. For UNIQUE. Under contract with Climate Focus. 2016.
  - Contribution to the assessment of results-based schemes. Under contract with Climate Focus. 2016.
  - Contribution as finance and Latin American specialist and author, to the document *Financing Land Use Mitigation: A Practical Guide for Decision Makers*. Streck, C., Murray, B., Aquino, A., Durschinger, L., Estrada, M., Parker C., and Zeleke, A. Under contract with Winrock Internacional. 2015.
  - Elaboration of a comparative study on the conditions and potential for REDD+ in 26 countries of Latin America, Africa and South-East Asia and recommendations for the activities of the German Cooperation Agency (GIZ). The Study included the assessment of governance, mitigation potential, private sector attractiveness and rural minorities circumstances in such countries Under contract with Silvestrum. June 2011.
  - Contribution as co-author to the discussion paper *National Financial Architecture for REDD for the Forest Carbon Finance Summit 2010: Getting To Scale, Getting Results*. Organized by WWF, Duke University and Harvard Law School. Washington, DC, February 25-27, 2010. Co-authored by Charlotte Streck, Carina Bracer and Michael Coren. For WWF under contract with Climate Focus.
  - Article *Not ready for REDD?* co-authored with Esteve Corbera, Researcher of the Tyndall Centre for Climate Change Research, for the Science and Development Network (Sci-Dev Net). Published online on the 21<sup>st</sup> October 2009.
  - Co-author, with Lucio Pedroni, Charlotte Streck and Michael Dutschke of the article: *Creating incentives for avoiding further deforestation: the nested approach*. *Climate Policy* 9 (2009) 207–220.
  - Elaboration, with Esteve Corbera, researcher from the Tyndall Centre for Climate Change Research, of the presentation: *REDD in Mexico: An overview of the issues*. Workshop *The Effects of REDD on Local Governance and Livelihoods*. School of International Development, University of East Anglia. 6-7 of April 2009.
  - Elaboration, with Esteve Corbera, researcher from the Tyndall Centre for Climate Change Research, of the discussion document *Mexico's forest policy and REDD. Background information*. Workshop: *The Effects of REDD on Local Governance and Livelihoods*. School of International Development, University of East Anglia. April 2009.
  - Elaboration, under contract with the Universidad de East Anglia, of the *Tyndall Working Paper 115 Reducing greenhouse gas emissions from deforestation in developing countries: revisiting the assumptions*, co-authored with Esteve Corbera and Katrina Brown (Tyndall Centre for Climate Change Research, UK, School of Development Studies, University of East Anglia, Norwich, UK). September 2007.
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- Co-author, with Lucio Pedroni (CATIE), Charlotte Streck (Climate Focus) and Michael Dutschke (BioCarbon), of the document. *The nested approach: A proposal to address GHG emissions from deforestation in developing countries within the framework of the international climate change regime*. May 2007.

#### [Capacity Building](#)

- Technical support to CONAFOR for capacity building related to GHG emissions inventories at the state level for the LULUCF sector – training for state-level verifiers of REDD+ results and establishment of a REDD+ reporting and verification framework. Under contract with UNDP. 2015.
- Training of Ecuadorian government officials as part of the Property Rights and Resource Governance Program (PRRGP) Task 2.4, Training for National Decision Makers (Latin America) for USAID. Under contract with ARD, Inc./Tetratech. June 2011.

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#### GHG mitigation projects and carbon markets

#### [Feasibility studies](#)

- Coordinator of the Project *Climate Change and Biodiversity: Incorporating biodiversity conservation through avoided/reduced deforestation in Colombia's Andes-Amazon Piedmont*, which included the assessment of the feasibility of carrying out REDD projects in the Pasto-Mocoa region and the evaluation of existing methodologies applicable to potential projects. Under contract with Carbon Decisions for the Interamerican Development Bank. August 2009.
- Feasibility assessment for the Clean Development Mechanism (including the elaboration of a Project Idea Note (PIN), the identification of methodologies and their application, the development of a baseline, the use of the additionality tool and the estimation of emission reductions and potential income from the sale of carbon credits) of the geothermal project Los Azufres III in Michoacán, Mexico, for West Japan Engineering Consultants – Japan Bank for International Cooperation (JBIC). April 2007.
- Feasibility assessment for the CDM (including the elaboration of a Project Idea Note (PIN), the identification of methodologies and their application, the development of a baseline, the use of the additionality tool and the estimation of emission reductions and potential income from the sale of carbon credits) of the geothermal project Cerro Prieto V in Baja California, Mexico, for West Japan Engineering Consultants – Japan Bank for International Cooperation (JBIC). February 2006.
- CDM feasibility assessment for the treatment of waste water from the LALA Group operations in Irapuato, Guanajuato and Tecate, Baja California, in Mexico. June 2005.
- Feasibility assessment for the CDM (including the elaboration of a Project Idea Note (PIN), the identification of methodologies and their application, the development of a baseline, the use of the additionality tool and the estimation of emission reductions and potential income from the sale of carbon credits) of the geothermal project Cerritos Colorados for West Japan Engineering Consultants – Japan Bank for International Cooperation (JBIC). 2005.
- Assessment of the environmental impacts (focused on the climate change impacts and benefits, particularly the reduction in carbon dioxide emissions) of the Cold-Pack project. 2000.
- Elaboration of a feasibility study on the capacity of bamboo to sequester carbon and promote sustainable development in Veracruz, Mexico. For BAMBUVER, A. C. 1999.

#### [Institutional development](#)

- Design, negotiation and establishment of the Mexican Committee for Emissions
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Reductions and GHG Sequestration Projects, which originally acted as the CDM Mexican Designated Authority. As Climate Change Director of the International Affairs Coordination Unit of SEMARNAT. 2004.

- Negotiation of several Cooperation Agreements and Memoranda of Understanding on CDM activities, including six signed in 2004, with the Netherlands, Canada, Italy, France, Spain and the Japan Bank for International Cooperation (JBIC). As Climate Change Director of the International Affairs Coordination Unit of SEMARNAT.
- Creation and pilot implementation of the *Voluntary Challenge and Registry*, aimed at promoting voluntary emissions reduction activities and Activities Implemented Jointly (AIJ) in Mexico. As Chief of the Climate Change Department of the National Institute of Ecology of SEMARNAT. 1996.

#### Carbon markets

- Briefing on the status and opportunities for REDD+ and voluntary carbon markets in the forest sector in Argentina. Under contract with UN-REDD Argentina. 2017.
- Assistance in the development of potential international policy scenarios on climate change and forest carbon credits offer under the CDM and generated through REDD activities. For Point Carbon, under contract with TerraCarbon. July 2008.
- Elaboration, under contract with the University of East Anglia, of the *Tyndall Working Paper 116 How do regulated and voluntary carbon-offset schemes compare?* Co-authored with Esteve Corbera and Katrina Brown (Tyndall Centre for Climate Change Research, UK, School of Development Studies, University of East Anglia, Norwich, UK). May 2008.

#### Advice

- Assistance in the acquisition of carbon credits from forest projects in Latin America under contract with TerraCarbon. 2007-2008.
- Development of the project *Advice to Mexican government entities (authorities and development banks) on opportunities in the framework of the Clean Development Mechanism of the Kyoto Protocol*, prepared for the Interamerican Development Bank. January 2007.

#### Analysis

- Chapter on the potential of carbon offsetting projects in the forestry sector for poverty reduction in developing countries, together with Esteve Corbera, in the book "Ecology and Poverty Alleviation" published by Springer. 2012.
  - Participation in the project *proyecto EcoLogic Development Fund: Proposal to assist with the development of a Business and Marketing Plan for the CarbonPlus Program*. Prepared by Terracarbon for Ecologic. December 2009.
  - Review of a report on temporary credits from afforestation and reforestation CDM projects prepared by TerraCarbon for the BioCarbon Fund. February 2009.
  - Review of the contents and proposal of additions and improvements for the Toolbox of the Forest Carbon Portal of the Ecosystems Marketplace. November 2008.
  - Review of the electronic resources available in Spanish on issues related to the CDM of interest to Ibero-american decision makers. Developed for the Interamerican Development Bank under contract with Energieas. December 2008.
  - Development of the project *Evaluation of the operations for the mitigation of GHG*
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*emissions in swine farms in Mexico*, under contract with ICF Consulting, Ltd. June 2006.

- National consultant (Mexico) for the pilot project *Austria-UNIDO Support for the Development and Identification of CDM projects in the Industrial Sector in Mexico, South Africa and Vietnam*. 2006.
- Lead Author, with Dr. Edmundo de Alba, of the chapters on opportunities for carbon sequestration/emissions reductions in Mexico's forestry and iron and steel sectors of the project *Opportunities for Small and Medium-Sized Companies in Mexico to Participate in the Clean Development Mechanism (CDM)*, prepared for the North American Commission for Environmental Cooperation (CEC) in coordination with the Center for Clean Air Policy (CCAP) and Eenergy International Corporation (EIC), 2000.
- Estimation of the emission reductions and elaboration of reports for the World Bank of the ILUMEX projects for 1997 (in collaboration with Alice Le Blanc, private consultant) and for 1998 (in collaboration with Dr. Juan Quintanilla from the National Autonomous University of Mexico), as Chief of the Climate Change Department of the National Institute of Ecology of SEMARNAP.

#### Capacity building

- Instructor/expert in the initiative *Improvement of Monitoring, Reporting and Verification (MRV) capacity at REDD+ project sites* to build capacities on REDD+ baseline and monitoring methodologies and MRV in 20 key existing project sites identified by CIFOR in three regions: Africa, Asia and Latin America and generate materials to facilitate the implementation of new REDD+ projects and to enhance the quality of existing ones. Under contract with CIFOR, 2011-2012.
- Instructor in the Seminar-workshop *REDD-Methodologies, experiences and perspectives in Latin America*, organized by CATIE and INWENT. 26-30 of January 2009.
- Design, co-organization and facilitation of the workshop/consultation *Development of carbon sequestration projects in Mexico: Lessons learned and steps to follow*. Organized by Reforestamos Mexico, Bancomext – Mexican Carbon Fund (FOMECAR) and Financiera Rural. November 2008.
- Instructor in the *International REDD Training Course*, organized by CATIE 27-31 October 2008.
- Training course on the international climate change negotiations and the modalities and procedures for forest projects under the CDM for Servicios Ambientales de Oaxaca, A. C. November 2005.
- Training course on forest projects under the CDM for the National Forestry Commission of Mexico (CONAFOR). Guadalajara, Jalisco, April 2005.
- Collaboration with Dr. Edmundo de Alba in the project *United Nations Capacity Building Needs Assessment for CDM Projects*, developed by the United Nations Institute on Training and Research (UNITAR) and the Centro Andino para la Economía en el Medio Ambiente (CAEMA), 2000.

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#### Development of standards

#### **Standards and methodologies for mitigation (offsets) projects**

- Participation in the development of the Verified Carbon Standard Jurisdictional and Nested Initiative standard as lead technical expert. Led the group of experts on legal issues and government approvals and participated in the group of experts on baselines. Under contract with Climate Focus and the Verified Carbon Standard
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Association. June – December 2011.

- Contribution to the development of a standard for GHG emissions reduction projects in peatlands, including the elaboration of guidelines and methodological tools required by the VCS. For Silvestrum under contract with TerraCarbon. April-July 2009.
- Participation, as member of the VCS Expert Groups on Afforestation, Reforestation and Revegetation (ARR) and Emissions Reduction from Deforestation (REDD) in the development of the Requirements for Agriculture, Forestry and Other Land Uses (AFOLU) of the Voluntary Carbon Standard (VCS, now VERRA). October 2007-June 2008.

#### Development of methodologies

- Assessment of the applicability of Verified Carbon Standard methodologies on Land Use, Land Use Change and Forestry to the Leuser Wetlands Restoration Program (Indonesia) and to the Leuser High Lands REDD+ Program. Under contract with Silvestrum. February 2012
- Elaboration of the manual “Standards and methods available for estimating project-level REDD+ carbon benefits: reference guide for project developers” for CIFOR. Published as CIFOR Working Paper 52. January 2011.
- Contribution to the development of a methodology for emissions reduction projects in peatlands to support the development of a project by the Royal Society for the Protection of Birds (RSPB) in Belarus. For Silvestrum under contract with TerraCarbon. April-July 2009.
- Review of a baseline and monitoring methodology for emissions reduction projects in peatlands in the United Kingdom. For Natural England under contract with TerraCarbon. June 2008.
- Development of a baseline and monitoring methodology for emissions reduction projects in tropical peatlands. For WWF under contract with TerraCarbon. June 2008.

#### Validation of methodologies

- Participation as expert in the validation, under the VCS, of the methodology *Carbon Accounting for Grouped Mosaic and Landscape-scale REDD Projects* proposed by Terra Global Capital. Under contract with Rainforest Alliance. May 2011.
  - Participation as expert in the validation process under the VCS of the adjustments proposed by Field Museum to the REDD Methodological Framework (REDD-MF) and the Unplanned Deforestation Baseline Module (BL-UP) of the Approved Methodology VM0007 (REDD+ Methodological Modules). Under contract with the Rainforest Alliance. February 2011.
  - Participation as expert in the validation under the VCS of the *Methodology for the Estimation of Emissions Reduction from Frontier Deforestation* developed by the Fundação Amazonas Sustentável. Under contract with the Rainforest Alliance. September 2010.
  - Participation as expert in the validation under the VCS of the baseline and monitoring methodology *Improved Forest Management – Logged to Protected Forest Methodology* versions 1.3 – December 2009 and March 2010, prepared by Green Collar Climate Solutions. Under contract with the Rainforest Alliance. March 2010.
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- Participation as expert in the validation under the VCS of the baseline and monitoring methodology proposed by the World Bank for projects reducing emissions from mosaic deforestation and degradation. Under contract with the Rainforest Alliance. September 2009.

#### [Methodological guidance](#)

- Review of the document "VCS Nesting Guidance". Under contract with Winrock International. 2016.
- Elaboration of initial drafts, and revision of subsequent ones, of a Good Practice Guidance document for the VCS Jurisdictional and Nested REDD+ Requirements, particularly regarding its sections on establishing baselines/reference levels; activity vs. land based accounting; deciding on scope of activities and pools; large scale activities (deforestation and infrastructure); use of UNFCCC baselines; relationship to nationally appropriate mitigation activities (NAMAs); and updating a baseline; grandparenting and leakage. Produced by the Forest Carbon, Markets and Communities (FCMC) Program. Under contract with Terra Global Capital. 2014.

#### [Analysis](#)

- Elaboration of initial drafts, and revision of subsequent ones, of two background papers that provide information and comparative analysis on different methodological approaches to address and account for leakage and Monitoring, Reporting and Verification under jurisdictional accounting. Produced by the Forest Carbon, Markets and Communities (FCMC) Program for the Forest Carbon Partnership Facility Carbon Fund (FCPF - CF). Under contract with Terra Global Capital. December 2012 – May 2013.
- Review of the document *National, sub-national and nested approaches: definition, implementation requirements and their implications* under contract with CIFOR. November 2008.
- Preparation of the report *Baseline and Monitoring Methodologies for peatlands – review of methodologies for projects reducing emissions in peatlands*. For Climate Focus, reviewed by Bernhard Schlamadinger (Joanneum Research/TerraCarbon LLC). September 2007.

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### GHG emissions inventories

#### [Development](#)

- Preparation of an *Action Plan for the Development of GHG Inventories and Emission Reductions Projects in the Mexican Industrial Sector*, for the National Institute of Ecology and the Mexico – US Foundation for Science (FUMEC). July 2006.
- Calculation of the emissions from the *Industry Processes and Livestock and Agriculture* sectors (following the IPCC guidelines and best practice reports) for *Mexico's National Greenhouse Gas Emissions Inventory* for 1994, 1996 and 1998, published as part of Mexico's second National Communication to the UNFCCC. 2000.

#### [Audit](#)

- Development of the Quality Control/Quality Assessment of Mexico's National GHG Emissions Inventory for 1990-2006, included in the 4<sup>th</sup> National Communication of Mexico to the United Nations Framework Convention on Climate Change, for the National Institute of Ecology – Ministry of Environment and Natural Resources of Mexico. December 2008.
  - Review of the National Greenhouse Gas Emissions Inventory for 1990 (1996 update) as Chief of the Climate Change Department of the National Institute of
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Ecology of SEMARNAP.

[Analysis](#)

- Lead author of the Chapters on *The Mexican Emissions Registry and Transfer of Pollutants* and on *The Interpretation of Information on Polluting Emissions* of the report *Manual for the Access and Use of Information on Polluting Emission* published by Mexican Citizen Presence and the North American Commission for Environmental Cooperation (CEC), 1999.

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Finance

[Preparation of proposals](#)

- Baseline analysis for the development of a proposal on results-based payments for REDD+ by Mexico to the Green Climate Fund (GCF). Under contract with UNDP. 2018.

[Design of environmental funds](#)

- Contribution to the desing and piloting of a Forest and Environment Fund as a tool for the financial architecture of Chile´s National Climate Change and Vegetational Resources. Under contract with Climate Focus. 2016.

[Analysis](#)

- Elaboration of the *WWF FCP Discussion Paper: How the Green Climate Fund (GCF) can operationalize the Warsaw Framework for REDD+*. Under contract with WWF. 2015.
- Elaboration of an analysis of relevant REDD+, finance and LULUCF issues in the context of the preparation of national contributions for Latin American countries. Under contract with ECLAC. May 2014.

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Country and program assessments

[Country assessments](#)

- Participation as national expert in the project *Mexico – preparation of Forests, Land Use, Land-use Change and Climate Change Assessment for USAID/Mexico*. Under contract with Tetrattech. 2016-2017.
- Participation as national expert in the elaboration of the report *Mexico – preparation of Forests, Land Use, Land-use Change and Climate Change Assessment for USAID/Mexico..* Under contract with Carbon Decisions for CIFOR. April 2010.

[Program assessments](#)

- Participation as national consultant in the first independent evaluation of the Climate Investment Funds, in particular, of the Forest Investment Program, in Mexico. Under contract with INDUFOR for ICF International. October 2013.

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Review and assessment processes under the UNFCCC

[Technical assessments of Forest Reference Emission Levels/Forest Reference Levels](#)

- [Madagascar](#) (2018 – in progress)
- [Uqanda](#) (2017 – in progress)
- [Costa Rica](#) (2016)
- [Guyana](#) (2015)

[Technical analysis of the technical annex on REDD+ of Biennial Update Reports \(BUR\)](#)

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- [Ecuador](#) (2017)

[Review of National Communications and Biennial Reports from Annex I Parties to the UNFCCC](#)

- Participation in the technical in-country review of the seventh National Communication and of the third Biennial Report of Norway as part of the UNFCCC Expert Review Team, as Lead Reviewer and reviewer of the information related to the provision of financial support, technology transfer and capacity building to developing country Parties (2018 – ongoing).
- Participation in the technical in-country [review of the sixth National Communication and of the first Biennial Report of Switzerland](#) as part of the UNFCCC Expert Review Team, in particular, regarding the information related to the provision of financial support, technology transfer and capacity building to developing country Parties (2014).

[Annex I GHG inventory reviews:](#)

- Participation in the ninth centralized review for [Hungary](#), [Lithuania](#), and [Romania](#) in the role of LULUCF expert (2014).
- Participation in the sixth centralized review covering the GHG inventories of [Croatia](#), [Greece](#), [Spain](#) and [Turkey](#), acting as LULUCF expert (2013).

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## Affiliations

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- Member of the [UNFCCC roster of experts](#). The UNFCCC Roster of Experts contains information on experts, who are nominated by their respective Governments through the National Focal Points of the Parties under the UNFCCC, to contribute to a number of processes mandated by the COP, CMP, CMA and the subsidiary bodies. These processes, among others, include the reviews of annual submissions of greenhouse gas (GHG) inventories and supplementary information under the Kyoto Protocol submitted by Annex I Parties, reviews of national communications and biennial reports submitted by Annex I Parties and technical analysis under the international consultation and analysis (ICA) process of biennial update reports (BURs) submitted by non-Annex I Parties. In addition, nominated experts to the UNFCCC Roster of Experts contribute to the technical assessment sessions of proposed forest reference emission levels and/or forest reference levels for the implementation of the activities referred to in decision 1/CP.16, paragraph 70 (REDD-plus), submitted on a voluntary basis by developing country Parties.
  - Member of the VERRA (Verified Carbon Standard (VCS)) [AFOLU Expert Assessment Panel](#). The Agriculture, Forests and Other Land Use (AFOLU) Expert Assessment Panel assesses applicants to determine whether they are qualified AFOLU experts who may be approved to assess AFOLU methodologies for use under the VCS Program. Three assessment panel members assess each applicant and make a recommendation to the VCSA. Assessment panel members are experts in their field and have been selected to ensure broad representation from business, academia, NGOs and GHG programs.
  - Technical Expert Lead of the VERRA ([Verified Carbon Standard \(VCS\)](#)) [Jurisdictional and Nested REDD+ Initiative](#). This initiative sets out the first global framework for crediting REDD+ activities from policies, programs and the projects “nested” within states, provinces or nations.
  - Member of the [Afforestation, Reforestation and Revegetation \(ARR\) expert group of VERRA \(formerly VCS\)](#). The ARR Expert Group provided the input for the elaboration of the first Guidance Documents for ARR projects under the VCS Standard.
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- Member of the [Reduced Emissions from Deforestation and Degradation \(REDD\) Expert Group of VERRA \(VCS\)](#). The REDD Expert Group provided the input for the elaboration of the first Guidance Documents for REDD projects under the VCS Standard.
  - [Member of the Peatland Rewetting and Conservation \(PRC\) Expert Group of VERRA \(VCS\)](#). The Peatland Technical Working Group developed existing VCS requirements for peatland rewetting and conservation projects (PRC), released in 2011. The working group was led by Netherlands-based project developer Silvestrum and composed of scientists and technical experts from VCS, TerraCarbon and Ernst Moritz Arndt University Greifswald. Peer reviewers provided detailed technical input to ensure all requirements are practical, conceptually sound and environmentally robust.
  - Senior Fellow, [European Capacity Building Initiative on International Climate Change Negotiations](#) (ecbi). The ecbi is an initiative for sustained capacity building in support of international climate change negotiations. The ecbi aims to promote a more level playing field between government delegations to the international climate change negotiations, and to facilitate mutual understanding and trust – both between European and developing countries and among the developing countries.
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## Education

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- Bachelors degree in Business Administration, Escuela Bancaria y Comercial, 1997.
  - UNFCCC training (courses taken for which I have passed exams allowing me to carry out the corresponding reviews and assessments):
    - UNFCCC Basic Course for the Review of Annex I Party Greenhouse Gas Inventories
    - LULUCF
    - National GHG Inventory Systems
    - Application of Adjustments under Article 5, paragraph 2 of the Kyoto Protocol (Examination for lead reviewers and LULUCF experts)
    - Modalities for the accounting of assigned amounts under Article 7.4 of the Kyoto Protocol
    - Review of National Registries and Information on Assigned Amounts
    - Review of activities under Article 3, paragraphs 3 and 4 of the Kyoto Protocol
    - General and cross-cutting aspects of the review of national communications and biennial reports of Annex I countries
    - Technical review of the provision of financial support, technology transfer and capacity building to developing countries
    - Technical review of targets and of policies and measures, their effects and their contribution to achieving those targets
    - Projections of GHG emissions
    - Technical review of non-Annex I countries Biennial Update Reports
    - Technical review of REDD+ technical annex of Biennial Update Reports
  - World Bank Institute e-course 'Policy Instruments for Low Emissions Development: From Design to Implementation'. October 2013.
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Languages (1: fluid; 5: basic)

LANGUAGE	READING	SPEAKING	WRITING
Spanish	1	1	1
English	1	1	1
French	2	3	3

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## Main publications

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- Financing Land Use Mitigation: A Practical Guide for Decision-Makers. Streck, C., Murray, B., Aquino, A., Durschinger, L., Estrada, M., Parker C., and Zeleke, A. Prepared with support from cooperative agreement # S-LMAQM-13-CA-1128 with U.S. Department of State. 2015.
  - WWF FCP Discussion Paper: How the Green Climate Fund (GCF) can operationalise the Warsaw Framework for REDD. 2015.
  - Status of Climate Finance and REDD+ under the UNFCCC. Estrada, M. and O'Sullivan R. USAID-supported Forest Carbon, Markets and Communities Program. 2014.
  - Land Use in a Future Climate Agreement. Estrada, M., Lee, D., Murray, B., O'Sullivan, R., Penman, J., and Streck, C. 2014.
  - Estrada, M. and Joseph, S. Chapter "Baselines and monitoring in local REDD+ projects" in Analysing REDD+: Challenges and choices Center for International Forestry Research (CIFOR), Bogor, Indonesia Authors: Angelsen, A.; Brockhaus, M.; Sunderlin, W.D.; Verchot, L.V. (eds). 2012.
  - Estrada, M. and Trines, E. Study comparing opportunities for REDD+ in 26 developing countries. Silvestrum report with conceptual input and financial support of GIZ. June, 2012.
  - Estrada, M. and Corbera, E., 2012. The potential of carbon offsetting projects in the forestry sector for poverty reduction in developing countries. A: De Clerck, F., Ingram, J.C., Rumbaitis del Rio, C. (eds) Integrating Ecology and Poverty Reduction. Springer Publishing Ltd. ISBN 978-1-4419-0632-8
  - Estrada, M. Standards and methods available for estimating project-level REDD+ carbon benefits. Reference guide for project developers. Center for International Forestry Research (CIFOR) Bogor, Indonesia. 2011.
  - CIFOR Infobrief Rights to forests and carbon under REDD+ initiatives in Latin America. Anne M Larson, Esteve Corbera, Peter Cronkleton, Chris van Dam, David Bray, Manuel Estrada, Peter May, Gabriel Medina, Guillermo Navarro and Pablo Pacheco. November 2010.
  - Article Rights to land, forests and carbon in REDD+: insights from Mexico, Brazil and Costa Rica. Corbera, E., Estrada, M., May, P., Navarro, G. and Pacheco, P. (2011). *Forests*, 2(1): 301-342.
  - Chapter The 'Nested Approach' to REDD+: How could it be Implemented? Lucio Pedroni, Manuel Estrada, Mariano Colini Cenamo in Pathways for Implementing REDD+ Experiences from Carbon Markets and Communities. UNEP Risø Centre. Perspectives Series 2010.
  - Article Much Still to be done (on REDD), on the implications of the AWG-LCA negotiating text on REDD for private investment. Included in the supplement Bonn climate talks of Trading Carbon published by Point Carbon. June 2010.
  - Chapter on México co-authored with Esteve Corbera, in the book REDD, forest governance and rural livelihoods: The emerging agenda. Edited by Oliver Springate-Baginski and Eva Wollenberg and published by CIFOR. 2010.
  - Article Reducing greenhouse gas emissions from deforestation and forest degradation in developing countries: revisiting the assumptions Esteve Corbera · Manuel Estrada · Katrina Brown. Published in *Climatic Change* DOI 10.1007/s10584-009-9773-1. Springer Science+Business Media B.V. 2009.
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- Corbera, E., Estrada, M. i K. Brown. How do regulated and voluntary carbon-offset schemes compare? Journal of Integrative Environmental Sciences, 2009.
  - Article Not ready for REDD? co-authored with Esteve Corbera for the Science and Development Network (Sci-Dev Net). Published online on the 21st October 2009.
  - Corbera, E. i M. Estrada, 2009. A cautionary note on reducing emissions from deforestation and forest degradation (REDD). Tyndall Briefing Note 39, Tyndall Centre, Norwich.
  - Co-authored the chapter Creating Incentives for Avoiding Further Deforestation: The Nested Approach, with Charlotte Streck, Lucio Pedroni and Michael Dutschke, included in the book Climate Change and Forests – Emerging Policy and Market Opportunities. Edited by Charlotte Streck, Robert O’Sullivan, Toby Jason-Smith and Richard Tarasofsky and published by Brookings Institution Press and Chatham House. 2008.
  - Co-authored the chapter A Latin American Perspective on Land Use, Land Use Change and Forestry Negotiations under the UNFCCC with Andrea García-Guerrero, included in the book Climate Change and Forests – Emerging Policy and Market Opportunities, Edited by Charlotte Streck, Robert O’Sullivan, Toby Jason-Smith and Richard Tarasofsky and published by Brookings Institution Press and Chatham House. 2008.
  - UNFCCC negotiations (pre-Kyoto to COP-9): what the process says about the politics of CDM-sinks. Co-authored with Emily Boyd, and Esteve Corbera. International Environmental Agreements. Accepted: 20 March 2008. Springer Science+Business Media B.V. 2008.
  - Estrada, M., Corbera, E. i K. Brown, 2007. Reducing greenhouse gas emissions from deforestation in developing countries: Revisiting the assumptions. Tyndall Centre Working Paper 115, Tyndall Centre, Norwich.
  - The politics of afforestation and reforestation activities at COP-9 and SB-20. written with Boyd, E., Corbera, E. and Gutiérrez, M. Tyndall Centre, Tyndall Briefing Note No. 12 (December 2004).
  - Climate Change: Origins and Consequences published in Revista Notas of the National Institute of Statistics, Geography and Informatics (INEGI), number 16, 2001.
  - “Climate Change: Sustainable Development, Equity and Market Mechanisms”, written with Carlos Gay in World Resources Review, vol. 13 no. 13, year 2001.
  - Opportunities for Fighting Climate Change in the Agricultural Sector, written with Carlos Gay and published in ASERCA-Claridades Agropecuarias magazine of the Ministry of Agriculture of Mexico (SAGARPA) number 91, march 2001.
  - Climate Change and its Effects, article published in Revista Notas of the National Institute of Statistics, Geography and Informatics (INEGI), number 8, 1999.
  - Joint Implementation in Mexico article published in the website of the National Institute of Ecology of Mexico, 1998.
  - Basic ideas about growing baselines in future commitments for non – Annex I countries written with Carlos Gay and prepared for the Workshop on Baselines organized by the U. N. Framework Convention on Climate Change held in Abidjan, Cote D’Ivoire, 1998.
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- Global Climate Change written with Julia Martínez and Cecilia Conde in Bien Común y Gobierno, Year 4, number 39, de February 1998.
  - Chapter on Climate Change in Habitat Destruction, written with Carlos Gay and published by the University Environmental Program of UNAM, 1998.
  - Chapter on Mexico in the National Climate Change Action Plans: Interim Report for Developing and Transition Countries, October 1997 written with Carlos Gay, Julia Martínez, Claudia Sheinbaum and Cecilia Conde, U. S. Country Studies Program.
  - Mitigation Analysis for Mexico .- written with Carlos Gay and Julia Martínez from the National Institute of Ecology and M. Bauer, O. Masera, J. Quintanilla, and C. Sheinbaum from UNAM in Global Climate Change Mitigation Assessment: Results for 14 Transitional and Developing Countries, August 1997, United States Country Studies Program.
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