

CARLOS F. MENA

Hayeck 209

Universidad San Francisco de Quito

Quito

Ecuador

+593 9844239927

cmena@usfq.edu.ec

www.cmena.org

Professor, School of Biological and Environmental Sciences
Co-Director, Galapagos Science Center (galapagossiencecenter.org)
Director, USFQ Institute of Geography (institutodegeografia.org)
Universidad San Francisco de Quito, Ecuador

Adjunct Professor, Department of Geography
University of North Carolina at Chapel Hill, USA

Bio-Sketch

Dr. Carlos F. Mena is the Founding Director of the USFQ Institute of Geography and founding Co-Director of the Galapagos Science Center, a joint research initiative from USFQ and the University of North Carolina at Chapel Hill (USA). He is Professor of Geography at the School of Biological and Environmental Sciences at USFQ and Adjunct Professor at the University of North Carolina at Chapel Hill. Carlos F. Mena is also founding member of the Association of Ecuadorian Geographers and is a member of the Ecuadorian Academy of Sciences. Carlos F. Mena obtained his Ph.D. in Geography from the University of North Carolina at Chapel Hill, in the United States and have been doing research in the Ecuadorian Amazon and Galapagos Islands for more than fifteen years.

Since 2010, developed and lead the Galapagos Science Center (GSC), in association with the University of North Carolina at Chapel Hill, which is an interdisciplinary research center in San Cristobal Island in the Galapagos Archipelago. The GSC is an administrative, logistic and scientific structure designed to promote research, education, and community development in the Galapagos Islands. The GSC dedicated in 2011 its own building (~1800 m²) that houses four unique laboratories: terrestrial ecology, marine ecology, micro- and molecular-biology, spatial analysis, and has spaces for community events and classrooms. GSC has developed more than 50 projects and more than 40 principal investigators have worked with the GSC.

The USFQ Institute of Geography, created by Carlos Mena is 2016, is an interdisciplinary space at the Universidad San Francisco de Quito to foster geographic research and education in Ecuador. It employs eight full time spatial analysts and encompasses twelve projects developed in the Amazon and Choco region of Ecuador. The Institute of Geography is developing graduate programs about environmental global change, geoinformatics and development and ecology. Carlos F. Mena is founding member of the Ecuadorian Association of Geographers and member of the Ecuadorian Academy of sciences.

Through a large portfolio of research projects, his research has covered topics of population and environment, remote sensing, geographic information science, complex adaptive systems, population geography, conservation, political ecology, citizen science, and community development. Carlos Mena's research has been funded by the Ecuadorian Government agencies like the Ministry of Culture and Ministry of Environment, US Government agencies, such as USAID, US Department of State, and other international organizations, such as the Netherlands Organization for Scientific Research (NWO), the US National Academy of Sciences, the Inter-American Institute for Global Change (IAI), among others. Carlos Mena has won several prestigious academic honors, including, the Earth Systems Science Fellowship from the US National Aeronautics Space Administration (NASA), the pre-Doctoral Traineeship from the National Institutes of Health (NIH) Fogarty International Center, the Anne U. White Fund Grant from the Association of American Geographers (AAG).

EDUCATION

University of North Carolina at Chapel Hill, USA

Ph.D., Geography, 2007

Graduate Certificate in International Development, 2006

Florida International University, Miami, FL, USA

M.Sc., Environmental Studies, 2001

Escuela Politécnica del Ejército, Quito, Ecuador

Geographic and Environmental Engineer, 1999

PROFESSIONAL EXPERIENCE

Universidad San Francisco de Quito, Ecuador

Professor, School of Biology and Environmental Sciences, 2008-Present

Co-Director, Galapagos Science Center, 2010-Present

Director, USFQ Institute of Geography, 2016

Director, Graduate Program in Tropical Ecology, 2009, 2014-2015.

University of North Carolina at Chapel Hill

Post-Doctoral Researcher, Department of Geography, Fall 2007

Teaching Fellow, Department of Geography, Fall 2006

Research Assistant, Department of Geography/ Carolina Population Center, 2002-2007

Florida International University.

Research Assistant, Andean Amazon Rivers Analysis and Management Project (AARAM), 2000-2002

EcoCiencia, Fundación de Estudios Ecológicos. Quito, Ecuador.

Geographical Analyst, 1998-1999

ACADEMIC HONORS

- Leading Author, IPCC Special Report on Climate Change and Land. *Inter-governmental Panel on Climate Change - IPCC*. 2017
- Leading Author, Assessment on Adaptation Actions to Climate Change in the RIOCC countries. *Iberoamerican Network of Climate Change Offices*. 2017
- Funding Member, *Ecuadorian Association of Geographers*, 2016
- Elected Member, *Ecuadorian Academy of Sciences*, 2014
- Journal of Geography Award. Best paper in Geographical Education. *US National Council for Geographical Education*. 2015.
- Member, Steering Committee 2008-2010. *International Geographic Union, Land Use and Land Cover Commission*.
- American Society for Photogrammetry and Remote Sensing, 2009 *ESRI Award for Best Paper in Geographic Information Systems* (2nd Place).
- Earth Systems Science Fellowship. *US National Aeronautics Space Administration (NASA)*, 2004-2007
- Pre-Doctoral Traineeship. *NIH Fogarty International Center - Carolina Population Center*, 2002-2004
- Anne U. White Fund Grant. *Association of American Geographers*, 2006
- Residency Grant. Mellon Foundation - *Carolina Population Center*, 2005
- Future Faculty Fellowship. *UNC Center for Teaching and Learning*, 2006
- Pre-dissertation Fieldwork Award. *UNC Institute Latin American Studies - The Tinker Foundation*, 2004
- NSF-IGERT Travel Grants. IGERT Program. *Carolina Population Center - National Science Foundation*, 2004-2007
- Latin America and Caribbean Scholarship, *Florida International University*, 2000-2001
- Programa de la Conservación de la Biodiversidad, *EcoCiencia, Fundación de Estudios Ecológicos*, Quito, Ecuador, 1998

PUBLICATIONS

BOOK SERIES

Walsh JS and **Mena CF**. Series Editors. 2013 – 2017. Social and Ecological Interactions in the Galapagos Islands. Springer Science and Business Media. New York. ISSN 2195-1055 (5 books produced).

EDITED BOOKS

Walsh SJ and **Mena CF**, Editors (2013) *Science and Conservation in the Galapagos Islands: Frameworks and Perspectives*. Springer Science & Business Media. New York.

Torres ML and **Mena CF**, Editors (2018) *Understanding Invasive Species in the Galapagos Islands: From the Molecular to the Landscape*. Springer Science & Business Media. New York.

PEER REVIEWED PUBLICATIONS

Mena, CF, Quiroga D, Walsh SJ. (In Press). Threats to sustainability in the Galapagos Islands: a socioecological perspective. In: *International Handbook of Geography and Sustainability* (F.O. Sarmiento and L.M. Frolich, Editors), Edward Elgar Publishing, UK

Pizzitutti F, Pan W, Feingold B, Zaitchik B, Alvarez C, **Mena CF** (2018). Out of the net: An agent-based model to study human movements influence on local-scale malaria transmission. *PloS One* (13)3: e0193493

Rivas-Torres G, Benitez FL, Rueda D, Sevilla C, **Mena CF**. (2018). Vegetation Map of the Galápagos: An Object-Oriented classification using LANDSAT-OLI and verification by UAVs to interpret native and invasive coverage in the Ecuadorian archipelago. *Progress in Physical Geography* 42(1):83-111

Benitez FL, **Mena CF**, Zurita-Arthos L. (2018). Urban Land Cover Change, in Ecologically Fragile Environments: the case of the Galapagos Islands, *Land* 7(21):1-19

Torres ML, **Mena CF**. (2018) Conclusion and Management Implications, in *Understanding Invasive Species in the Galapagos Islands: From the Molecular to the Landscape*, Torres ML and Mena CF (Editors). Springer Science & Business Media. New York.

Sampedro C, **Mena CF**. (2018) Comparison of pixel-based, principal components and object-oriented image classification approaches – a case study in the Agricultural area of San Cristobal Island, Galapagos Islands, Ecuador in *Understanding Invasive Species in the Galapagos Islands: From the Molecular to the Landscape*, Torres ML and Mena CF (Editors). Springer Science & Business Media. New York.

Mena CF, Martínez, P, Sampedro C, Laso F. (2017). Land Change Scenarios From the Expansion of the Extractive Frontier in the Ecuadorian Amazon: Carbon Emissions and Deforestation Using Road Network And Land Use Change Simulations. *Journal of Land Use Science* 12(6):477-492.

Sellers S, Bilborrow RE, Salinas V, **Mena CF**. (2017) Population and development in the Amazon: A longitudinal study of migrant settlers in Ecuador. *Acta Amazonica* 47(4):321-330.

Walsh SJ, Page PH, Brewington, Bradley JR, **Mena CF**. (2017). A Beach Vulnerability Framework for the Galapagos Islands: Fusion of World-View 2 Imagery, 3-D Laser Scanner Data & Unmanned Aerial Vehicles in *Comprehensive Remote Sensing: Societal Benefits*, Walsh SJ (Editor). Elsevier. Oxford, UK.

Mena CF, Sampedro C, Martinez PE, Encarnación A, Zambrano D. (2017). Remote Sensing of Oil Spills: Linking Community Monitoring and Satellite Image Processing in the Ecuadorian Amazon in *Comprehensive Remote Sensing: Societal Benefits*, Walsh SJ (Editor). Elsevier. Oxford, UK.

Pizzitutti F, Walsh SJ, Rindfuss RR, Reck G, Tippet R, Quiroga D, **Mena CF**. (2017). Scenario Planning for Tourism Management: A System Dynamics Simulation Approach Applied to the Galapagos Islands of Ecuador. *Journal of Sustainable Tourism* 25(8): 1117-1137

Walsh SJ and **Mena CF**. (2016). Coupled Human-Natural Systems: Interactions of Social, Terrestrial & Marine Sub-Systems in the Galapagos Islands. *Proceedings of the National Academy of Sciences PNAS*. October 10, 2016, doi: 10.1073/pnas.1604990113.

Pizzitutti, F, Pan W, Barbieri A, Miranda J, Feingold B, Guedes G, Alarcon-Valenzuela J, **Mena CF**. (2015). A validated agent-based model to study the spatial and temporal heterogeneities of malaria incidence in the rainforest environment. *Malaria Journal* 15:514

Cabrera P, **Mena CF**. (2014). Using Remote Sensing and a Cellular Automata-Markov Chains-GEOMOD model for the Quantification of the Future Spread of an Invasive Plant: A Case Study of Psidium guajava in Isabela Island, Galapagos. *International Journal of Geoinformatics* 10(3) 23-30.

Walsh SJ, Carter RW, Lieske S, Quiroga, F, **Mena CF**. (2014) Examining Threats to Iconic National Parks through Modeling Global Change, Biocomplexity, and Human Dynamics. *The George Wright Forum*, 31(3): 311–323

Lerner A, Rudel T., Schneider L, Mcdroddy M, Burbano D, **Mena CF**. (2015). The Spontaneous Emergence of Silvopastoral Landscapes in the Ecuadorian Amazon: Patterns and Processes. *Journal or Regional Environmental Change* 15 (1421).

Samonte-Tan G., Suman D, Mate J, Quiroga D, **Mena CF**, Catzim-Sanchez A, Fong P, Wang X. (2014). Governance is critical to managing coastal and marine

resources: effects of marine management areas. In Nunes P.A.L.D, Kumar P, and Dedeurwaerdere T (Editors) *Handbook on the Economics and Ecosystem Services and Biodiversity*. Edward Elgar Publishing. Oxon, UK.

Burbano D, **Mena CF**, Guarderas P, Vinueza L, Reck G (2014). Shifting Baselines in the Galapagos White Fin Fishery, Using Fisher's Anecdotes to Reassess Fisheries Management: The Case of the Galapagos Grouper in Denkinger J and Vinueza L (Eds) *The Galapagos Marine Reserve: A Dynamic Social–Ecological System*. Springer, New York, NY.

Pizzitutti F, **Mena CF**, Walsh SJ (2014). Agent-Based Model of touristic offers reservation in the Galapagos Islands. *Journal of Artificial Societies and Social Simulation* 17(1)14.

Arsel M, **Mena CF**, Pellegrini L, and Radhuber I (2014). Evolving Property Structures of Minerals: Reflections on how to Theorize 'Nationalization' in Bolivia and Ecuador' in Bavinck, M., Pellegrini, L. and Mostert, E. (eds.) *Conflict and Cooperation over Natural Resources – Conceptual Approaches*. CRC Press. Boca Raton, FL

Brewington L, Frizzelle B, Walsh SJ, **CF Mena**, and Sampedro (2014). Remote Sensing of the Marine Environment: Challenges and Opportunities in the Galapagos Islands of Ecuador in Denkinger J and Vinueza L (Eds) *The Galapagos Marine Reserve: A Dynamic Social–Ecological System*. Springer, New York.

Engie K, Walsh S.J, Brewington L, **Mena CF** (2013). Collaborative Learning & Global Education: Human-Environment Interactions in the Galápagos Islands, Ecuador. *Journal of Geography* 112(5): 179-192

Bilsborrow RE, **Mena CF**, Arguello (2012) Colombian Refugees in Ecuador: Sampling Scheme, Demographic Characteristics, and Migratory Patterns. *International Journal of Global Environmental Issues* 11(3/4): 271 - 298

Mena CF, Walsh SJ, Frizzelle FG, Xiaozheng Y, Malanson GP (2011) Land Use Change on Household Farms in the Ecuadorian Amazon: Design and Implementation of an Agent-Based Model. *Applied Geography* 31: 210-222.

Walsh SJ, Malanson GP, Brown DG, Messina JP, **Mena CF** (2011). Biocomplexity. In: *Handbook of Biogeography*, M. Blumler M, G. MacDonald, A. Millington, U. Schickhoff (Editors), Sage Publications, London.

Walsh SJ, McCleary A, Heumann B, Brewington L, Raczkowski E, **Mena CF**. (2010). Community Expansion and Infrastructure Development: Implications for Human Health and Environmental Quality in the Galápagos Islands of Ecuador. *Journal of Latin American Geography* 9(3): 137-159

Lu, F, Gray C, Bilsborrow RE, **Mena CF**, Erlieen CM, Bremner J, Barbieri A, and Walsh SJ (2010), Contrasting Colonist and Indigenous Impacts on Amazonian Forests. *Conservation Biology* 24 (3): 881 – 885

Brondizio ES, Cak A, Caldas M, **Mena CF**; Bilsborrow R, Fudemma CT, Moran EF, Batistella M, and Ludewigs T. 2010. Small Farmers and Deforestation in Amazônia. In M. Keller, M. Bustamante, J. Gash, and P. Silva Dias (eds.) *Amazônia and Global Change: A Synthesis of LBA Research*. World Scientific Publishing (American Geophysical Union, Geophysical Monograph Series 186). Pp. 117-143.

Walsh, SJ, **Mena CF**, DeHart J, Frizzelle FG (2009). Stylized environments and ABMs: educational tools for examining the causes and consequences of land use/land cover change. *Geocarto International*, 24: 1752-0762

Mena, CF (2008). Trajectories of Land Use and Land Cover in the Northern Ecuadorian Amazon: Temporal Composition, Spatial Configuration, and Probability of Change. *Photogrammetric Engineering and Remote Sensing* 74(6): 737-752

Walsh, SJ, Shao Y, **Mena CF**, McCleary A (2008). Integration of Hyperion Satellite Data and a Household Social Survey to Characterize the Causes and Consequences of Reforestation Patterns in the Northern Ecuadorian Amazon. *Photogrammetric Engineering and Remote Sensing* 74(6): 725-736

Walsh SJ, McCleary A, **Mena CF**, Tuttle J, Shao Y, Atkinson R, Gonzales A, (2008). Hyper-Spatial and Hyper-Spectral Remote Sensing of an Invasive Plant in the Galapagos National Park and Archipelago: Spatial Structure and Implications for Control. *Remote Sensing of the Environment* 112(5):1927-1941

Walsh SJ, Messina JP, **Mena CF**, Malanson GP, Page PH (2008). Complexity and Land Use Dynamics in the Northern Ecuadorian Amazon, *GeoForum* 39:867-878.

Rindfuss RR, Entwisle B, Walsh SJ, An L, Badenoch N, Brown DG, Deadman P, Evans TP, Fox J, Geoghegan J, Gutmann M, Kelly M, Linderman M, Liu J, Malanson G P, **Mena CF**, et al. (2008) "Land use change: complexity and comparisons" *Journal of Land Use Science* 3(1): 1 – 10

Rindfuss RR, Entwisle B, Walsh SJ, **Mena CF**, Erlieen CM, Gray CL (2007). Frontier Land Use Change: Synthesis and Next Steps, *Annals of the Association of American Geographers* 97(4): 739-754

Mena CF, Bilsborrow RE, McClain ME (2006). Socioeconomic Drivers of Deforestation in the Northern Ecuadorian Amazon. *Environmental Management* 37(6): 802-815.

Mena CF, Barbieri A, Walsh SJ, Erlien CM, Bilsborrow RE, Lu F (2006). Pressure on the Cuyabeno Wildlife Reserve: Development and Land Use/Cover Change in the Northern Ecuadorian Amazon. *World Development* 34(10): 1831-1849.

Messina J, Walsh SJ, **Mena CF**, Delamater P (2006). Land Tenure and Deforestation Patterns in the Ecuadorian Amazon: Conflicts in Land Conservation in Frontier Settings. *Applied Geography* 26(2): 113-128.

Erlien CM, Tuttle JP, McCleary AL, **Mena CF**, Walsh SJ (2006). Complexity Theory and Spatial Models of Land Use/Land Cover Dynamics: Implications of “What if” Scenarios for Education, Land Management, and Decision-Making, *Geocarto* 21(4):67-74.

NON-PEER REVIEWED PUBLICATIONS (Selected)

Walsh, SJ and **Mena CF**, (2018). Series Forward – Galapagos Book Series, Sustainable Energy Mix in Fragile Environments – Frameworks and Perspectives (M.E. Tyler, Guest Editor), Springer.

Walsh, SJ and **Mena CF**, (2018). Series Forward – Galapagos Book Series, Disease Ecology: Galapagos Birds & Their Parasites (P. G. Parker, Guest Editor), Springer.

Walsh, SJ and **Mena CF**, (2018). Series Forward – Galapagos Book Series, Understanding Invasive Species in the Galapagos Islands: From the Molecular to the Landscape (M.L. Torres & C.F. Mena, Guest Editors), Springer.

Walsh, SJ and **Mena CF**, (2014). Preface – Galapagos Book Series, Social and Ecological Interactions in the Galapagos Islands. In: Galapagos Marine Reserve: A Social-Ecological System (Denkinger, J. & Vinueza, L., Guest Editors), Springer

Melo C, **Mena CF**, Arsel M, Pellegrini L (2013). The State is dead, Long Live the State: Re-inserting the State in the Gold-mining Industry in Zamora-Chinchipec, Ecuador. CoCooN NEBE Working paper. www.iss.nl/nebe

Arsel M, **Mena CF**, Pellegrini L, Radhuber I (2013). Property Rights, nationalization and extractive industries in Bolivia and Ecuador. CoCooN NEBE Working paper. www.iss.nl/nebe

Quiroga D, **Mena CF**, Karrer L, Suzuki H, Guevara A, Murillo JC (2011). Dealing with Climate Change in the Galápagos: Adaptability of the Tourism and Fishing Sectors. In Climate Change Vulnerability Assessment of the Galápagos Islands, Larrea I and Di Carlo G (Eds.) WWF and Conservation International, USA. Pp: 81-108

Arsel M, Pellegrini L, **Mena CF**, Anda A (2011). Ecología Política de las Industrias Extractivas y el Desarrollo Dirigido por el Estado en Ecuador: Conflicto y Cooperación. FLACSO: Ventana A La Cooperacion N. 7, Febrero 2011

Echeverría H, Quiroga D, Mena C, Anda A (2011). Manual de Aplicación del derecho Penal Ambiental como Instrumento de Protección de las Áreas Naturales en Galápagos. Sea Shepherd, WWF, USFQ. Quito, Ecuador.

Mena CF (2011). Deforestación en el Norte de la Amazonía Ecuatoriana: del patron al proceso. *Revista Polémika* (2)5: 58-65

Frizzelle BG, Walsh SJ, Erlien CM, **Mena CF** (2004). Establishing Remote Sensing Control in a Frontier Environment: the Case of the Ecuadorian Amazon. *Earth Observation Magazine* 12 (7):20-24

Frizzelle BG, Walsh SJ, **Mena CF**, Erlien CM (2005). Land Use Change Patterns of Colonist and Indigenous groups in the Northern Ecuadorian Amazon: A Comparison of Landsat TM spectral and Spatial Analyses. Proceedings, *American Society for Photogrammetry and Remote Sensing*.

Mena CF (2001) Mapa de Uso de Suelo y Cobertura Vegetal del Parque Nacional Llanganates en *Biodiversidad del Parque Nacional Llanganates*, Vazquez M. (Editor). EcoCiencia. Quito

RESEARCH GRANTS AND CONTRACTS (Selected)

Mena CF. 2017-2019. *Mapping Urban Vulnerability and Resilience: Water, Structural Poverty and Social Cohesion in Esmeraldas City of Ecuador*. Secondary Cities Program. US State Department and the American Association of Geographers (AAG).

Pellegrini L, Arsel M, **Mena CF**, Orta M. 2015-2017. *Behavioral Responses to Information on contaminated Drinking Water: Evidencie from the Ecuadorian Amazon*. International Initiative for Impact Evaluation (3ie) and International Institute for Social Studies.

Pellegrini L, **Mena CF**, Arsel M, Orta M. 2015-2017. *Community Monitoring of Socio Environmental Liabilities with Advanced Technologies in Ecuador and Peru*. International Initiative for Impact Evaluation (3ie) and International Institute for Social Studies.

Barbieri A, **Mena CF**, Pan W, Miranda J, 2013-2017. *LUCLA – Land Use and Infectious Disease in Western Amazon*. Inter-American Institute for Global Change Research – IAI.

Bilsborrow RE and **Mena CF**. 2012-2015. *Improving University Education and Research on the Ecuadorian Amazon: A New Partnership*. USAID-Initiative for the Conservation for the Andean Amazon, University of North Carolina at Chapel Hill.

Murshed SM, Arsel M, Pellegrini L, **Mena CF**, van de Schoot T, Gruenberger J. *Nationalization of natural resources, cooperation and conflict in Bolivia and Ecuador*. 2010-2015. Netherlands Organization for Scientific Research.

Walsh, SJ, **Mena, CF**, Rindfuss RR, Quiroga D, Reck G, Valle C. 2013-2014. *Tourism Growth Scenarios and Impacts in the Galapagos Islands*. Galapagos National Park & World Wildlife Fund.

Mena CF, Walsh SJ (2011-2012; 2016-2017). *Modelamiento de los Impactos del Turismo en Galápagos*. Ministerio del Ambiente del Ecuador y WWF.

Mena, CF. 2011-2013, *Impacts of Glyphosate in the Ecuadorian Amazon*. Foley and Hoag, LLC and the Ecuadorian Government.

Mena CF. 2012-2015. *REDD based Forest Expansion, Food Consumption, and Reduced Emissions Agricultural Policies in the Ecuadorian Amazon*. US National Academies of Science, US National Science Foundation, USAID.

Mena CF. 2011-2012. *Spontaneous Silvopastoral Landscapes*. Rutgers University, US National Science Foundation.

Mena CF. 2011-2014. *Modeling Population-Environment Interactions in a World Heritage Site: Comparison of Statistical and Agent Based Modeling Approaches to Study Complex Systems*. University of North Carolina at Chapel Hill, James S. McDonnell Foundation.

Quiroga D, **Mena CF**. 2009-2010. *Assessment of the Vulnerability of Biodiversity and Related Well Being in the Galapagos Islands to Climate Change*. Conservation International and World Wildlife Fund.

Quiroga D, **Mena CF**. 2009. *Socioeconomic Effects of Climate Change in the Galapagos Islands: An Emphasis on the Marine Resources and Marine Reserve*. Conservation International.

Mena CF. 2010. *Design of the Territorial Information System for Ecuador's Patrimony*. 2010. Ministry of Coordination of Patrimony of Ecuador.

Mena CF. 2010. *Links between Invasive Species and Agriculture Abandonment in the Galapagos Islands*. USFQ-GAIAS Internal Seed Grant.

Mena CF. 2010. *Review of the Cartographic Processes in the Ecuadorian Institute of Census and Statistics*. United Nations Population Fund.

Mena CF. 2009. *Institutional Cartography of Culture of Ecuador*. Ministry of Culture of Ecuador, Spanish Cooperation Agency.

Mena CF. 2009. *Design of the Environmental Information Systems for the Galapagos National Park*. Galapagos National Park.

Mena CF. 2008. *Systematization of Information of the Protected Forest of Ecuador: Limits and Conflicts*. Ministry of Environment of Ecuador.

SCIENTIFIC REVIEWER

- United States National Science Foundation (NSF) - Geography and Regional Science Program
- National Secretariat of Science, Education and Technology (SENESCYT)
- Population and Environment (Editor Board)
- Geocarto International
- Journal of Environmental Management
- Journal of Earth Systems Science
- Development and Change
- Applied Geography
- Progress in Physical Geography

PROFESSIONAL ASSOCIATIONS

American Association of Geographers (AAG)
Population Association of America (PAA)
International Union for the Scientific Study of Population (IUSSP)