

NIGEL M. ASQUITH, Ph.D

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SUMMARY

- Ph.D. scientist with over 20 years experience researching and implementing development projects
- Extensive research program, most recently based out of Harvard's Kennedy School of Government, assessing feasibility of market based tools for poverty alleviation and environmental management.
- Proven experience in fund raising and donor/foundation relations: led Conservation International teams that accessed \$10.5 M in 2003 from USAID and CI/GEF/World Bank/MacArthur Foundation
- Founded Bolivian conservation NGO: guided NGO from initiation to becoming a 50-person \$1.5 M a year organization, raised \$9 M, managed donor relations, and helped set up 35 Municipal Water Conservation Funds that enrolled 450,000 acres into payments for environmental service schemes and created 2 million acres of new protected areas
- Directed transition of the \$17 M EcoFund Foundation from being a reactive small donor, to a strategic proactive conservation investor in environmental services in northern Ecuador
- Awarded and managed external grants from the EcoFund Foundation, Conservation International and the Bolivian Nature Foundation to Bolivian, Ecuadorian and Brazilian conservation and development NGOs
- Director of Kinship Conservation Fellows training program, and Assistant Director of Enviropreneur Institute at the Property and the Environment Research Center, teaching environmentalists how to use markets and incentives to improve natural resource management: additional teaching at Harvard and Duke
- Regional specialization in the tropical Andes: additional experience in Indonesia, Mesoamerica, Madagascar, Yemen, Ghana, China and South Africa
- Technical expert in neotropical forest dynamics, environmental services and valuation, and the impacts of the oil and gas sector on biodiversity

EDUCATION

Ph.D. in Tropical Ecology, Center for Tropical Conservation, Duke University (94-8)

Ph.D. thesis: *Mammals, Edge Effects, and the Loss of Tropical Forest Diversity*. Advisor: John Terborgh.

Masters of Public Policy, Sanford Institute of Public Policy, Duke University (96-7)

Memo: *How Should the World Bank Encourage Private Sector Investment in Biodiversity Conservation?*

Masters in Ecology, Department of Biological Sciences, University of Illinois (92-94)

Masters thesis: *Indirect Effects of Tropical Forest Fragmentation, Central Panama*. Advisor: Henry Howe.

BA in Geography, Oxford University (86-89) Concentration: The Nature and Human use of Arid Zones.

POSITIONS HELD

Charles Bullard Fellow, Harvard Forest and Research Fellow in Sustainability Science, Kennedy School of Government, Harvard University, Cambridge, USA (09/13-05/14, 09/08-5/09) (*supervisor Bill Clark*)

- *Undertook research* on "Scaling up Payments for Watershed Services Schemes: lessons from South Africa, Bolivia, Ecuador and India" (with Sven Wunder (CIFOR), Pablo Lloret (FONAG), Chetan Agarwal (Winrock International) and Christo Marais (Working for Water, Government of South Africa))
- *Coordinated research teams* to undertake a randomized control trial (RCT) of conservation investments in Bolivia's new Rio Grande-Valles Cruceños Biosphere Reserve with N. Ashraf and K. Jack (Harvard Business School); and a hydrology-forest cover relationship analysis with S. Bruijnzeel (Vrije University, Amsterdam), S. Uhlenbrook (UNESCO-IHE) and C. Tobon (Universidad Nacional de Colombia).
- *Currently extending the scope of the RCT* into conservation of the dry forest biodiversity of the Bolivian Chaco (with Julia Jones (Bangor)), and writing papers based on research in Peru, Colombia and Ecuador.

Director of Policy and Strategy, Fundación Natura Bolivia, Santa Cruz, Bolivia (5/05-present)

- *Co-founded and directed Bolivian environment and development NGO:* Identified, designed and initiated projects with partners, developed strategic action plan and annual workplans, and provided institutional strengthening, follow up, and monitoring
- *Raised \$9 million and managed donor relations* with the UK Government's Department for International Development, USAID, CGIAR, IUCN, the European Commission, US Fish and Wildlife Service, Blue Moon Fund, the Rufford Foundation, the MacArthur Foundation, the Garfield Foundation, the Rockefeller Foundation, the International Institute for Environment and Development and others
- *Developed strategy for creation and management of new 2 million-acre protected area*, the Rio Grande-Valles Cruceños Biosphere Reserve. Worked with Santa Cruz Prefectural Government to coordinate studies to justify reserve creation, and led development of institutional strategy and management plan to include sustainable forest management strategies that included development of 5 municipal water funds.
- *Worked with partner NGOs, thirty-five municipalities and 85,000 water users* to participatively design payments-for-watershed services schemes; built local support, raised funds for initial payments, and developed a monitoring and evaluation system. This program now compensates ~4000 landowners to conserve 450,000 acres of forest. Compensation is in the form of barbed wire, tree seedlings, and beehives
- *Designed and led-implementation of REDD project en El Chore Forest Reserve* that required working with local communities, indigenous groups and partner NGOs
- *Published results* in journal such as *Ecological Economics* and the *Journal of Forest Ecology and Management*, organized workshop at the Rockefeller Centre in Bellagio, Italy to discuss experiences, and presented results at other meetings around the world

Consultant, World Bank Institute (WBI), Interamerican Development Bank (IADB), Rare Conservation and Bolivian National Park Service (SERNAP) (02/09-12/12)

- *Developed Bolivian Environmental Services Strategy* for SERNAP (Bolivian National Park Service) that uses compensation for environmental services to link protected area management with poverty reduction.
- *Identified policy lessons for WBI* from the World Bank's Loess Plateau Rehabilitation Project, a \$500 M investment that used rewards for environmental services to lift one million farmers out of poverty
- *Lead writer* on \$2.5 M proposal from Rare Conservation to GEF to undertake incentive based watershed management at 12 sites in the northern Andes
- *Assessed feasibility of Payments for Environmental Services mechanism* to ensure financial/environmental sustainability of the IADB's Pasto-Mocoa road improvement in Colombia

Executive Director, EcoFund Foundation, Quito, Ecuador (5/05-12/08)

- *Director of the EcoFund*, a private foundation that invested \$17 M in conservation projects, mainly along the route of Ecuador's Oleoducto Crudos Pesados pipeline. Led initiative and facilitated relationships between energy sector investors (OCP, EnCana, Petrobras, AGIP, Repsol, Occidental, and Perenco), the fund manager (Fondo Ambiental Nacional), and local conservation NGOs
- *Managed transition* from being a small reactive donor to being a strategic proactive investor
- *Reviewed more than 300 funding proposals* from NGOs, universities and local governments
- *Provided technical support* to more than 40 applicants, in order to improve their proposals to better defining goals, objectives and logical framework, and supported more than 30 projects, worth \$5 M, including the development of Municipal Water Funds in El Chaco and Juan Calvo municipalities

Director, Kinship Conservation Fellows, Bellingham, Washington (09/12-present)

Assistant Director, PERC Enviropreneur Institute, Bozeman, Montana (07/06-07/08)

- *Developed curriculum, hired faculty, and directed month-long training program* for mid-career professionals on how to use markets and incentives for environmental management
- *Lectured* on the role of property rights, markets and contracts in watershed conservation
- *Mentored 90 mid-career professionals* in developing market based conservation projects

Senior Director, Field Support Division, Conservation International, Washington DC, USA (2/01-4/05)

- *Led grant proposal-writing and strategy development:* Led development of CI/GEF/World Bank/MacArthur Foundation Critical Ecosystem Partnership Fund \$7.4 M Northern Mesoamerica regional strategy (which later became CEPF's "Ecosystem Profile"); led, submitted, and won funding proposals that designed projects in Southern Mexico worth \$3.1 M; liaised with government and non governmental partner organizations and foundations to develop and achieve common deliverables
- *Led policy analysis of impact of oil and gas sector on Bolivian biodiversity:* Designed research plan, interviewed stakeholders and developed economic and political analysis of the likely impact of oil and gas exploration and exploitation on the Bolivian protected area system
- *Provided global technical policy support:* Developed global legal analysis of protected area policies; directed policy, legal and enforcement projects in Bolivia, Mexico and Brazil, provided technical and strategic support to Conservation Coffee program; supported Enforcement Economics analysis
- *Led functional transition of CI Mesoamerica Program:* Played critical support role in transition of Mesoamerica program from independent country-based offices to a cohesive regional center with transboundary objectives and partner-support strategies
- *Managed partnerships:* Supported development of Mundo Maya Alliance of NGO partners and the InterAmerican Development Bank; supported internal strategy development and program evaluations
- *Supported research:* Initiated CI's payments-for-environmental services research program; helped develop new environmental services program; completed multidisciplinary analysis of the role of legal enforcement in protected area management

Fellow, Center for International Forestry Research (CIFOR), Bogor, Indonesia (7/99-9/00)

- *Designed and coordinated 16-month research project* that assessed the potential for integrating the goals of the Clean Development Mechanism of the Kyoto Protocol with sustainable rural development and biodiversity conservation
- *Evaluated joint implementation forest management (LULUCF) projects* in Chiapas, Mexico and Santa Cruz, Bolivia; co-wrote policy brief, presented recommendations to client institutions at international policy workshops in Lima (February) and Milan (March); liaised with government officials in Indonesia, Bolivia and Mexico to strengthen future project design
- *Authored reports:* Published monitoring and evaluation report: Can forest carbon projects improve rural livelihoods? Analysis of the Noel Kempff Climate Action Project, Bolivia *Mitigation and Adaptation Strategies for Global Change* 7: 323-337)
- *Developed in-depth knowledge* of the potential role and limitations of forest management in Kyoto; designed efficient and well-received project implementation plan; gained understanding of the potential for CGIAR system and UN organizations to interact and work together.

Analyst, World Bank, ENVGM/Environment Department, Washington DC, USA (5-8/98)

- *Designed and implemented a three-month research project* assessing the involvement of the private sector in biodiversity conservation. Developed economic, fiscal, and institutional policy recommendations for increasing the role of private capital in conservation, and assisted World Bank staff and partners with data analysis, and preparation of project status reports.
- *Developed innovative recommendations* and check list for increasing private sector investment in conservation. Lobbied with senior Bank staff to implement recommendations; learned how World Bank and associate partners and governments interact and function.

Project Leader, Smithsonian Tropical Research Institute, Panama (1/94-12/97)

- *Organized, and managed a 3-year, 5-person project* to investigate the effects of tropical forest fragmentation on tree regeneration in Panama and Venezuela.
- *Designed experiments* to quantify seedling survival in and on the edges of fragmented forests, with special reference to forest management strategies
- *Supported logistics* for undertaking long term ecological field research in the Gran Sabana region of Venezuela; liaised with partner research institutions in Panama City, Puerto Ordaz and Caracas.
- *Raised \$50 000 in funds and managed donor relations* with the Conservation, Food and Health Foundation, the Lincoln Park Zoological Society, the Forest History Society and others.
- *Published and presented results*: Developed ground-breaking analysis of the competing theories of the role of top-down control of predators on tree species diversity, wrote book chapter on forest dynamics in the Spanish language book “Neotropical forest ecology and conservation”; published two articles in the top international journal in the field *Ecology*.
- *Trained and supervised four field technicians*: Each of these technicians already had a Bachelors degree in biology; three were inspired to continue their studies and since undertook Ph.Ds at Cambridge University and the Universidad Complutense de Madrid.
- *Taught three classes to undergraduate students* on Tropical Ecology, Earth in the Balance and Introductory Biology; presented results and implications to students, policy makers and scientists in Puerto Ordaz, Venezuela and Panama City, Panama.

Lead Consultant, Foundation for Biology (YABSHI), Jakarta, Indonesia (2-4/94)

Designed and led a 3-mo research project with 3 students and faculty from the University of Indonesia, assessing the effects of deforestation on endangered primate and other mammal communities in west Java. Quantified threats to diversity, recommended solutions, and published forest management strategy in *Tropical Biodiversity* 3: 1-14. Published analysis of Javan conservation strategies in *Conservation Biology* 15:345-352.

Team Leader, Krakatau Research Project, Java, Indonesia (1-10/89, 4-8/92)

Coordinated, raised funds for, and implemented a \$30 000, 6-mo project which placed 15 researchers on the Krakatau Islands, 40 km off the coast of Java, to assess the role of biogeography on reforestation rates. Extended project management in 1992 to involve 25 field assistants and an additional field site in Java.

Lead Consultant, Center for Yemeni Studies, Sana’a, Yemen (6-8/90)

Designed and managed a 2-mo assessment of the Yemeni mountain terrace-agricultural system. Interviewed local farmers and government officials, undertook field surveys, completed literature review, recommended development solutions. Published results as “Yemen: Cultivation Crisis” (*Geographical* XIV.3: 40-41).

COUNTRY EXPERIENCE

Bolivia, Brazil, Ecuador, Ghana, Guatemala, Indonesia, Madagascar, Mexico, Panama, South Africa, Venezuela, Yemen.

FUNDRAISING EXPERIENCE

- 2005-14: Wrote proposals that raised \$9 million for Fundación Natura Bolivia initiatives on payments for environmental services and protected area management, including:
 - European Commission, USAID, \$3.9 million
 - DFID, Blue Moon Fund and MacArthur Foundation, \$1 million
 - UNESCO Water Inst, Consultative Group on International Agricultural Research, \$600 000
 - US Fish and Wildlife Service and IUCN-NL, Rockefeller Foundation \$320 000
- 2004: led development of Conservation International’s Northern Mesoamerica regional strategy (which later became CEPF’s “Ecosystem Profile”); awarded \$7.4 million from the Critical Ecosystem Partnership Fund (GEF/World Bank/MacArthur Foundation) for strategy implementation
- 2004: led, submitted, and won funding proposals from USAID-Mexico for \$3.1 million.

PUBLICATIONS AND PAPERS

- Asquith, N.M. 2015. Governing the Commons through Reciprocal Watershed Agreements: an alternative to Payments for Environmental Services, in review.
- Asquith N.M. 2013. Investing in Latin America's Water Factories: Incentives and Institutions for Climate Compatible Development. *Harvard Review of Latin America* 1: 21-4
- Asquith N.M. 2011. Reciprocal Agreements for Water: An Environmental Management Revolution in the Santa Cruz Valleys. *Harvard Review of Latin America* 3: 58-60
- Xie, M., N.M. Asquith et al 2010. *Rehabilitating a degraded watershed: A case study from China's Loess Plateau*. World Bank Institute, Climate Change Unit, Washington DC.
- Le Tellier, V., A. Carrasco & N.M Asquith. 2009. Attempts to Determine the Effects of Forest Cover on Stream Flow by Direct Hydrological Measurements in Los Negros, Bolivia. *Journal of Forest Ecology and Management*. 258: 1881-1888.
- Asquith N., S. Wunder et al. 2008. *Payments for Watershed Services: the Bellagio Conversations*. Fundación Natura Bolivia, Santa Cruz de la Sierra, Bolivia.
- Asquith N.M., M.T. Vargas Ríos & S. Wunder. 2008. Bundling environmental services: Decentralized in-kind payments for bird habitat and watershed protection in Los Negros. *Ecological Economics* 65: 675-684.
- Asquith, N.M. & M.T. Vargas. 2007. *Fair Deals for Watershed Services in Bolivia*. Natural Resource Issues Series Number 7, IIED, London
- Asquith N. 2006. Bees and barbed wire for water on the Bolivian frontier. *PERC Reports* 24.4:3-6.
- Asquith N.M. & M. Mejia-Chang. 2005. Mammals, edge effects and the loss of tropical forest diversity. *Ecology* 86:379-390
- Asquith N.M, M.T. Vargas Ríos & J. Smith. 2002. Can forest carbon projects improve rural livelihoods? Analysis of the Noel Kempff Mercado Climate Action Project, Bolivia. *Mitigation and Adaptation Strategies for Global Change* 7: 323-337.
- Asquith N.M. 2002. La dinámica del bosque y la diversidad arbórea. Pages 377-406 in: Guariguata, M.R. & G. H. Kattan eds.. *Ecología y conservación de bosques neotropicales*. Ediciones LUR, Cartago, Costa Rica.
- Arnold, A.E. and N.M. Asquith. 2002. Herbivory in a fragmented tropical forest: patterns from islands at Lago Gatún, Panama. *Biodiversity and Conservation* 11:1663-1680.
- Asquith N.M. 2001. Misdirections in conservation biology. *Conservation Biology* 15: 345-352.
- Asquith N. 2000. The Kyoto Protocol, ITTO and tropical forests. *Tropical Forest Update* 10.2.
- Asquith N. 2000. Current directions of climate change mitigation: lessons learned from AIJ pilot phase forestry projects. *Perhimpn 1999 Conference Proceedings*, Bogor, Indonesia.
- Asquith, N.M., J. Terborgh, A.E. Arnold & M. Riveros C. 1999. The fruits the agouti ate: *Hymenaea courbaril* seed fate when its disperser is absent. *Journal of Tropical Ecology* 15: 229-235.
- Asquith N.M., S.J. Wright & M.J. Clauss. 1997. Does mammal community composition control recruitment in neotropical forests? Evidence from Panama. *Ecology* 78: 941-6.
- Asquith N.M., Martarínza & R.M. Sinaga. 1995. The Javan Gibbon: status and conservation recommendations. *Tropical Biodiversity* 3: 1-14.
- Asquith N.M. 1995. Javan Gibbon conservation: why habitat is crucial. *Tropical Biodiversity* 3: 63-65.
- Asquith N. 1992. Yemen: Cultivation Crisis. *Geographical* XIV.3: 40-41.
- Asquith N. 1989. Adios vida silvestre de Ghana. *Los Aventureros* 4:26-32