Jorge Barrigh

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PROFESSIONAL EXPERIENCE

Independent Senior Advisor USA, Latin America & Africa Renewable Energy & Energy Efficiency, Climate/Green Financial Instruments, Leveraging Sustainability Strategy, Innovation & Entrepreneurship

Provide advisories to private, multilateral and public sector clients on renewable energy project development & finance, the fit, use and articulation of climate and green financial instruments in the financial and corporate sectors, leveraging sustainability strategy as a strengthening and growth instrument for business operations, and incorporating innovation and entrepreneurship trends and initiatives. Selected current & recent engagements:

Leveraging, Strategy & Articulation of Green/Climate Financial Instruments:

- Climate / green finance strategy development and fundraising plan for GEF/IADB funded program managed by ENEL, the national power generation company in Nicaragua. Focus is strengthening, extending and ensuring sustainability of entrepreneurial, climate smart agriculture and conservation initiatives with direct impact on the watershed management program for its hydropower generation assets.
 - Work has included fund raising, capacity building and active engagement of national, regional and local stakeholders, ensuring close coordination with forestry, water and environmental authorities, engagement with local landowners, farmers and entrepreneurs, as well as related REDD+ initiatives underway. *The final product is a climate finance & resilience strategy & proposed action plan for the program*
- Senior advisor on team tasked with review, gap analysis and strengthening strategy for the inclusion and rapid deployment of green & climate finance instruments, as relevant to internal growth and development strategy initiatives, with particular emphasis on inclusion of private sector clients, at a National Development Bank in Namibia and a Regional Development Bank in Uganda. The product of this work was incorporated in the submitted applications by the Banks to the Green Climate Fund.
- Senior fundraising & innovative projects advisor to forestry, sustainable agriculture green/climate investment fund operated and managed by Ecotierra and partners. Ecotierra is a Quebec based firm with offices in Lima, Peru and project activities underway in the Americas. *This fundraising work is underway and its objective is a first closing in the near term.*
- Led senior advisory in financial mapping & characterization and development of proposed implementation strategy on behalf of the Government of Finland's Energy & Environment Partnership's Andean Initiative, which is managed by the Inter American Institute for Cooperation on Agriculture, IICA. This mandate delivered a characterization on the current state of traditional and non-traditional financing including private and managed asset & green banking products, impact and angel investors, as well as the applicability of emerging climate finance instruments in the Andean region (Colombia, Ecuador, Peru, Bolivia) for private sector rural renewable energy and energy efficiency SMEs. *Portions of the research and completed work have been published by IICA and a training webinar has been produced.*
- Senior advisory to Peruvian COP Presidency & IADB on developing, implementing and articulating a climate & green finance strategy relevant to the Peruvian private sector with heightened emphasis on the finance and export sectors as well as private and national development banking & Investments. The work was part of the climate finance drive undertaken in the run-up to, and during COP 20, and culminated with, among other results, the adoption of green finance principles by ASBANC (national banking association) and its leading private and public sector members, as well as a strengthened collaboration

with the principles for responsible investment (PRI) initiatives underway regionally.

Project Development, Due Diligence & Financing Renewable Energy & Energy Efficiency:

- Providing business strategy and fundraising advisory to Roatan Renewable Energy, an innovative renewable energy company based in Roatan, Honduras. *The advisory is focused on strengthening the core business, leading project finance and fundraising efforts and developing an ESCO model leveraging traditional, green and climate finance instruments while monetizing efficiency and reducing emissions.*
- Providing advisory to renewable energy project owners and developers in Guatemala, Nicaragua & Jamaica, on financing and funding sources including climate finance commercial strategy, business planning, linkages with utility partners and leveraging environmental and social strengths to the project's benefit in Central America and the Caribbean (solar, wind, hydro). *The advisory is focused on supporting due diligence, and project financing engagements underway with potential partners*.
- Member of the Private Financing Advisory Network (PFAN) that provides advisory services focused on business plans and commercial and funding strategy for renewable energy projects (wind, solar & hydro) seeking investment in Central America and Caribbean, under regional clean energy investment initiatives.

Innovation & Entrepreneurship:

- Provided market entry & strategy advisory to SparkMeter, an innovative US based smart metering & micro-grid company introducing a patented cloud-based smart meters for micro grid applications and non-technical loss reductions in industrial, utility and rural electrification. The product was a, characterization and proposed market entry strategy including prioritized targets & partners in Latin America for this innovative technology as well as active support on the securing of their first pilot in South America.
- Leading advisory to Sequoia Space, a Colombian private sector aerospace company producing nanosatellites currently fundraising, restructuring and shifting market development to innovative information service for precision agriculture, conservation & watershed management, among other relevant industry applications. *This engagement is underway*.
- Leading start-up strategy advisory and fund raising for Embarkee, a Peruvian private sector startup focusing on launching and supporting a multimodal sustainable travel platform in Peru, Colombia, Mexico & Chile. *This engagement is underway*.
- On behalf of MIF/IADB, led financial and business model review, including due diligence and validation of a pilot investment in Kingo Energy, an innovative "last-mile" solar PV business introduced by a Guatemalan "pre-paid" Solar startup company addressing rural electrification in dispersed indigenous communities. The resulting product was a due diligence & investment memorandum useful to identify impact, gaps, lessons, scalability, sustainability and replicability of the business model.
- Innovation & Entrepreneurship advisory support to Ministry of Science & Technology in Panama for local start-ups in the fields of energy, environment, climate change, sustainability & intelligent agriculture

Honors & Memberships:

- Senior Fellow Energy & Climate Finance World Watch Institute (<u>www.worldwatch.org</u>)
- Board Member Latin American and Caribbean Council on Renewable Energy & Energy Efficiency (www.lac-core.org)
- Active member of the Clean Technology Initiative's Private Finance Advisory Network (http://cti-pfan.net)

Ecoressources Inc.Canada

Vice President; Director General; Senior Advisor to the President

2012 – 2014

Following two years as part of Ecoressources' External Board of Advisors was recruited as Vice President of the Natural Resource Economics practice of the Quebec based firm. Ecoressources is an advisory firm providing consulting services in economic analysis and climate change.

Seven months after joining was asked to become Director General (DG) and as part of a senior management team focused on restructuring the firm's core business, rationalizing its service offer, strengthen management during merger and led a Board mandated crisis restructuring & refocus/footprint reduction strategy. Following conclusion of the restructuring plan, returned to role of Senior Advisor to the President.

Energy, Finance, Innovation & Sustainability Consultant

Panama 2010 - 2012

Independent Senior Advisory Services specializing in Finance, Environment, Sustainability, Energy and Innovation Strategy for international firms including:

- Emerging Energy & Environment a US & Brazil based Renewable Energy Private Equity Fund. Provided leadership in fundraising, due diligence and deal origination, including development and review of investment opportunities in renewable energy/efficiency projects and environmental technologies for the fund. Led financial, regulatory and business due diligence of renewable energy investments (Hydro and Wind) in Peru, Panama, Costa Rica, Jamaica, Colombia and Nicaragua for the fund.
- CAF Development Bank of Latin America Provided senior advisory on environmental markets and finance as well as renewable energy & climate funds. Was engaged to provide a report reviewing the status, performance and analysis on barriers and challenges to the effective use and implementation of green and climate financial instruments in private sector & multilateral banking in Central and South America. The final report was published by CAF.
- CDC Climat a French Financial Institution Advisory on renewable energy compliance carbon offset origination, development and transaction services.

Natsource LLC 2006 - 2010Managing Director, Latin America & Caribbean

Led, originated and managed opportunities & strategic relationships in the renewable energy / environmental technologies / carbon space in Latin America and the Caribbean for the \$1.2 Billion fund under management by the company in New York and London.

Focused on regional business development and transactional strategy for the fund as well as project origination & review, transaction development, structuring and negotiations, in close coordination with compliance and investment fund managers in London and New York.

On behalf of the company, originated and managed internal relationships with institutional, public policy and commercial actors in the region. Represented the funds as speaker in international events on renewable energy finance, environmental markets and carbon finance.

CAF – Development Bank of Latin America **Fund Manager/Senior Executive Environment Division**

Venezuela 2001 - 2006

Panama

Coordinator, Latin American Carbon Program: Led the transition and repositioning of a capacity building & technical assistance program into a financing partner for power and infrastructure lending units at the Bank, extending and strengthening the Bank's brand towards environmental business initiatives on Carbon, Energy Efficiency and Renewable Energy Finance.

During nearly six year term leading the carbon program (PLAC in Spanish), actively led the internal

engagements necessary to embed carbon & climate finance as part of an evolving relevant financial instrument with the Bank's core business, while engaging with multiple external actors in the private sector, government and other relevant institutions to reframe the value of carbon finance assets from an environmental space to a broader operational, strategic, risk management and financial space.

• Fund Manager:

Negotiated, and managed the CAF-Netherlands Fund and its portfolio of projects: A US\$65 million fund focused on sourcing carbon offsets from renewable energy and energy efficiency projects in the Americas.

Negotiated, and managed the CAF-Spain Fund and its portfolio of projects: A US\$60 million fund focused on sourcing carbon offsets from renewable energy, energy efficiency and forestry projects in the Americas.

Both funds were innovative (first of their kind) in the region, leveraging and extending the development institution's traditional energy and infrastructure business into the clean energy & environment space.

As fund manager, led and closed transactions in Central America, Brazil, the Caribbean and the Andean Region. Also led detailed project reviews, due diligence and negotiations provided experience & expertise with renewable energy projects (hydro, wind, geothermal, biomass), transportation (BRT), waste management (LFG and biogas), as well as energy efficiency projects (fuel switch, technology upgrade) & cleantech.

Negotiated & managed technical cooperation and capacity building agreements with Environment and Sustainable Development Ministries resulting in projects in Uruguay, Peru, Bolivia, Colombia, Ecuador and Panama.

As part of environmental finance team, took a leadership role in the initial review and design of targeted debt instruments for renewable energy/energy efficiency projects with European and Japanese Development banks which evolved into specialized credit facilities currently in use at CAF.

Ballard Power Systems Business Development

Canada & USA 1997 – 2001

• Business Development: Senior member of business development group implementing market entry strategies for stationary and portable hydrogen fuel cell power generators in emerging markets.

GPU International (Now FirstEnergy) Project Manager and Financial Analyst

USA 1995-1997

• *Project & Financial Management:* Managed study, evaluation, development and implementation of traditional and renewable energy and rural electrification projects (Hydro & Solar) in the US and Latin America.

EDUCATION

UC Berkeley Haas School of Business Center for Executive Education – Berkeley, CA, USA

Advanced Innovation Management Certificate 2011

Temple University Fox School of Business - Philadelphia, PA, USA

MBA, Finance 1995

Messiah College - Grantham, PA, USA

Bachelor of Science Economics 1989

OTHER

- Frequent speaker on the strategy & finance of sustainability, renewable energy& innovation
- Excellent communication skills
- Fluent in Spanish, English, Portuguese; Functional French