Amazonia em Transformação (AmazonIEA) Program - Institute for Advanced Studies, University of São Paulo, Brazil

Adding Economic Value to Standing Forests: New Perspectives for the Development of Human Resources

Plans for Establishment of a

"Rainforest Continent" Business School

in Brazil

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Tropical Rainforests - Climate and Biodiversity Challenges

The destruction of rainforests remains an unresolved challenge in the global climate, biodiversity and water agendas. As yet, it proves hard to counter strong, economically motivated deforestation. Forests are cleared and replaced by cattle pastures, soy bean, oil palm, and other agro-business.

Overall, forest destruction and burning occur at globally alarming levels. In some of the world's tropical rainforest regions periodic reductions in deforestation have been achieved - thanks to nature protection and conservation measures, policies, legislation, and monitoring. "Destruction more slowly" is encouraging, but more needs to be done.

Rainforest clearing is a major contributor towards global climate change.

Forest fires associated with deforestation

contribute an estimated 12% of all global, annual emissions of CO2.

Reducing emissions from deforestation can make a significant contribution towards global targets in averting climate change.

Executive Summary

The proposed "Rainforest Continent" Business School (RCBS) will provide expert training for competitive, environmentally and socially sustainable, and science based business development in tropical Rainforests. It will enable a new generation of professionals to realize the *sui generis*, unique economic potential that can be realized within "standing forests".

The school will fill a gap: In Brazil and worldwide there is no academic institution offering specialized training and rainforest business expertise.

Rationale

Adding value to standing forests is a strategic option in fighting deforestation. A greater economic realization of gain from standing, rather than cleared rainforest could weigh in as an economic "counterbalance", saving forests from destruction.

To develop this opportunity, specialized human resources are required. The generation of more and sustainable economic gain from "standing forest" requires knowledge- and science based product and business development, as well as due understanding of social and environmental, legal, administrative and value chain related parameters.

The rainforest business school will - globally for the first time - systematize learning from rainforest business experiences to date, and identify and promote new social, technological, and market opportunities, among others through systematic case studies of both, successes and failures.

With more profound applied research and deployment of rainforest business expertise, significant new contribution towards rainforest preservation could be achieved. Improvements in rainforest business could result in higher income levels among local communities, and in turn incentivize "economic forest preservation".

Reach

The aim of the proposed business school is to reach three distinct client groups:

- (1) At the post graduate level, a next, new generation of specialized business leaders, scientists, and policy makers;
- (2) at Executive Development level, mid-career executives from interested food, cosmetics, arts & crafts, flower, fisheries, tourism, and other industries; and

(3) at local communal level, leaders of small & medium size businesses, interested in grooming their business plans, products, and market access.

The proposed business school will promote and work closely with applied research programs. It will foster and mentor the realization of promising business models, public policies, and private sector strategies.

Collaborative Curriculum & Governance

The AmazonIEA program at the Institute for Advanced Studies of Sao Paulo University has begun to coordinate this project, as needed for the duration of a 3-5 year "incubation" period. Initial establishment involves curriculum development, search for academic partnerships, and plans for independent private sector governance and finance.

The objective is to turn the "Rainforest Continent" Business School (RCBS) into an independent, separately incorporated educational institution, commonly financed and owned by a small set of outstanding academic centers and business schools in Brazil and beyond.

Results

The "Rainforest Continent" Business School is designed to:

- Generate specialists in Rainforest Business, able to develop the *sui generis* economic potential of rainforest biomes in Latin America, Asia, Africa & elsewhere
- Supply government, companies, financial sector, consulting companies, academic institutions, relevant programs of applied science in scientific entities, with specialized human resources
- **7** Provide new, unprecedented economic incentives for Rainforest Protection

The "Rainforest Continent" Business School should with time serve each of the world's major tropical rainforest : an area - if put together - equivalent to a "rainforest continent" three times as large as Europe (EU).

I. Beginnings

At the Institute for Advanced Studies (IEA) at São Paulo University (USP), the "Amazonia em Transformação – Historia e Perspectivas" (AmazonIEA) program began to question in 2011 how primary rainforest ecosystems might in future be better protected against economically driven deforestation. *Economically motivated protection of rainforests* was identified as a strategic opportunity within the broader rainforest protection agenda, worthwhile to be looked into further.

If value could be added to "standing forests", this might give them a greater "competitive" chance to withstand deforestation outside legally designated, protected nature conservation or indigenous reserve areas that count on "command and control" enforcement regimes.

The quest began for levers and incentives designed to keep, rather than destroy and replace, forests.

Experience to date

The concept that "productive" income generating tropical forests have a greater chance of escaping destruction - provided their use is managed sustainably - is not new. AmazonIEA Seminar contributors profiled a rich array of existing business experiences, along with policy and administrative challenges.

In the current Brazilian market, products include a great variety of raw materials and finished products – among them precious oils, fibers, resins, shampoos, nuts, cereals, fruits, spices, juices, wild cocoa, perfumes, creams, cosmetics, rubber, medicinal products, fish, ecotourism, certified wood, flowers, and also products from cultivation within forests and on seasonally flooded lands – shade tree crops, agriculture, floriculture, and more. Similar patterns can be observed in rainforest regions abroad, for instance in Indonesia or Madagascar.

However, current business endeavors rarely reach significant *scales of production and continuity*. To make sustainable forest-based business economically more "competitive" with business involving forest-clearance and substitution, the range and variety of sustainably harvested and processed rainforest products would need to be brought to an economically more appealing and more sophisticated scale. Inspiring examples exist: some large companies in Brazil, such as *Natura* and *O Boticário*, are well ahead in pioneering rainforest products and markets; they exemplify the potential of larger scale, high-end production.

In addition to the scale and continuity of production, close attention would need to be paid to *community level economic development*. Unless local communities in or adjacent to forest

regions see a brighter forest-based future, trends of further deforestation are likely to prevail. In order to generate strong economic self-interest in forest protection, growing prosperity at the local level would be key.

Typically, in sensitive rainforest environments, such prosperity can only come sustainably from *diversification*. Only simultaneous development of a broad range of locally viable products in parallel can avoid over-exploitation of any single species. Diversified income generation could improve local incomes significantly, while respecting natural limits for sustainable use. To date, this type of local business planning remains rare.

Opportunities and Obstacles

Both, opportunities and obstacles were identified:

- Research & Development are tall challenges. Unique features and opportunities of "standing forests" and non-timber products within them need to be researched and commercially developed. So far, a major institutional engine for applied research is lacking: Amazonia, much like other rainforest regions on earth, lacks specialized "MIT"type institutions, able to deliver sophisticated and market oriented applied research, along with science-based guidelines for sustainable use.
- *The range of products* and growth of niche markets would need to become economically far more significant, to cause enduring improvements in local livelihoods.
- *Procedural impediments need to be removed*. All involved communities, traders and industry confront multiple "red tape" and unnecessarily long waiting periods in processing authorizations, all of which cut into their profits.
- This is a market under early construction. There are few, if any, specialized rainforest product credit lines; value chains are imperfect; quality controls for ecologically and fair trade certified products are expensive; and in the absence of specialized commodity exchanges, both primary producers and buyers shoulder considerable risk.
- *Poor energy, transport, and communication infrastructures* leave local communities at a disadvantage in trading. Energy poverty condemns local producers to sell products unprocessed, at unattractive low prices. Without reliable energy, value-adding, small industrial processes, cool storage, drying of products, or packaging are not possible.

In short, while there is growth in rainforest business, there is too little gain and too much uncertainty. Stronger economic levers would be needed to incentivize "standing forests".

Human Resources

A turnaround creating strong and high quality sustainable forest management requires specialized expertise, with multidisciplinary combinations of business, science, and technical skills. Therefore, we have proposed to establish a first rainforest business school designed to train new generations of rainforest experts - able to add value to "standing forests" in the major rainforest regions of the world. It should serve training needs in Brazil and across the "Rainforest Continent".

Several strands need to be developed alongside: (1) applied research expertise, (2) specialized business training with learning from experiences with business, and policy and regulatory environments, and (3) for business start-ups, access to finance and coaching.

The challenge is to offer to a new generation of professionals the opportunity to specialize in sustainable, largely non-timber rainforest business. *The world over, there is no school offering such a curriculum.*

Why a <u>"Rainforest Continent</u>" Business School?

Put together, the earth's remaining rainforest regions in South & South East Asia, Central Africa, South and Central America, and the world of tropical islands add up to "continental size": The metaphoric "Rainforest Continent" is three times the size of Europe (EU).

The "Rainforest Continent" is composed of diverse biomes. Instead of sweeping solutions, any sustainable economic use will require careful understanding of small scale, locality specific ecosystems, cultural, socio-political and governance characteristics.

The "Rainforest Continent" is under-researched. It remains to be discovered and cherished in all its ecological potentialities in the interest of generations to come. A science-based "conquest" - in the footsteps of explorers 5-6 centuries ago – is long overdue.

II. A Brazilian "Rainforest Continent" Business School (RCBS)

First proposals for a rainforest business school were prepared under the AmazonIEA program of the Institute for Advanced Studies of Sao Paulo University in 2012. Following a Roundtable and endorsements in February 2013, a collaborative project is now under early preparation. A first advisory council has been formed. The AmazonIEA Program has begun to identify opportunities for academic partnerships and for the formation of a coalition of founding partners and investors.

Based on its environmental leadership and competencies, Brazil is well placed to launch the world's first rainforest business school. In many ways, Brazil has become a sustainability leader. Since the 1980ies, it has developed a protected areas network in Amazonia, the Atlantic Forest and other parts of the country, and pioneered environmental policies and institutions, monitoring and law enforcement systems, and longer term rainforest pilot programs involving community based sustainable forest management, non-timber forest products, carbon sequestration, novel industries and trade fares, and schemes for payments for environmental services, and REDD program proposals.

Brazil has a long-standing, excellent record in scientific research related to rainforest ecosystems. Its public- private- and non-profit sectors strive to achieve sustainable development patterns. Brazil is among the pioneers in non-timber rainforest market developments.



RCBS Objectives

The school's ultimate objective is to deliver underpinnings for sustainable, economically motivated protection of tropical rainforests from clear cutting. The "Rainforest Continent" Business School will equip experts and entrepreneurs to sustainably derive and increase economic gain from standing tropical rainforests.

It will train academics, executives, & entrepreneurs, and promote applied research, new financial instruments, and promising business models. The Rainforest Business School will cater to students and/or professionals who want to develop opportunities of the "Rainforest Continent" in industry, local entrepreneurship, consulting, public administration, planning and

environmental certification, monitoring and law enforcement, or in the financial sector. Its curriculum will reflect special country, regional, and sector conditions.



RCBS Structure and Clientele

The RCBS structure will combine three pillars – Promotion of Applied Science, Business Education, and Mentoring for sustainable rainforest business ventures.

The RCBS training will reach three clienteles:

- Post-graduate "Master in Rainforest Business Administration" students, adding a specialization in rainforest business to their basic discipline and qualifications (1-2 year programs)
- (2) **Executives**, mid-career, seeking to deepen their understanding of rainforest opportunities (short, intensive executive development programs, focused on a subsector & region)
- (3) **Local and community entrepreneurs**, knowledgeable of local ecosystems, wanting to groom their businesses.

Governance

A Private Sector Institution. The RCBS will be established in Brazil as a private sector academy, with due institutional agility, professional excellence, strong socio-environmental mission, and independent oversight by high quality independent scientific and ethical councils. It will be established with Brazilian leadership, and with south-south partnerships internationally.

A Brazil-centered Institution. A Brazilian conceptual and institutional start-up process can take full advantage of decades of experience in combating deforestation in Brazil's various vast rainforest regions, combining policy and regulatory, monitoring and policing, nature conservation, and science programs, as well as communal and citizen non-profit initiatives, and business case experiences.

"Rainforest Continent" governance orientation. Within Brazil and internationally, the objective is a collaborative and franchising approach – involving a (1) a small founding Consortium of Academic Institutions/Business Schools, and investors, and (2) other partners contributing to the curriculum and/or teachings. In addition to the Latin American Region, partner institutions in Asia and Africa will be identified, as well as leading academic centers in Europe and America.

Franchises. We propose a governance structure that will generate a curriculum shared and taught by certified partner academic institutions. With time, a larger, global body of pertinent business and policy lessons will be assembled, collaboratively with academic institutions outside Brazil.

Checks & Balances. RCBS governance will include assurances of independent, high quality checks and balances. Therefore, the early-on creation of two independent watchdog bodies is planned: A *Scientific Council* (focusing on questions of environmental sustainability), and an *Ethics Council* (focusing on socio-cultural and intellectual property aspects). Both Councils should take on an active role in the detailed design process for the RCSB.

Two-pronged Establishment

The <u>academic development</u> will be led and coordinated directly by AmazonIEA (IEA/USP):

- curriculum development: preparing content and methodology
- preparation of financing proposals for incubation & start-up project development
- establishment of independent Scientific & Ethics Councils
- identification of institutional partners

• protocols of academic, technical and financial cooperation, pilot operations/tests of academic modules

The *operational development* will be led by members of the non-profit and private sectors, with IEA/USP oversight and coordination:

- Private and civil society engagement will be needed in laying institutional and financial foundations of the RCBS.
- Two interdependent bodies will be established:
 - First, *a non-profit organization* with open and collaborative participation (an association of friends, advisors and sponsors of the RCBS), and
 - Second, *a company with participation through capital shares*, establishing the RCBS as a private sector academic institution.

Establishment process

The incubator and start-up process is planned as a two-pronged approach:

- 1. Academic Development
 - Development of content, methodology, identification of institutional partners
 - Preparation of financing proposals for incubation & start-up project development

2. Operational Development:

- Development of a differentiated business model, based on the creation of two interdependent entities
- Establishment of (1) a NGO with open and collaborative participation and (2) a company with participation through capital shares

Curriculum

Basic structure. A core curriculum (as sketched out in Annex 1) will serve as the trunk of a system with multiple branches. It will be accompanied by specialized curriculums for ecoregions-, national domains, and sectors. Themes of priority in developing the core curriculum include - in addition to business management – ecosystem management, social sciences, ethics, law and governance, and environmental economics.

Case studies. A case study method akin to Harvard Business School methodology will be one of the central methodological features. The development of a body of case-study teaching modules reflecting pertinent recent business experiences (good and bad) will be commissioned early on.

Field work. One field campus location in the Amazon has already been offered to the future RCBS, and others should be added. Field work will give students the opportunity for "live understanding" of rainforest locations, environments, local business challenges, and community livelihoods.

Collaborative Curriculum Development. An initial RCBS curriculum can in some measure be developed from teachings and modules presently "scattered" across research institutes, universities, companies, and NGOs.

The AmazonIEA team will make every effort to identify a first collaborative consortium of academic contributors and distributors of RCBS teachings. An inventory will be made of suitable materials and teaching modules available at various academic, business and research institutions.



Reach

The RCBS will be a new age university that maximizes INTERNET outreach and inter-institutional academic cooperation. It will be an "Intercontinental Academy", combining direct teaching with distance training internationally. RCBS participating academic centers will share video-taped classes, a growing body of case studies, interactive websites and feedback, new research results, information on market developments, etc. "Live" RCBS teaching will occur at

participating academic centers of excellence, with integrated curriculum development, management, and quality control.

Investments will be prioritized for cutting edge communication facilities, curriculum quality, high quality teachings, and close colaboration with scientific and business development institutions. *An attempt will be made to avoid new physical infrastructure development*, such as construction of any new Campus. These may be unnecessary, as long as readily available facilities at participating academic centers and various existing field campuses can be used.

What matters most, is a quick, high quality start, collaboratively, involving existing academic centers and reaching usefully into many tropical rainforest regions around the world.

ANNEX 1

Curriculum Development

Disciplinary Fields in Sustainable Biodiversity Management and Business (*Exemplary, preliminary list)

Торіс	Sub-Topics
Biodiversity Management (general + regional)	 Sustainability management concepts (biodiversity, water, soil, climate resources) Major Ecosystems & their management to date Criteria & Practice in Biodiversity Protection: Public, NGOs, Private, Business
	 Research: Basic Research Applied Research Traditional knowledge systems R&D: From basic Research to Business applications: Biodiversity research networks & centers Industrial Product Developments
Social Science & Ethics (general + regional)	 Community, cultural & religious factors in sustainable biodiversity management: Traditional indigenous knowledge systems, concepts, beliefs, user & property rights, inter- generational responsibility systems, etc.
	 Participatory local Development Local development planning
	 Socially Responsible investment concepts
	 Protection of Communal and indigenous biodiversity
	 Development Planning for Biodiversity Business
	Major international safeguard policies: ILO, World Bank, OECD,

	others
Law , Governance (general + regional)	 Environmental Law (conservation, sustainable use, environmental & social impact assessments, public hearings, law enforcement, etc.) Contemporary & Aboriginal legal systems Bio-Prospecting Practice in: Intellectual Property Rights, User rights, Licensing, Patents, Royalties etc. Export-import Legislation
	Certification (carbon, fair trade, etc.)
Environmental Economics (general + regional)	 Economic valuation – national accounts Economic instruments (incentives, taxes, debt for nature swaps, etc.) Ecosystem Services (climate, biodiversity, water): concepts and practice
Finance/Banking (general +regional)	 Finance for R&D Venture Capital Agro-Forestry Credit Lines Investment Funds, Equity, Asset Management etc. Socially Responsible Investment & Impact Investing Micro-finance Insurance International Development Finance

Infrastructure (general + regional)	• Energy
	Storage
	On-site processing/value added
	Access to sustainability certification Systems
	Communications for Market access
	Transport
Market oriented Product	 Non-timber forest products (Fruit, fibers, seeds, herbs, medicinal
Research & Development	plants, vines, vegetables, resines, perfumes, essential oils, medicinal
	plants, freshwater fisheries, etc.);
	non-fisheries marine products
	Companies & products
	Value chains
	Markets:
	Trade Fairs
	Internet Trading Platforms
	Wholesale and retail patterns
	- Trading Evolution at a
	Trading Exchanges , etc.