

Driving the sustainable development of Amazonas

AP: “Regional stimuli and budget flow”

Special Committee on Tax Reform (PEC 45) House of Representatives

Brasília-DF, 10/8/2019.





- ✓ Develops studies and analyzes on the economy and the environment to achieve sustainable development.
- ✓ Contributes to qualified debates, through the numerical translation of economic, social and environmental impacts, to reconcile and channel efforts in the search for alternatives and innovative solutions in public and private decision making.

What Regional Stimuli?

**Inputs to
Production**

or

**Investment
Stimuli**

CURRENT REGIONAL STIMULUS MODEL IS DEFFICIENT

1. INEFFICIENT ALLOCATION OF PRODUCTION FACTORS

Companies and investments are moved to regions that offer incentives, not considering comparative advantages, which undermines the country's revenue and productivity.

3. DISTORCES MARKETS AND PRODUCTION CHAINS

Logistics costs, supply chain development, access to intermediate goods and final generate market distortions

2. NO CONDITIONS AND GOALS

No commitments productivity, employment, market access and technology to the private sector.

For the public sector, social and tax goals also do not exist.

4. GENERATES DEPENDENCE

Little encouragement for benefited sectors and companies to seek independence from incentives and subsidies

ELEMENTS FOR GOOD REGIONAL STIMULATION POLICY

1. FOCUS ON RESEARCH AND DEVELOPMENT - R&D

Environment conducive to the integration of universities, research institutes and industry for scientific and technological development.

2. GENERATES INNOVATION

Innovation in business models, processes, products, market approaches, based on the use of inputs in each region and, in particular, those of local biodiversity.

3. INTEGRATION PRODUCTIVE CHAINS

Companies are qualified and competitive to insert themselves in global productive chains, generating exports and internationalization of businesses and companies.

4. SEARCH FOR COMPETITION

Companies are stimulated and constantly seek to increase their competitiveness, whether through technological, process or product

5. ACTION SHOULD NOT BE ISOLATED FROM THE STATE

It should not be the only stimulus policy. Being part of a set of measures to stimulate technological, productive, industrial and social development, inducing the creation of an innovation ecosystem that brings together the three spheres of government, companies and academia.

Competition factors

A. PRODUCTIVE EFFICIENCY

Increased productivity and reduced production costs: labor market, financing, tax system and physical infrastructure

C. INNOVATION

Innovation incentive structure, modernization of business management, expansion of technology-intensive services

E. MARKETS ENLARGEMENT

Insertion in national and international production chains

B. PUBLIC MANAGEMENT EFFICIENCY

Control of expenses; Macroeconomic predictability of interest and exchange rates; Higher investment rates; Environmental Sustainability

D. LEGAL SECURITY

Legal efficiency and bureaucracy reduction

F. SOCIAL INFRASTRUCTURE

Includes, among others, health, housing, transportation and sanitation, and is based on education (basic and vocational)

ASSUMPTIONS AND UNDERSTANDINGS

CURRENT MODEL ASSESSMENT

1. Production input generates dependence and distortions

Competitiveness of the pole depends on the existence of subsidies - estimated at \$ 20 billion annually

2. Local inputs and biodiversity is not used

Industry does not use elements of local biodiversity

3. High economic concentration

Activity in the state is centered in Manaus (90%) and in the industrial sector - neither diversified nor decentralized

STIMULI POLICIES MODERN

- CONSIDERED FOR THE ZFM -

1. Incentive for investment, not for production

Companies and businesses should not be dependent on benefit

2. Use of biodiversity and local factors

Comparative advantages of the environment where it is located should be leveraged and generate economic value, production and income.

3. Decentralization and diversification of economic activity

Generating Opportunities for and Non-Concentrated Income in Single Location or Sector

Vulnerability of the Manaus Industrial Pole - PIM



- Industry 4.0
- Commercial Opening
- Integration with supply chains
- Digital Connectivity
- Export



- Tax bottleneck
- Need to reduce production subsidies
- Review of regional development mechanisms

Economic, social and fiscal feasibility of current at-risk PIM model
Reflection on cost vs. benefit of the current model

GOAL → PRESENT NEW OPPORTUNITIES FOR DIVERSIFICATION OF AMAZON'S ECONOMIC ACTIVITY

STRUCTURED MODEL

- A. DINAMIZATION OF LOCAL INDUSTRIAL PARK AND CURRENT MODEL
- B. SUSTAINABLE USE OF BIODIVERSITY POTENTIAL
- C. SCIENTIFIC, TECHNOLOGICAL AND INNOVATIVE DEVELOPMENT
- D. ECONOMIC DECENTRALIZATION AND GENERATION OF SOCIAL AND ENVIRONMENTAL GAINS

OPPORTUNITY AXIS



BIOECONOMY



DIGITAL
TRANSFORMATION
ECONOMY



ECOTURISM



PISCICULTURE

Opportunities - Economic Diversification and Sustainable Development

OPPORTUNITY AXIS



BIOECONOMY



**DIGITAL
TRANSFORMATION
ECONOMY**



ECOTOURISM



PISCICULTURE

206,000 DIRECT / INDIRECT
JOBS



R\$ 7.15 billion in
investments in
physical
infrastructure



Generation of
218 thousand
jobs

Considering sectors involved and
investments to be made - direct
and indirect

12,000 jobs during
infrastructure works

Along 10 years

Forecast of investments in physical infrastructure with low social and environmental impact

Geostationary satellite to streamline broadband access	R\$ 3 billion	Manaus Furniture Pole (50 companies)	R\$ 1 billion
5 tourist reception logistics hubs	R\$ 300 million	Industrial park for food processing and production, biopharmaceuticals from Amazonian fish	R\$ 500 million
Manaus International Airport (a new terminal with 10 <i>fingers</i>)	R\$ 500 million	5 logistic fishing reception hubs	R\$ 50 million
Decentralized cold chain logistics complex	R\$ 300 million	Manaus Green Biochemical Center (10 biotech companies)	R\$ 500 million
Engineered tropical timber production pole for use in construction (5 companies)	R\$ 500 million	Plant and Insect Food Tech Polo from Amazon Biodiversity (20 companies)	R\$ 500 million

Additional Investments: Marketing, Training and Training, R&D, Management and Entrepreneurship

Impacts on the Economy of AM over 10 years

Opportunities	CURRENT PRODUCTION N *	Annual growth of DEMAND **	Production Growth	Increase in Salary Income	Direct Job Creation	Indirect Job Creation	Induced Job Creation	Total Job Creation
Bioeconomics	R\$ 3.1 bi	10.0%	R\$ 9.7 bi	R\$ 1.5 bi	37,413	9,021	13,374	59,809
Digital Transformation Pole	R\$ 1.1 bi	11.0%	R\$ 3.9 bi	R\$ 770.3 mi	9,292	29,318	34,863	73,472
Ecotourism	R\$ 1.7 bi	3.5%	R\$ 1.3 bi	R\$ 541.5 mi	45,194	5,586	11,681	62,461
Pisciculture	R\$ 72.1 mi	10.0%	R\$ 169.4 mi	R\$ 69.6 mi	8,356	995	1,432	10,783
TOTAL	R\$ 5.97 bi	-	R\$ 15.1 bi	R\$ 2.9 bi	100,255	44,921	61,350	206,525

Impact on GDP: 16.96%

Rising of Salary Income by Employment: R\$ 13,887.12

Elevation from Current Formal Employment Number *: 35.30%**

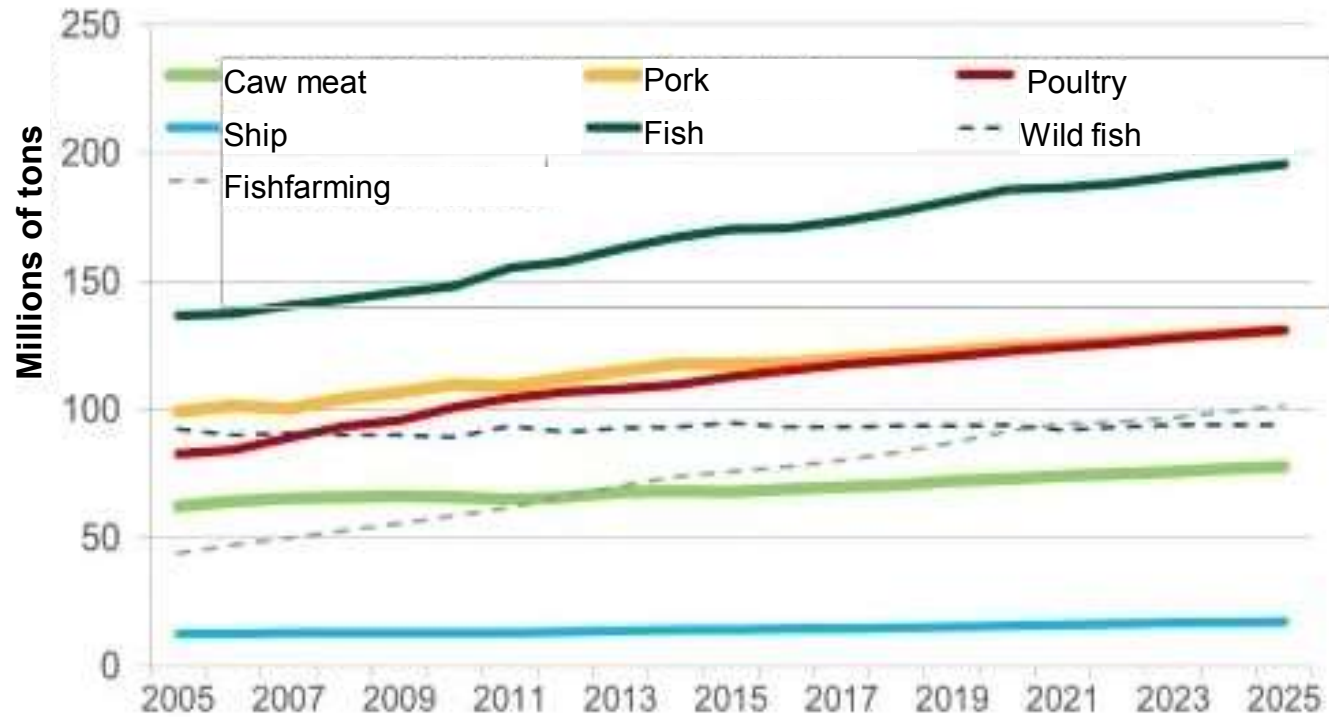
Source: Own elaboration based on IBGE (current production), RAIS / MTE (number of formal employment relationships) and Amazonas Input-Product Matrix (SUFRAMA, 2006).

Notes: * values 2016

** proposed estimates for scenario building

*** number of formal employment relationships equal to 584,318, according to RAIS 2017

Global production



Fonte: OCDE-FAO

Is Amazonas capturing this window of opportunity?

ILLUSTRATIVE CASE Fish Farming

58% of fish consumed in the state of Mato Grosso are purchased from Rondônia/Roraima

✓ In Tambaqui, this percentage is 90%

CRITICAL FACTORS FOR OPPORTUNITIES



BIOECONOMY

Manaus R&D investment as the world's first bioeconomy research hub



ECOTOURISM

Forest Sebrae - School of Sustainable Ecotourism



DIGITAL TRANSFORMATION POLE

Broadband Access - Geostationary Satellite Existence for Amazon



PISCICULTURE

Fish Embrapa - development and training of techniques and processes for fish cultivation and processing

Pondering

Federal House Representative Sidney Leite PSD/AM

“The Free Zone model that has so far yielded very positive results can be rethought to bring the economy of the Amazon into the 21st century. The focus should now be on innovation. We need to encourage the knowledge economy in the Amazon and northern Brazil. That means investments in cutting-edge agriculture, technology and biotechnology.”

Federal House Representative Atila Lins PP/AM

“Without economic alternatives, the state can suffer from deforestation and end its policy of environmental preservation.

“In addition to the need to preserve its model, we have this environmental issue where the whole world is turning its sights on the Amazon”,

Deputy Pablo PSL/AM

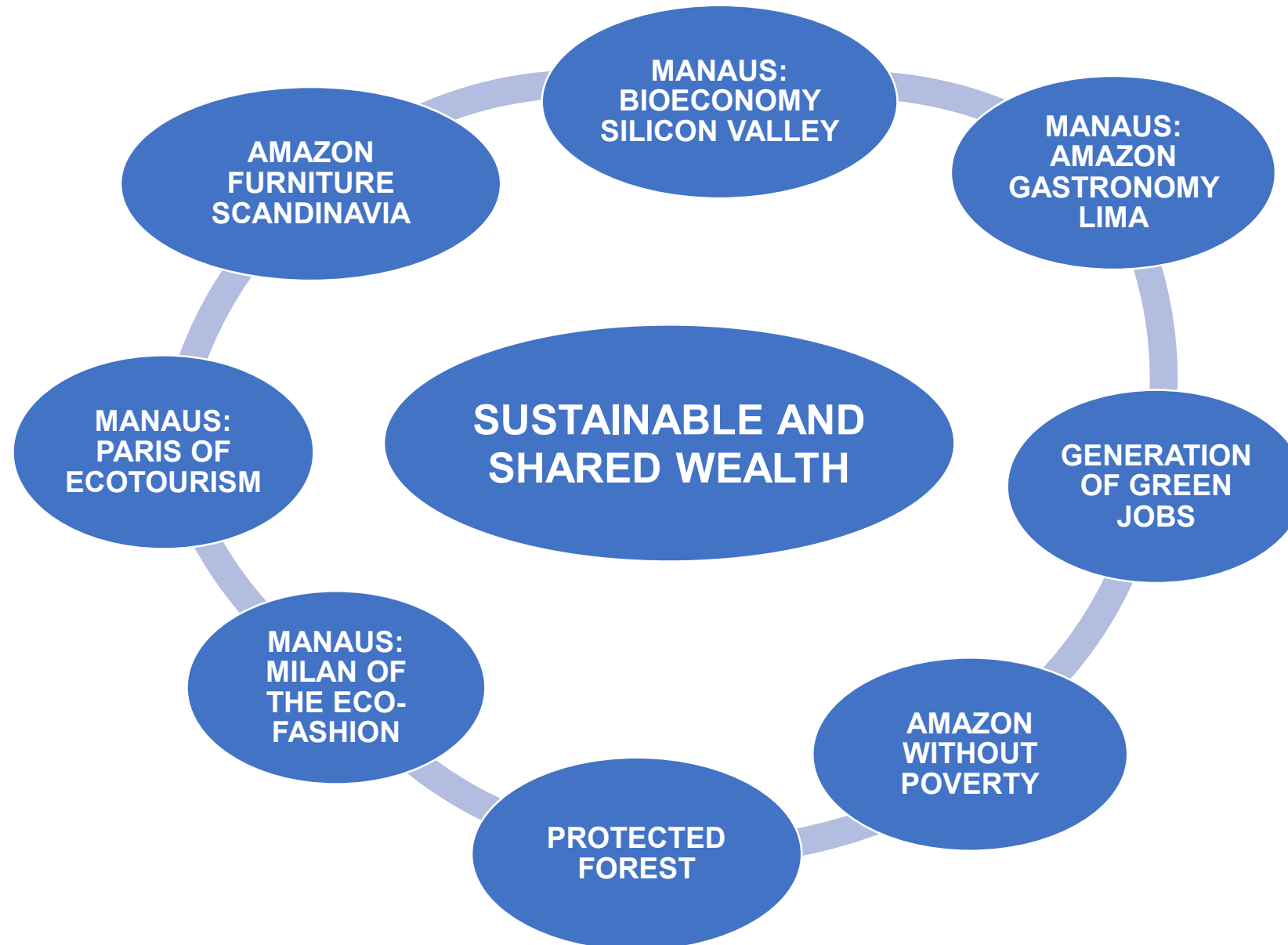
“We also have medicine products. Why are these sources not used? Why doesn't tourism go forward here in the Amazon? The name 'Amazonas' is one of the strongest in the world, this name should be highlighted so that we win the globe, the world, and that can make it different from what has been done until today”

Federal House Representative - Marcelo Ramos PL/AM

“We need to evaluate it permanently and make adjustments. Any reflection on ZFM must start from two premises. There is a finding that is self-critical. No industrial model stands forever with tax incentives and barriers to imports.

We need to understand the model as a temporary policy that needs infrastructure planning, productivity and labor training so that it can be competitive in the future in an environment of less tax incentives.”

FUTURE VISIONS



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ANNEX - Methodological notes, bibliographical references and team

Methodological Notes

- Multipliers of production, employment and wage income from the input-output matrix of the state of Amazonas.
- Opportunities discussed in interviews with local government (Amazonas and Manaus), academia and regional development specialists
- Bases consulted: employment (RAIS and Continuous PNAD), value of production (IBGE, Regional Accounts), poverty and household conditions (PNAD), SUFRAMA (variables related to Manaus Industrial Pole)
- Physical infrastructure pricing: preliminary estimates based on analogous cases
- Critical Success Factors: derived from interviews with relevant public and private sector actors, and literature review

Interviews held

- **Adalberto Verissimo** , IMAZON Co-Founder
- **Alcimar Marques de Araújo Martins** , Planning Assistant Superintendent at SUFRAMA
- **Ana Bastos** , CEO of AMATA
- **Carlos Nobre** , Climatologist
- **Carlos Schneider**, Executive Director of the CERTI Foundation
- **Daniela Lerda**, Climate and Land Use Alliance Coordinator - CLUA
- **Fabio Calderaro** , Director of the Amazon Biotechnology Center
- **Guilherme Leal**, Cosmetics Business Owner
- **Noble Ismael**, Biologist
- **Izabella Teixeira**, former Minister of the Environment
- **Jessé Rodrigues dos Santos**, Department of Economic Research at SUFRAMA
- **João Tezza Neto**, Original Trade Executive Director and IDESAM Consultant
- **Jório de Albuquerque Veiga Filho**, State Secretary for Planning, Development, Science, Technology and Innovation of Amazonas
- **José Eduardo Fiates** - General Superintendent of the **CERTI** Foundation
- **Marcos Daré** , Director of the CERTI Foundation's Green Economy Center
- **Marcos Mueller**, CEO of Darwin Startups
- **Mariano Cenamo**, IDESAM Researcher
- **Oskar Metsavah**, textile entrepreneur - Instituto E.
- **Renato Mendes Freitas**, Executive Secretary of Amazon Development
- **Tatiana Schor**, Executive Secretary of Science, Technology and Innovation of Amazonas

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- **“Amazon Creative Labs and Rainforest Business School”**, de Carlos Nobre et al.
- **Programa “Amazônia em Transformação”**, do Instituto de Estudos Avançados de São Paulo (IEA/USP) and IMAZON
- **Project “Biopolis Amazonas”** , by the Government of Amazonas
- **“Peixes e o Futuro Sustentável da Amazônia (Fish and the Sustainable Future of the Amazon)”**, David G. Mcgrath, vice-diretor of Earth Innovation, Universidade Federal do Oeste do Pará (UFOPA)
- **“Forestry & Biomaterials Endowment Fund (FBEF)”** , an equity fund created by USP's Luiz de Queiroz College of Agriculture forest and biomaterial resource areas
- **“A Zona Franca e a Conservação da Amazônia”, (The Free Zone and the Conservation of the Amazon)**, by Carlos Durigan, Director of the Amazon Program of WCS-Brazil (Wildlife Conservation Association).
- **“Pacto das Cidades Amazônicas” (Amazon City Pact”)** signed in Manaus by representatives of the Legal Amazon (16 municipalities and 16 entities), which proposes 12 (twelve) environmental measures
- **“Qual o impacto do desmatamento zero no Brasil? (“What is the impact of zero deforestation in Brazil?”)**, Prepared by the Choices Institute.
- **“Priority and Gaps in Native Species Forestry Research & Development”**, (**“Prioridade e Lacunas de Pesquisa & Desenvolvimento em Silvicultura de Espécies Nativas no Brasil”**,) WRI Brasil - World Resources Institute
- **“How much does Brazil need to invest to recover 12 million hectares of forests” (“Quanto o Brasil precisa investir para recuperar 12 milhões de hectares de florestas”)**, prepared by Instituto Escolhas
- **The New Climate Economy/Working Papers**
- **Xingu: histórias dos produtos da floresta (Xingu: stories of forest products)**, VILLAS BOAS, André J. A. et al, Ed. Instituto Socioambiental
- **Amazônia – Por uma economia do conhecimento da natureza, (Amazon - For a knowledge economy of nature)**, Ricardo Abramovay
- **Importance of Knowledge-Intensive Economic Development to Conservation of Biodiversity in Developing Countries**, Claudio Valladares-Padua (IPE)
- **Zona Franca de Manaus – Impactos, efetividade e oportunidades (Manaus Free Zone - Impacts, effectiveness and opportunities)**. Coordinator Márcio Holland - Getúlio Vargas Foundation (FGV) and São Paulo School of Economics (EESP),

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