



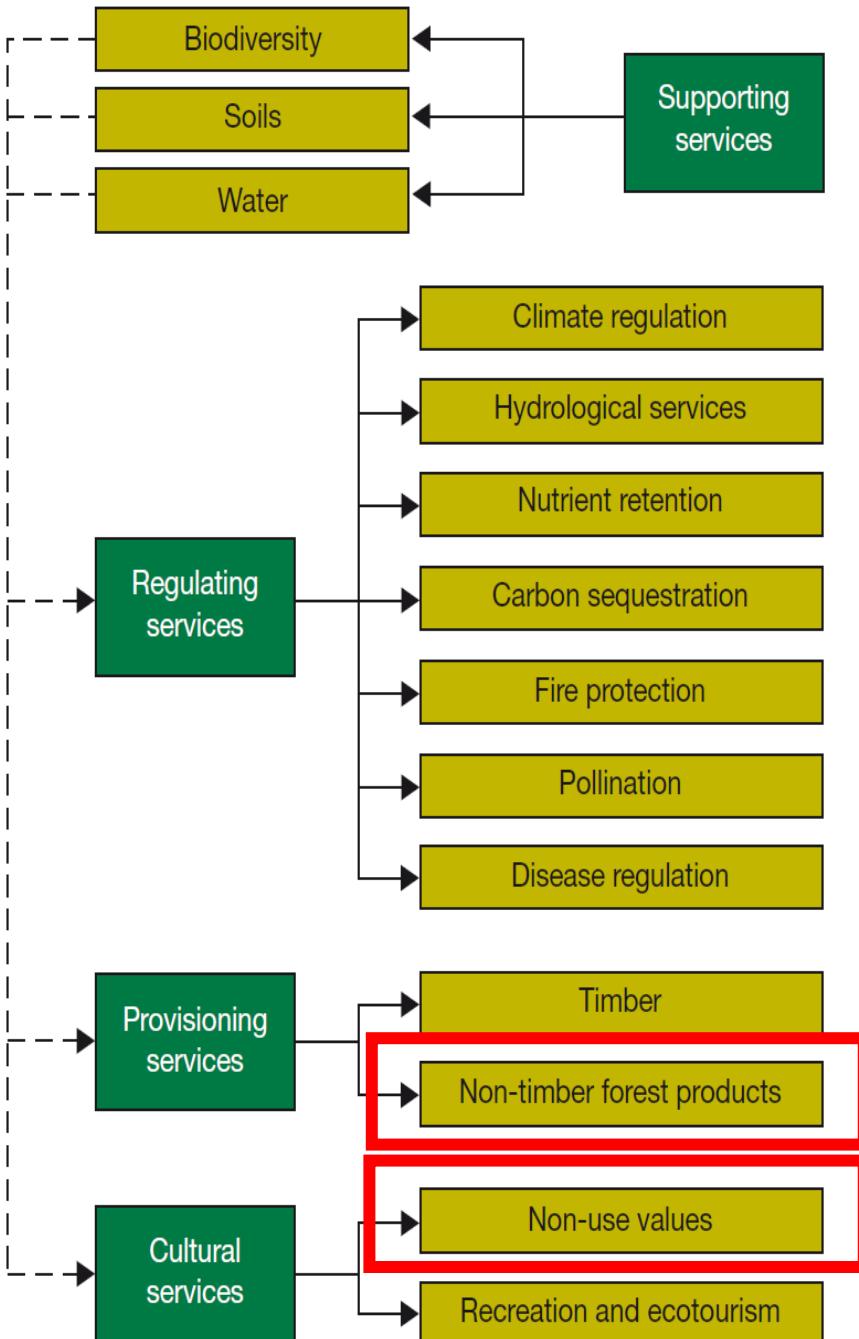
Non Timber Forest Products in the Brazilian Amazon: The role of socio biodiversity chains

Sónia Maria Carvalho Ribeiro, Britaldo Soares Filho



Centro de Sensoriamento Remoto





Cultural diversity heritage values

Knowledge systems (traditional and formal)



Educational values



Aesthetic values

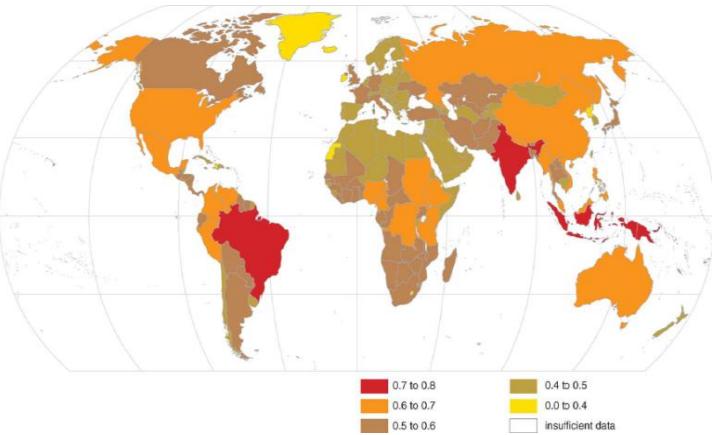
Social relations

Sense of place

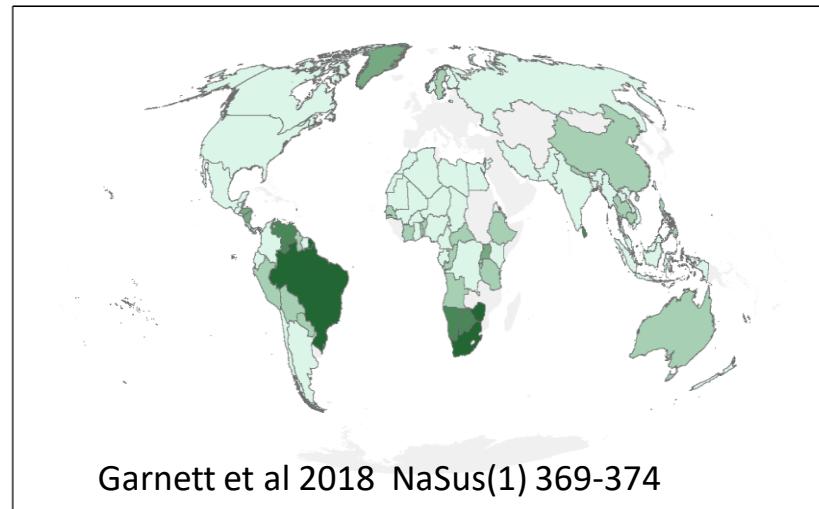
Recreation and ecotourism

Biological Cultural

Index of
biocultural
diversity



J. Loh, D. Harmon Ecological Indicators (5) 231–241
Percentage of Indigenous Peoples'
lands that are ...



Garnett et al 2018 NaSus(1) 369-374

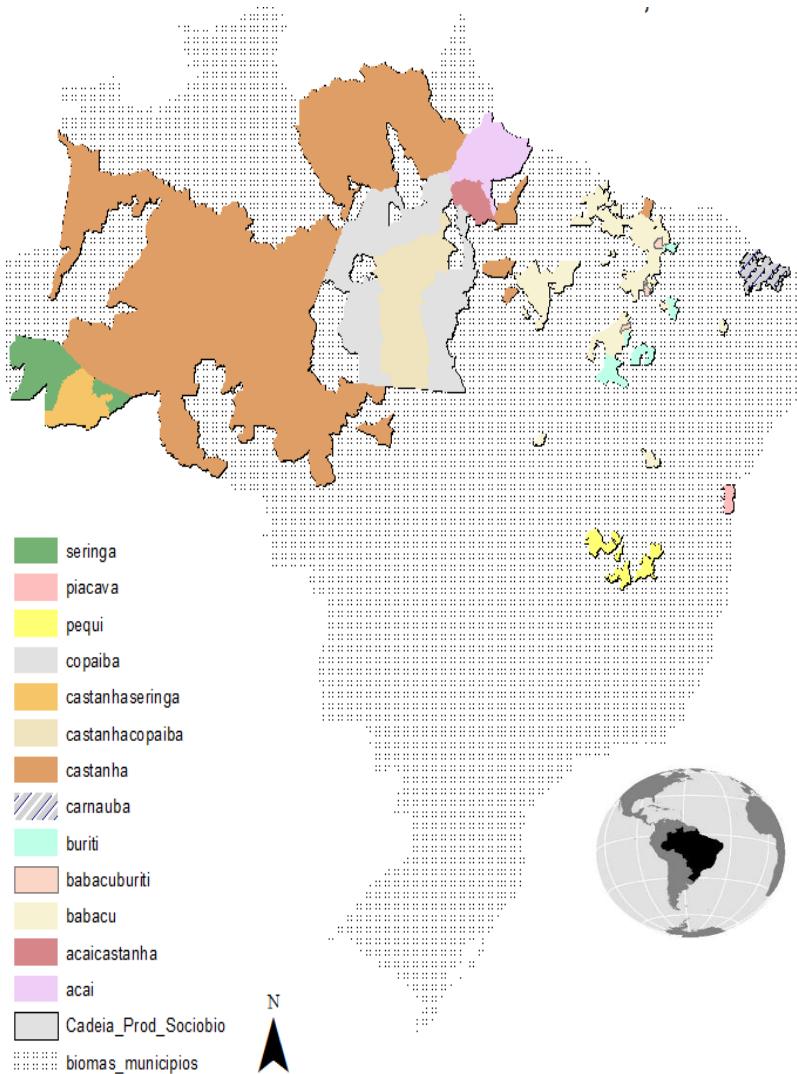
DIVERSITY

IN A NUTSHEL: BRAZILIAN SOCIOBIODIVERSITY

- Number of mammals and bird species: **1886**
- Number of Ethnic groups: **224**
- Number of languages spoken: **246**
 - Forest and traditional people acknowledged by law:
 - over **644,000** families of ribeirinhos agro-extractivists,
 - 204** indigenous tribes of over 605,000 families and
 - over **4,500** families of Quilombola,



Brazilian Sociobiodiversity Chains



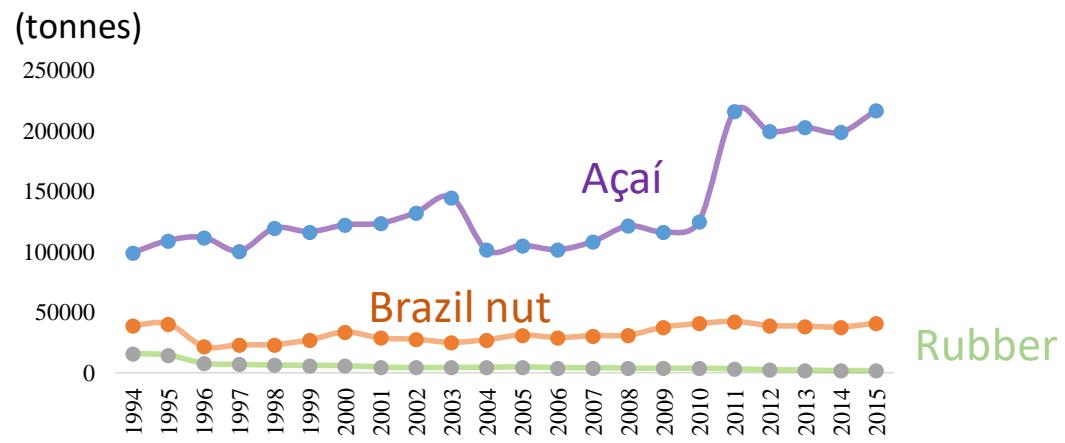
Plano Nacional para Promoção das Cadeias de Produtos da Sociobiodiversidade MMA 2009

Cadeias de Produtos da Sociobiodiversidade

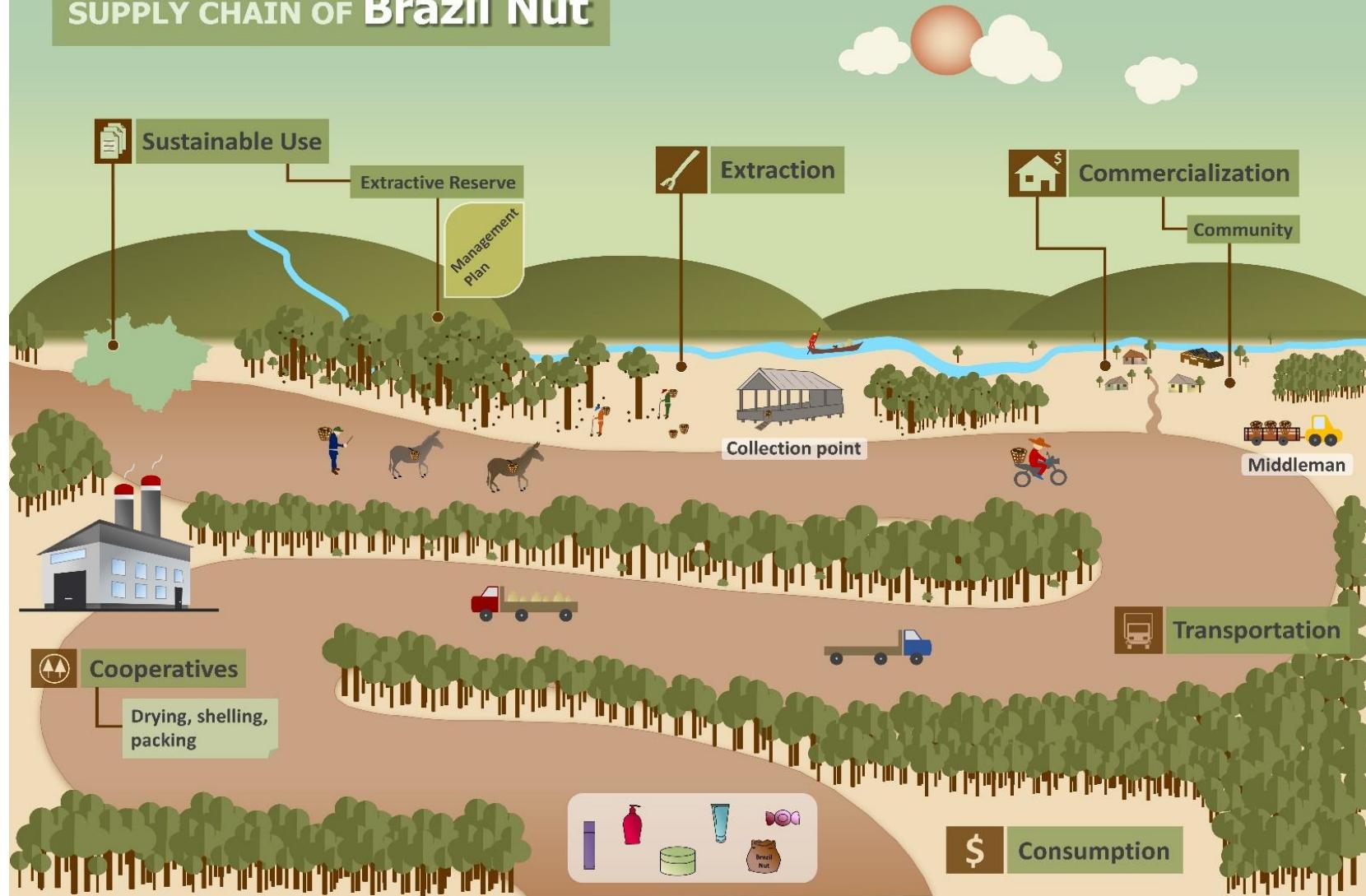
Babaçu	Andiroba	Borracha
Castanha do-brasil	Carnaúba	Buriti
Açaí	Pequi	Copaíba
Piaçava		

A variety of Non Timber Forest Products (NTFPs) as part of Brazilian Amazon's livelihoods:

- over 50 NTFPs are traded in Amazonian Markets
- IBGE reports 30
- Only 3 NTFPs are prominent**



SUPPLY CHAIN OF Brazil Nut



Environmental Conservation, Volume 39, Issue 2

June 2012, pp. 132-143

Economic benefits of forest conservation: assessing the potential rents from Brazil nut concessions in Madre de Dios, Peru, to channel REDD+ investments

FELIPE NUNES ^(a1), BRITALDO SOARES-FILHO ^(a1), RENZO GIUDICE ^(a1), HERMANN RODRIGUES ^(a1), MARIA BOWMAN ^(a2), RAFAELLA SILVESTRINI ^(a1) and ELSA MENDOZA ^(a3)

DOI: <http://dx.doi.org/10.1017/S0376892911000671>

Published online: 07 February 2012



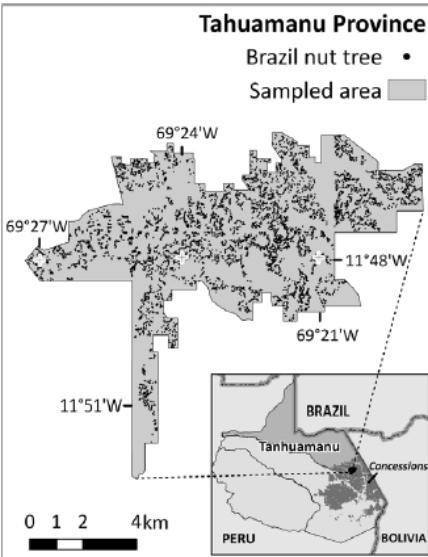
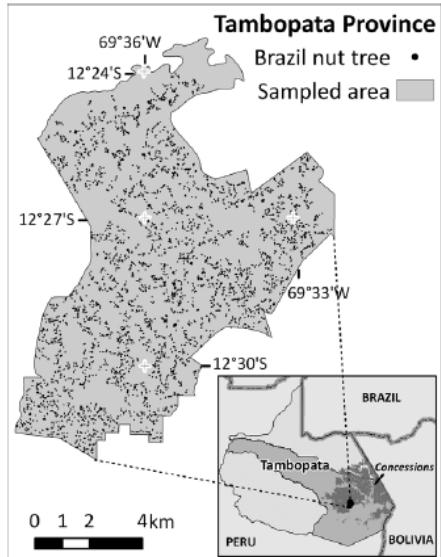
**Encontro da Sociedade
Brasileira de Economia
Ecológica**

Brasília, 4 a 8 de Outubro de 2011

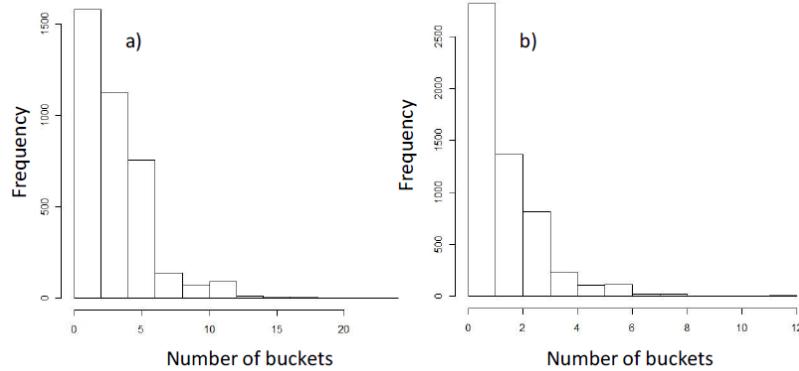
Políticas Públicas e a Perspectiva da Economia Ecológica

Wa

VALORANDO A FLORESTA EM PÉ: A RENTABILIDADE DA CASTANHA DO BRASIL NO ACRE



Clustered spatial distribution



PDF of yields

Table S9: Disaggregated transportation costs by type of product and mode of transport

Product*	Mode of transport	Land use	US\$/70kg/km
Unshelled Brazil nuts	Motorcycle	forest	0.08
	Truck	roads	0.38
	Boat	navigable rivers	0.03
Shelled (processed) Brazil nuts	Motorcycle	forest	0.27
	Truck	roads	1.32
	Boat	navigable rivers	0.12
Shelled-certified Brazil nuts	Motorcycle	forest	0.27
	Truck	roads	1.32
	Boat	navigable rivers	0.12

*Transportation costs are estimated for the collecting season, from December to April.

Production and transport costs

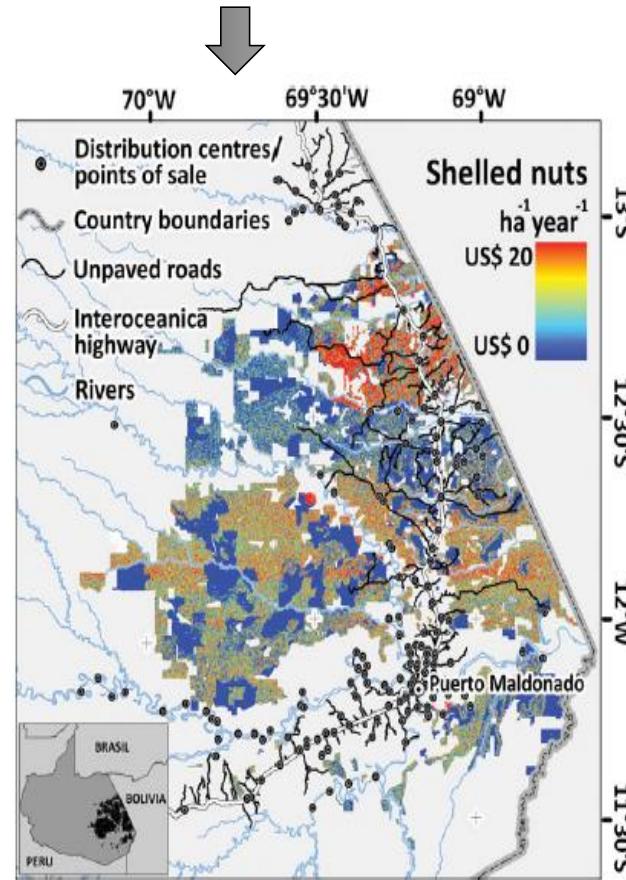
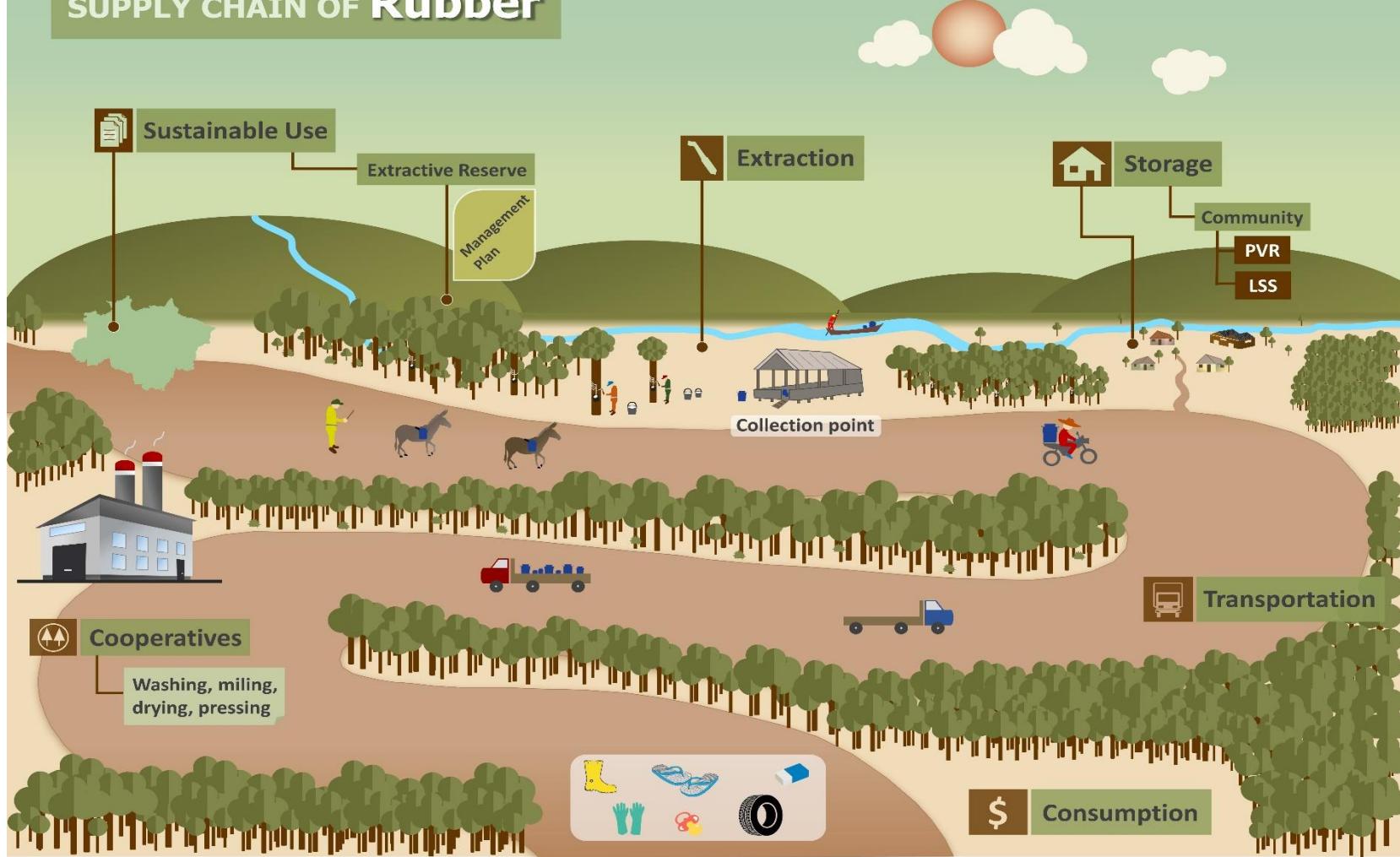


Figure 4 Spatial distribution of potential annual rents per hectare for shelled Brazil nuts.

SUPPLY CHAIN OF Rubber





Analysis

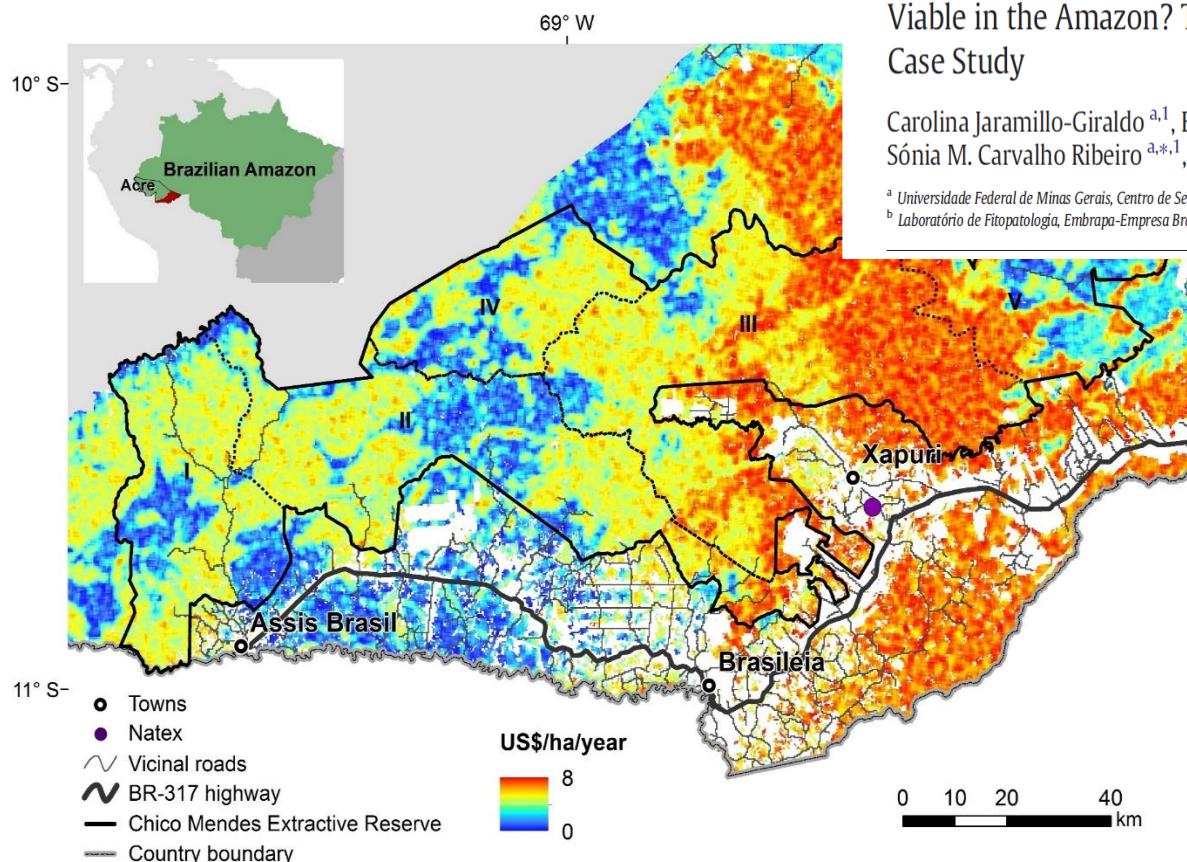
Is It Possible to Make Rubber Extraction Ecologically and Economically Viable in the Amazon? The Southern Acre and Chico Mendes Reserve Case Study



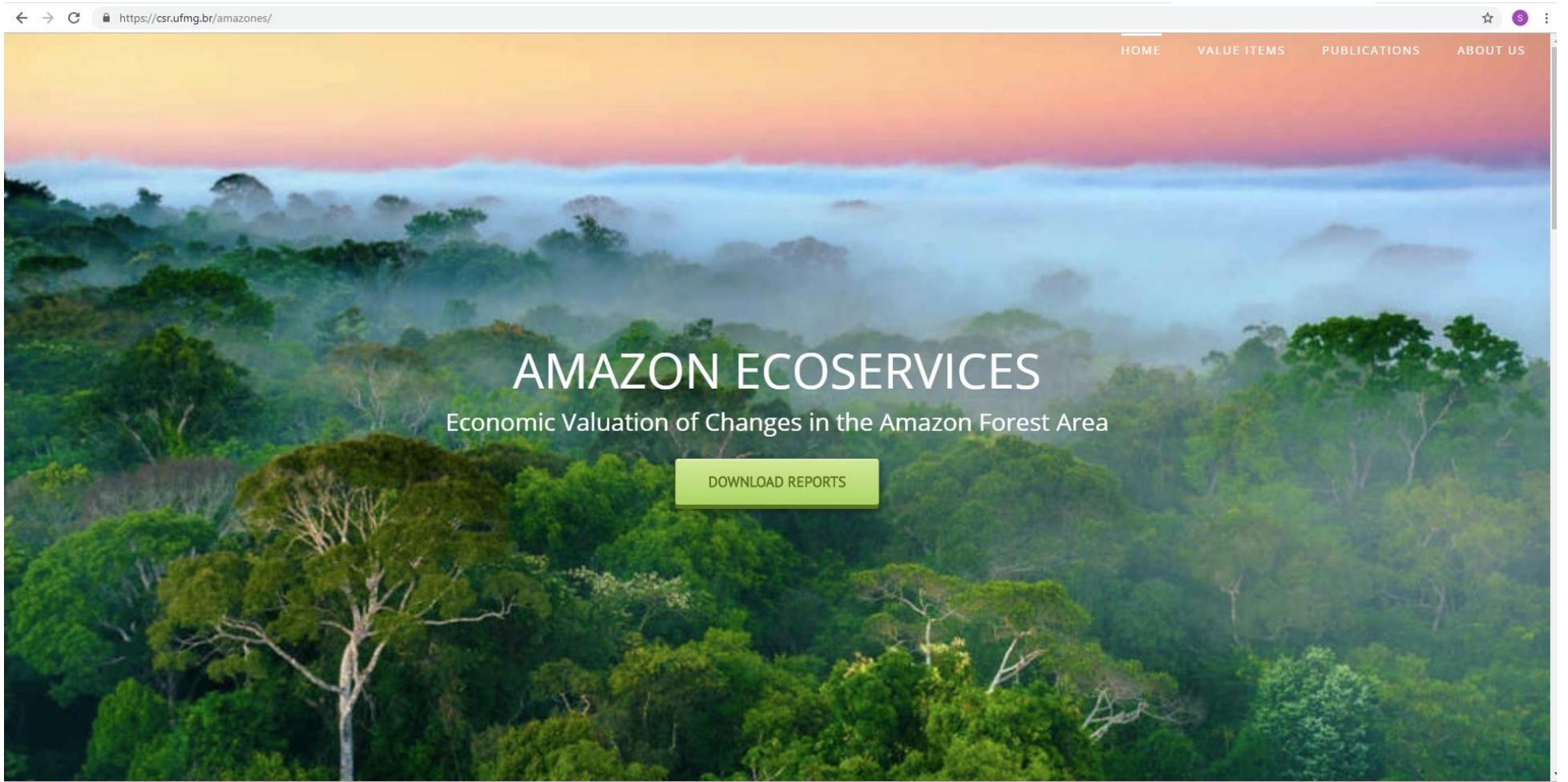
Carolina Jaramillo-Giraldo ^{a,1}, Britaldo Soares Filho ^{a,1},
Sónia M. Carvalho Ribeiro ^{a,*1}, Rivadalve Coelho Gonçalves ^{b,2}

^a Universidade Federal de Minas Gerais, Centro de Sensoriamento Remoto, Av. Antônio Carlos, 6627, Belo Horizonte, MG, CEP 31270-900, Brazil

^b Laboratório de Fitopatologia, Embrapa-Empresa Brasileira de Pesquisa Agropecuária, Rio Branco, Acre, Brazil



amazones.info



The website features a large, horizontal banner image of a lush green rainforest under a warm, orange and yellow sky. The banner serves as the header for the site.

<https://csr.ufmg.br/amazones/>

HOME VALUE ITEMS PUBLICATIONS ABOUT US

AMAZON ECOSERVICES

Economic Valuation of Changes in the Amazon Forest Area

[DOWNLOAD REPORTS](#)

2006- 2014 CASE STUDIES



Previous work
(Nunes et al. 2011,
2012, Jaramillo et
al. 2014)



2014- 2015 BIOME SCALE

Developing, Implementing, and validating Brazil Nut, Rubber Model
Estimating yields (Brazil Nut, Rubber)
Estimating production and transport costs (Brazil Nut, Rubber)
Estimating Brazil Nut rents (EAA)
Estimating Rubber rents (EAA)

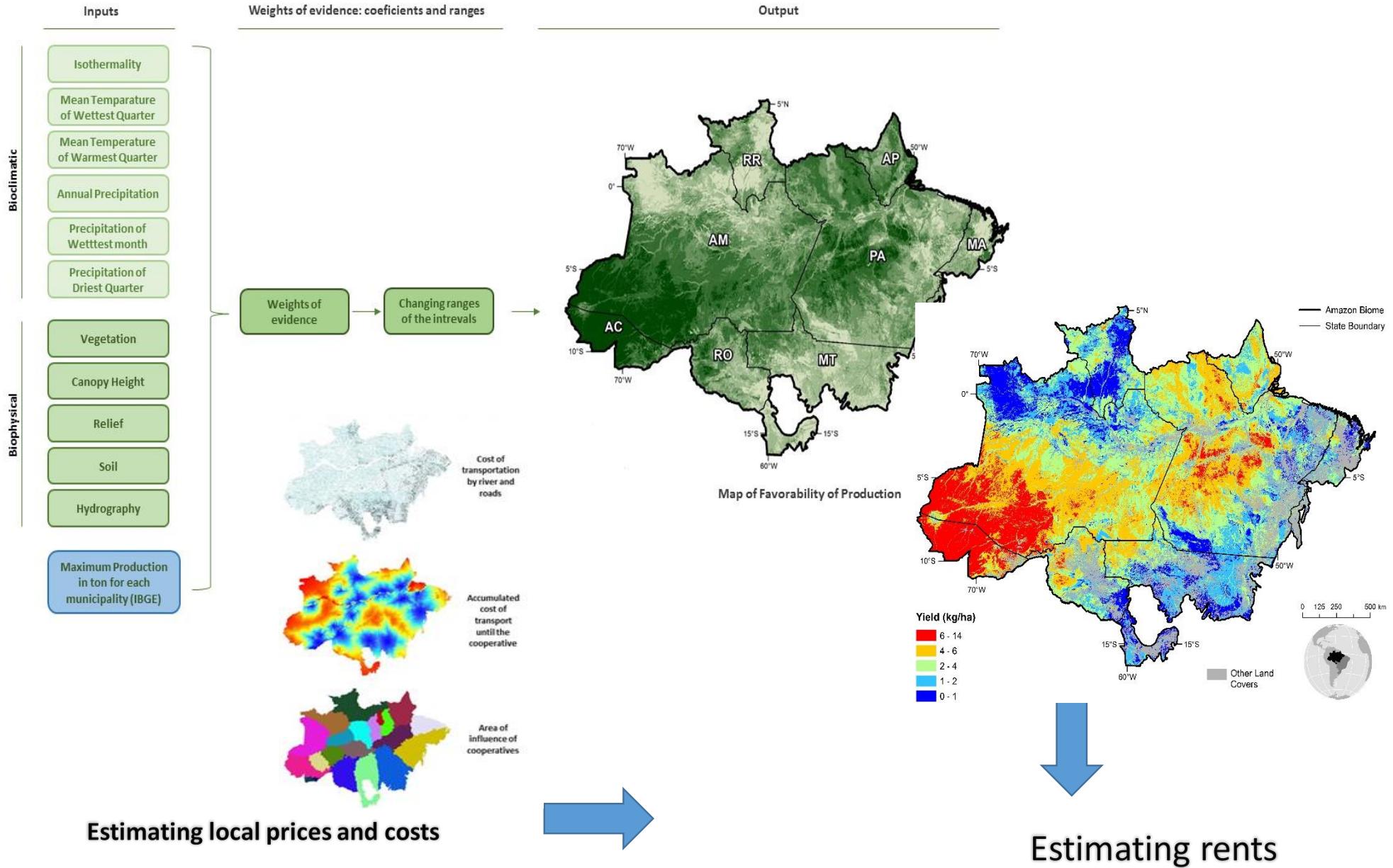
2016_2017 CASE STUDIES

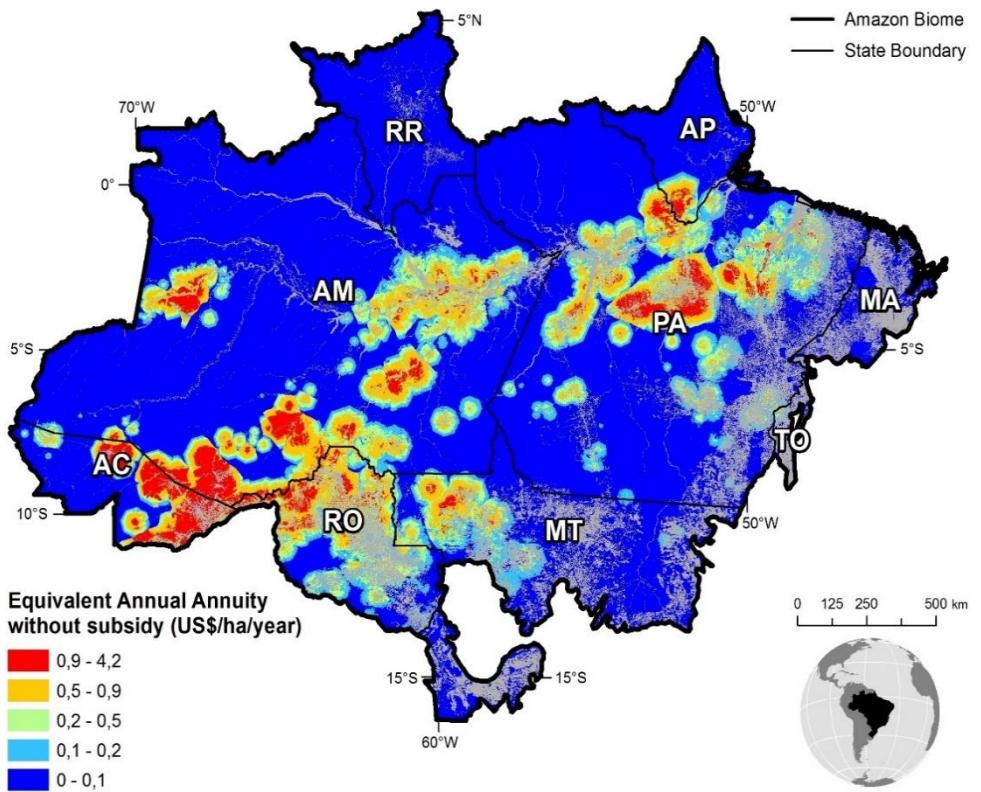
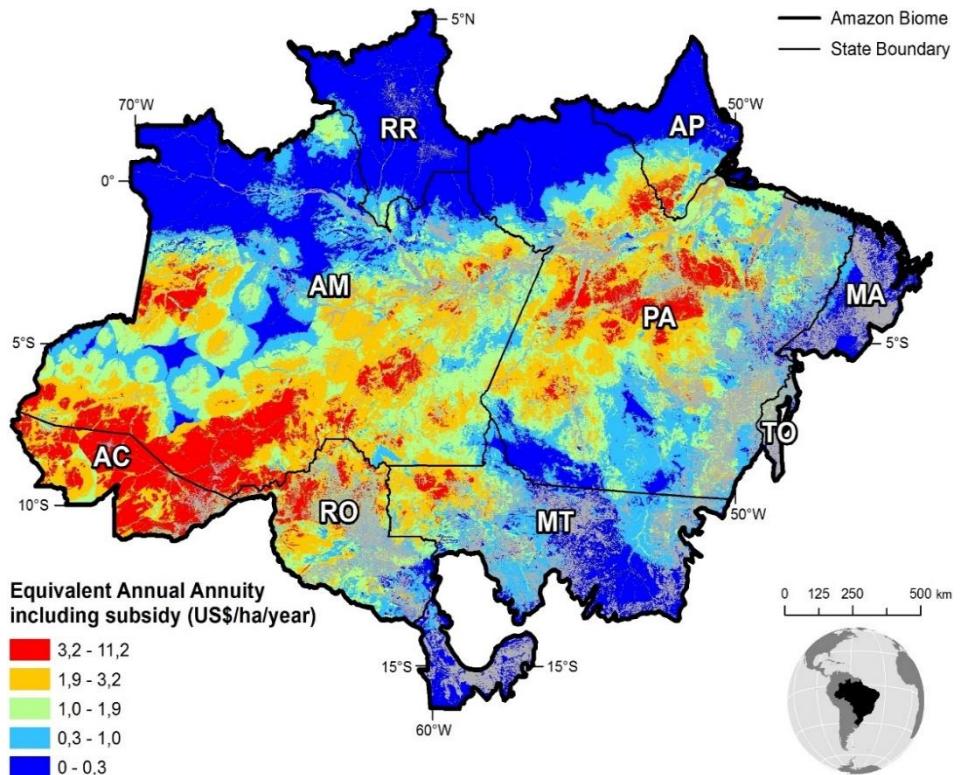
Field work in
Pará
Acre

I
M
P
R
O
V
E

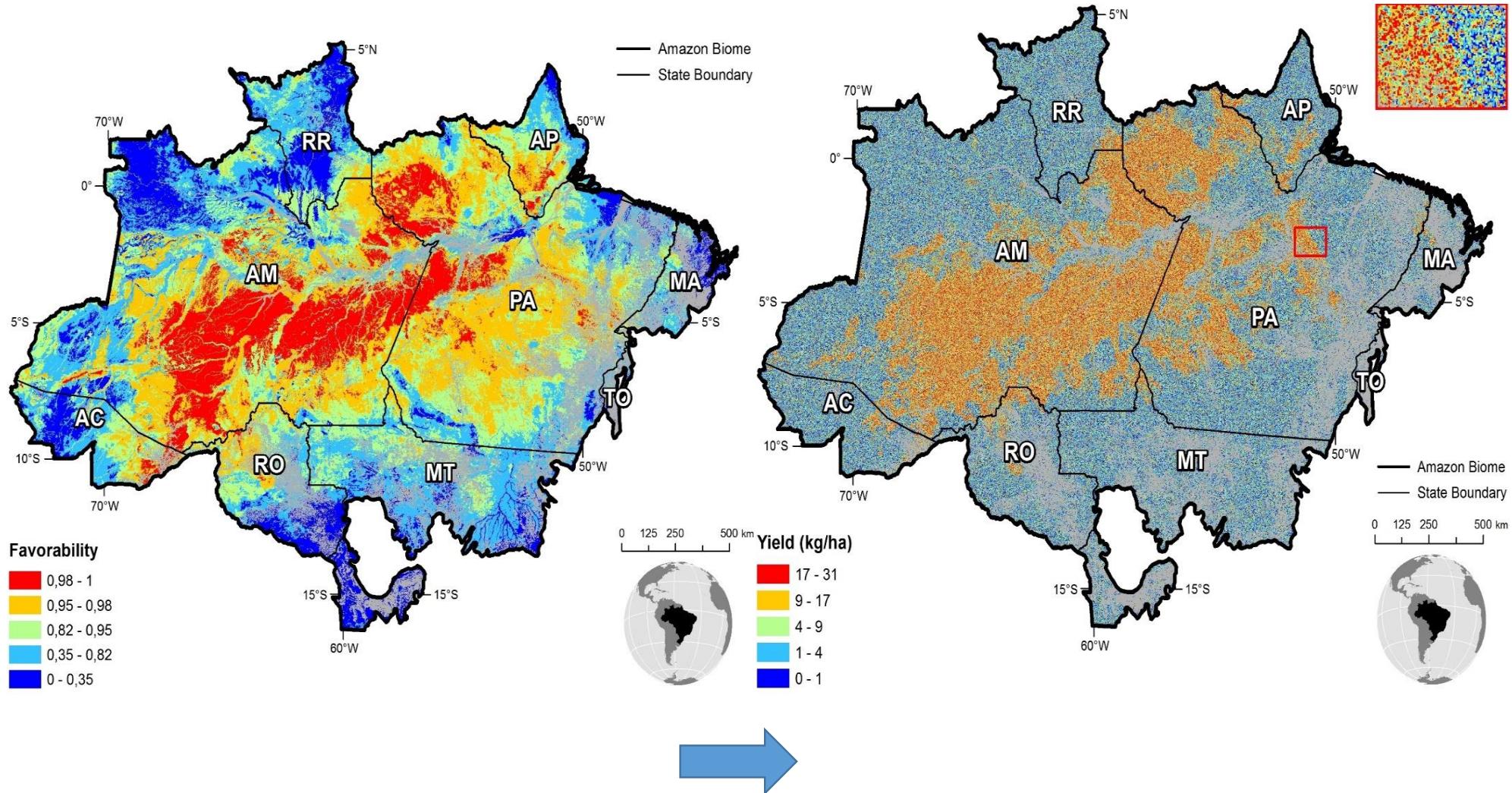
Validate
& revise

Estimating yields

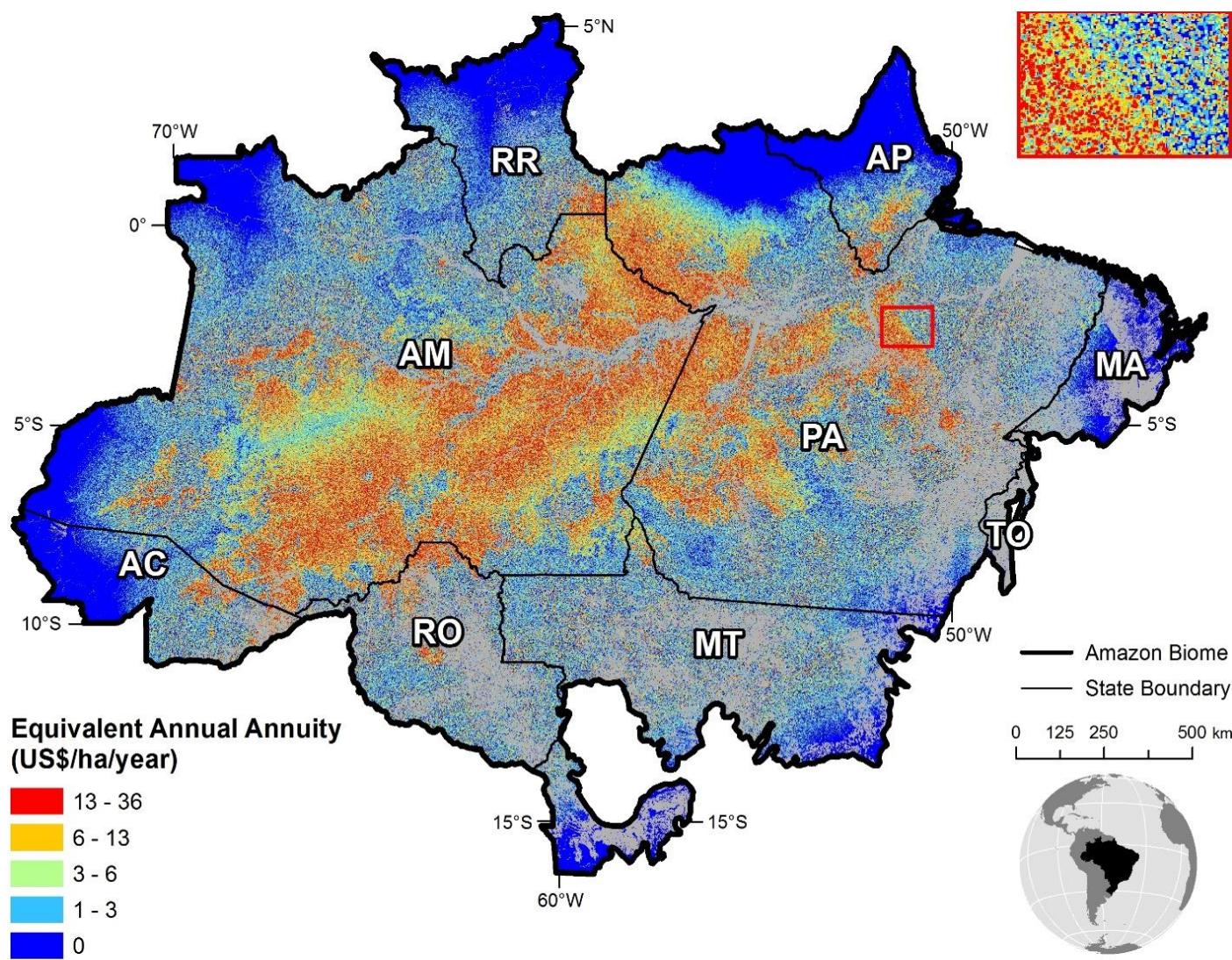




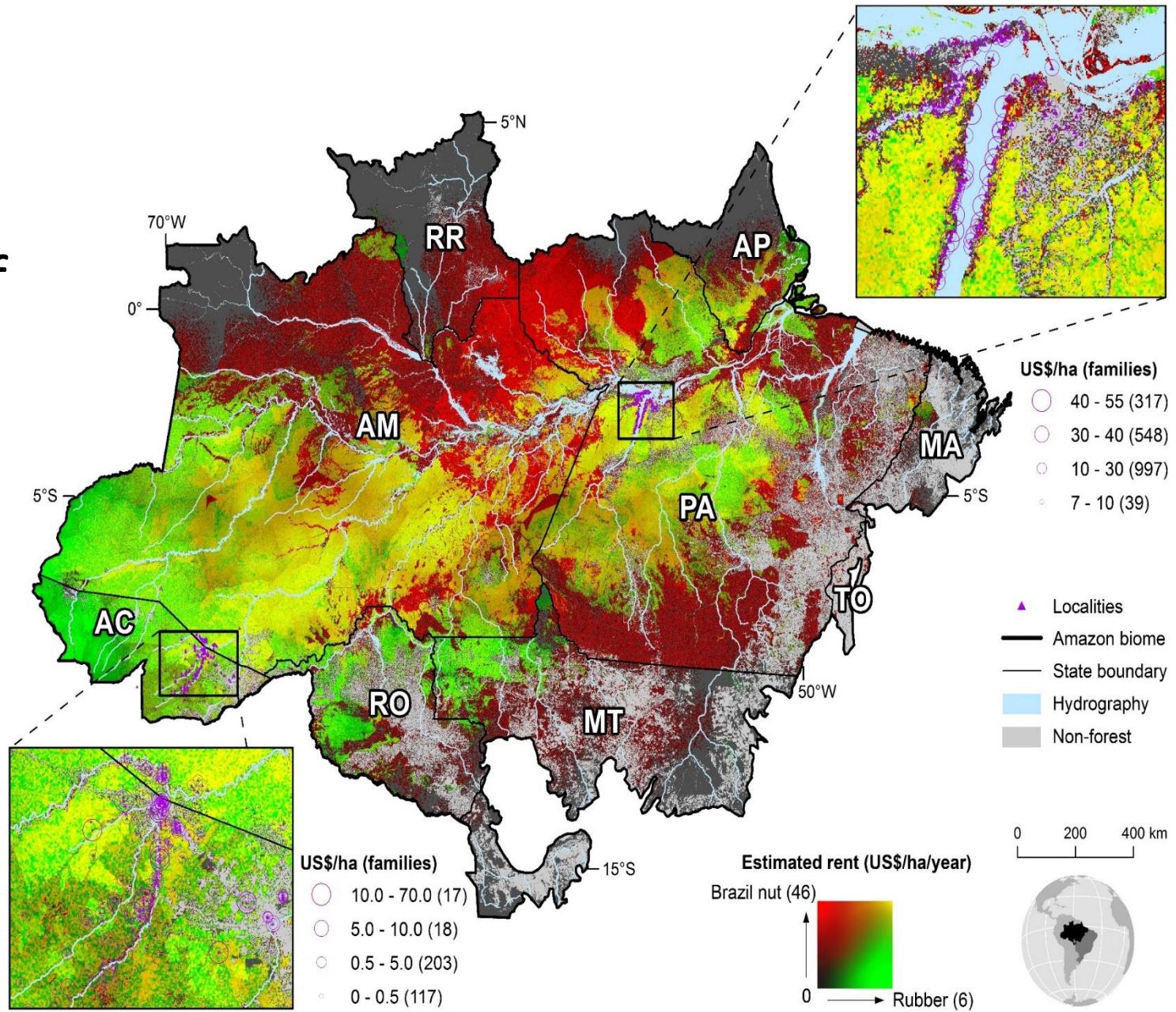
Brazil nut model



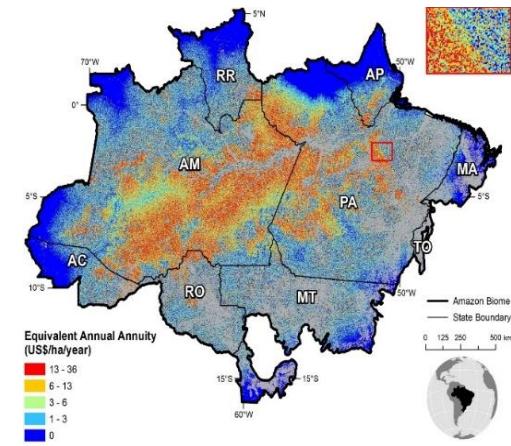
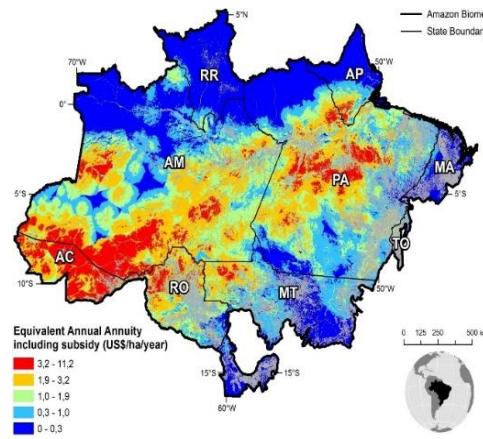
Brazil nut rents



Comparing our RENT estimates with a sub set of field work data



Targeting specific portfolio of regional policies



Programa Nacional de Desenvolvimento Sustentável dos Povos e Comunidades Tradicionais (PNPCT)

Programa Nacional Fortalecimento de Agricultura Familiar (PRONAF)

Política Nacional de Assistência Técnica e Rural Extensão (PNATER)

Política Geral de Preços Mínimos para Produtos da Socio Biodiversidade (PGPMBio)

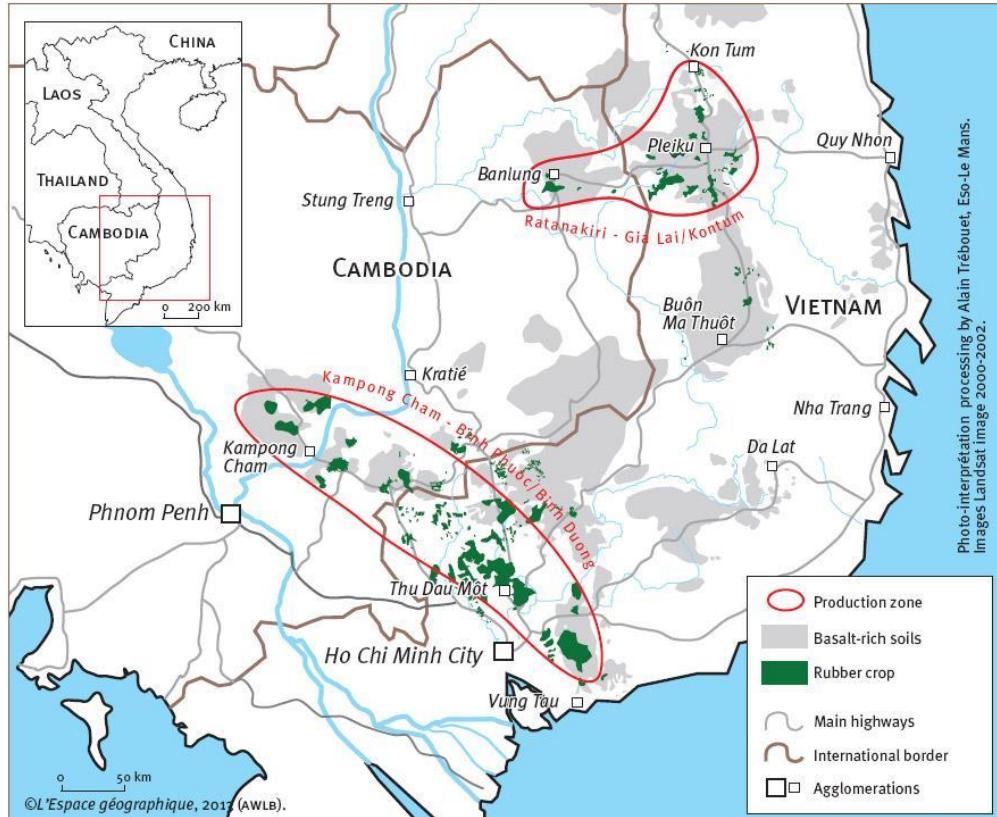
Programa de Aquisição de Alimentos (PAA)

Plano Nacional da Promoção das Cadeias de Produtos da Sociobiodiversidade (PNPSB)

Bolsa Família

Política Nacional da Agricultura Familiar e Empreendimentos Familiares Rurais.

Can markets save the forest (and the climate?)



The double role of rubber tapping



Jaramillo et al. 2017

Spatially explicit valuation of the Brazilian Amazon Forest's Ecosystem Services

Jon Strand^{1*}, Britaldo Soares-Filho^{1,2*}, Marcos Hell Costa³, Ubirajara Oliveira²,
 Sonia Carvalho Ribeiro², Gabriele Ferrelra Pires³, Aline Oliveira², Raoni Rajão^{1,4}, Peter May⁵,
 Richard van der Hoff^{4,6}, Juha Sikkimäki⁷, Ronaldo Seroa da Motta⁸ and Michael Toman¹

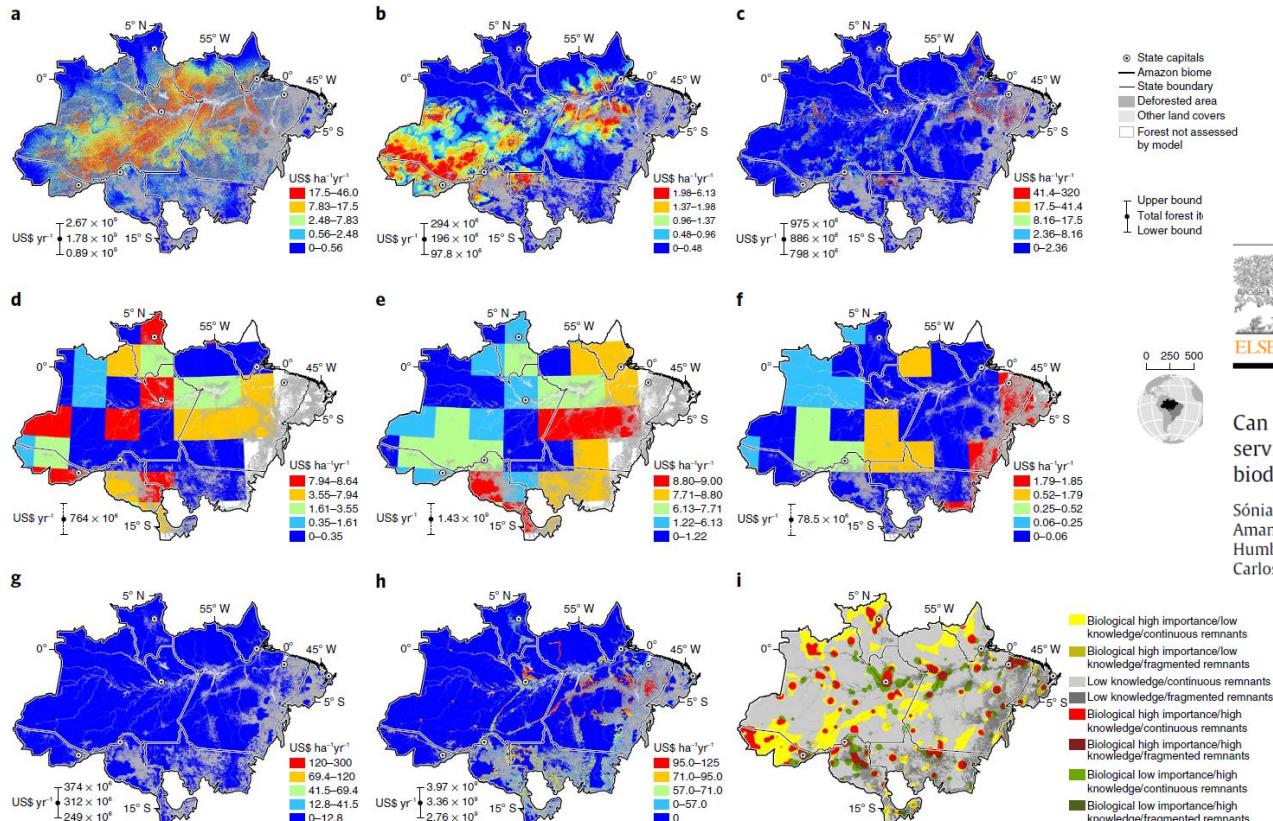
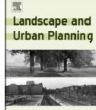


Fig. 1 | Forest values for individual value components a-i. Value maps for brazil nut (a), rubber (b), timber (c), soy* (d), livestock* (e), energy* (f), fire losses to timber (g), CO₂ emission reductions (h) and biodiversity relevant areas (i). Values are presented in EAA (30-year period with a discount rate of 5%). The value of CO₂ abatement is set at US\$5 per tonne. Soy*, Livestock* and Energy* refer to their marginal value not lost by keeping vegetation standing. Bar diagrams depict overall value for valuation component and associated uncertainty bounds when available.



Research Paper

Mapping the socio-ecology of Non Timber Forest Products (NTFP) extraction in the Brazilian Amazon: The case of açaí (*Euterpe precatoria* Mart) in Acre

E. Lopes^a, B. Soares-Filho^a, F. Souza^b, R. Rajão^c, F. Merry^d, S. Carvalho Ribeiro^{a,*}

^a Universidade Federal de Minas Gerais (UFMG), Centro de Sensoriamento Remoto, Programa Pós Graduação em Análise e Modelagem Sistemas Ambientais, Av. Antônio Carlos, CEP 31270-900, 6627 Belo Horizonte, MG, Brazil

^b World Wildlife Fund WWF, Acre, Rua Hugo Carneiro, 811, Rio Branco, AC, Brazil

^c Universidade Federal de Minas Gerais UFMG, Dep. Engenharia de Produção, Laboratório de Gestão de Serviços Ambientais, Av. Antônio Carlos, CEP 31270-900, 6627 Belo Horizonte, MG, Brazil

^d Conservation Strategy Fund, Washington DC, United States

Ecosystem Services 31 (2018) 517–526

Contents lists available at ScienceDirect



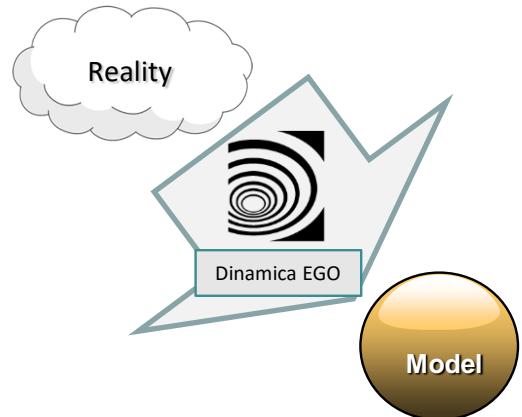
Can multifunctional livelihoods including recreational ecosystem services (RES) and non timber forest products (NTFP) maintain biodiverse forests in the Brazilian Amazon?

Sónia M. Carvalho Ribeiro^{a,*}, Britaldo Soares Filho^a, William Leles Costa^b, Laura Bach^c, Amanda Ribeiro de Oliveira^b, Patrícia Bilotto^d, Allaoua Saadi^e, Elaine Lopes^e, Tim O'Riordan^f, Humberto Lôbo Pennacchio^g, Lúcio Queiroz^h, Susanna Hechtⁱ, Raoni Rajão^j, Ubirajara Oliveira^k, Carlos Ciocca Sampaio^l

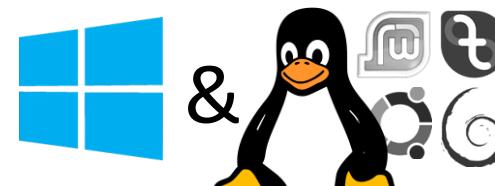
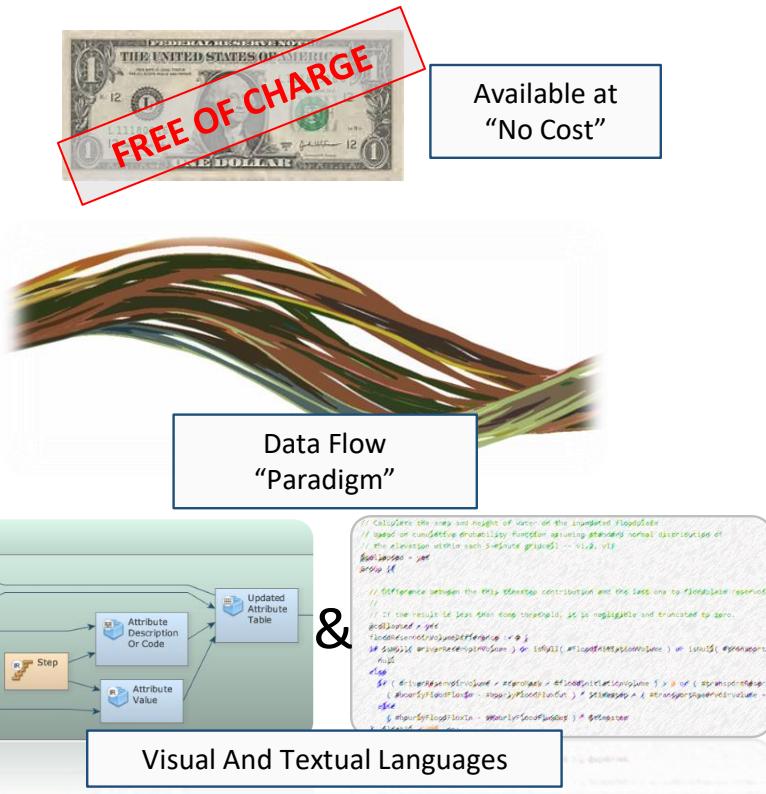
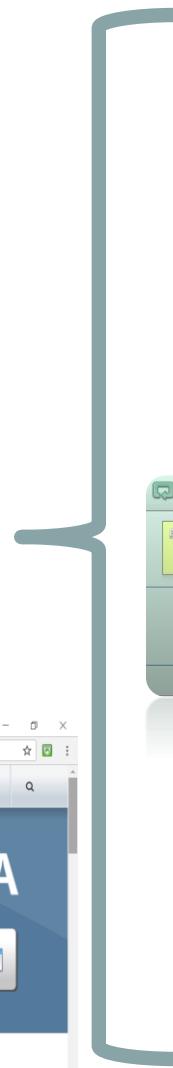




At a Glance



A screenshot of the DINAMICA EGO software interface. At the top, there's a navigation bar with links for Home, About, Documentation, Community, Contact, and a search icon. Below the navigation bar, the title "DINAMICA EGO" is prominently displayed in large white letters. To the left of the title, there's a small thumbnail image of the software's graphical user interface. To the right of the title, there's a "Download" button with the text "current stable: 3.0.17". At the bottom of the page, there's a section titled "What is Dinamica EGO?" followed by a detailed description of the software's capabilities and a note about its graphical interface.



Supports Windows & Linux

Over 200 peer-reviewed papers: dynamicaego.com

Thank you, Obrigado!

