

# UNDERSTANDING THE IMPACT OF ECONOMIC GLOBALIZATION: GLOBAL VALUE CHAINS AND BIODIVERSITY

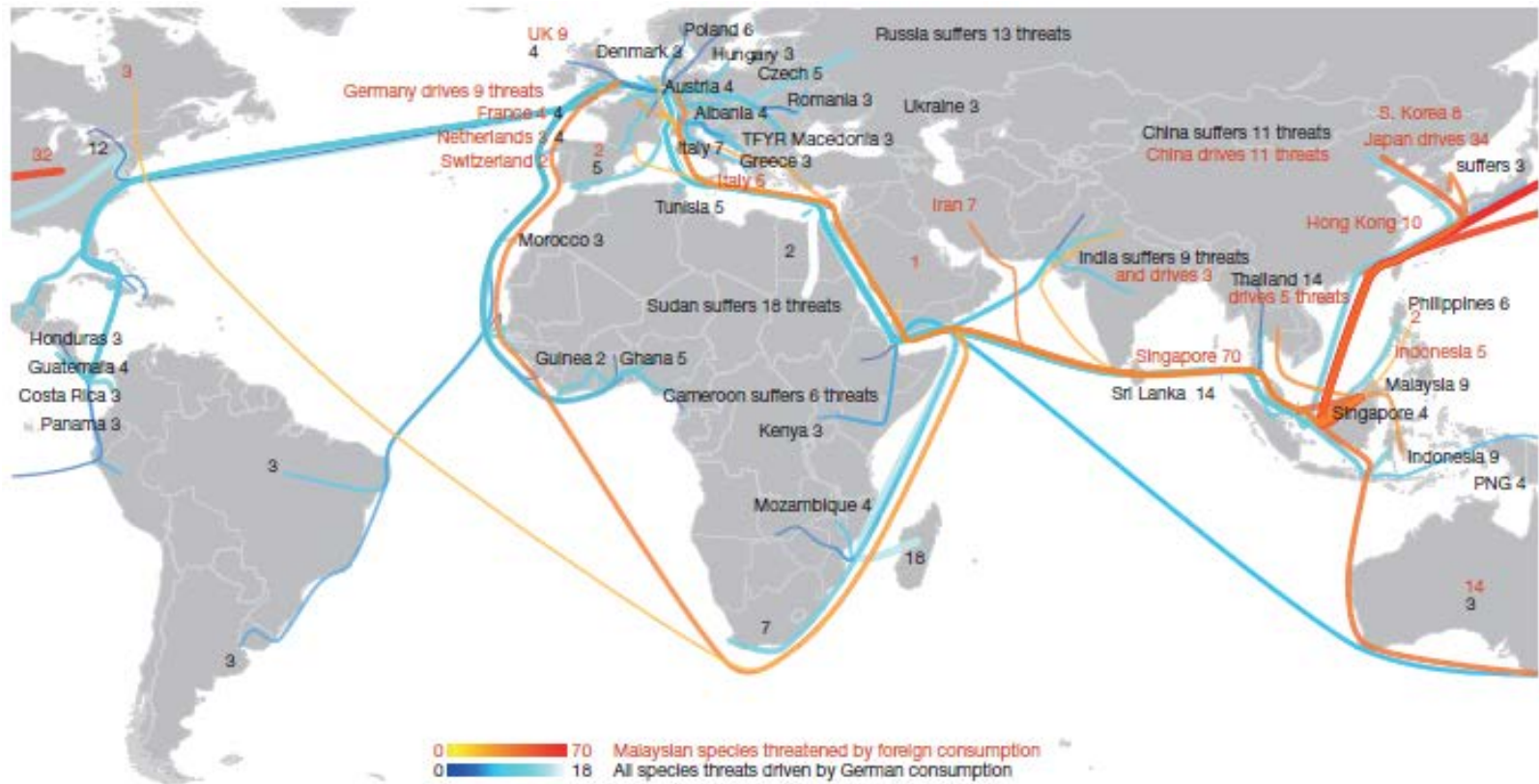
Yann Laurans, Renaud Lapeyre, Pierre-Marie Aubert, Marellia Auger

# Presentation's rationale and structure

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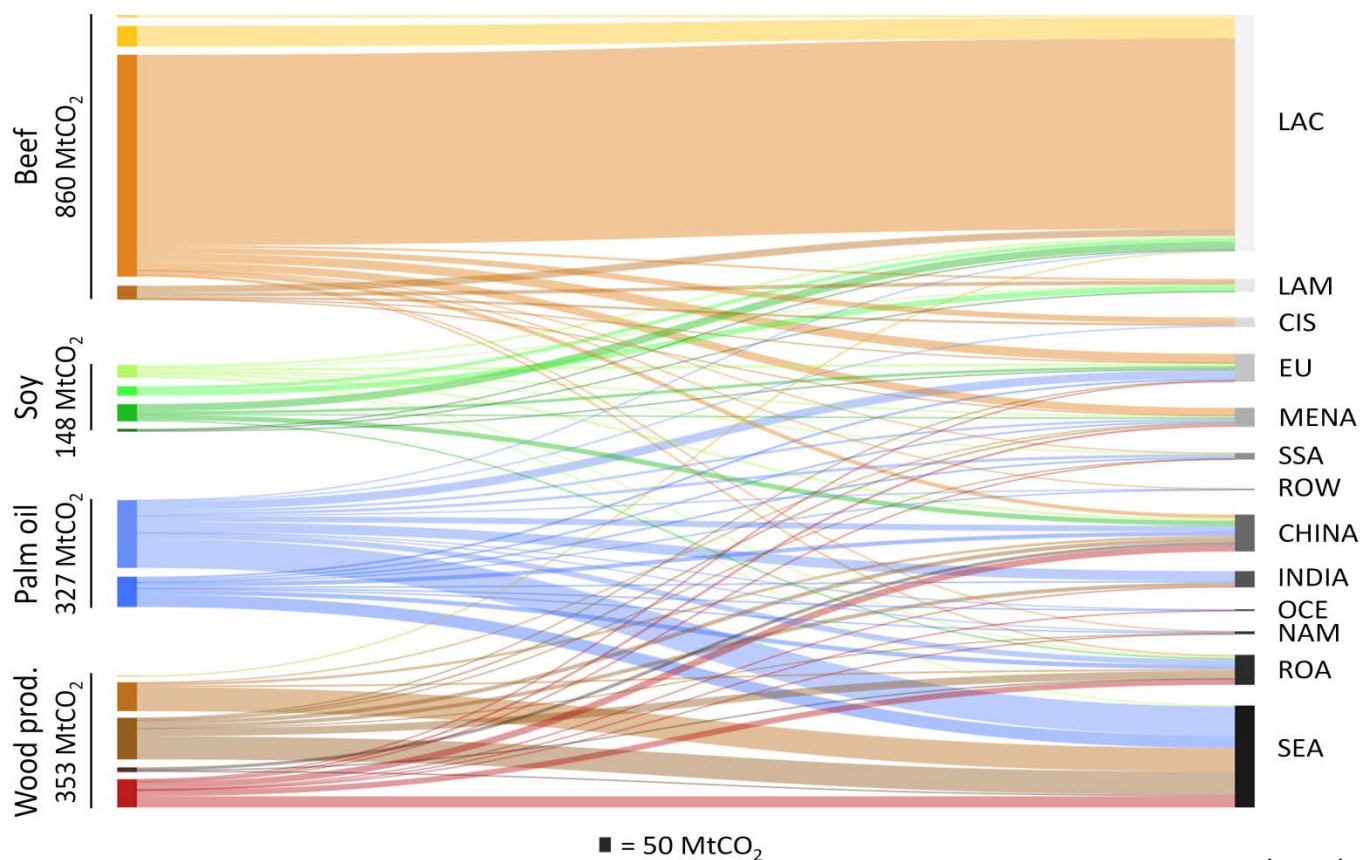
- Quickly uncovering the relation between **commodity supply chains and impact on biodiversity** (data) and disentangle the **reasons behind such a relationship**
- **Exploring the scientific literature** on the supply chains-biodiversity relationship and its blindspots
- Investigating the "traditional" **Global Value Chain (GVC) framework** as a tool to better explain those relationships
- Contributing to set a **research agenda**

## What we know about biodiversity Loss: International trade and supply chain (1)



# What we know about biodiversity Loss: International trade and supply chain (2)

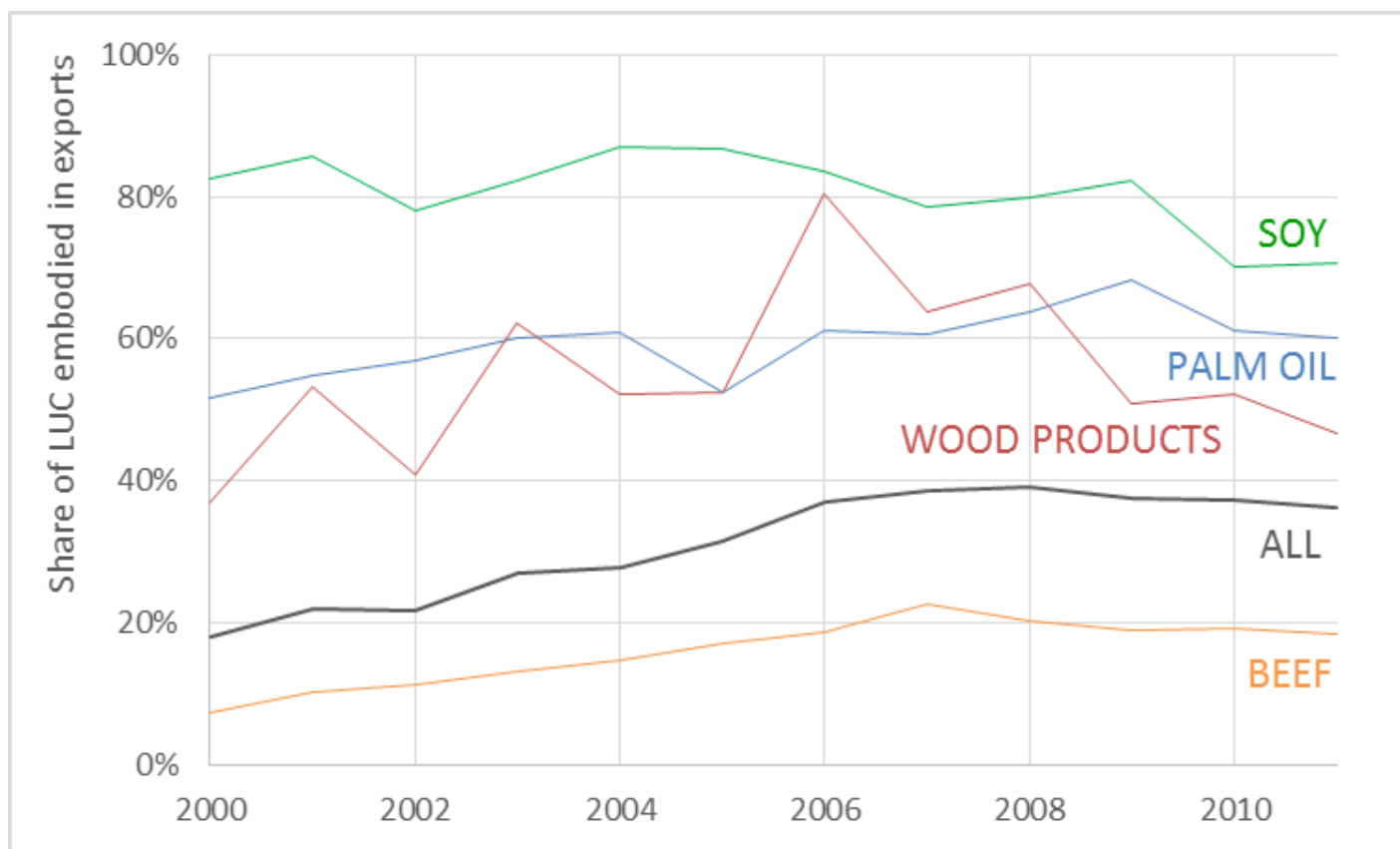
> 30% of recent tropical deforestation can be attributed to four commodities (beef, soybeans, palm oil, wood products)



Source: Henders et al. (2016), ERL

# What we know about biodiversity Loss: International trade and supply chain (3)

> 30% of recent tropical deforestation can be attributed to four commodities (beef, soybeans, palm oil, wood products): Especially embodied in international trade !



Source: Henders et al. (2016), ERL

# Biodiversity loss and international trade: a black box?

But **why** and **how** does this happen?

We want to **look inside the black box**

-Which **elements** are driving value chains to erode biodiversity at the local level?

-What are the **actors** responsible for this?

- Can we have a detailed explanation of the precise **causal chain** ?

Looking through **the VALUE CHAIN APPROACH**



Governance is the Key !



# The value chain approach: a new "mantra" for development & conservation policies

A number of **initiatives by NGOs** in the last 10-15 years based on extensive experience and knowledge

## RSPO

Roundtable on Sustainable Palm Oil



Though with a **relative lack of detailed scientific analysis** on the value chain



# The value chain approach: a new "mantra" for development & conservation policies

A number of **initiatives by NGOs** in the last 10-15 years based on extensive experience

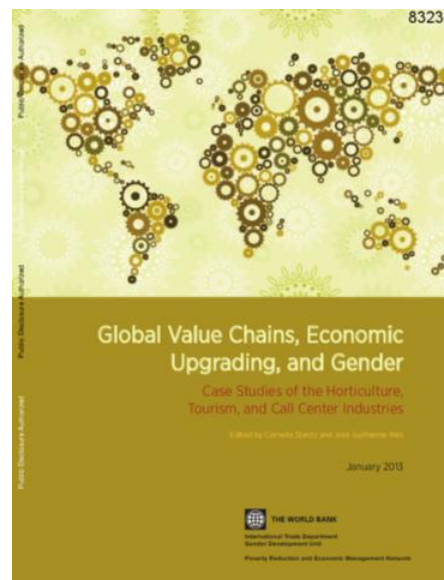
An approach **embraced by international institutions**



OECD Trade Policy Papers No. 182

## Trade, global value chains and wage-income inequality

Javier Lopez Gonzalez,  
Przemyslaw Kowalski, Pascal Achard



## VALUE CHAIN DEVELOPMENT FOR DECENT WORK

How to create employment and improve working conditions in targeted sectors

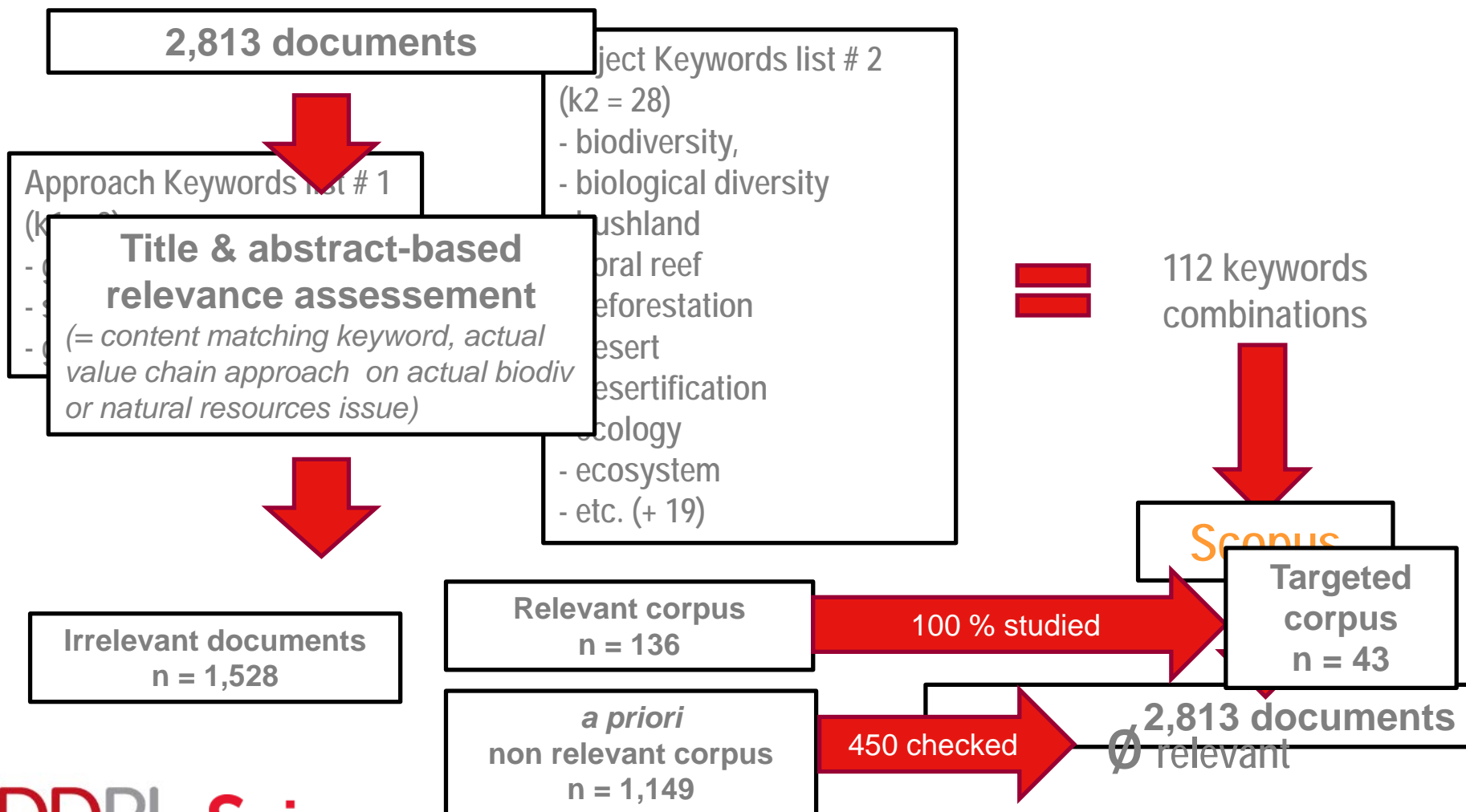
Second edition

Though mostly focused on the **strategic, social, wage and decent work agenda**

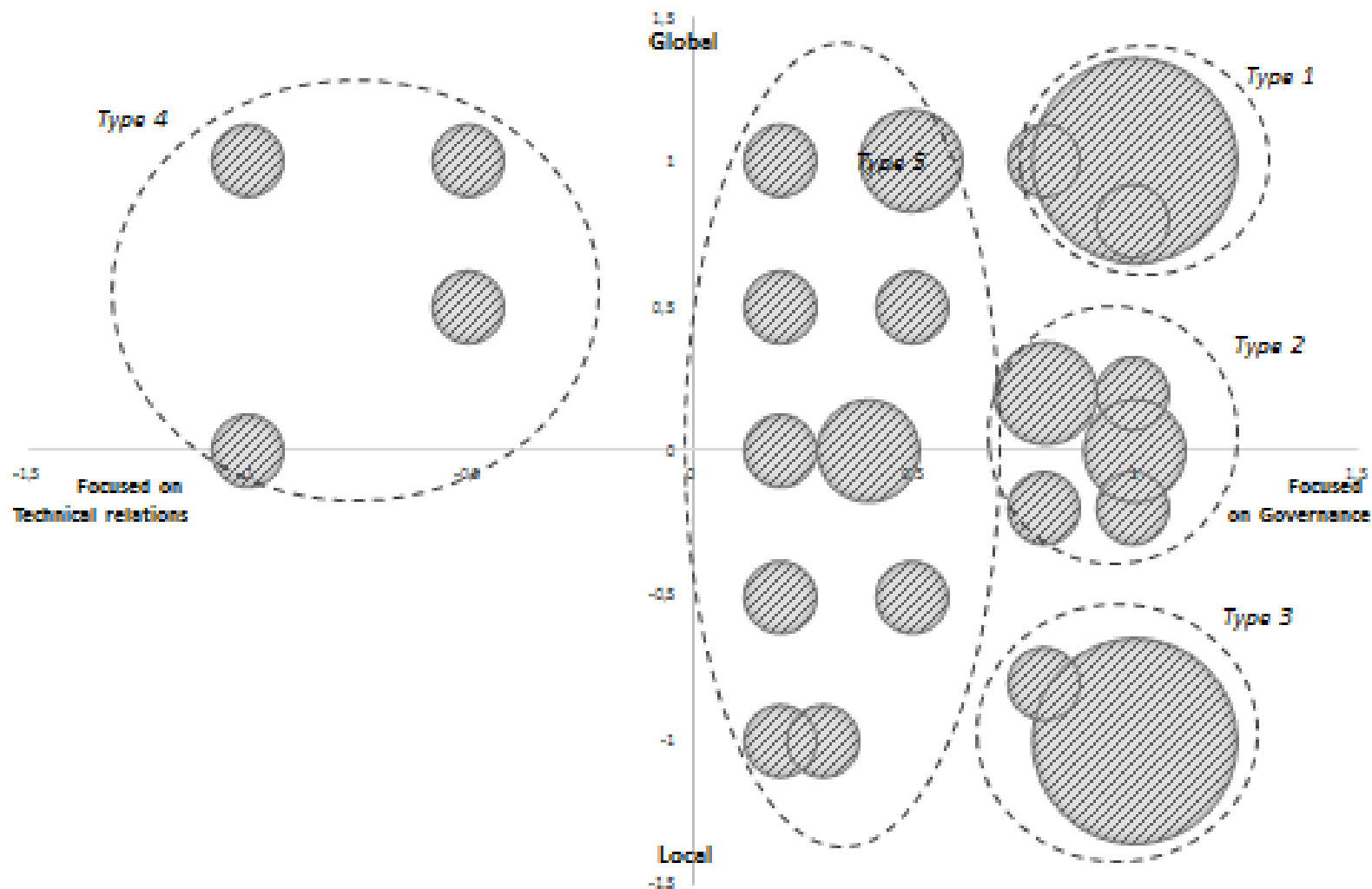


# Literature review: who has published work on governance of value chains related to biodiversity (1)

What is our **sample**?



# Literature review: who has published work on governance of value chains related to biodiversity (2)



# Literature review: who has published work on governance of value chains related to biodiversity (3)

Mongabay.com Open Access Journal - Tropical Conservation Science – Special Issue Vol.6 (3):446-467, 2013

## Research Article

### From Amazon pasture to the high street: deforestation and the Brazilian cattle product supply chain

Nathalie F. Walker<sup>1,\*</sup>, Sabrina A. Patel<sup>1</sup>, Kemel A. B. Kalif<sup>2</sup>

<sup>1</sup> National Wildlife Federation, National Advocacy Center, 901 E St. NW, Suite 400, Washington, DC. 20004, USA.

<sup>2</sup> Am

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#### Cattle and Deforestation

Deforestation in the Legal Amazon rose sharply from 2001-2005 but then even more rapidly declined to less than a quarter of the 2004 peak (Fig. 10). In Mato Grosso, the state with the largest cattle herd, 2010 deforestation was reduced to just 7% of the 2004 peak [38].

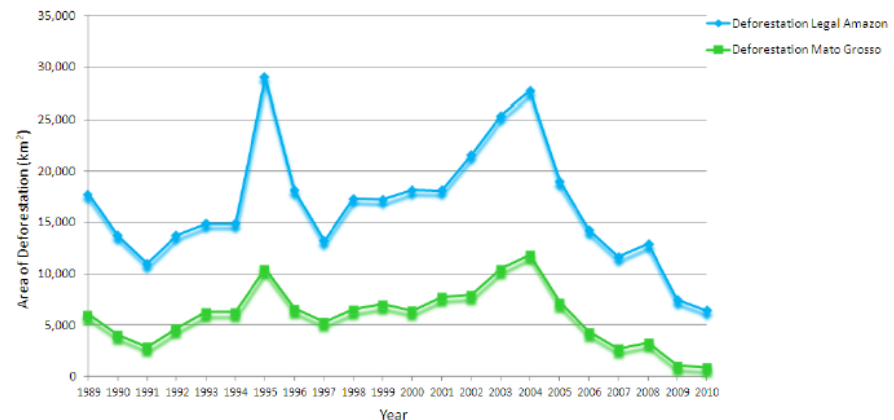
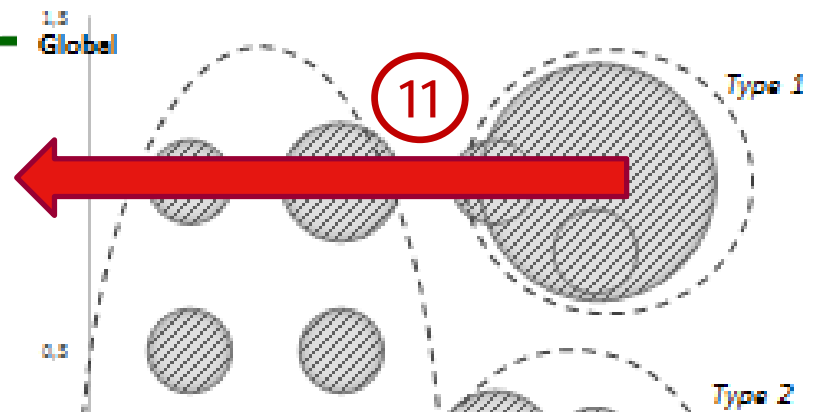


Fig. 10. Deforestation in the Brazilian Amazon. Source INPE (2011) [38].



# Literature review: who has published work on governance of value chains related to biodiversity (4)

Conservation Biology



Contributed Paper

## Use of Market Data to Assess Bushmeat Hunting Sustainability in Equatorial Guinea

S.M. ALLEBONE-WEBB,<sup>†‡§</sup> N.F. KÜMPPEL,<sup>†‡‡</sup> J. RIST,<sup>†‡‡‡</sup> G. COWLISHAW,<sup>†</sup> J.M. ROWCLIFFE,<sup>†</sup> AND E.J. MILNER-GULLAND<sup>†\*</sup>

<sup>†</sup>Institute of Zoology, Zoological Society of London, Regents Park, London, NW1 4RY, United Kingdom

<sup>‡</sup>Centre for Environmental Policy and Department of Life Sciences, Imperial College London, Division of Biology, Silwood Park Campus, Manor House, Buckhurst Road, Ascot, Berks SL5 7DY, United Kingdom

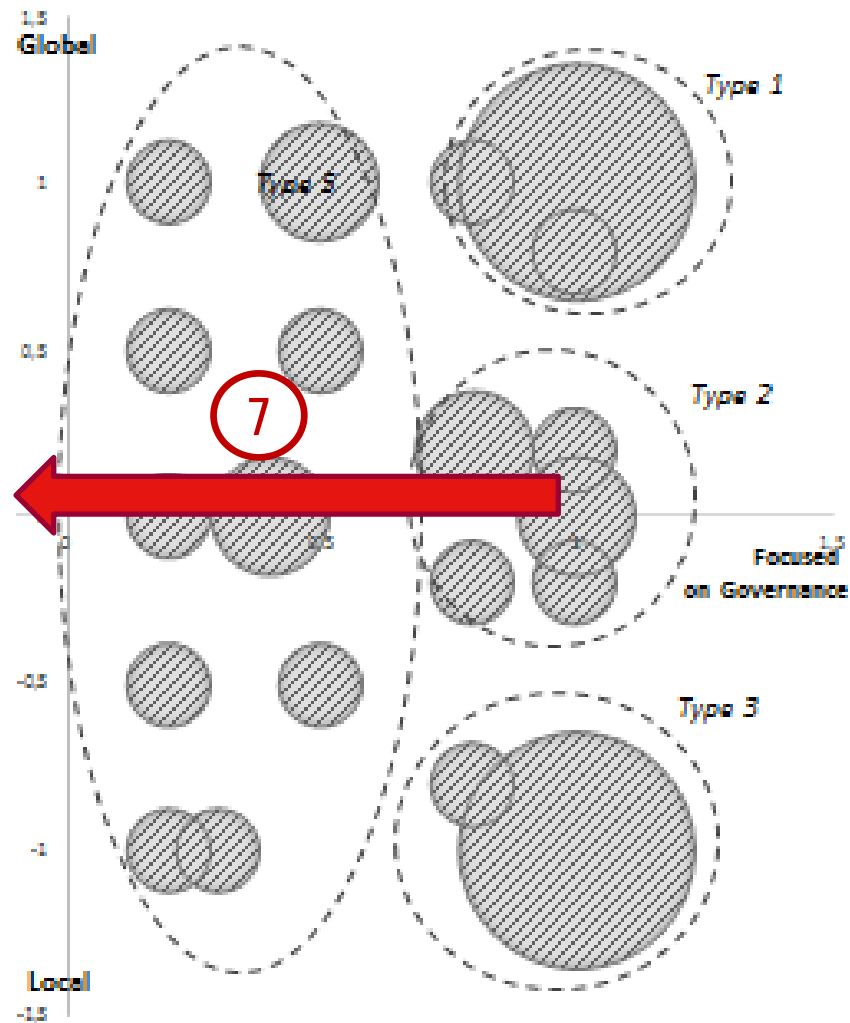
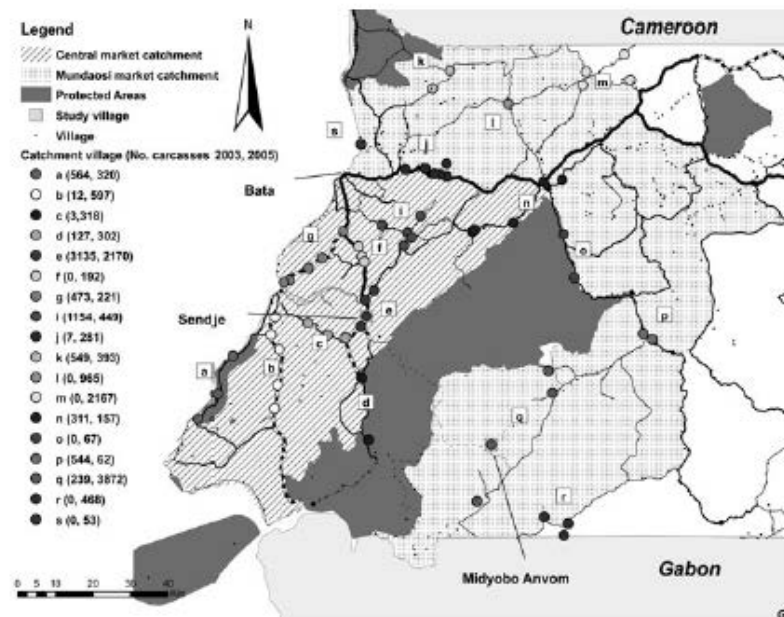


Figure 1. Approximate market catchments for Mundoasi and Central markets in Bata. Bata and the study villages Sendje and Midyobo are marked.

# Literature review: who has published work on governance of value chains related to biodiversity (5)

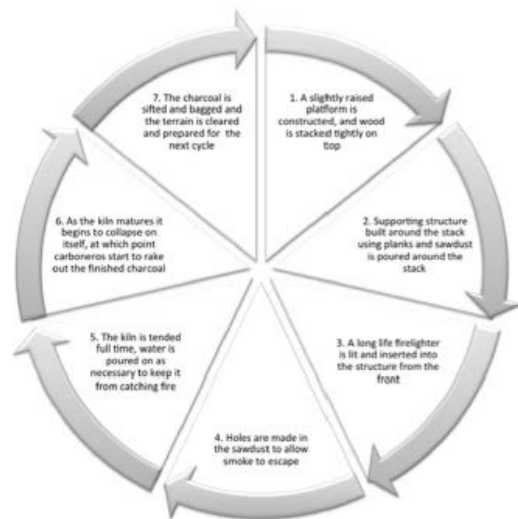
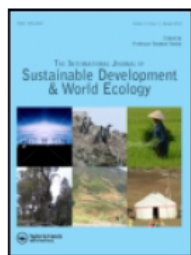


Figure 3. Charcoal production process in Pucallpa city.

clearance and wood processing by-product (Arnold et al. 2003; Lattimore et al. 2009). This paper described a large charcoal production system that is based almost entirely on utilisation of sawmill by-product. The question of wood source is central to determining the pressure on natural resources caused by this activity, and any subsequent need for reactive conservation measures. This is particularly relevant in the current political climate, as institutional elites strive to reconcile development and environmental goals. Decisions about who should bear the most responsibility for environmental damage caused by natural resource extraction ties in tightly with issues of equity and rights and are not always straightforward. In the case of the current study for example, accountability for environmental damage caused by the exploitation of this natural resource is in question with relation to the chicken brasseries in Lima.

An increasing global concern about 'wrong data' is

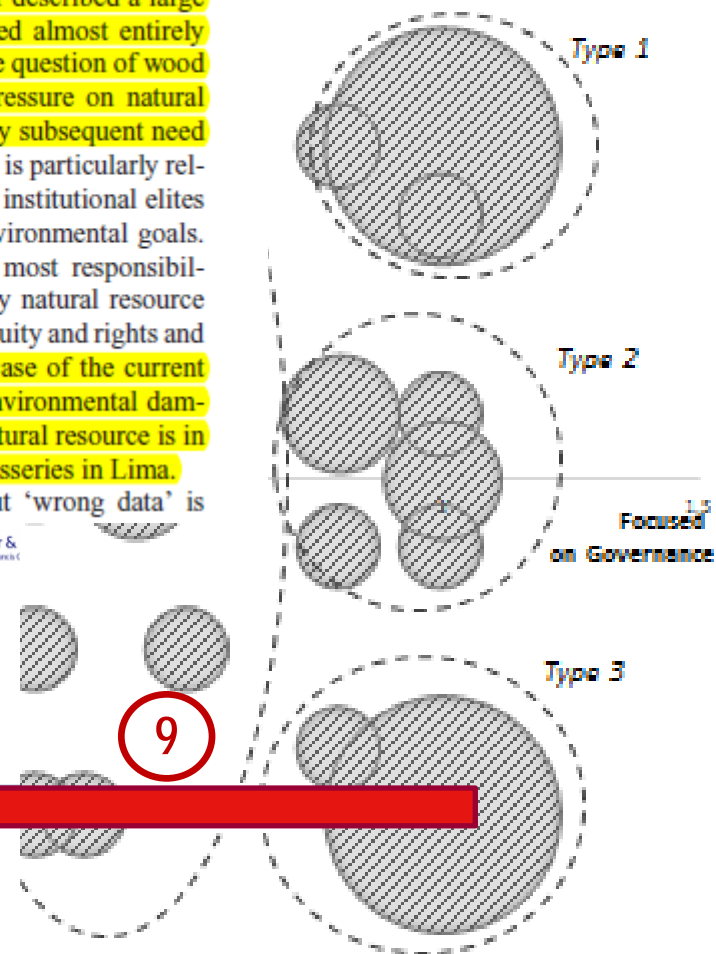


International Journal of Sustainable Development & World Ecology

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Leakage effects in natural resource supply chains: a case study from the Peruvian commercial charcoal market

Aoife Bennett-Curry, Yadvinder Malhi & Mary Menton



# Literature review: who has published work on governance of value chains related to biodiversity (6)

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## Discussion: 5 main elements

- Characterizing the **relation between the value chain governance and biodiversity is relatively infrequent** (esp. for the global-scale)
- **Economic descriptions** of value chains are more common than socio-political descriptions
- Most addressed topic is **interventions in the value chains (esp. certification)** and their implications
- A limited, although remarkable, **handful of researchers have identified the relationship** and started working on it
- This does **not yet forms a structured research field**



# Embracing an original analytical perspective: The Global Value Chain (GVC) approach (1)

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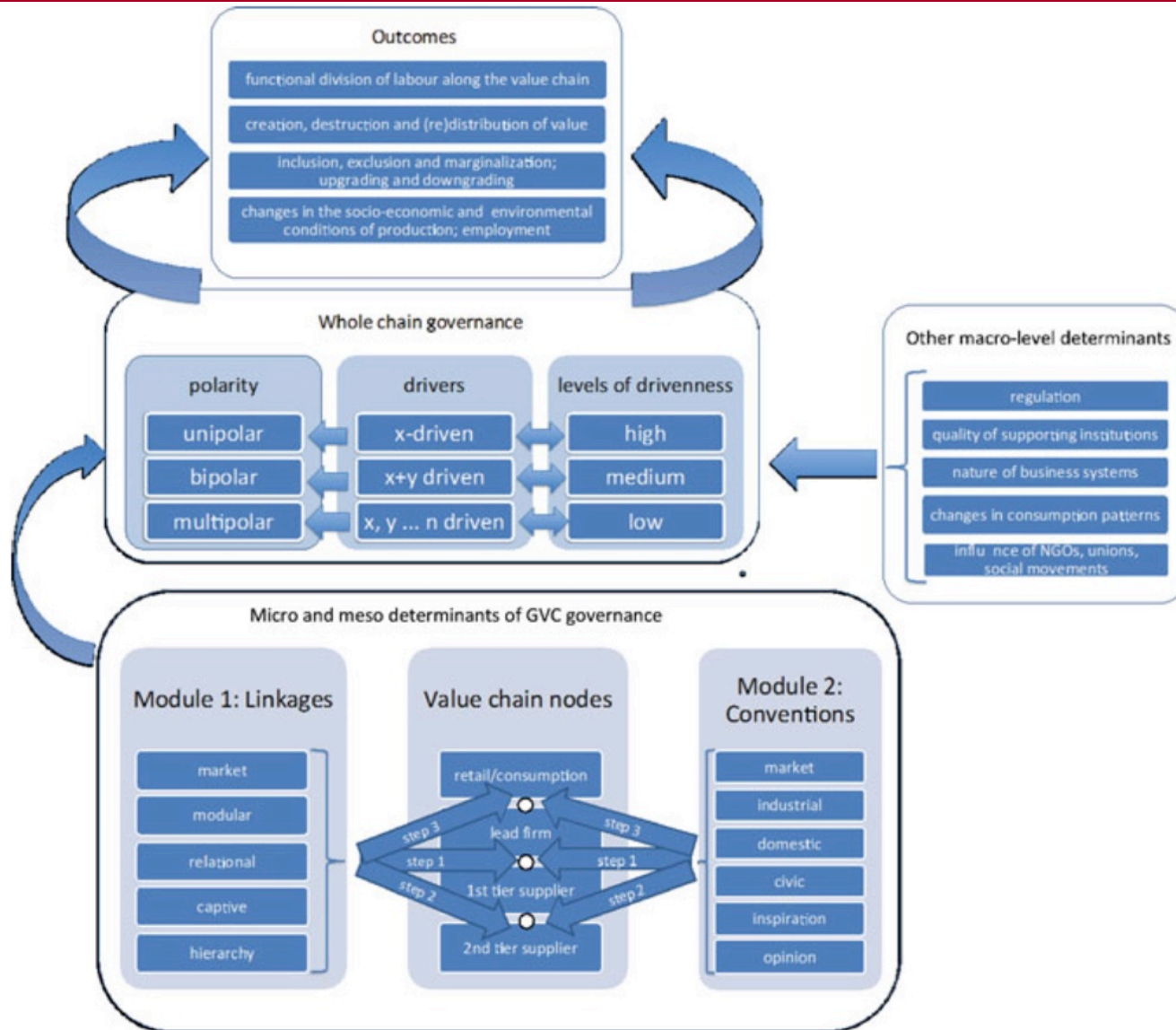
Taking roots in the **World System Theory** put forth by Hopkins & Wallerstein (1979)

Researched by Gereffi (1994; 1999), the GVC concept looks at:

- the **input-output structure**: the material process of sequential transformation from raw materials to final products (material flows)
- the **geographical distribution** of the production process: allows to account for the (often) unevenness of the economic development process
- the **institutional framework**: the set of local, national and international policies that shape activities at each stage of the chain
- the **governance structure** of the value chain: modes of coordination between actors, who dominates, contractual relationships between firms.

# Embracing an original analytical perspective: The Global Value Chain (GVC) approach (2)

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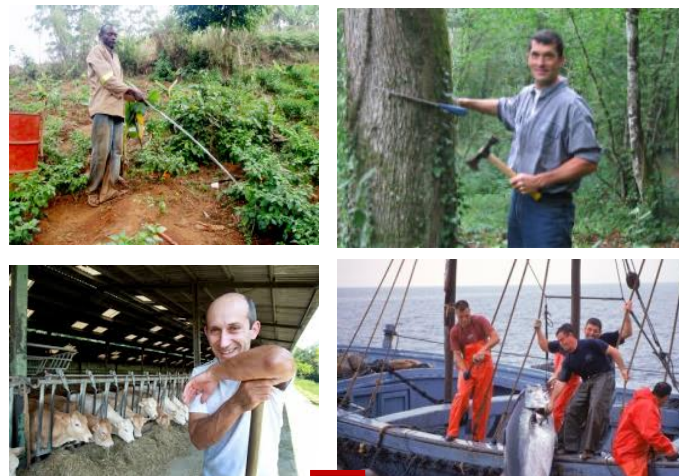


# Building a research matrix at crossroads: horizontal biodiversity impacts and vertical links along GVC (1)

How do we want to contribute?



Farmers' practices & strategies



- Agro-ecological conditions
- Socio-demographic conditions
- Financial conditions
- ... etc

Biodiversity and natural resources

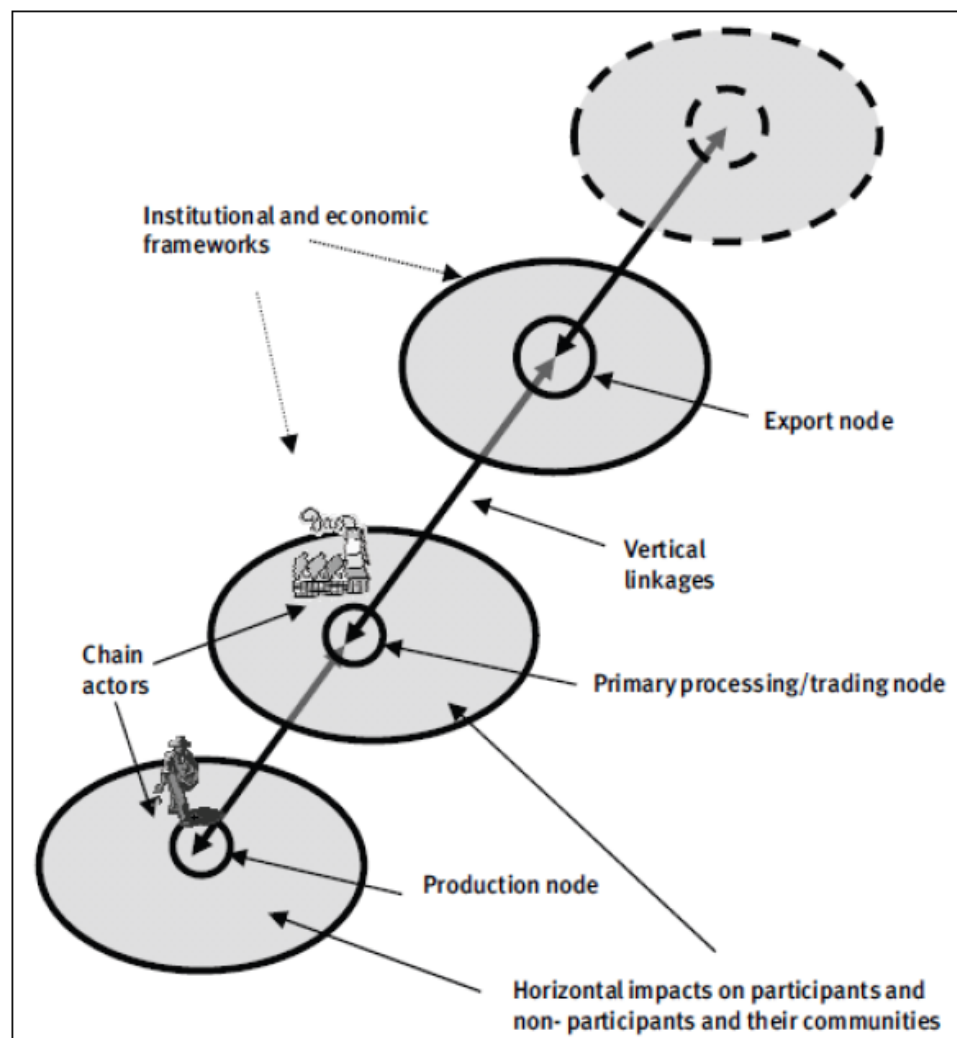


- Other drivers of natural resources management
- Other drivers of landscape dynamics

# Building a research matrix at crossroads: horizontal biodiversity impacts and vertical links along GVC (2)

How do we want to contribute?

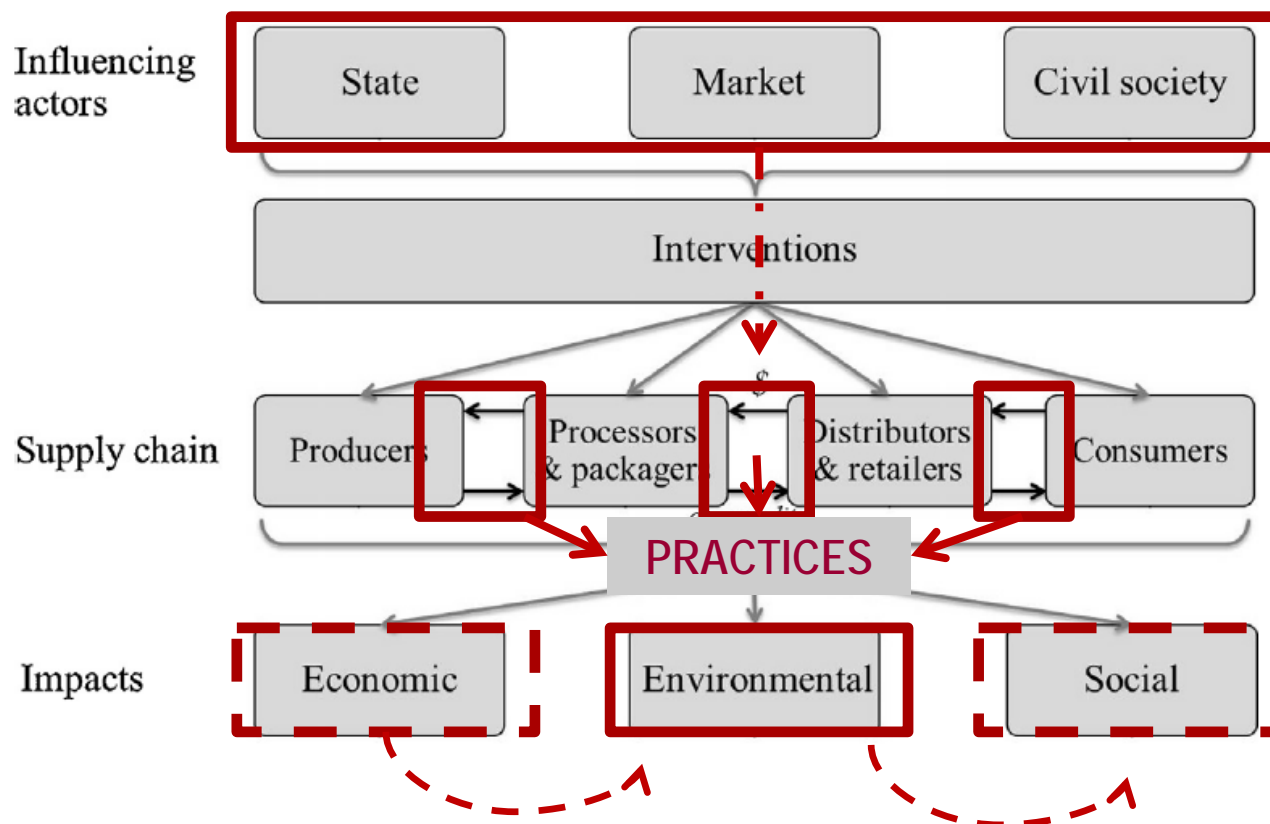
- Combining an analysis of both **horizontal** impacts and relations to **vertical** linkages
- Analysing **in-depth material and financial flows** along the chain (Input-Output and Geographical components)
- Disentangling contractual arrangements and **concentration trends** (Governance component)
- Building **systematic comparisons** across regions and time periods



# Building a research matrix at crossroads: horizontal biodiversity impacts and vertical links along GVC (3)

How do we want to contribute?

- Researching **policy and economic responses**





# Building a research matrix at crossroads: horizontal biodiversity impacts and vertical links along GVC (3)

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How do we want to contribute?

- Researching **policy** and economic **responses** at the interface between:
  - Vertical / horizontal dynamics
  - Hard / soft regulations
  - International / domestic policies

Looking at four main thematic areas:

- **Land tenure reforms** and assistance
- **Agricultural** models and policies
- Policies, rules and regulations organizing **trade**
- Global governance & domestic policies **for biodiversity conservation**



# THANK YOU FOR YOUR ATTENTION!

Yann Laurans, Renaud Lapeyre, Pierre-Marie Aubert, Marellia Auger

Agrichains & Sustainable Development conference