

# ASSESSING THE CURRENT LANDSCAPE: INSIGHTS FROM ONGOING SEI RESEARCH

Belmont Forum Food-Water-Energy Consumption and Urbanization  
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# SEI INITIATIVES

From 2015, SEI will invest in research on key issues around sustainable development that we are particularly well placed to address. The SEI Initiatives will function as hubs for research supported by both core and project funding. Eight initiatives are in the pipeline as of January 2015.

## ***Behaviour and Choice***

This initiative will examine how to bring about changes in behaviour, choice and decision-making at the household level. By doing so it will support the design and implementation of more effective development programmes and governance interventions.

## ***Fossil Fuels and Climate Mitigation***

This initiative aims to understand the factors that support movement towards and away from fossil fuel development through high quality and timely research. It will do this to influence policies, plans and investment decisions in a manner that makes the pace and location of further fossil fuel development and trade more consistent with long-term sustainability objectives.

## ***Low Emission Development Pathways***

This initiative will study the effects of integrated mitigation of short-lived climate pollutants as well as other air pollution and greenhouse gases, and the realization of multiple benefits. It will support practitioners to more effectively integrate the many dimensions of air pollution and climate change into their plans and strategies, in both the near and long term.

## ***Climate Finance***

This initiative aims to untangle key controversial issues that have emerged as impediments to the mobilization, delivery and scaling up of climate finance. It will do this to contribute to better governance and more effective and efficient use of climate finance.

## ***Producer to Consumer Sustainability***

This initiative aims to understand the sustainability implications of the evolving trade, production and consumption patterns of major traded commodities in an increasingly resource-scarce and globalized world. By doing so it will support more informed decision-making along supply chains to deliver positive economic, social and environmental outcomes.

## ***Transforming Development and Disaster Risk Reduction***

This initiative will connect disaster risk reduction (DRR) with inclusive, equitable and sustainable development. Research into socio-economic changes and environmental risks in specific contexts will generate knowledge that can both enable communities to cope with hazardous situations and support policy and practice to pursue development that takes account of new and emerging risks.

## ***The Water, Energy and Food Nexus***

This initiative will apply a nexus toolkit to address interconnected water, energy and food development challenges at different levels. It will do this to enable those who govern and manage these systems to work together to ensure basic access, efficiency and sustainability.

## ***Sustainable Sanitation***

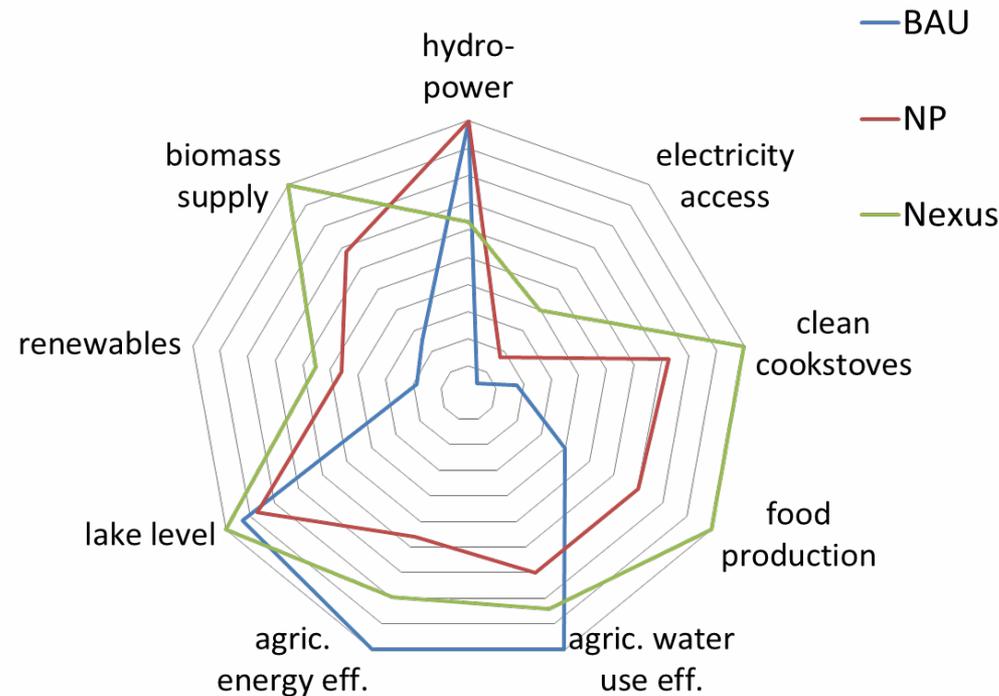
This initiative will seek to inject new momentum into the search for sustainable ways to boost sanitation provision in low- and middle-income countries through new research, knowledge exchange, capacity building and advisory services. It will focus on "productive" solutions that offer multiple benefits in terms of food security, environmental sustainability, livelihoods and health.



**SEI**

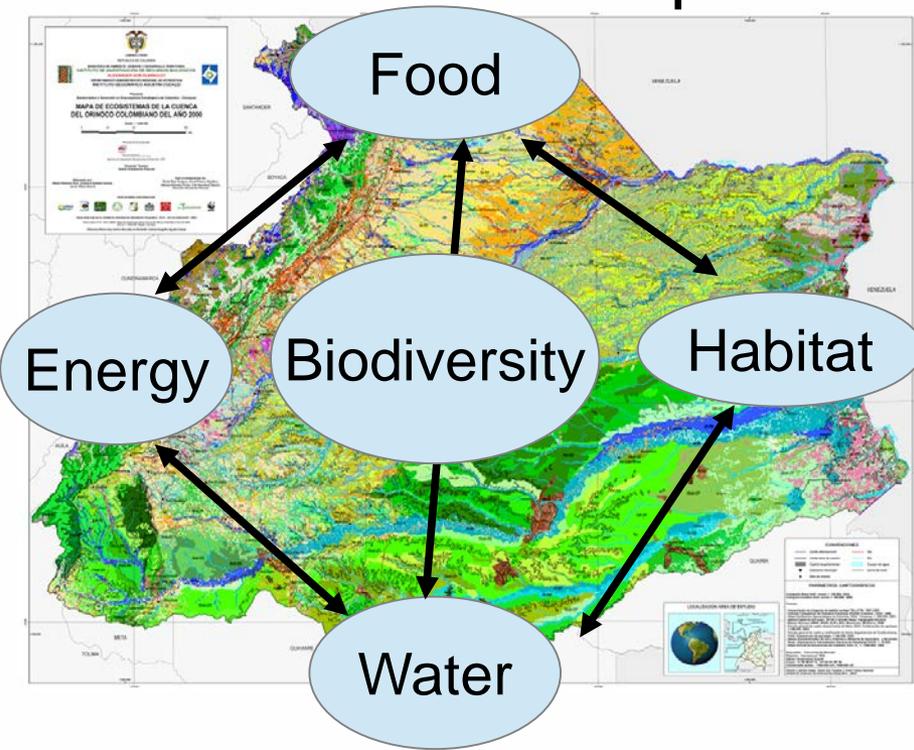
STOCKHOLM  
ENVIRONMENT  
INSTITUTE

# Stakeholder-driven nexus approaches can help to capture interlinkages and make tradeoffs clearer



Karlberg, L.; et al, 2015. Tackling complexity: Understanding the food-energy-environment nexus in Ethiopia's Lake Tana Sub-basin, *Water Alternatives* 8(1): 710-734

# Some regions are beginning to take a very deliberate nexus planning approach



Orinoco basin of Colombia

Can we build understanding of the relationships between food, energy, water and habitat security

in order to...

enable better democratic and sustainable management of these resources?

# How can nexus activities support decision processes that promote more equitable and sustainable development?



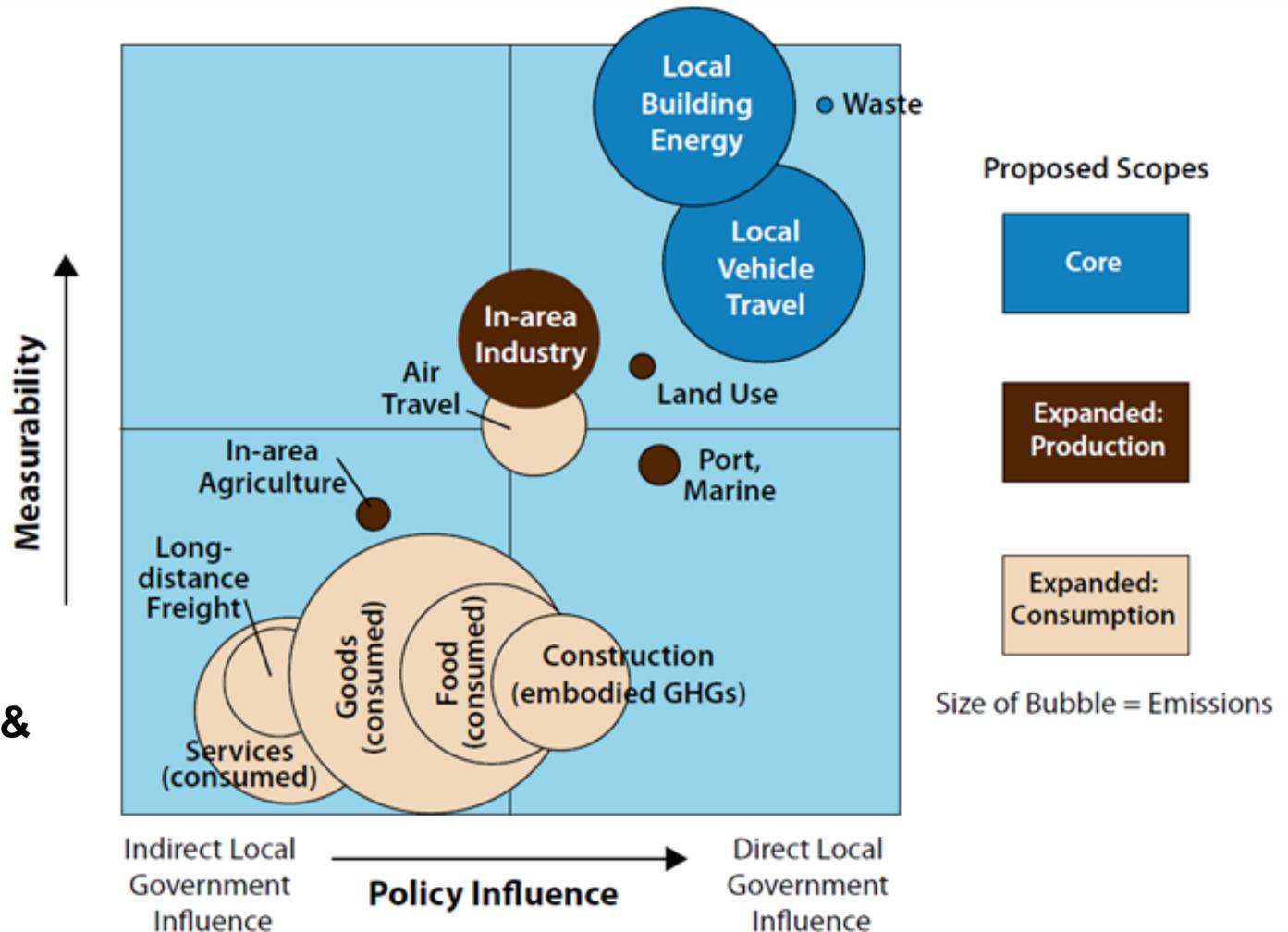
World Bank/SEI Lesotho project

How can nexus activities support decision processes that promote more equitable and sustainable development?



# What is the urban decision-makers' sphere of influence?

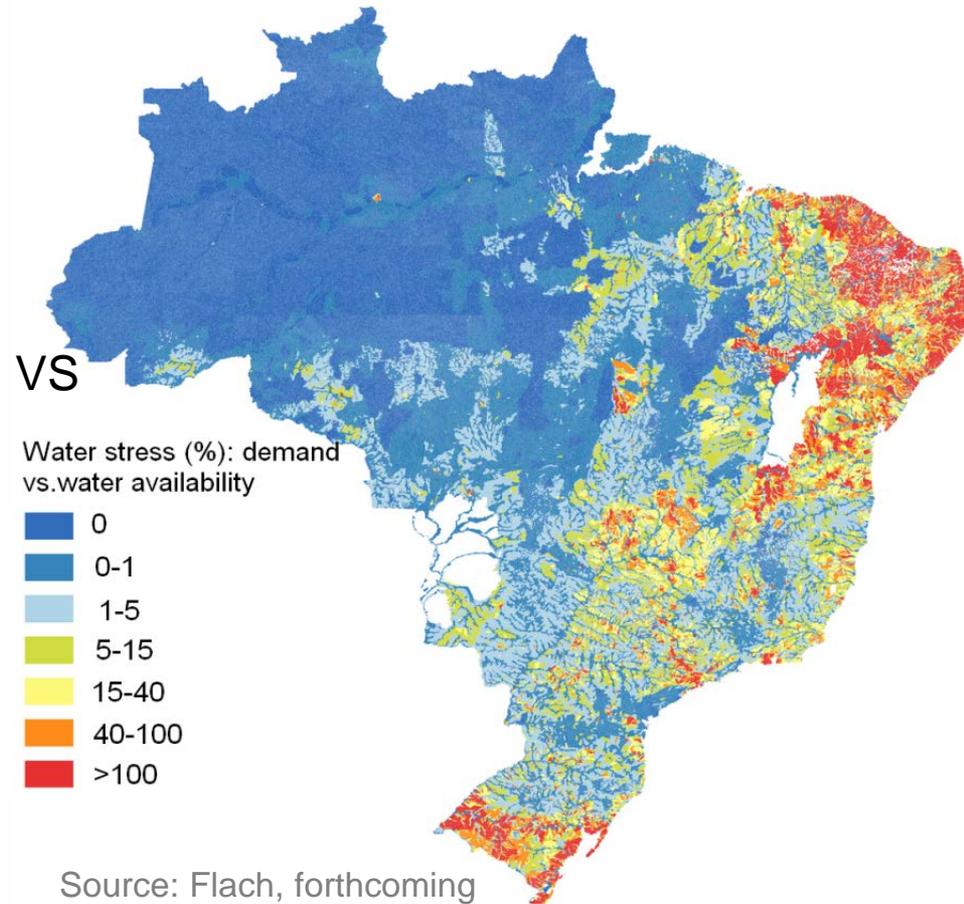
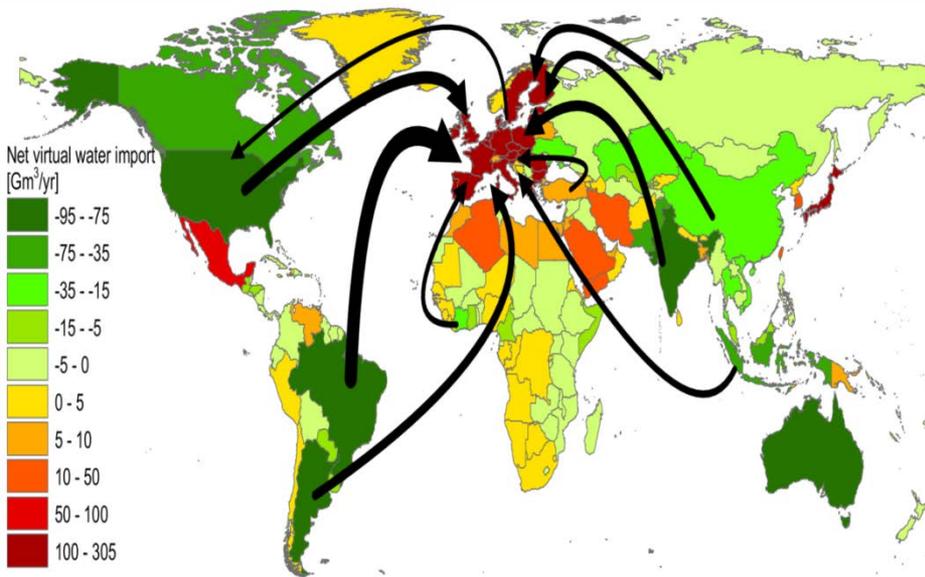
## GHG Emissions & Recommended Scopes



# Can "footprint(ing)" be tied to actual locations?

Sub-national heterogeneity in environmental conditions

*Impact  $\neq$  national impact factor*  
*\* number of tones consumed*

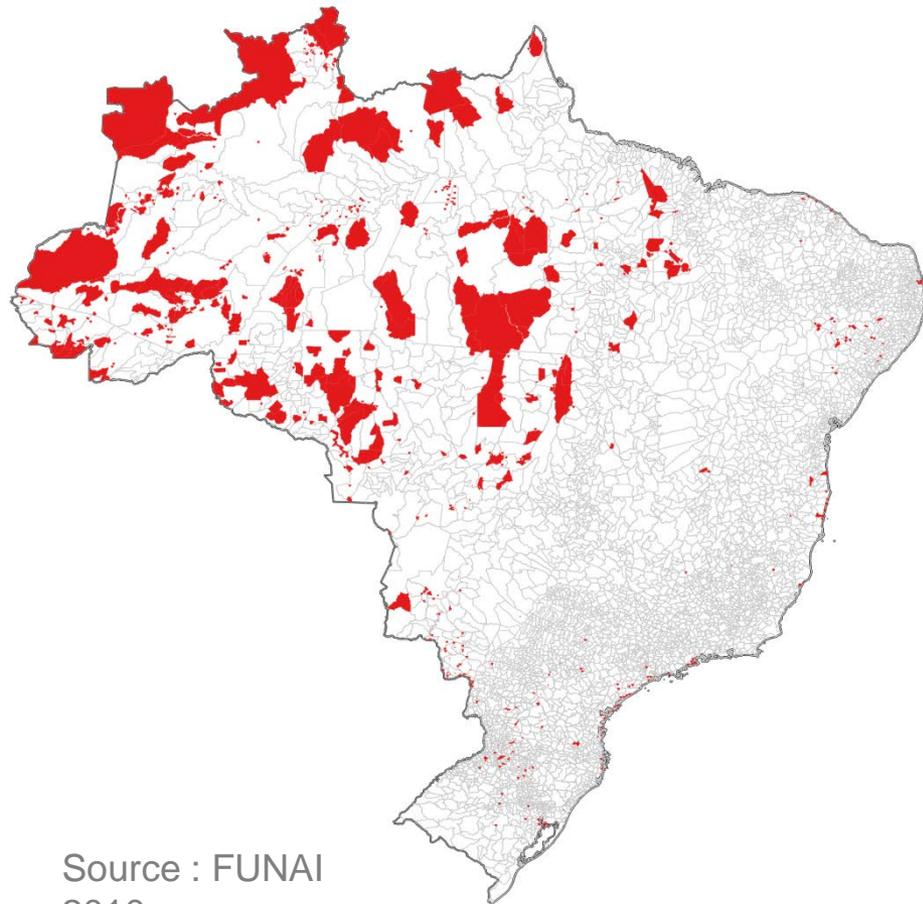


Source: Mekonnen, M.M. and Hoekstra, A.Y. (2011)

Source: Flach, forthcoming

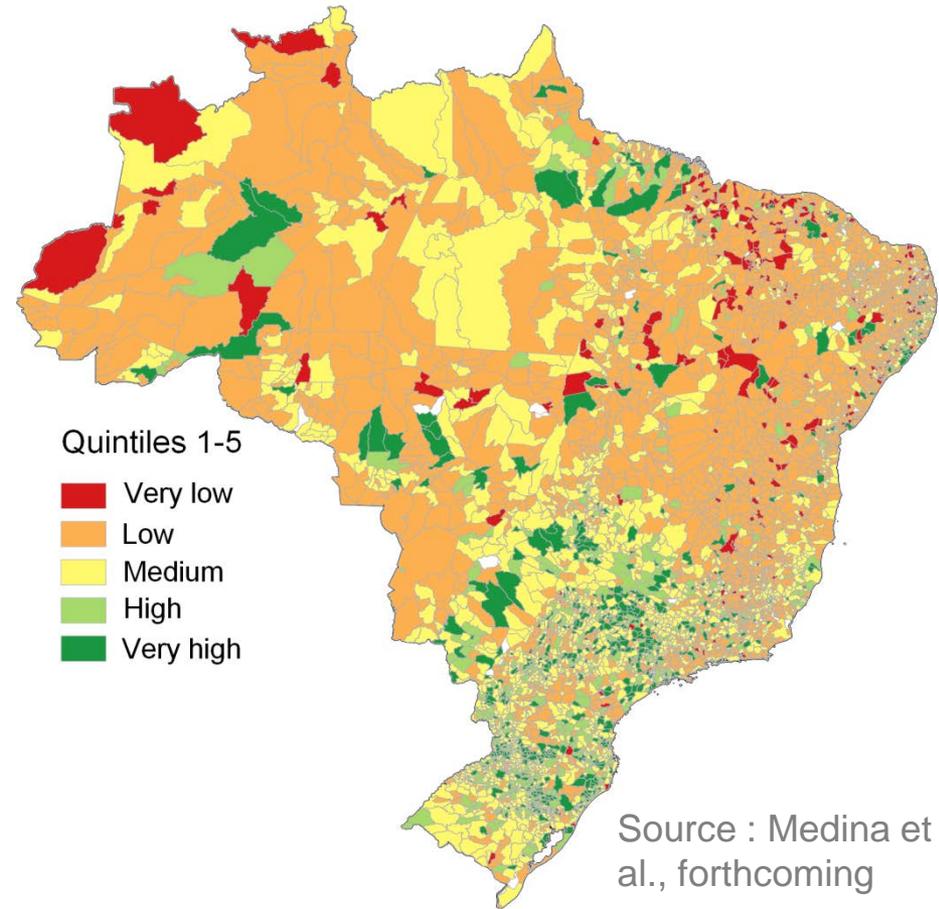
# Sub-national heterogeneity in socio-economic conditions and actors

BRAZILIAN INDIGENOUS AREAS (2010)



Source : FUNAI  
2010

INCOME LEVELS OF SMALLHOLDERS IN BRAZIL (2006)

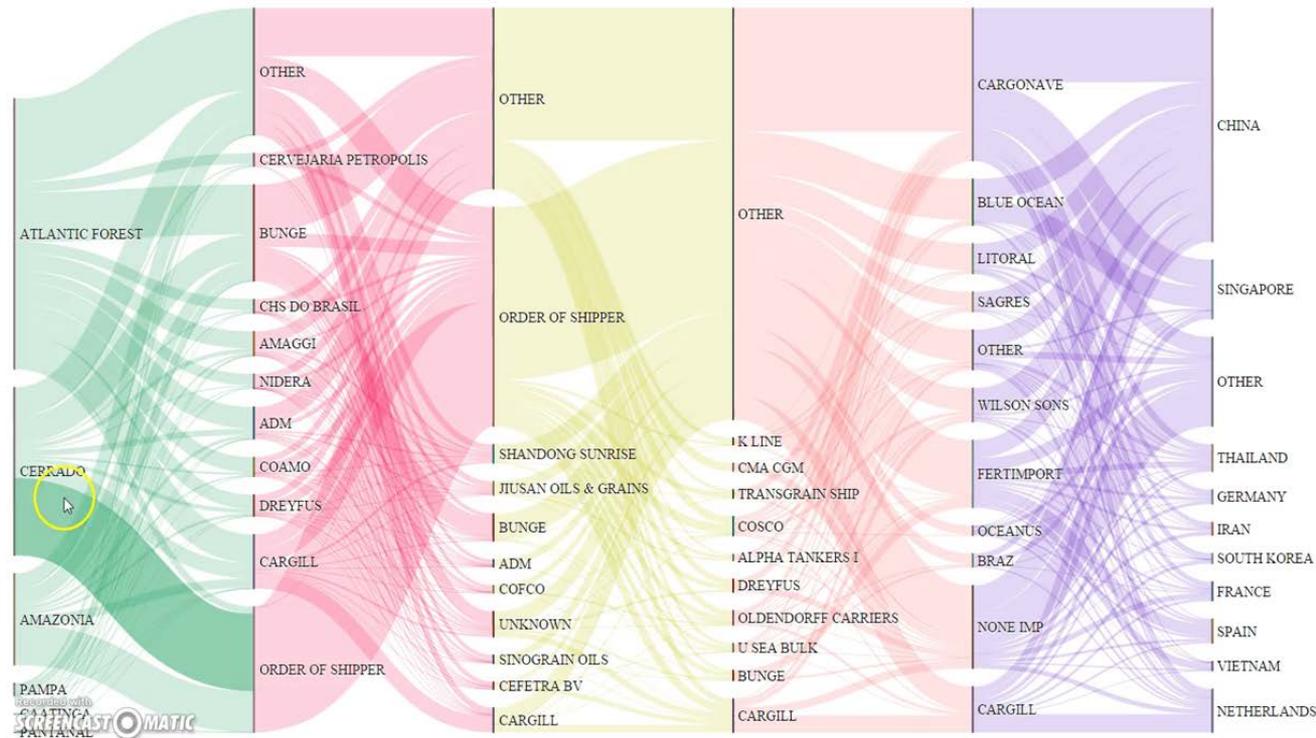


Source : Medina et al., forthcoming

# How to make SCP knowledge more relevant for policy and decision-making?

## SUPPLY CHAIN OF BRAZILIAN SOYBEANS 2012

MUNICIPALITIES OF PRODUCTION, TRADERS, CARRIERS, SHIPPING BROKERS, IMPORTERS AND CONSUMER COUNTRIES



# Summary

- WEF nexus activities can generate new synergies, momentum, and champions for more inclusive and integrated planning
- SCP methods are evolving to enable better spatial resolution, better attribution, and more policy-relevant knowledge
- As cities play a more central role in climate, energy, water and other sustainability challenges, better understanding and broader suite of policy levers are needed



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