Scalable sustainability insights of agri commodity imports

TKI Seed money project 21.25

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Introduction to the project

- Client: Port of Amsterdam

- From nice to know to need to know

- Due diligence legislation

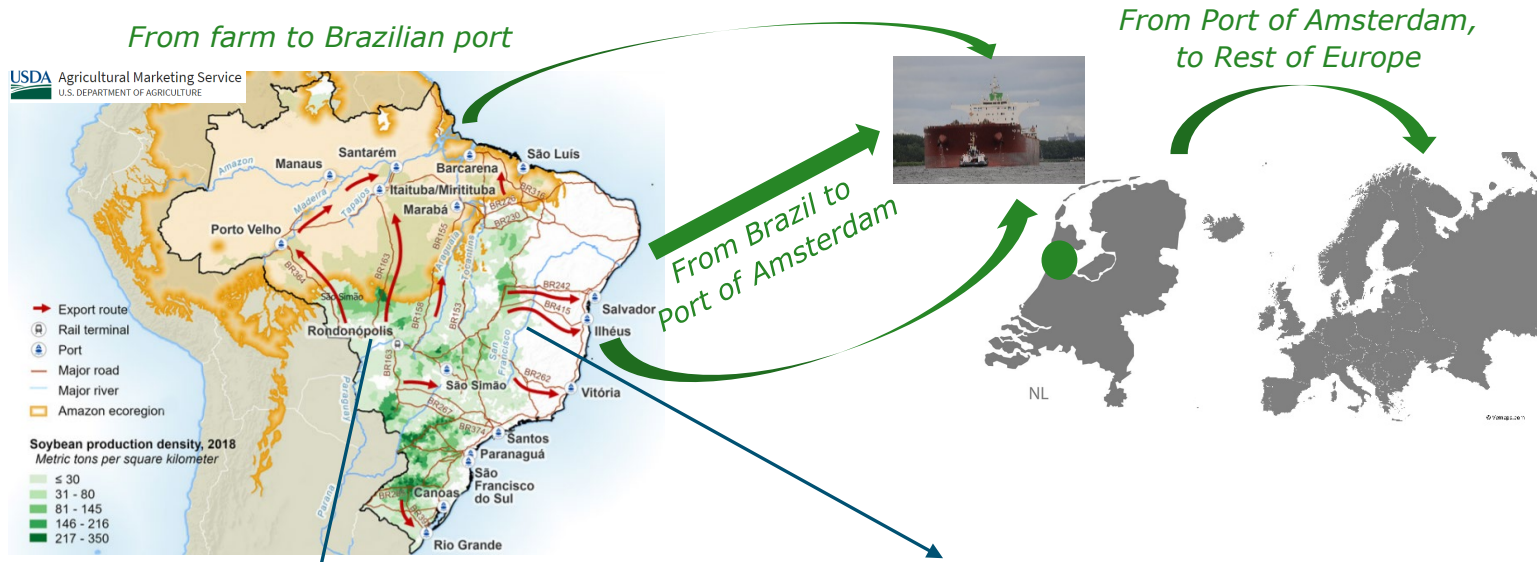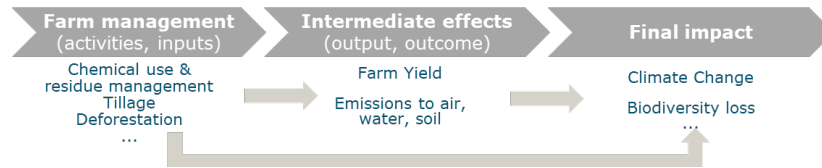- Environmental and social risks/impacts

Testcase soy

- Better understand options to develop a sustainability dashboard

- Much discussed product, ample information seems available, scattered over a variety of (data)sources with different notions/definitions of risks and impacts
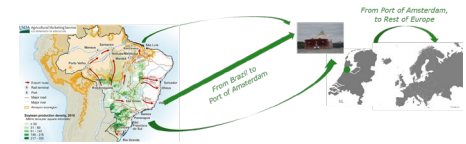
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Soy flow Brazil to EU (I)

From farm to Brazilian port

From Port of Amsterdam, to Rest of Europe

From Brazil to Port of Amsterdam

USDA Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE

NL

Soy production at Brazilian farms: social & environmental risks and impacts

Farm management (activities, inputs)	Intermediate effects (output, outcome)	Final impact
Chemical use & residue management Tillage Deforestation ...	Farm Yield Emissions to air, water, soil	Climate Change Biodiversity loss ...

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Soy flow Brazil to EU (II)

Generic steps to generate scalable sustainability profiles of agri commodities

Step 1: Origination: what is known?
From farm to Brazilian port to Port of A'dam

Step 2: Material sustainability themes?
Define themes based on literature review or use existing materiality analysis

Step 3: inter-relation of themes?
Explain how one sustainability risk relate to the other

Step 4: define KPIs
Define KPIs (risk scores) for each theme separately and test feasibility with data availability

Step 5: generate scalable risk levels
Estimate risk scores by combining public sources as input for prioritization

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https://www.ams.usda.gov/services/transportation-analysis/soybean-brazil

Data availability – method

- Scan of available databases:

  - what is known for soy with regard to trade, environmental and social indicators for risk and impacts?

  - at what level (national/regional)? At what part of the chain (production, transport, processing, consumer)?

  - can data be combined?

Main gaps in data availability

- *Information per theme*

    - Ample information on environmental aspects, trade

    - Much less information on human/social indicators

- *Information per level*

    - Mostly on national level, much less on regional level

- *Information per part of the value chain*

    - Farm level: more information available than for other parts of the value chain

    - From producer to port and from port to destination: mixed

    - Environmental impact for full value chain, environmental & social risks at farm level

End goal PPP: a sustainability dashboard

Factors that define sust. risks & impacts

Map to visualize trade flows & agri areas

Environmental & social impact & risk hotspots

Agri origination and production data

Production volumes & yields, trade data, farm inputs, land use changes
(FAO, TRASE, etc.)

Info on legislation & certification schemes

Coverage sustainability topics (TSC THESIS on certification, literature review on legislation)

Map of agri flows

country of origination and destination

Colours that indicate relative risk and impact scores

Environmental hotspots

Impact hotspots: GHG, land use and 16 other LCA categories based
(source: Agri Footprint database, GFLI)

Risks: deforestation, biodiversity loss, water stress (source TSC Commodity Mapping)

Social hotspots:

Human Rights risk: 8 ILO categories
(WUR Humanity Views)
Living Income
Other: land rights, animal welfare?

A dashboard with sustainability profiles of agri commodities and contextual info that define these profiles as starting point for a due diligence

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1. The expected innovation of the PPP

1 All key sustainability insights at one place for the world's key agri flows

- Environmental and social, risks and impacts
- Smartly linking big data sources and tools
- Filling in gaps with new scores (e.g. human rights)

2 Link farm level drivers with sustainability hotspots, show sensitivity (e.g. GHG with(out) land clearing) & segmented insights within countries

3 Adjust robustness of score depending on level of origination data

4 Compare sustainability of agri commodities from different origination

Partners (*tentative*)

- Port of Amsterdam
- Acomo
- CropLife International
- OLAM International
- The Sustainable Trade Initiative
- Syngenta

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