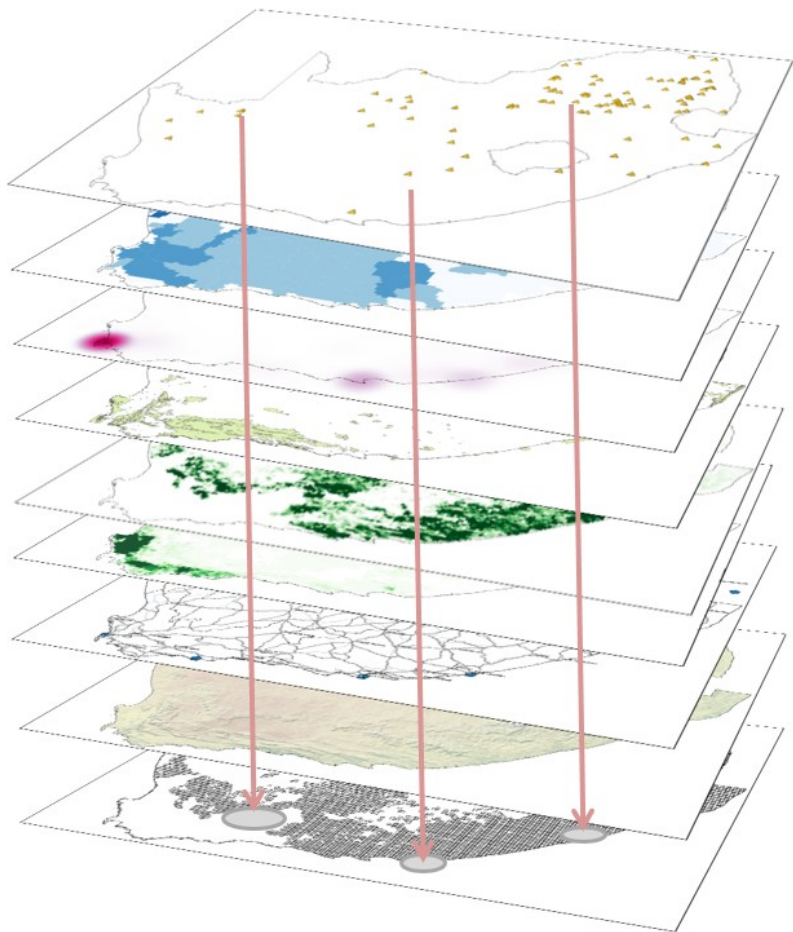# FINEPRINT

Using global crop maps to improve the estimation of impacts associated with biomass production

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01.03.2019

FINEPRINT multilayer analysis

Mining activities

Water depletion levels

Hotspots of social conflicts

Protected areas

Crop production and associated impacts
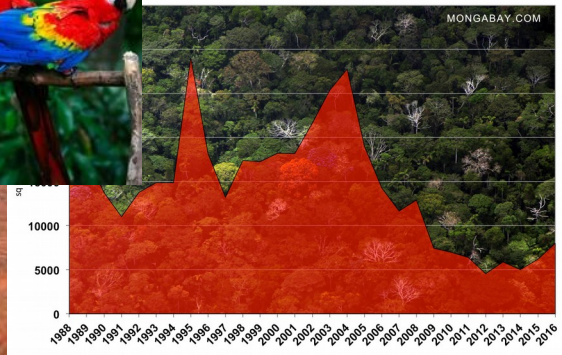
Infrastructure

Land cover

Geographic entities

Local impacts of global supply chains

Photo: https://theintercept.com/2019/02/16/brazil-bolsonaro-indigenous-land/

Deforestation in the Brazilian Amazon, 1988-2016
MONGABAY.COM

Where exactly are biomass commodities produced and what are the associated impacts?

Available global crop maps
5 arc-minutes grid cell (~10 km x 10 km at the equator)
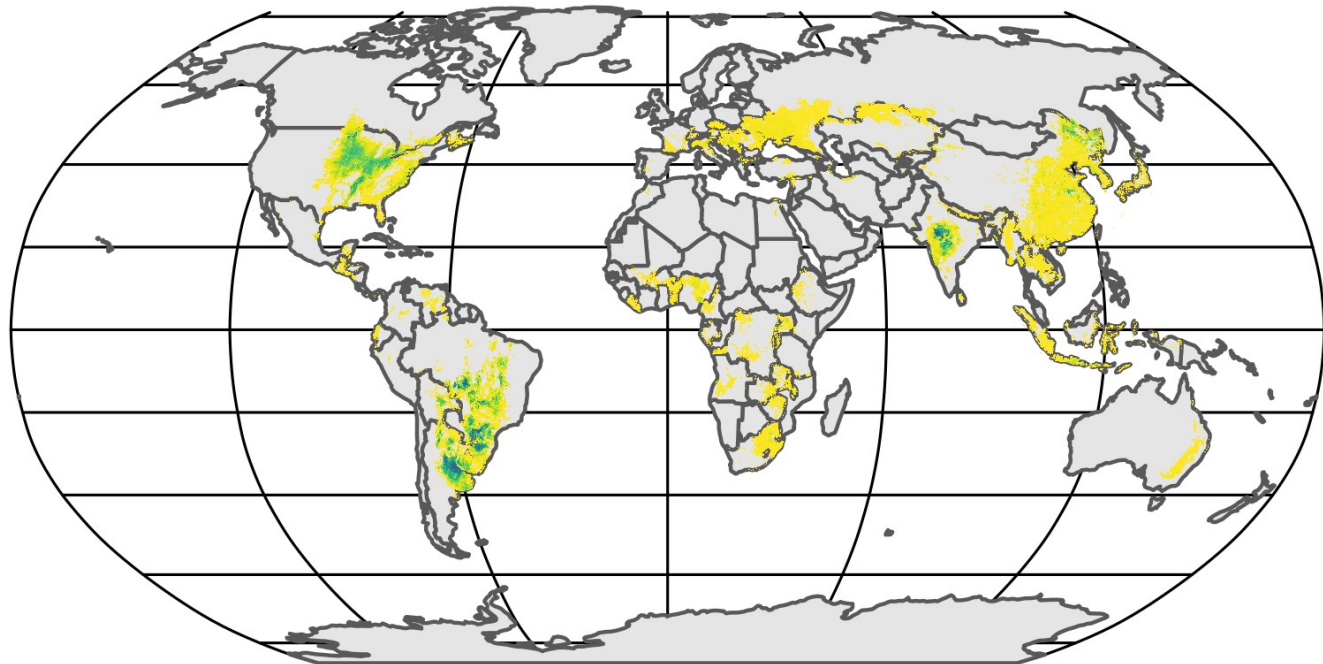
To name a few available data products:

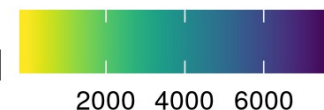**MapSpam**: 2000, 2005, 2010 (42 crops)

GAEZ: 2000 (23 crops)

M3: 2000 (175 crops)

Limitations:

- **Poor temporal coverage**

- **Inconsistent methodology over time (MapSpam)**

- **Does not allow direct land use change analysis**

Harvested area of soabean in 2010 [Hectares]

2000 4000 6000

Data source: International Food Policy Research Institute (2019)

Available global crop maps
5 arc-minutes grid cell (~10 km x 10 km at the equator)

To name a few available data products:

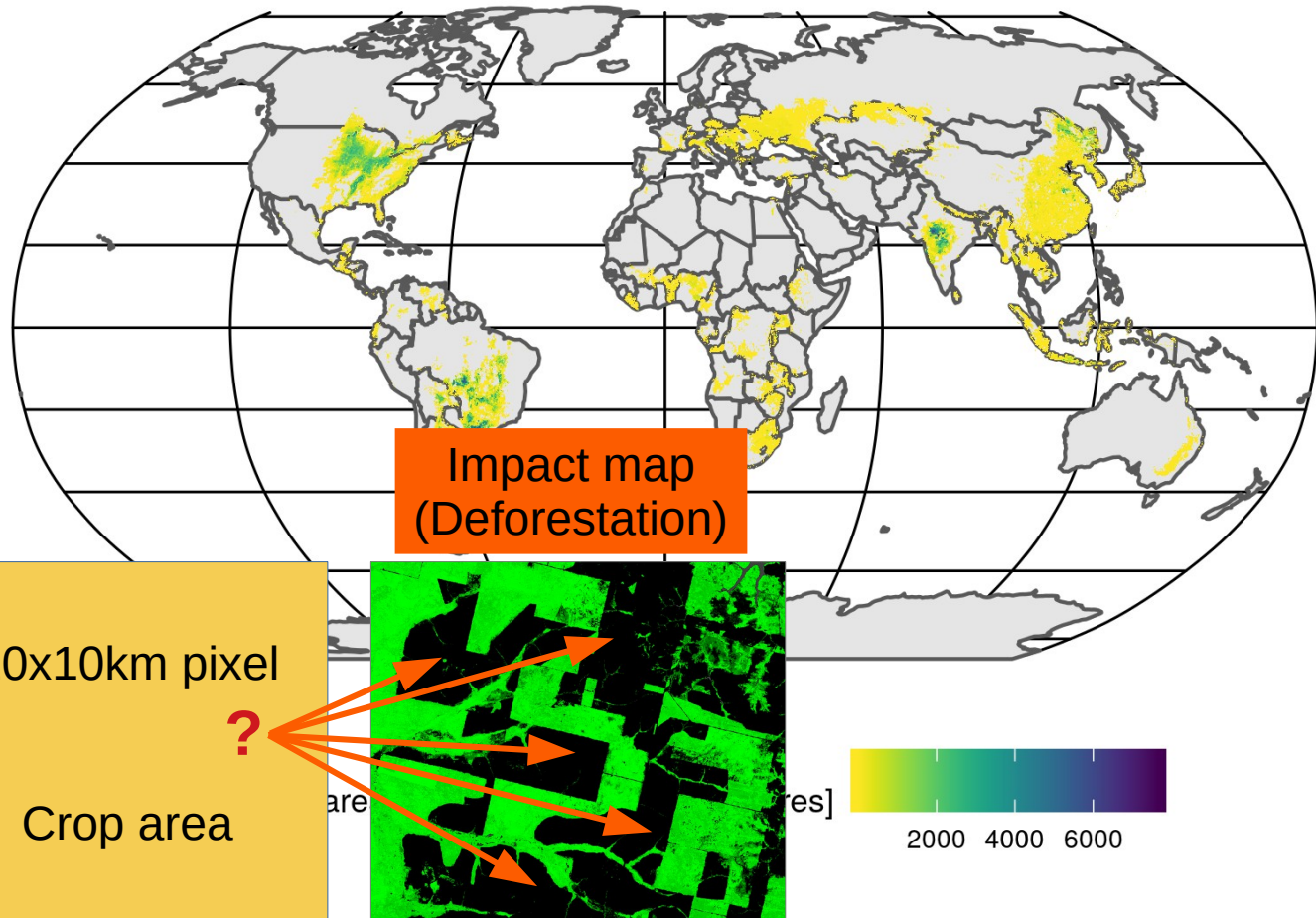**MapSpam**: 2000, 2005, 2010 (42 crops)

GAEZ: 2000 (23 crops)

M3: 2000 (175 crops)

Limitations:

- Poor temporal coverage

- Inconsistent methodology over time (MapSpam)

- Does not allow direct land use change analysis

10x10km pixel

?

Crop area

Impact map
(Deforestation)

2000 4000 6000

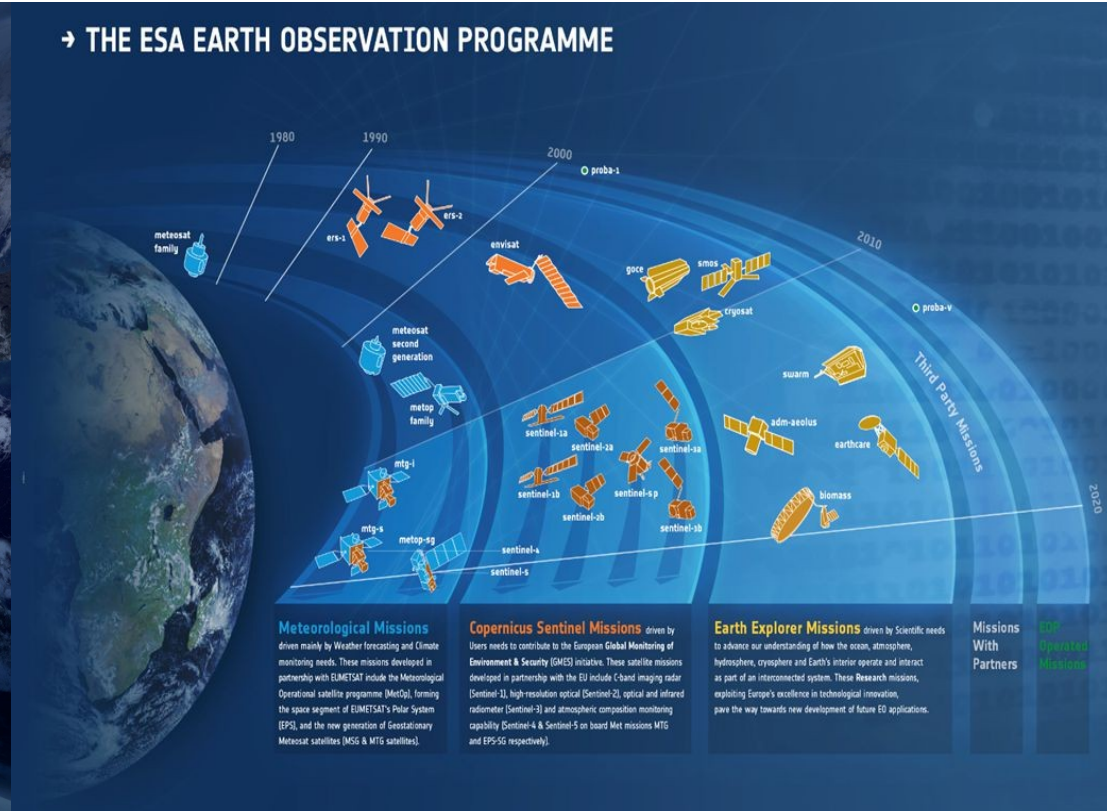Data source: International Food Policy Research Institute (2019)

Earth Observation for Supply Chains

How to design a reliable and scalable methodology to improve impact assessments of biomass production?
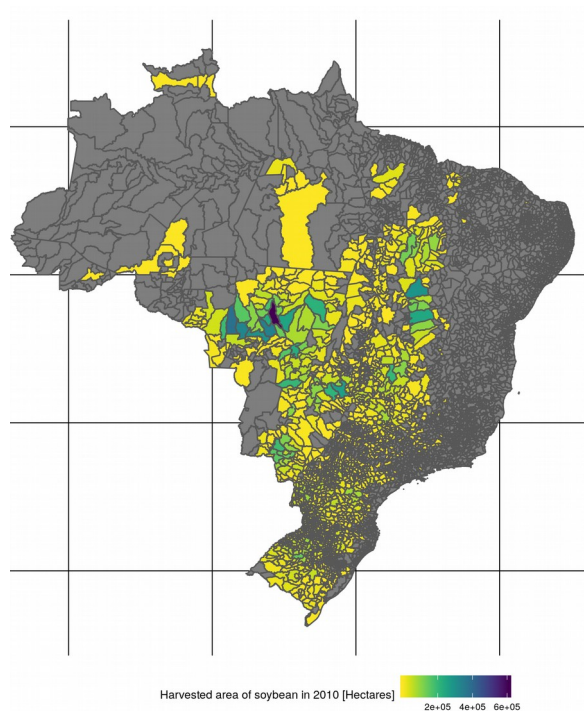
Openly available satellite data for crop mapping

To name a few sensors: Sentinel 1, Sentinel 2, Landsat 8, MODIS Terra and MODIS Aqua

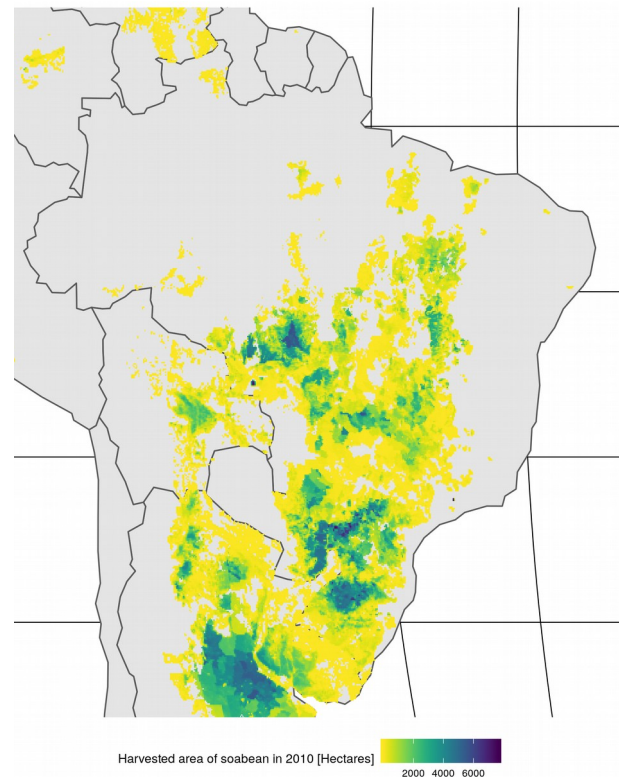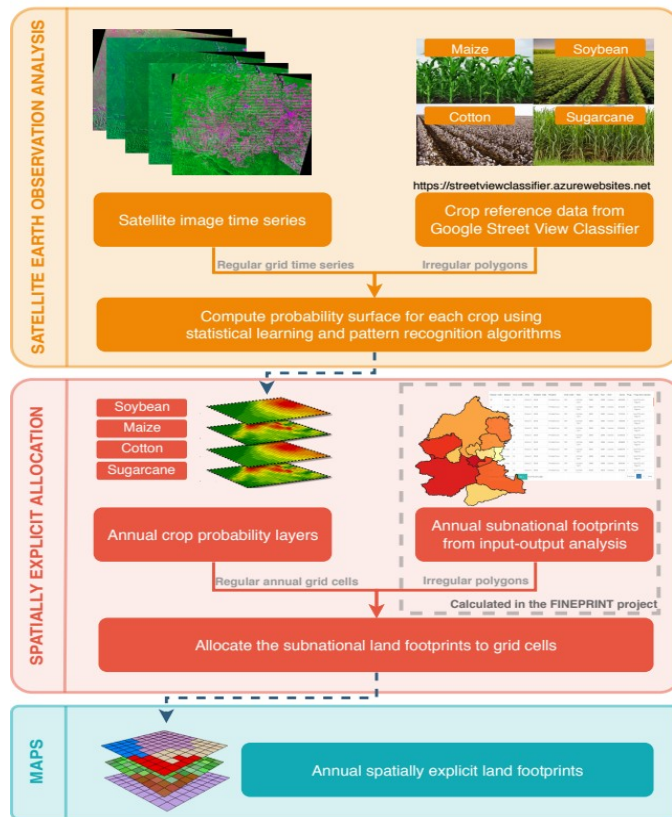# Earth Observation for Supply Chains

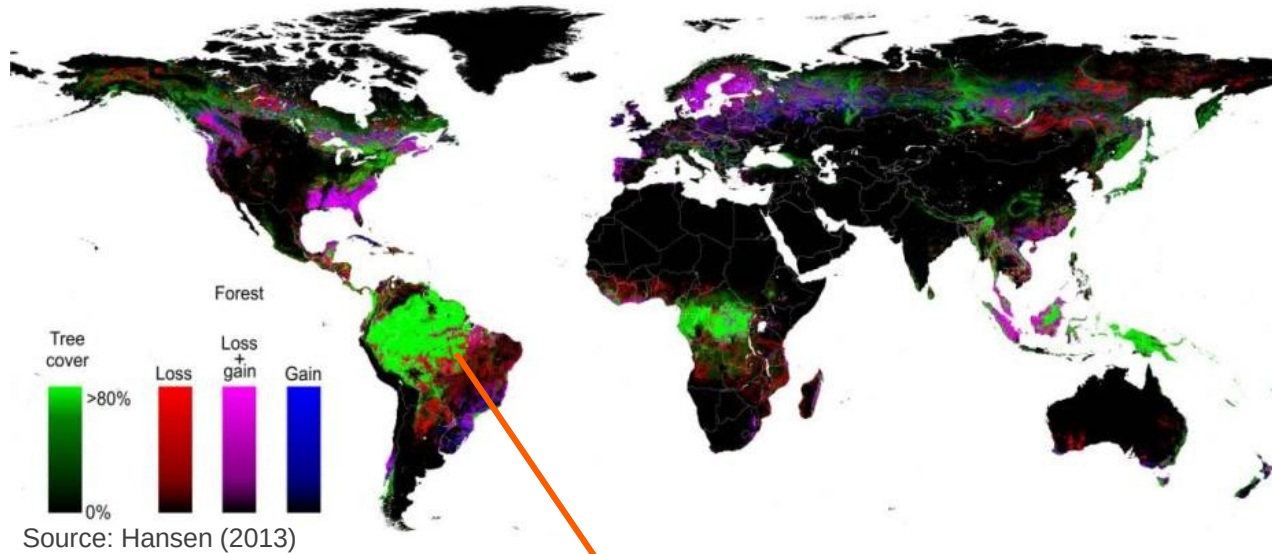National or sub-national Production and trade statistics

Yearly 250m crop maps

Data source: PAM IBGE (2019)
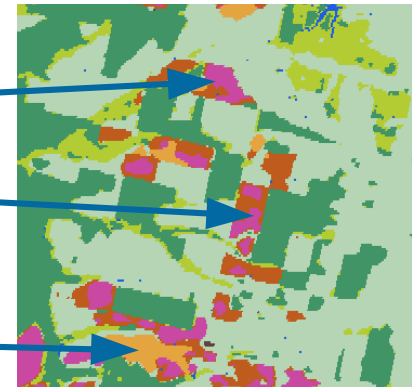
Spatially explicit production and impacts

Source: Hansen (2013)

Improved estimation of impacts associated with production of commodities

High resolution crop distribution from satellite data

Spatially explicit impacts

www.fineprint.global

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