

# Soil natural capital valuation needs for agri-food businesses

Jessica Davies and Victoria Janes Bassett



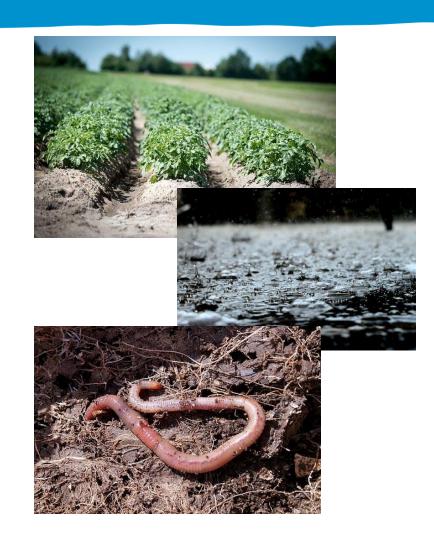






# The importance of soil

- Food provision
- Water regulation
- Support biodiversity
- Nutrient cycling
- Climate regulation



# Soil in agriculture

- Soils are a key asset vital component of agrifood business
  - Medium for plant growth
  - Nutrient and water availability
  - Crop productivity
- Management of soils changing soil health
- Soil value is often overlooked
  - Flows of ecosystem services to economic benefits are not direct
- As a result over half of agricultural soils are degraded







#### Soil issues

- Erosion
  - Decreasing soil depth and reducing soil function
- Decrease in SOC
  - Reduced water storage capacity
  - Carbon source
- Compaction
  - Reduced water storage
- Excess nutrients and pollution
  - Fertilizer runoff
  - Heavy metal pollutants
- Salinisation
  - 20% irrigated land threatened by salinization
- Desertification





# The need for soil natural capital

- We need to manage soil sustainably to ensure future food provision
  - Changing climate will increase existing pressures on soils
- Knowledge of soil natural capital is poor
  - We don't understand the current value of soil stocks
  - Limited understanding of complex flows of ecosystem services
- No standardised metrics for measuring/monitoring soil stocks

# Addressing the call

Pathways between soil as a natural asset, and benefits to humans

Natural capital

Ecosystem and

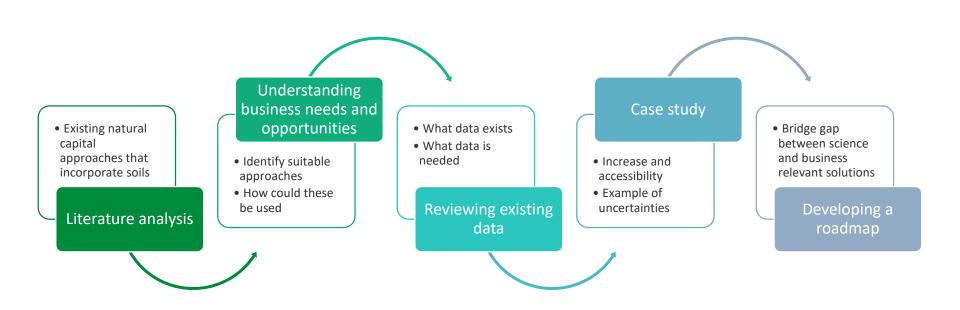
Renefits to business

- within the agri-food sector
- Business needs
  - How is soil natural capital currently accounted for?
  - What is needed to integrate soil natural capital in decision making?
- Roadmap for soil natural capital valuation
  - What currently exists?
  - What is needed?
  - Recommendations for future research

# Aims of the project

- Summarise the current state of knowledge surrounding soil natural capital valuation relevant to the agri-food sector
- Identify key gaps in this knowledge that should be addressed by further research and collaboration

#### Methods



## User engagement



 Project partner Olam International – agri-business operating from seed to shelf in 70 countries.











- February meeting in London to discuss business needs
- Workshops in March with crop specific focus to discuss soil natural capital roadmap

## Reporting

- Synthesis report
  - Current state of knowledge
  - Required future direction
- White paper document
- Wider external engagement
  - WBCSD
  - Natural Capital Coalition







# Thank you

Contact: jess.davies@lancaster.ac.uk







