Natural Capital Project

Rwanda case

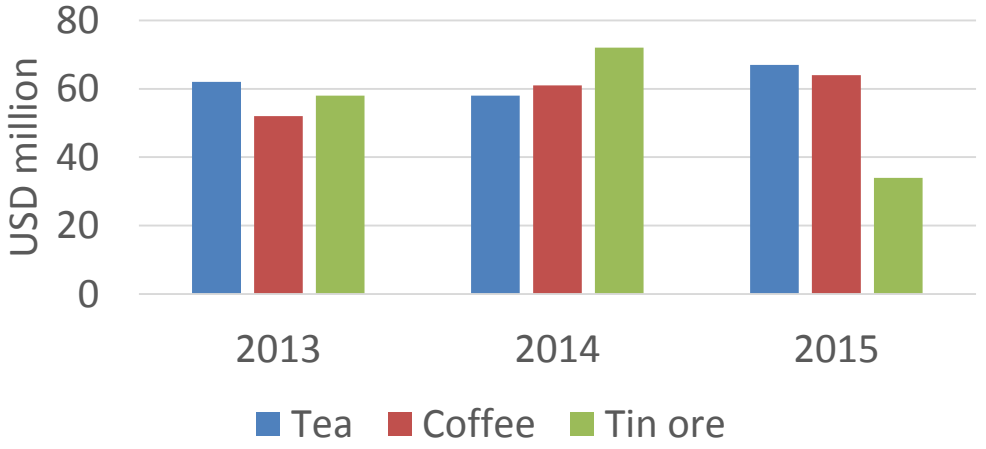
22nd November, 2017

Indufor ...forest intelligence

Tea: most valuable export crop

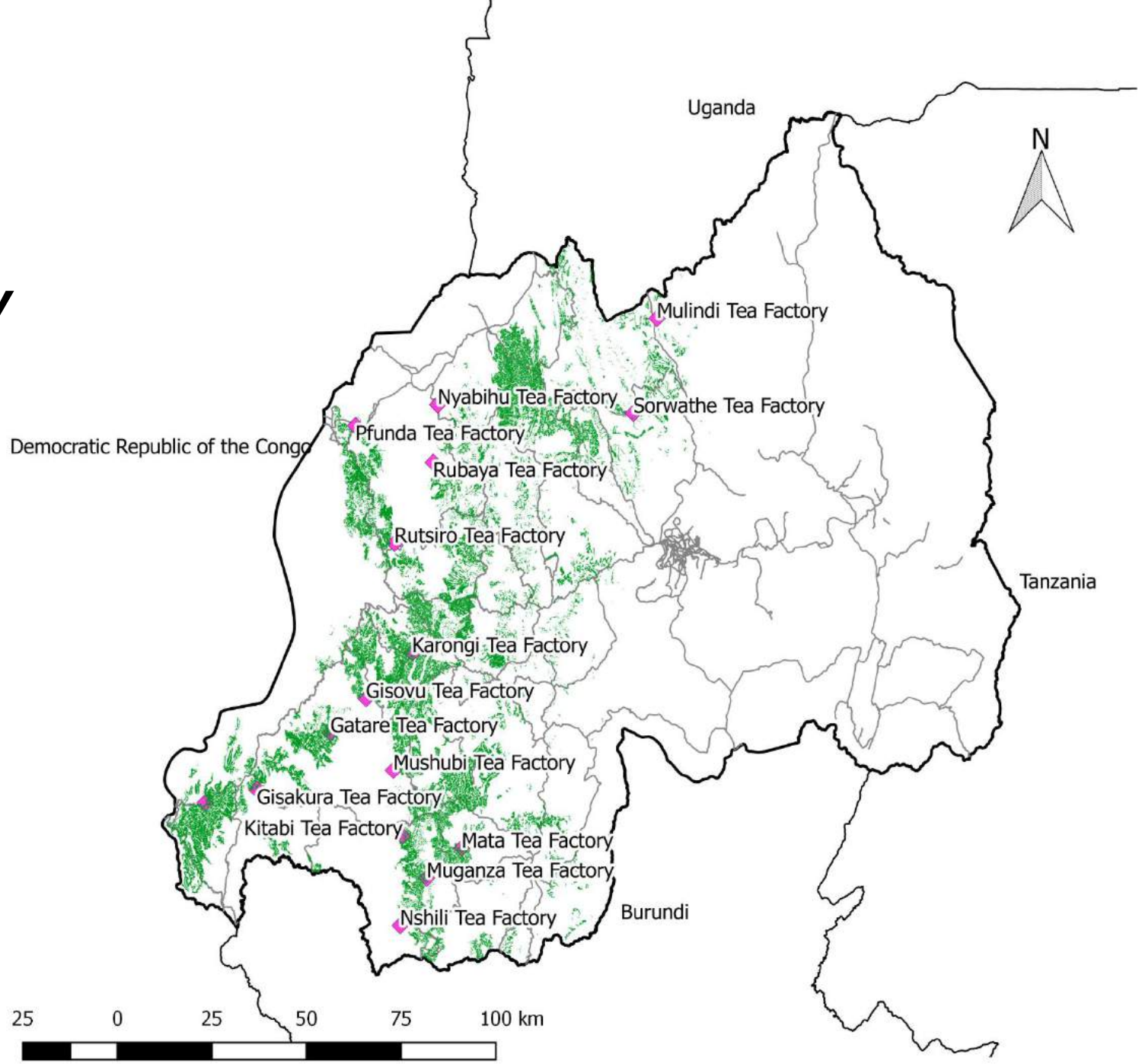
- Rwanda has produced tea since 1952
- Currently 14 operational tea factories

Figure: Value of exported goods from Rwanda in million USD in 2013, 2014, 2015



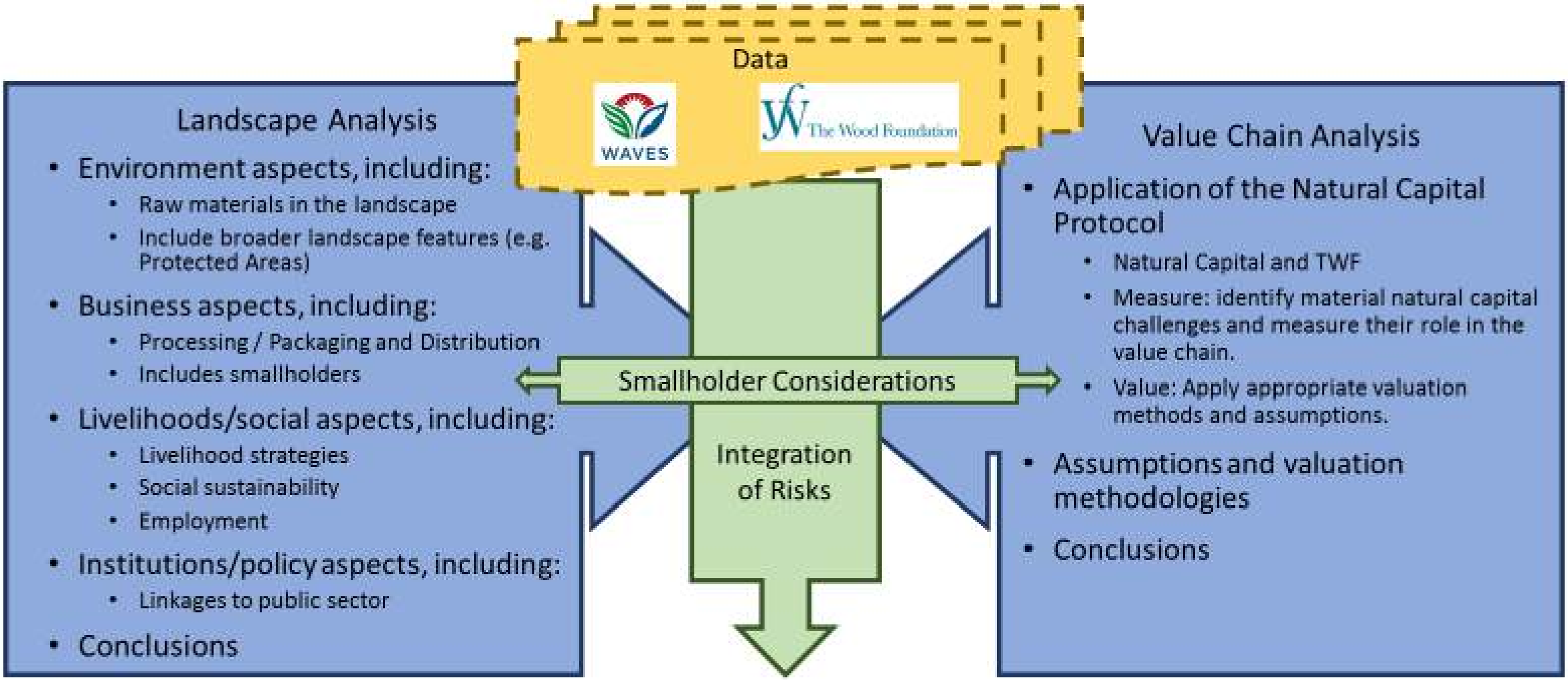
Suitable tea production area

Expansion constrained by agronomic and climatic conditions



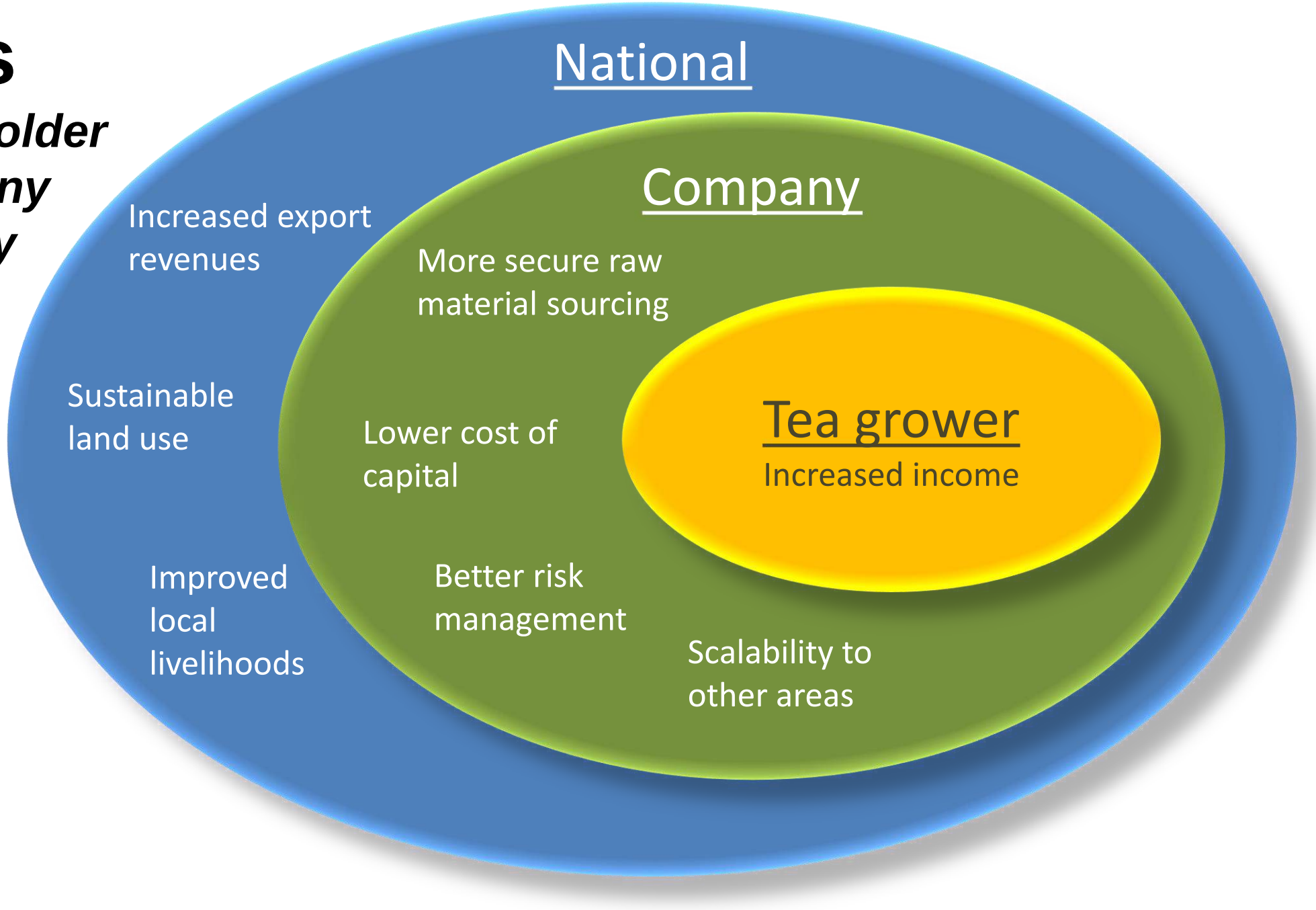
Case study with The Wood Foundation

Natural Capital Protocol and WAVES

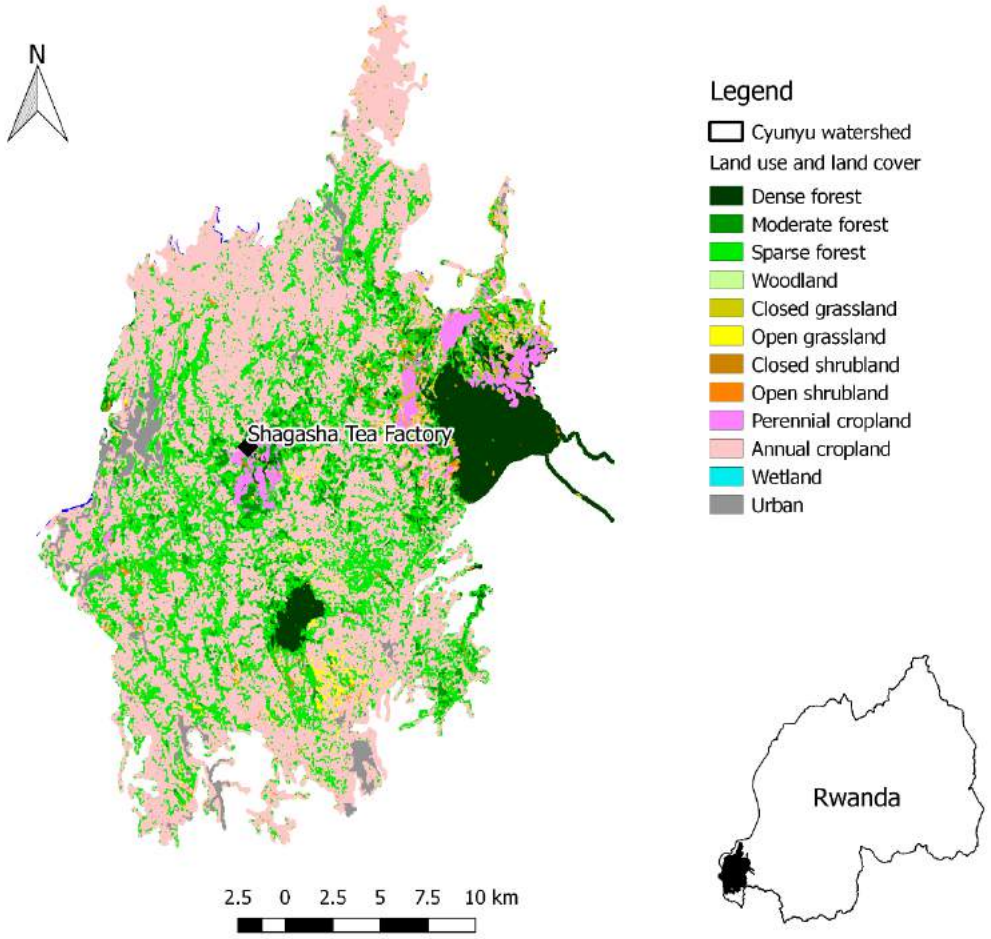


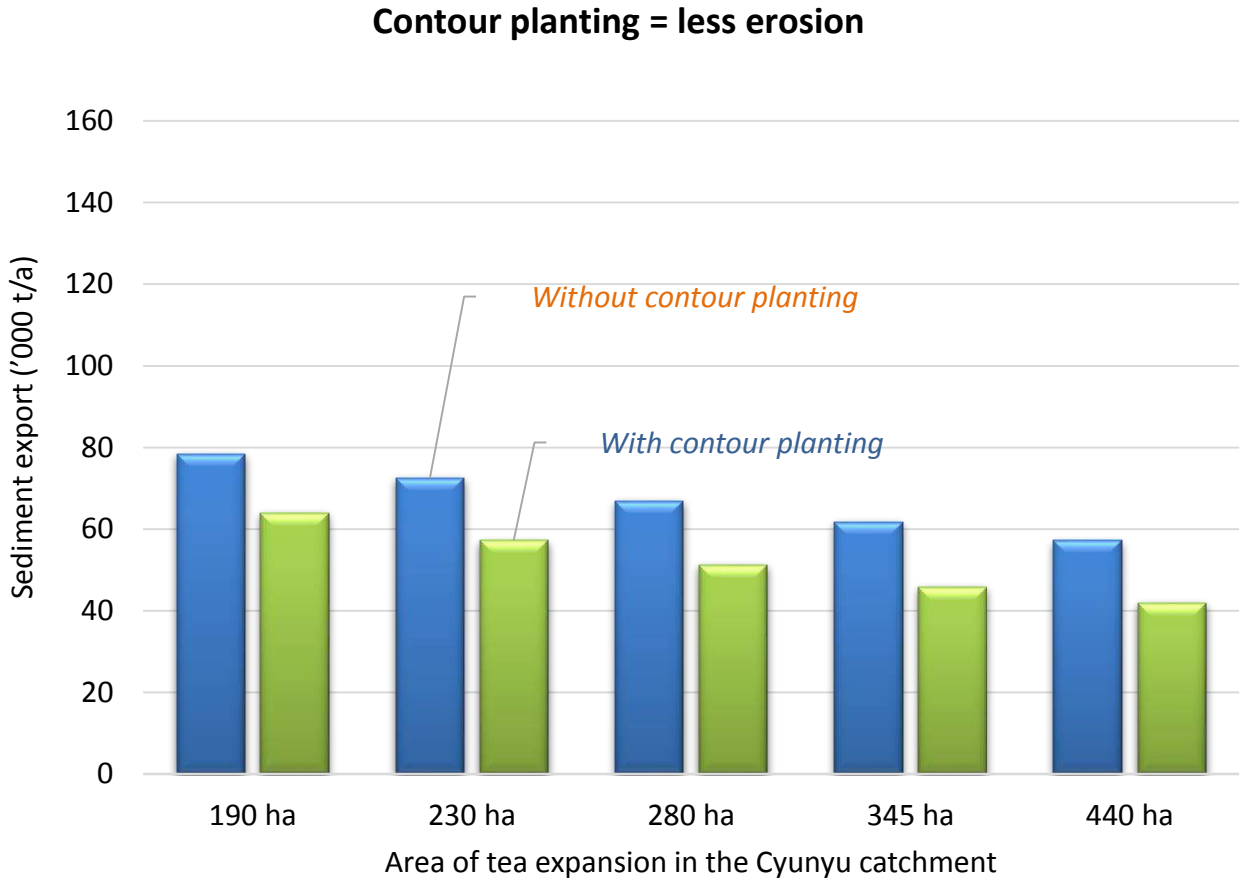
Benefits

to the smallholder
to the company
to the country



Contour planting essential for tea sector growth



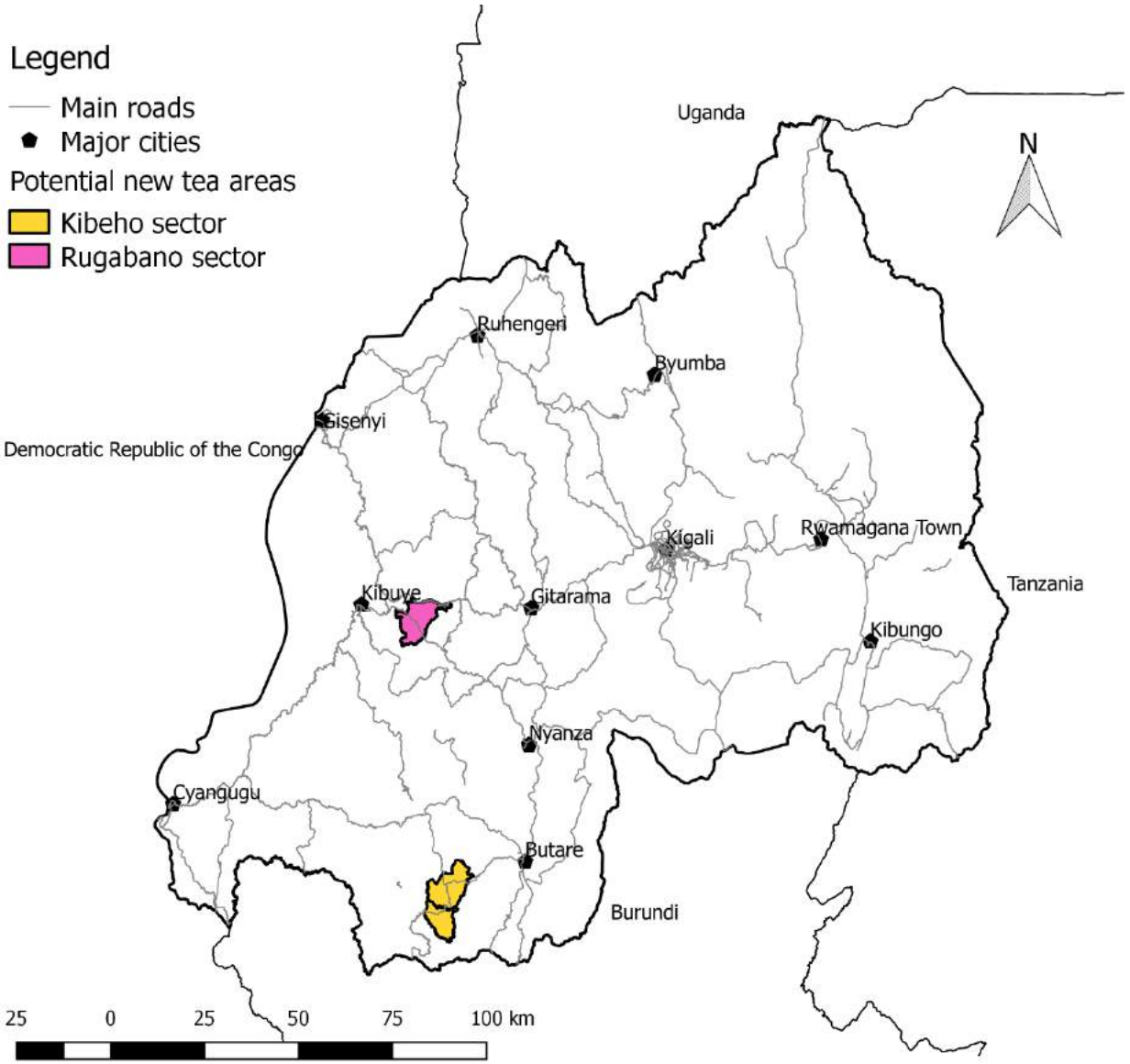


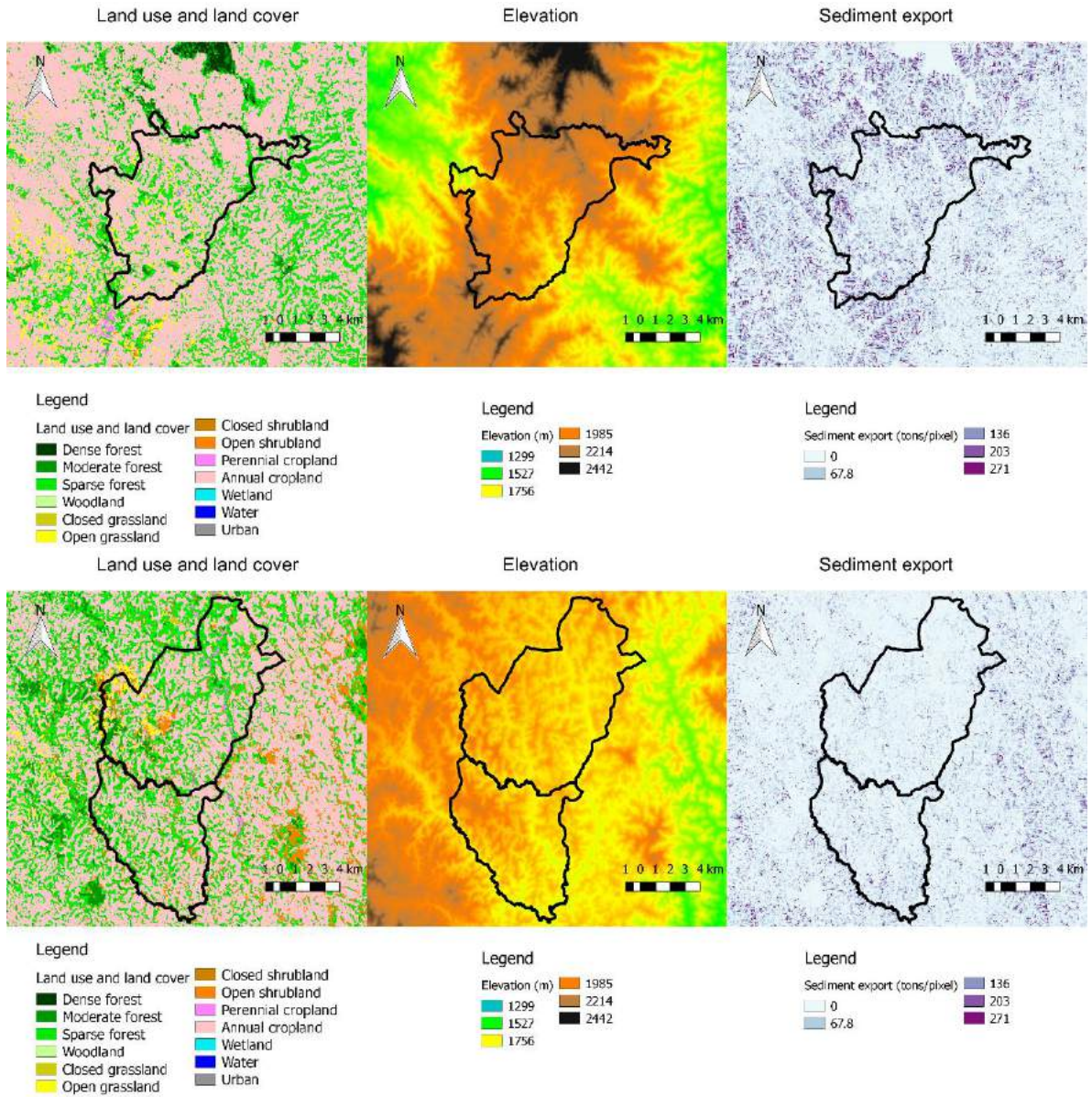
Dependency on fuelwood is critical for tea processing

- Net present value of the opportunity cost of continuing with current poor forest management practices is $431,000
- With current market prices, the value of the company's fuelwood dependency is $43,500 per year
- The company is already seeing the effects of pests and they are expected to become more critical as climate change intensifies – pest and drought-resilient species should be promoted



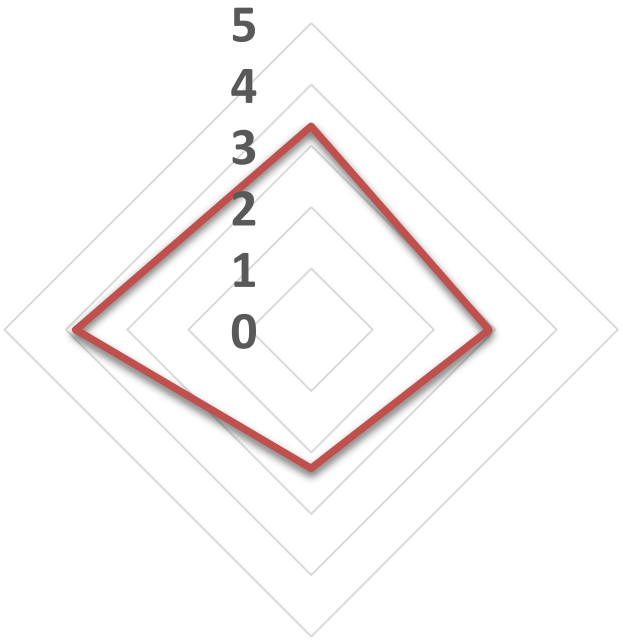

More sustainable expansion of tea





Opportunities and obstacles exist to scaling-up

1. Law, Policy & Data Context



2. Actors & Platforms

4. Agribusiness & Finance Factors

3. State of Adoption and Tools

5 4 3 2 1

Strong Weak

Opportunities and obstacles exist to scaling-up

Category 1: Laws, regulations, and general political economy environment

Category 2: National and subnational policies, strategies, and programs

Category 3: Data and information coverage and availability

Category 4: Reporting and disclosure environment

Category 5: Key actors and roles

Category 6: Platforms for collaboration within sectors and across stakeholders

Category 7: Current state of private sector adoption of natural capital approaches

Category 8: Tools and capacity to support use and interpretation of data for decision-making

Category 9: Vulnerability of natural capital dependencies to climate variability and change

Category 10: Agribusiness sector drivers, including voluntary standards

Category 11: Financial sector drivers, including voluntary standards

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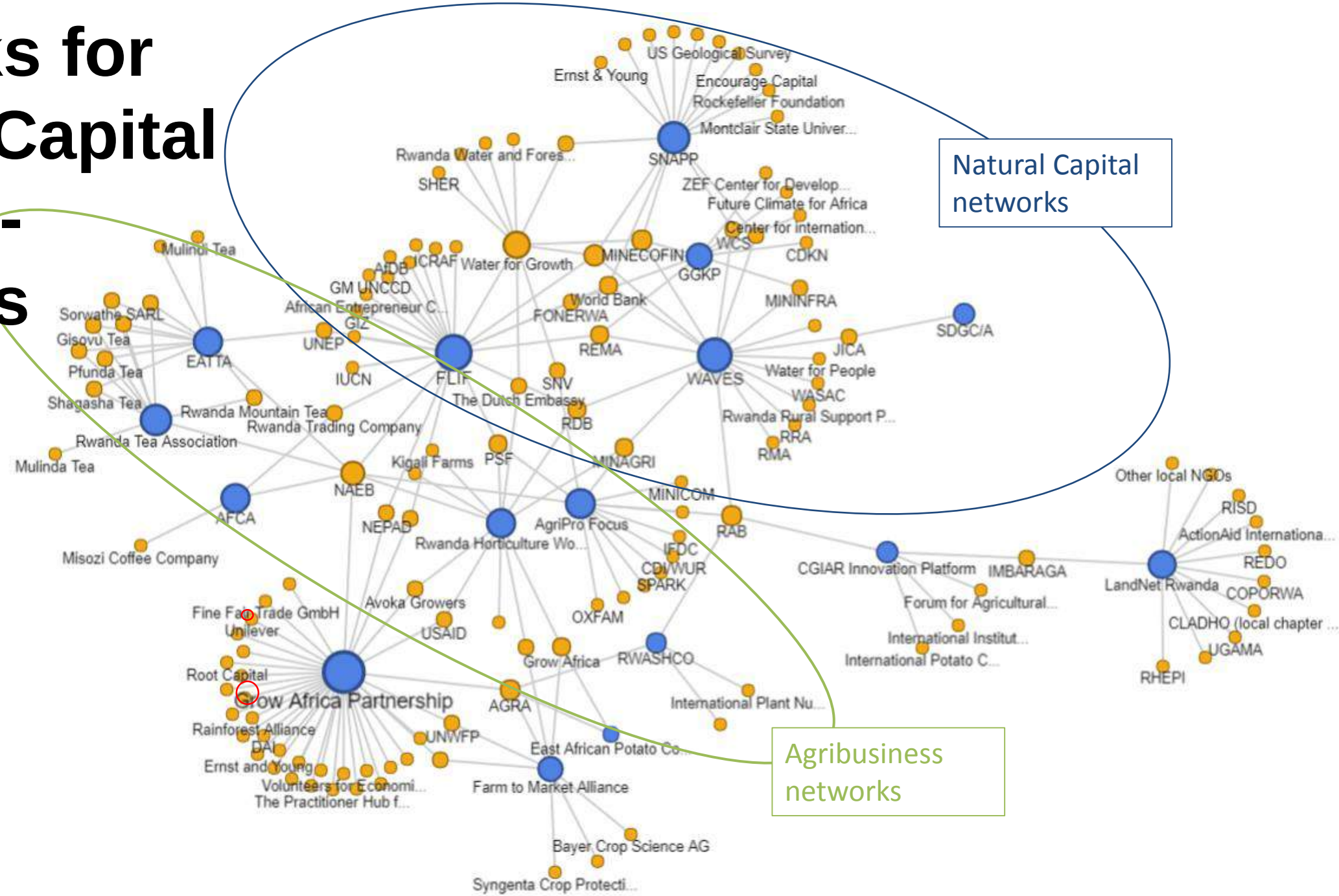
Strong Weak

Networks for Natural Capital and agri-business



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Case study with The Wood Foundation

1. Why?

Understand impacts and dependencies on natural capital to inform their decisions related to expansion of tea plantations in Rwanda

2. What?

The most material issues in terms of financial and environmental relevance, and interest from stakeholders were selected for further analysis. The analysis focused on tea cultivation by smallholders and tea factory operations

The valuation of impacts and dependencies focused on **soil stability and health, fuelwood dependency, and water provisioning** to the tea plantations and the factory

3. How?

Various methodologies for measurement and valuation were used. Most prominently the **inVEST model for soil delivery** was employed to understand the quantities of erosion in different scenarios. Fuelwood dependencies were valued through **opportunity costs** of continuing with current practices and costs of fuelwood in the markets if they were bought from local markets.

4. What next?

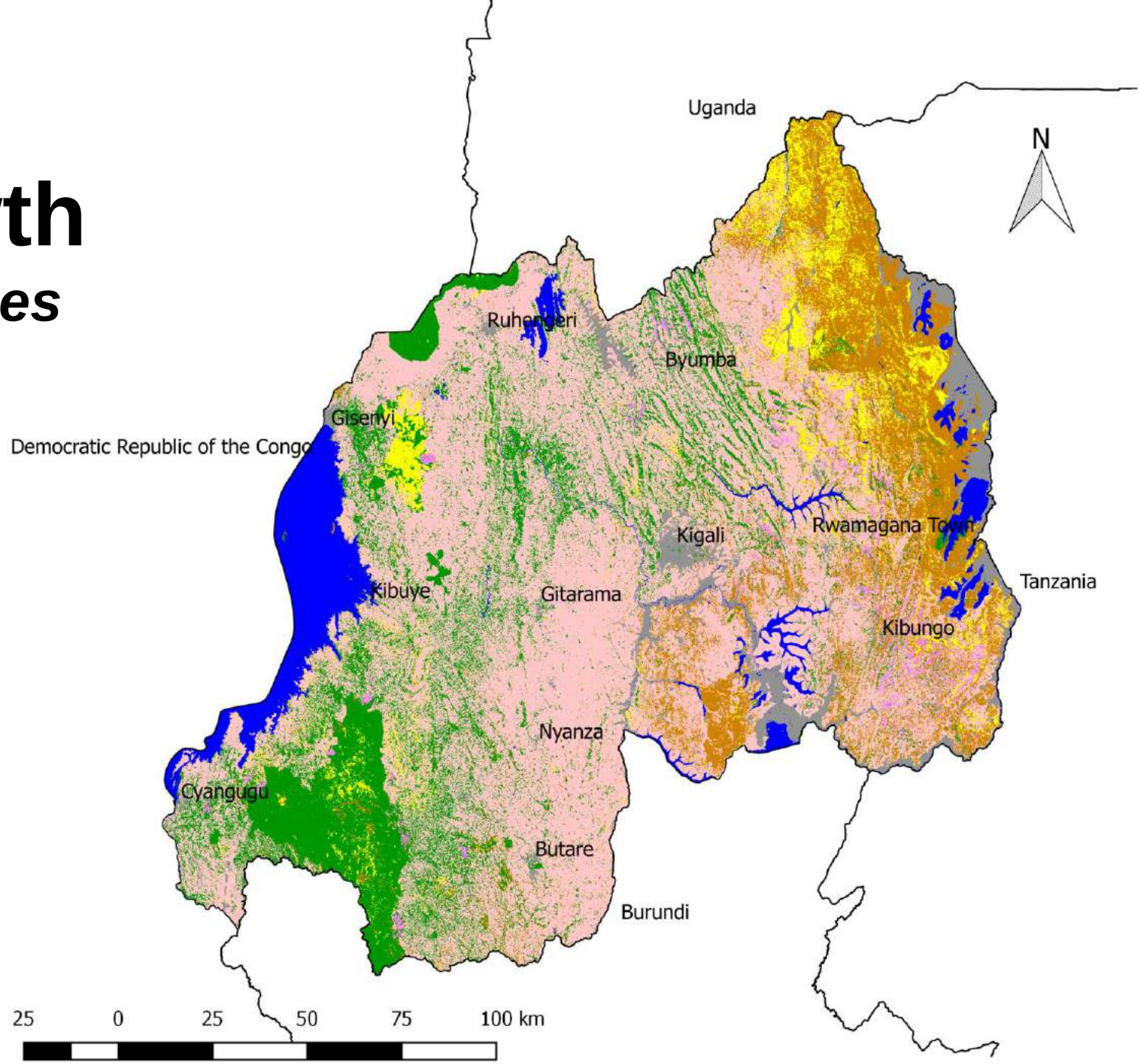
1. Selecting erosion-prone areas for tea cultivation as opposed to annual agriculture has a **positive impact on the yields** of the smallholders as well as provides potential **external benefits to downstream water and land users**
2. Dependency on **fuelwood is critical** to the business and actions to mitigate risks around this dependency need to be taken immediately
3. **Tea could be a viable buffer zone crop to help decrease** forest degradation in the nearby natural forest, but regulatory and certification frameworks are unclear at the moment

Overall, The Wood Foundation benefited from the exercise through deeper understanding of their relationship with nature and the potential impacts both positive and negative they may have on the landscape.

Land use constraints growth

Need to find new efficiencies

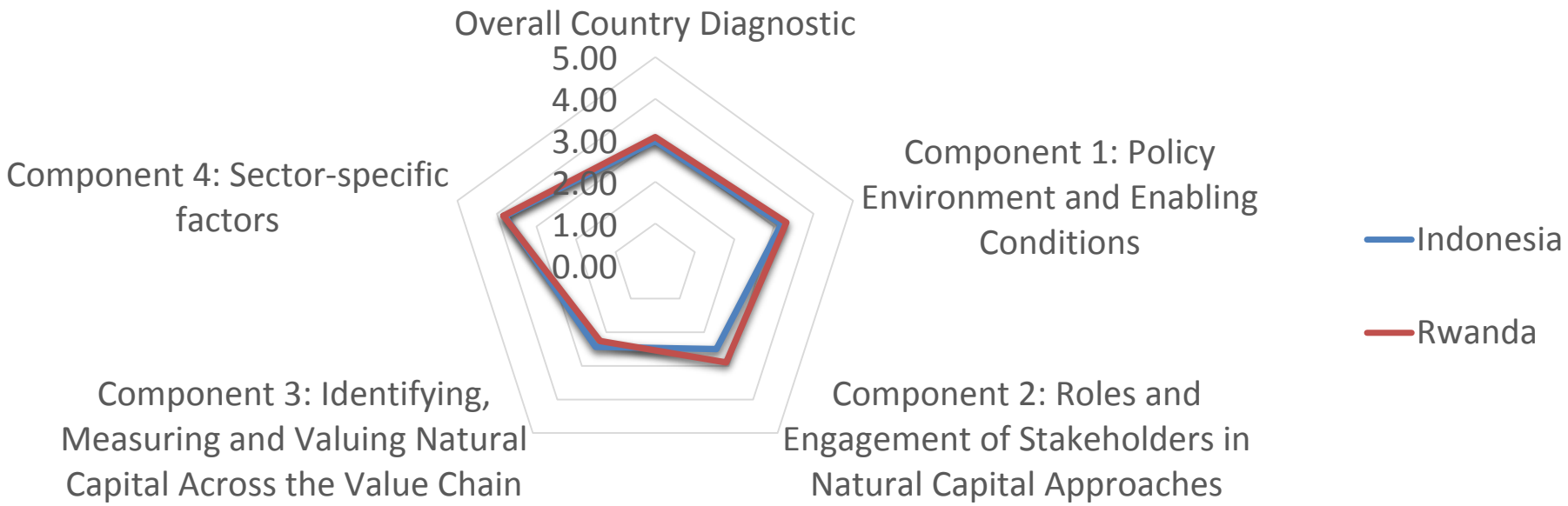
Annual cropland	52%
Forests and woodlands	17%
Shrublands	13%
Other	6%
Grasslands	6%
Water	5%
Perennial cropland	1%



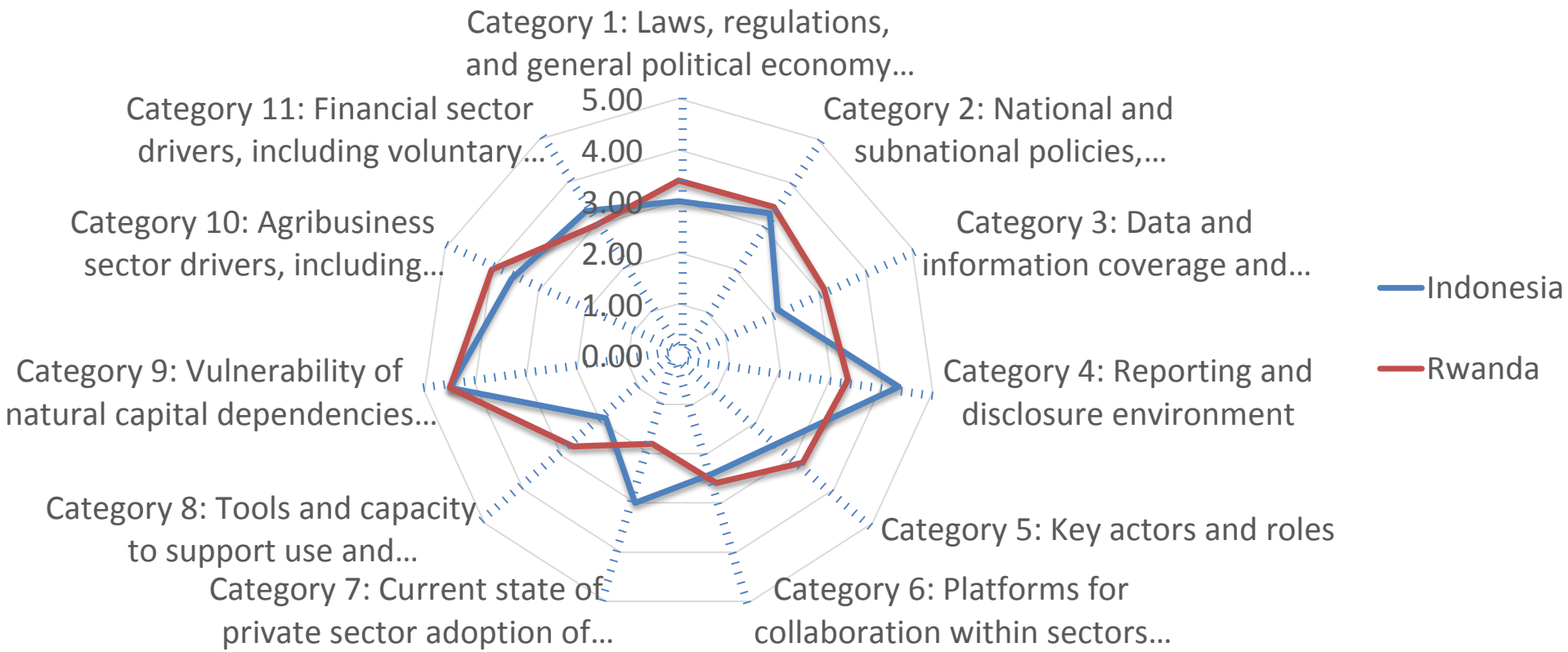
5. Initial Diagnostic Tool Results for Indonesia and Rwanda

	Rwanda	Indonesia
Overall Country Diagnostic	**3.08**	**2.98**
Component 1: Policy Environment and Enabling Conditions	**3.32**	**3.19**
Category 1: Laws, regulations, and general political economy environment	3.40	3.00
Category 2: National and subnational policies, strategies, and programs	3.43	3.29
Category 3: Data and information coverage and availability	3.11	2.13
Category 4: Reporting and disclosure environment	3.33	4.33
Component 2: Roles and Engagement of Stakeholders in Natural Capital Approaches	**2.90**	**2.50**
Category 5: Key actors and roles	3.20	2.60
Category 6: Platforms for collaboration within sectors and across stakeholders	2.60	2.40
Component 3: Identifying, Measuring and Valuing Natural Capital Across the Value Chain	**2.26**	**2.44**
Category 7: Current state of private sector adoption of natural capital approaches	1.80	3.00
Category 8: Tools and capacity to support use and interpretation of data for decision-making	2.71	1.88
Component 4: Sector-specific factors	**3.83**	**3.80**
Category 9: Vulnerability of natural capital dependencies to climate variability and change	4.50	4.50
Category 10: Agribusiness sector drivers, including voluntary standards	4.00	3.57
Category 11: Financial sector drivers, including voluntary standards	3.00	3.33

6. Country Context Overall and by Diagnostic Tool Components



7. Country Context by Diagnostic Tool Categories



Policy environment and enabling conditions for agribusiness to adopt natural capital in decision making

- Laws and regulations are in place
- Policies, strategies, & programs integrating natural capital in planning are in place
- Law enforcement is strong
- Sustainability criteria in finance beginning to gain traction
- Some data exists but is not accessible and applied
- Incentives to apply natural capital valuation are limited

Roles and engagement of stakeholders in natural capital approaches

- CSOs and NGOs are active around natural capital use
- There are limited examples of natural capital valuation from international private sector corporations and finance sector
- Corporations and small-scale producers have not taken steps to apply natural capital identification, measurement, valuation, and management
- There are few platforms on corporate and fiancial sustainability

Public sector

Private sector

Finance sector

Identifying, measuring and valuing natural capital across agriculture value chains

- Unilever and DSM committed to the Natural Capital Protocol
- Natural capital measurement and valuation are not yet emerging practices and there are no standardized approach in place
- Tools and capacity to support use and interpretation of data for decision-making is still limited

Sector-specific factors for agribusiness

- Climatic change is evident and impacts agricultural practices by incidence of pests and diseases; lowering yields.
- Tea and coffee yields vary nationally and internationally by natural capital linkages
- Agriculture contributed 30% to the GDP of Rwanda in 2016 and 80% of employment.

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Strong

Weak