

Forest Trajectories, Socioeconomic Status, and Perceptions about Guyana's Village Improvement Plans

CONTEXT

Village Improvement Plan (VIP) sets mid- and long-term development goals for indigenous villages including land use and management. The VIP is a village self-determination 10-year plan that outlines the communities' priority areas for

- Development and infrastructure
- Land and other natural resources management
- Cultural heritage.
- Minister of Indigenous People's Affairs & Regional Council
- Enables access to funding

OBJECTIVES AND QUESTION

1. Advance methods to quantify tropical forest carbon dynamics associated (i.e., maintenance, degradation, and regrowth) using data from GEDI, NISAR, & Landsat.
2. Quantify the impact of VIP on forest carbon trajectories and socioeconomic outcomes with quasi-experimental methods.
3. Identify the factors that drive the adoption of VIP and quantify their spillover impacts.

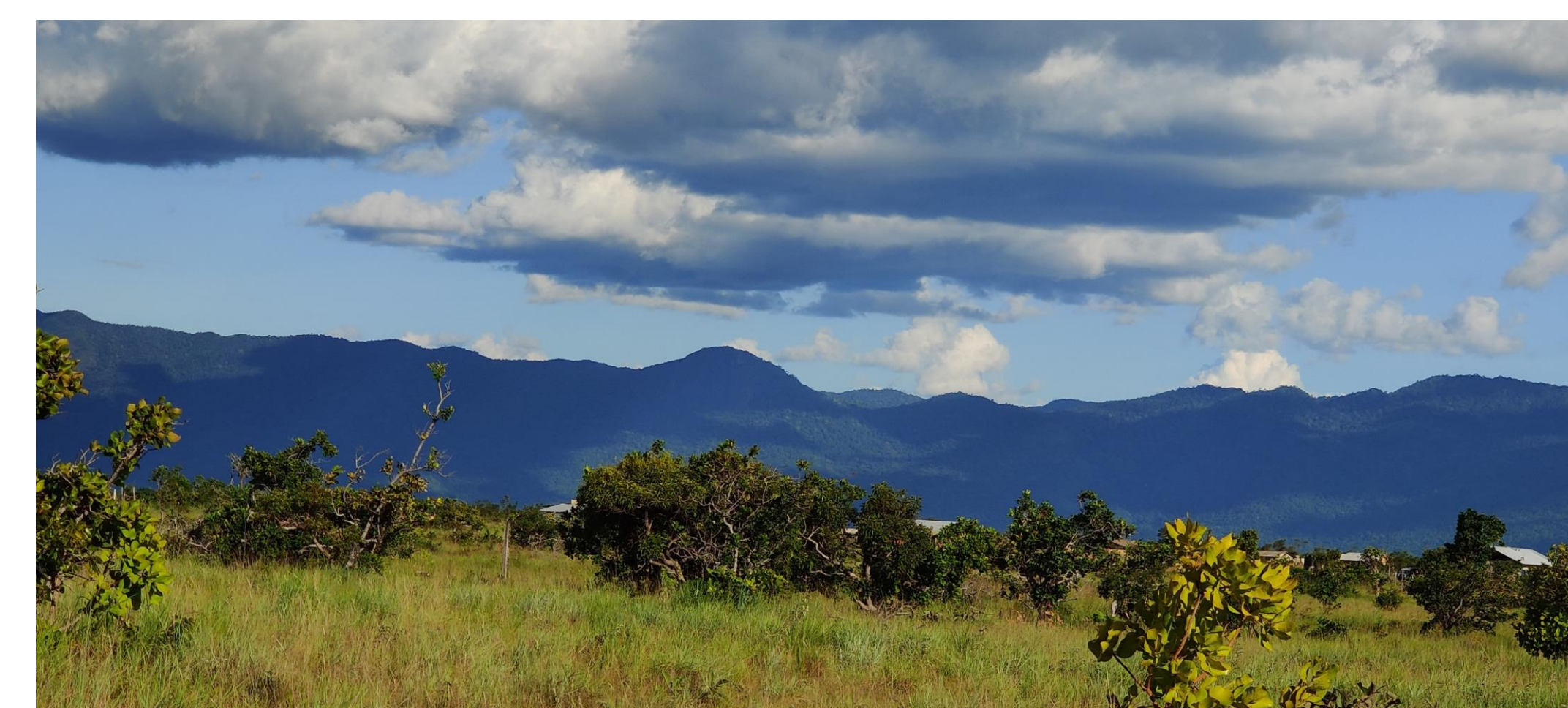
What are people's perceptions about VIPs. What LCLUC patterns do we see?



Education
Livelihoods

Health
Governance

Culture and Traditions
Environment



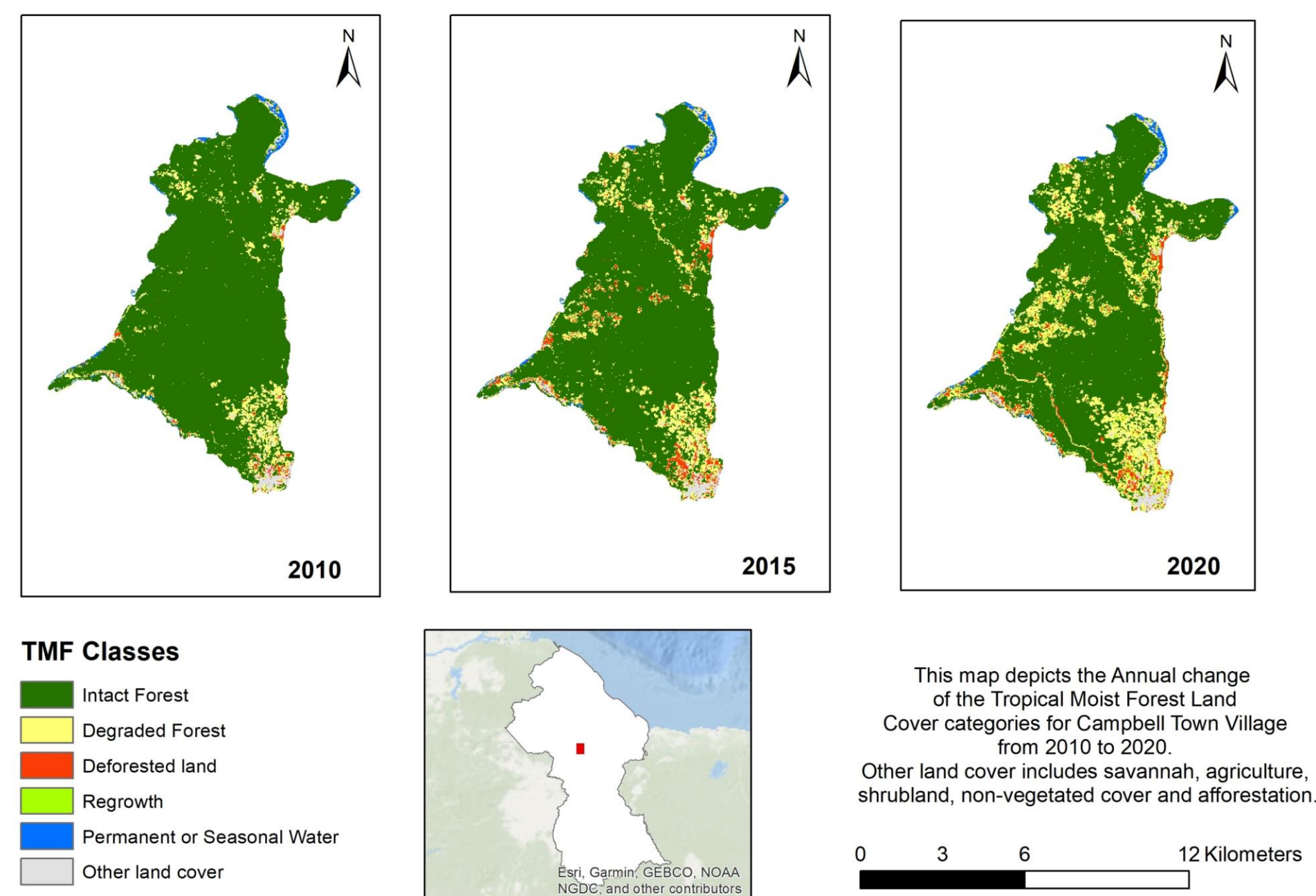
Pictures depict Village Improvement Plan Programmatic Areas

METHODS

Objective 1. Integrate new and existing sources of EO data with an extensive network of forest inventory plots across the Guiana Shield

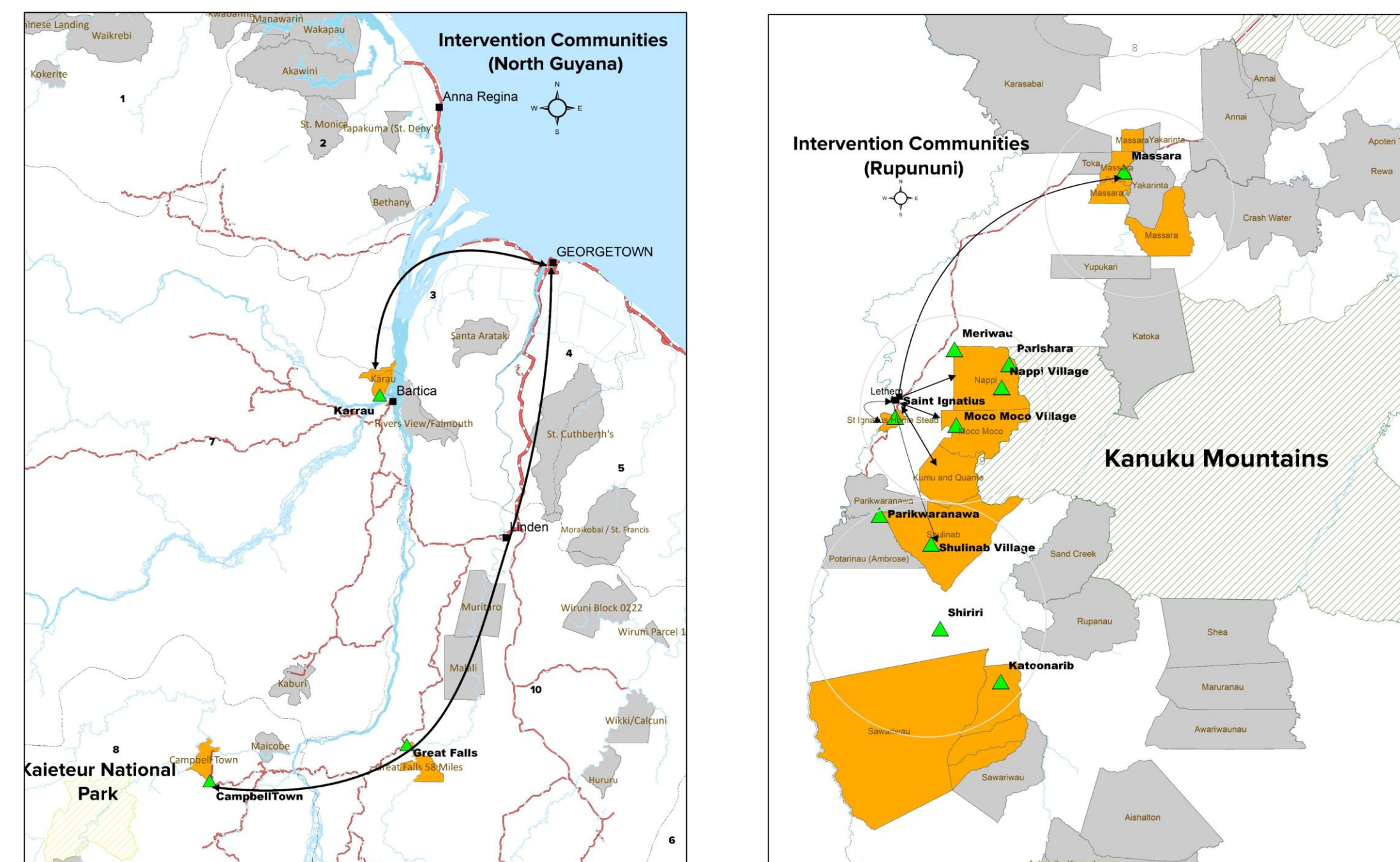
- stratifying the Guiana Shield region into areas of stable and changing forest cover;
- develop models that integrate EO and in-situ forest inventory plot data;
- apply a state-space modeling framework to satellite time-series data to quantify forest carbon dynamics

Tropical Moist Forest Land Cover - Campbell Town Village



Objective 2. Apply statistical matching methods that integrate the spatial nature of forest carbon dynamics and socioeconomic variables related to outcomes to assess and attribute

- Household survey to create a socioeconomic status (SES) index
- Likert scales to classification household level perception about
 - VIP
 - Community level environmental conditions
 - Inclusion and equity



Objective 3. Apply the diffusion of innovation theory and a conceptual framework developed to assess the adoption of VIPs. In addition, apply a comparative case-study design to identify:

- Traits of the VIP intervention
- Qualities of adopters and non-adopters
- Characteristics of the socio-ecological context of VIPs vs non-VIPs
- Demographics, social cohesion, governance institutions, degree of isolation, and Government and NGO support to assess enabling conditions



Tenure	Forests ('000 ha)	Non-Forest ('000 ha)				Other Land	Total Area ('000 ha)
		Grassland	Cropland	Settlements	Wetlands		
State Forest Area Titled	12142	194	19	12	121	106	12594
Amerindian Lands	2298	637	7	7	26	331	3306
State Lands	2469	910	344	48	125	178	4074
Protected Areas	1092	30	0	0	12	4	1138
Total Area (ha)	18001	1771	370	67	284	619	21112

PRELIMINARY RESULTS

- We are producing forest carbon stocks estimates for the Guiana Shield by employing different approaches to quantifying forest carbon dynamics for areas of stable vs. changing forest cover between 2000 and 2018 at 30 meters resolution.
- Classifying households by socioeconomic status (SES) and assess the association by SES level with perceptions about the VIP program and the land conditions for the village.
- We will evaluation elements around village level governance processes in relation to the SES classification.

Our finding will further knowledge about

- measuring forest carbon dynamics linked to project interventions on indigenous and local communities' forests and lands.

LITERATURE CITED

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ACKNOWLEDGMENTS

Timothy Babb; Gwen K. Murphy; CI-Guyana, leaders and community members in villages visited, enumerators, NASA LCLUC Program.

FURTHER INFORMATION

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