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Preferences for voluntary carbon credit programs

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Papua New Guinea



PNG: A global rainforest treasure

- Forests are a vital resource for local communities
- Key economic driver – contributing approximately 380 million kina annually
- Deforestation and forest degradation deplete forest resources and contribute to rising greenhouse gas emissions
- PNG took the global lead in climate action, by proposing REDD+



What is REDD+?

- REDD+ are cost effective mechanisms to pay landholders for avoided deforestations.

- Forest landowners are provided with monetary incentives to manage or preserve forested land according to specific guidelines.

- In return, the carbon offsets created from improved forest or ecosystem management are valued and sold as an equivalent emission-reducing activity to carbon emitters elsewhere in the world



Reducing emissions from Deforestation



Reducing emissions from forest degradation



Conservation of forest carbon stocks

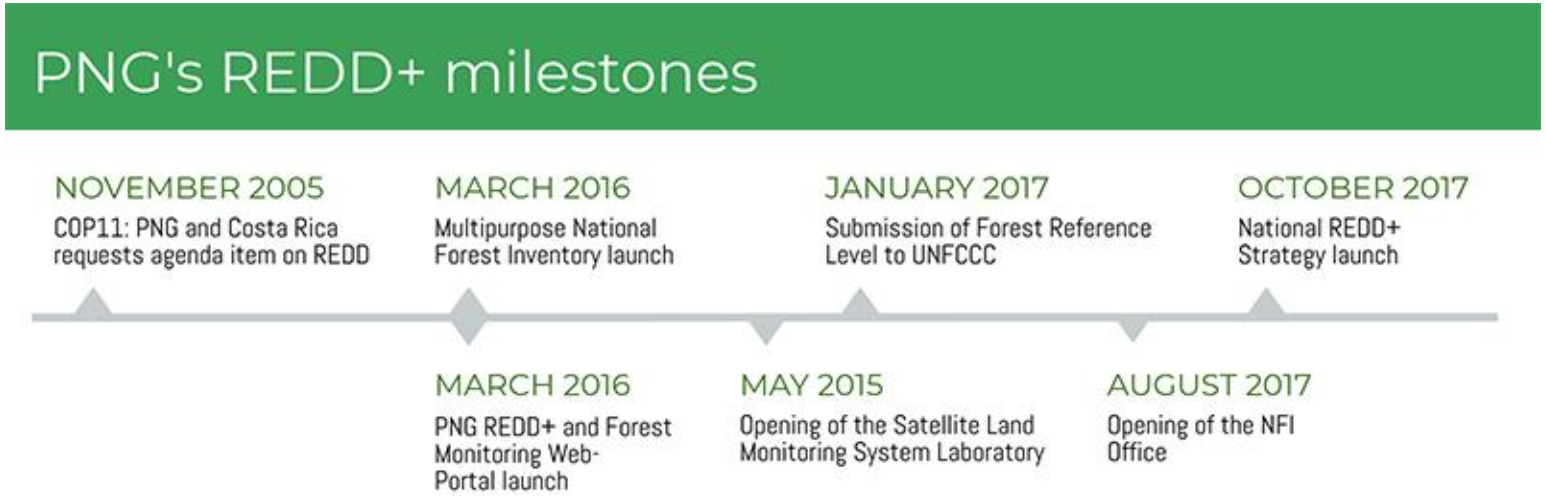


Sustainable management of forests



Enhancement of forest carbon stocks

REDD+ in PNG

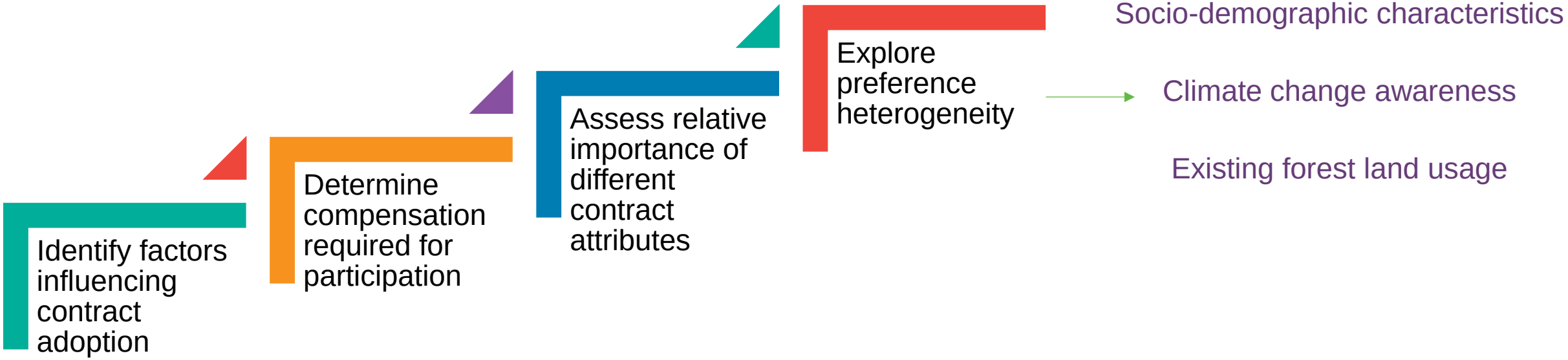


- **Since 2022, PNG has placed a moratorium on voluntary carbon credit programs** to assess progress

- PNG is transitioning from Phase 1 to Phase 2 of REDD+ development
  - Testing various approaches to implement REDD+
  - Refine strategies and scale up

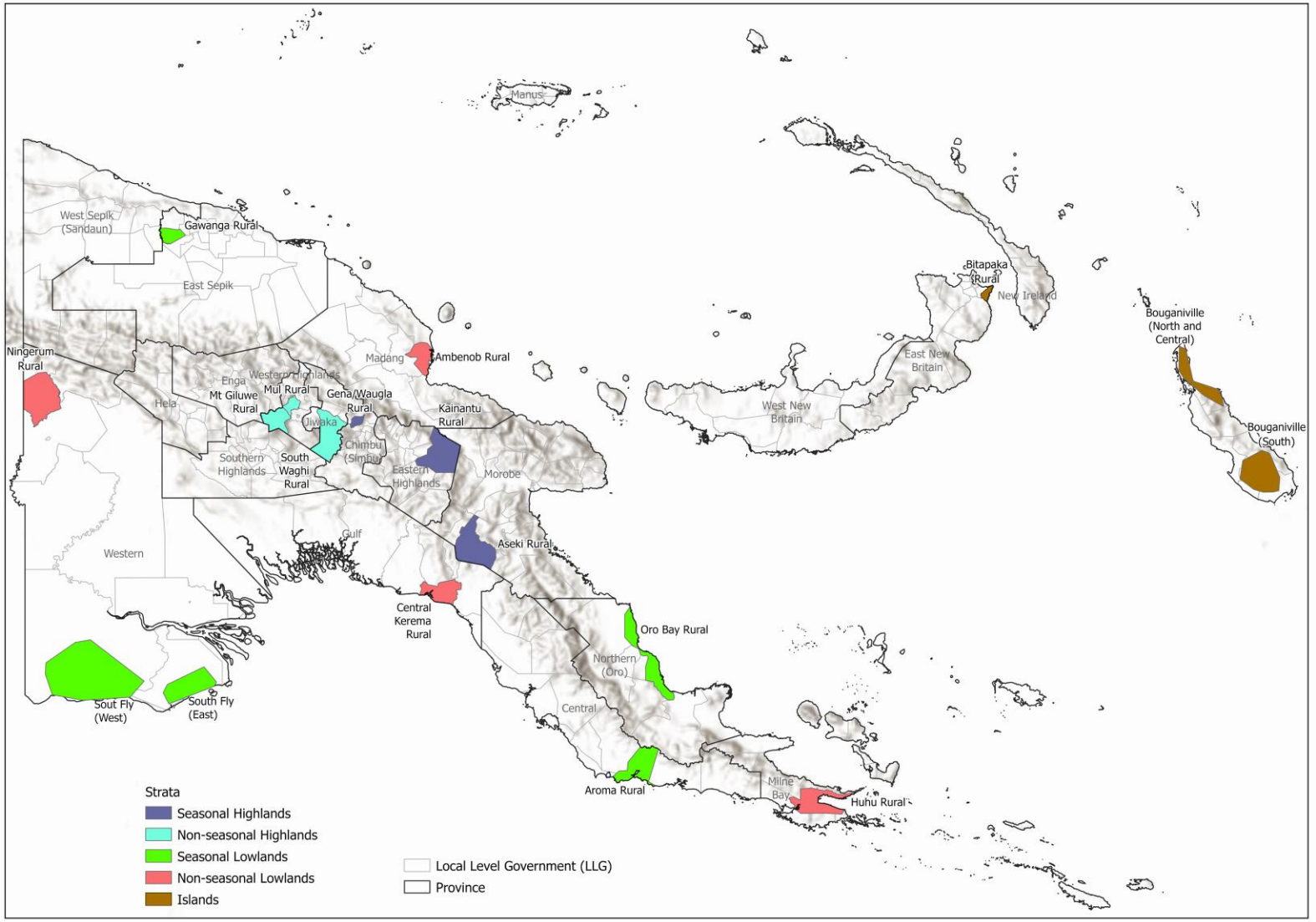
Research Objective

We evaluate forest landholders' preferences to enter a hypothetical voluntary carbon credit contract and assess the relative importance of different program attributes and household/ individual factors that influence their decisions



PNG Rural Household Survey 2023 – Survey Sample

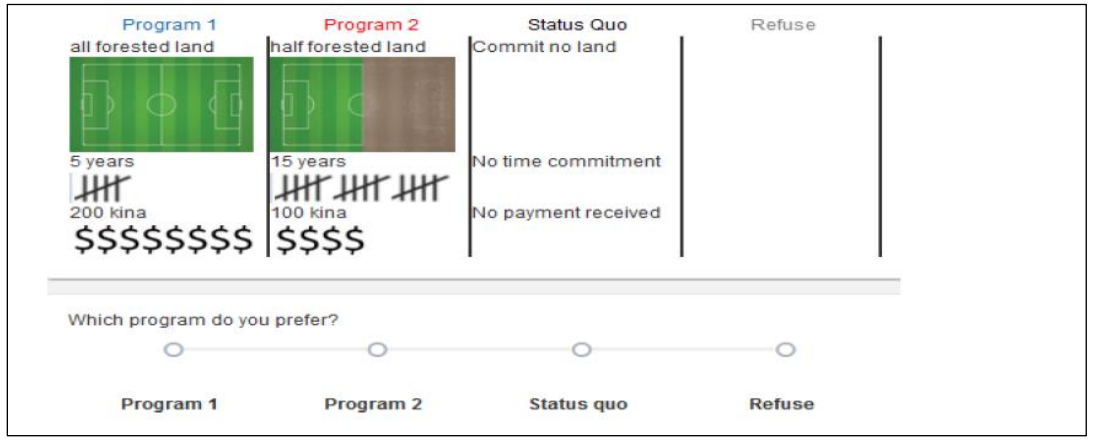
- Used a choice experiment module to collect preferences from forest owning households for voluntary carbon credit programs
- Households that had access or owned at least 0.35 hectares of forest land
- 1,259 households
- Across 14 provinces



Mixed Method Approach to Analyze Preferences

Discrete choice experiment: N = 1259

Example of choice set presented



- Hypothetical voluntary carbon credit contract:
  - Forest preservation commitment
  - Contract duration
  - No land use
  - Financial incentives provided
  - Comply with annual monitoring

Attributes

Annual payment	25 PGK / 100 PGK / 200 PGK
Contract length	5 years / 15 years / 25 years
Share of forested land	Half of land / All the land

Mixed Method Approach to Analyze Preferences



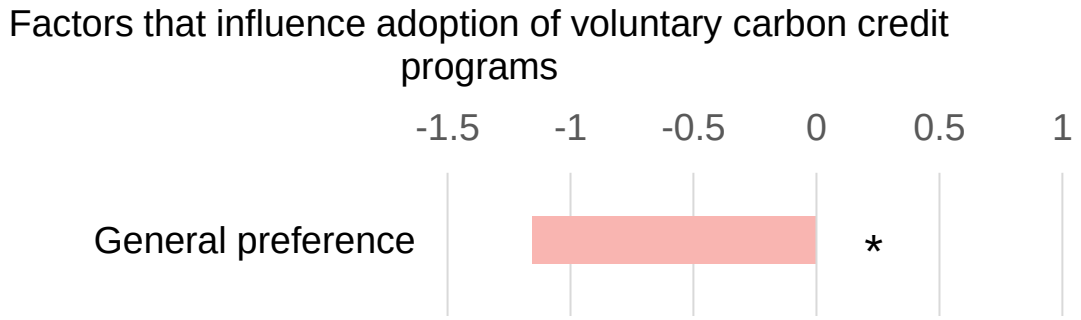




Focus Group Discussions: N = 240

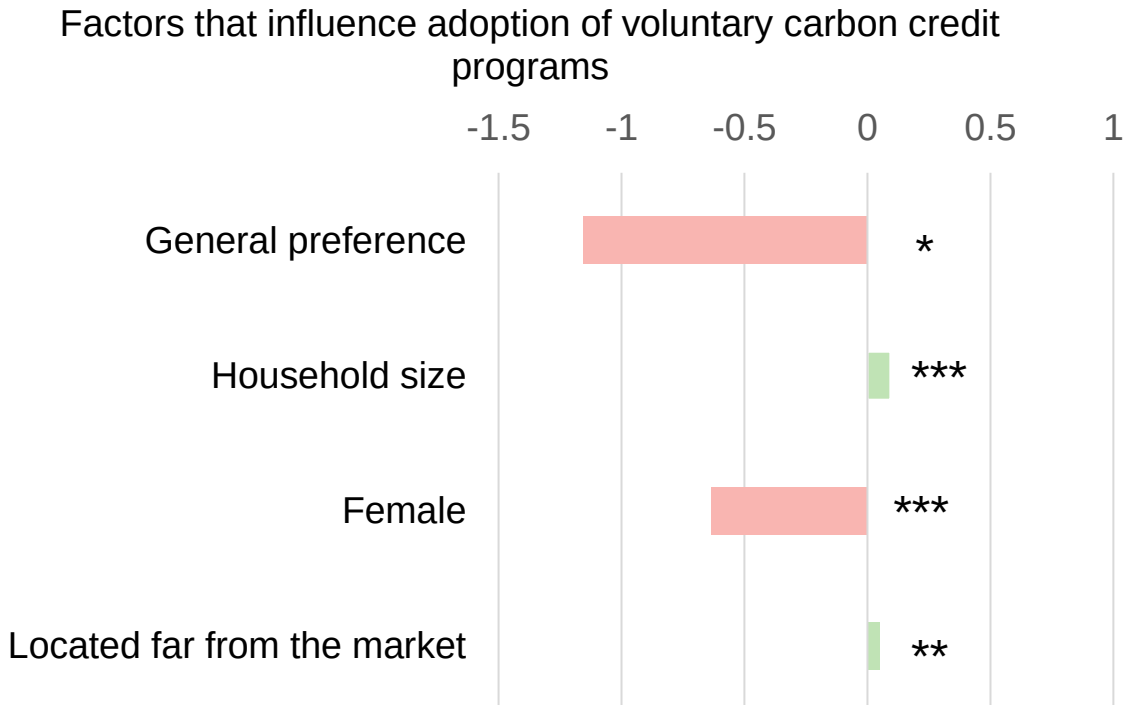
- Gender differentiated focus group discussions were conducted to validate quantitative results
- Discussions were focused on forest land management, climate change awareness, forest preservation, attributes of forest conservation contracts, and forest land use allocation

Socio-economic characteristics shape willingness to accept a voluntary carbon credit program



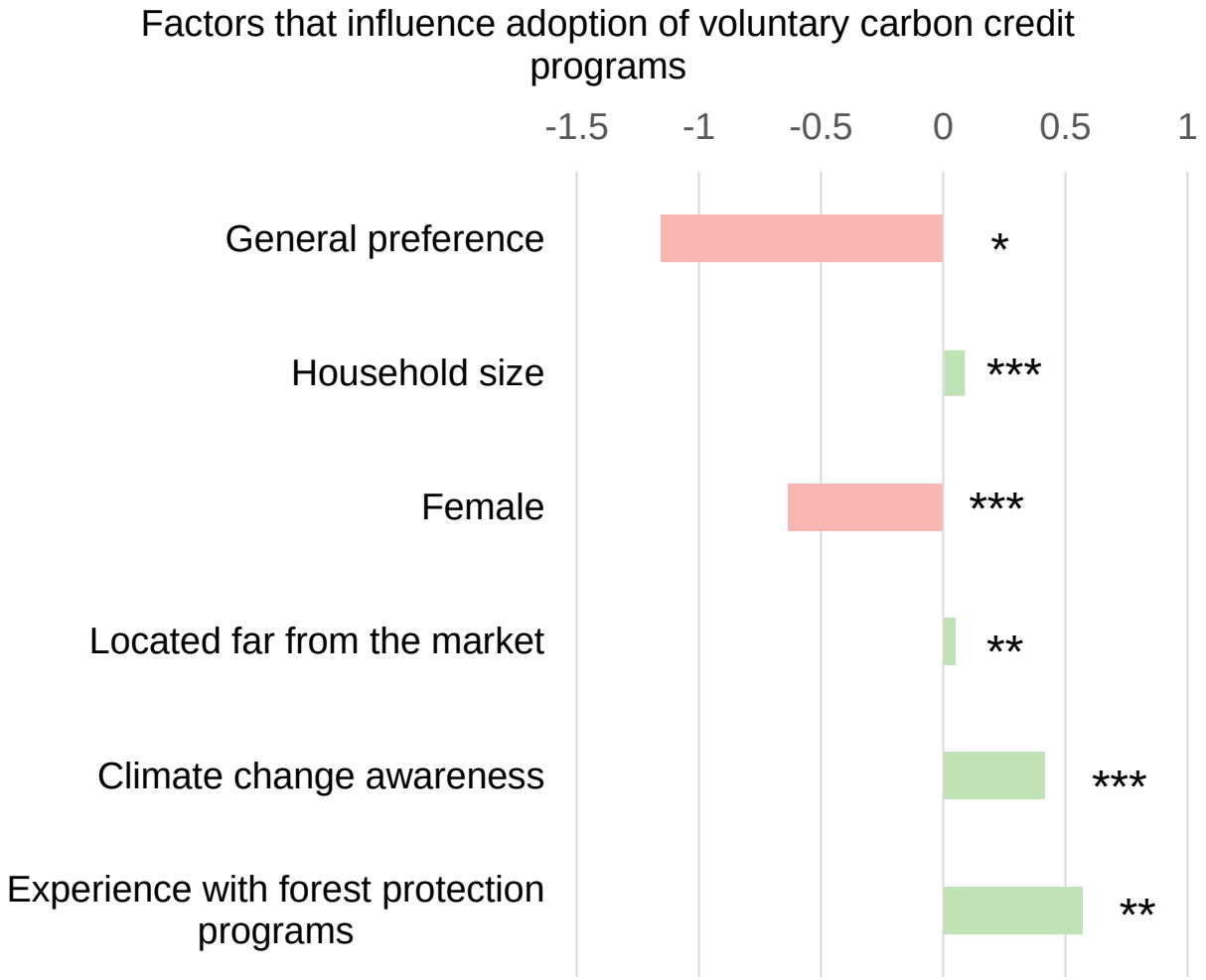
- On average, forest landholders are not inclined to enter a voluntary carbon credit contract
  - Intrinsic motivations > monetary incentives

Socio-economic characteristics shape willingness to accept a voluntary carbon credit program



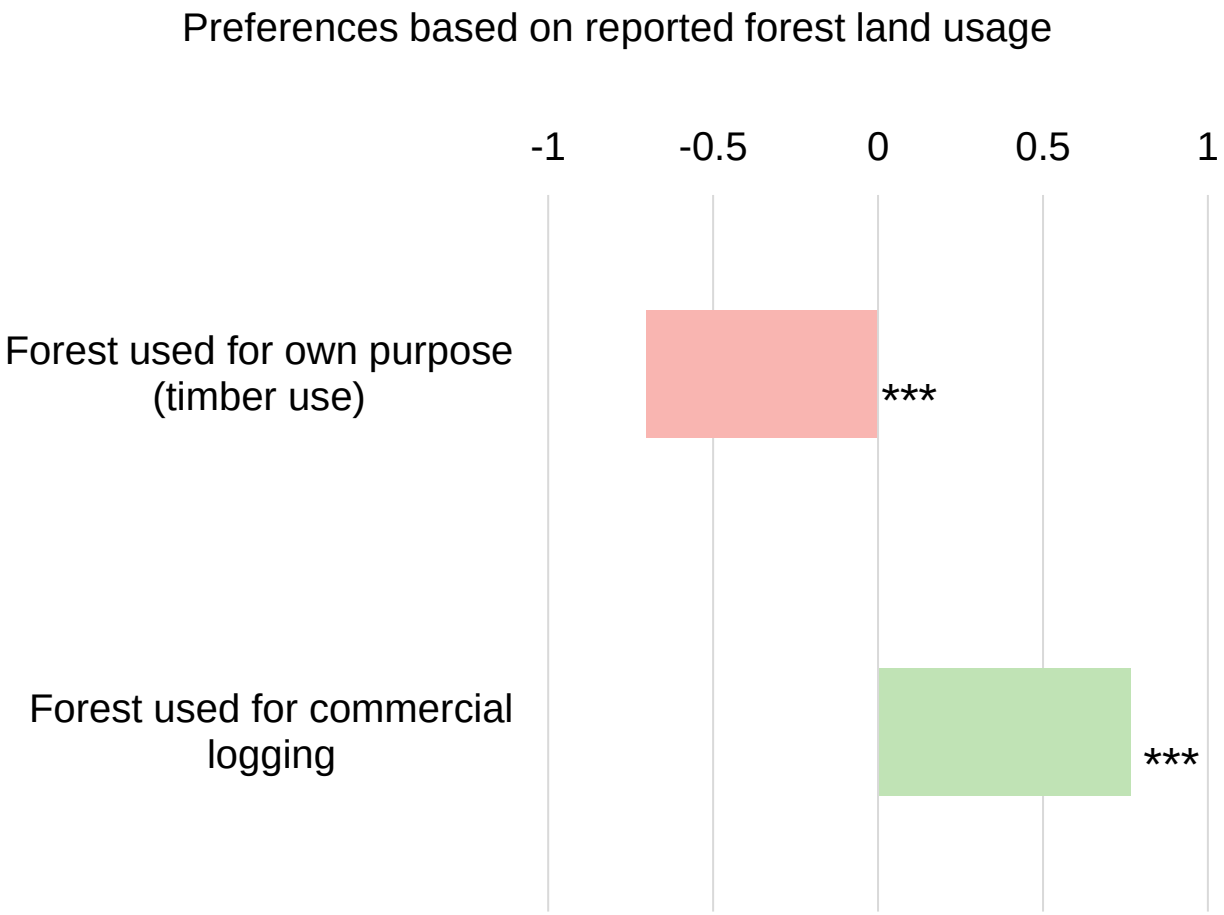
- Greater household size and those who are located far way from the market are more likely to engage in a PES contract.
- Females are less likely to accept a voluntary carbon credit contract compared to male respondents

Climate change awareness can boost adoption of voluntary carbon credit programs



- Individuals aware of climate change consequences and previous experience with forest management programs are more likely to enter a contract.
- Generating climate change awareness and knowledge of sustainable forest management can boost program adoption.

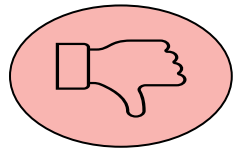
Diverse forest land use shape willingness to accept a voluntary carbon credit program



- Individuals who value forests for own purposes (using timber to build their own homes and other establishments) are less willing to conserve forests through a PES contract.

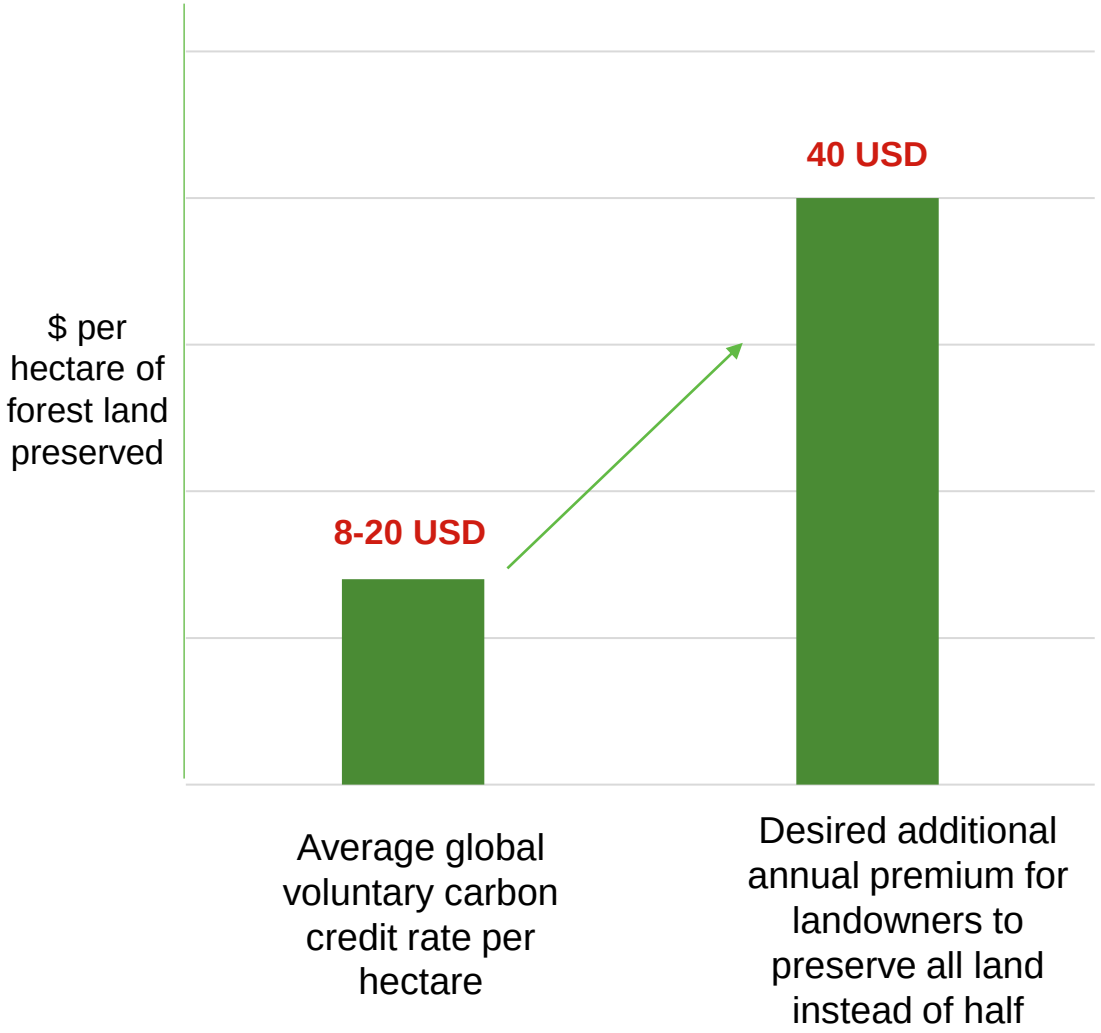
- Commercial loggers show preference towards forest protection program:
  - Mass destruction
  - Mistrust
  - Negative environmental consequences

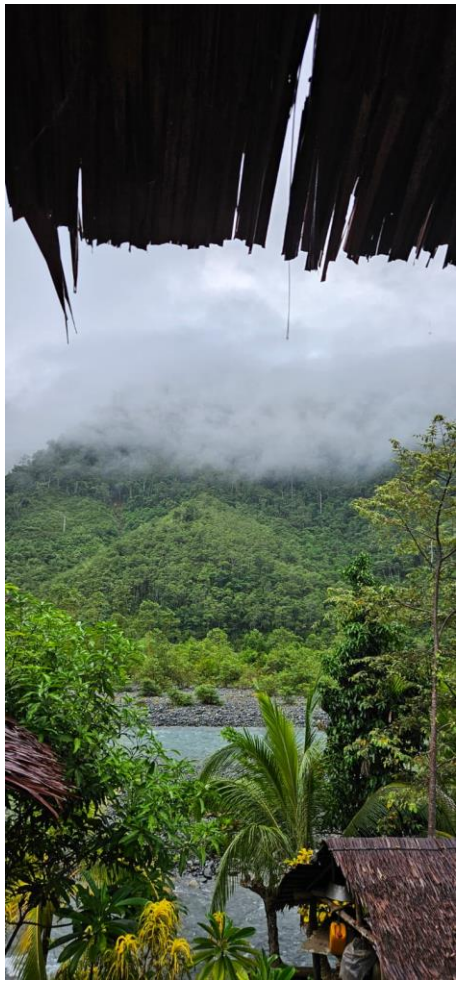
Higher revenue and access to forest land holds important value for landowners

Contract Attributes	 Higher financial incentives	  Higher land commitment
Rationale	Opportunity to diversify rural income portfolio	Threat to their autonomy over land use decisions

- Duration of the contract was not a significant factor
  - Limited experience with land contracts,
  - Less experience with long-term contract monitoring and auditing practices,

Access to forest land holds important value for landowners









‘One-Size fits all’ approach may not be effective in promoting voluntary carbon credit participation in PNG

Any forest preservation or biodiversity conservation policy must be co-designed, co-priced, and co-monitored with the custodians of the forested land

Awareness & Support: Increasing knowledge on climate risks & forest conservation can boost local REDD+ & PES participation.

Beyond Payments: Incentives matter, but non-monetary factors such as land commitment also drive engagement.

Gender Inclusion: Raising REDD+ awareness among women can enhance participation.

Targeting Strategy: Commercial loggers and remote households show higher adoption potential.



Thank you!

For more information on this study, please scan the QR code

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