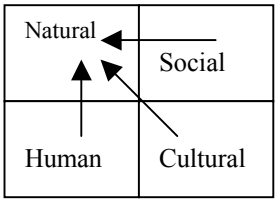
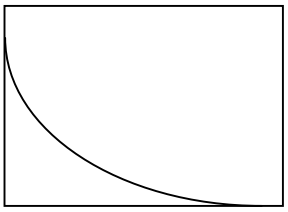


Research Scheme

Conservation Capital → Outcome of Conservation Practices

Xi → Y

Human + Social + Cultural Capital → Biodiversity

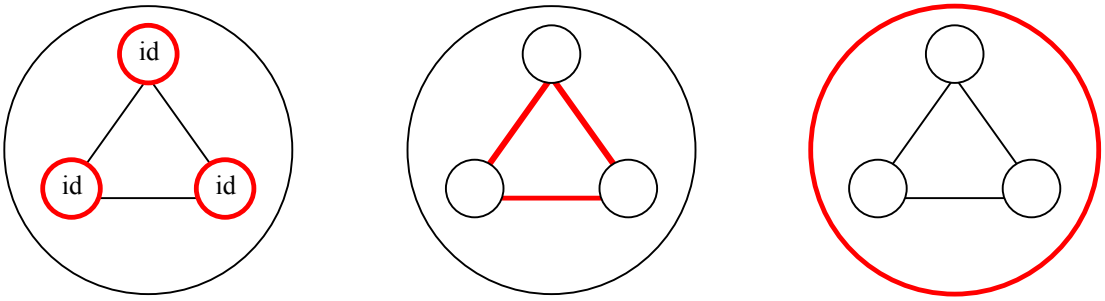


Conservation Capital (X)

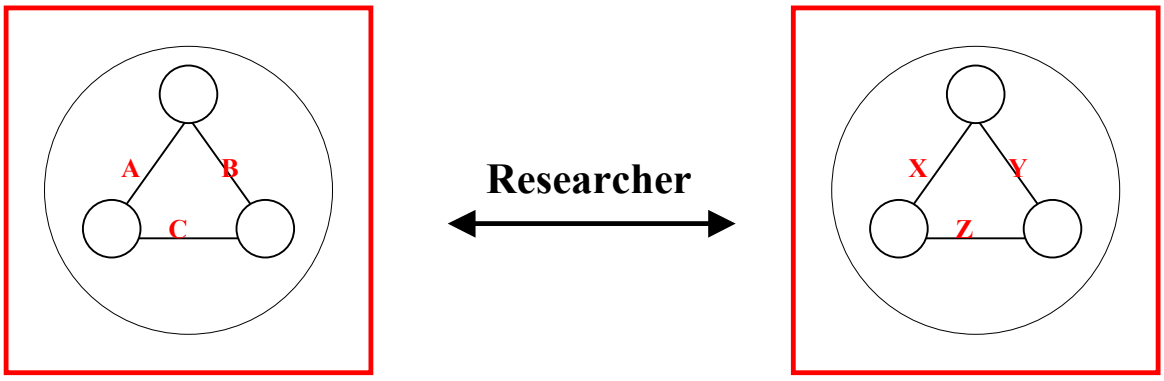
Human Capital : personal stock-like holding
Emotion, knowledge, training...

individuals as social actors

Social Capital : structural support to put individuals in
Categorical Group → Inter-Personal Network → Institution



Cultural Capital : symbolic meaning of what is done + proper learning of how to do



Q: Why does sustainable development occur? What is the local making of conservation?

Nominal Comparison in Small-N Analysis (two village)

Comparative Logic

	Method of Difference				Method of Agreement			
X	**A** B	B	A alone or jointly → a	X	**A** B	**A** C	A → a	
Y	**a** b	b	B is not causal to → a	Y	**a** b	**a** c	B or C is not causal to → a	

Expected Truth-Finding Table 1

Village	Ivarinu (traditional)	vs.	Yaro (modernizing)
X: Conservation Capital			
Natural (environmental factors)	similar		similar
Human (sustainable knowledge)	**yes (diverse)**		**no (lost)**
Social (institutional support)	**yes (strong)**		**no (lost)**
Cultural (land ethics)	**yes (meaningful)**		**no (lost)**
Y: Conservation Outcome			
Biodiversity	**yes (diverse)**		**no (declining)**

Hypothesis (based on method of difference):
Conservation may occur mainly because of personal, institutional and cultural supports.

Expected Truth-Finding Table 2

Village	Ivarinu (traditional)	vs.	Yaro (modernizing)
X: Conservation Capital			
Natural (environmental factors)	similar		similar
Human (sustainable knowledge)	**yes (diverse)**		**yes (diverse)**
Social (institutional support)	yes (strong)		no (lost)
Cultural (land ethics)	yes (meaningful)		no (lost)
Y: Conservation Outcome			
biodiversity	**yes (diverse)**		**yes (diverse)**

Hypothesis (based on method of agreement):
Conservation may occur mainly because of personal supports.

Expected Truth-Finding Table 3

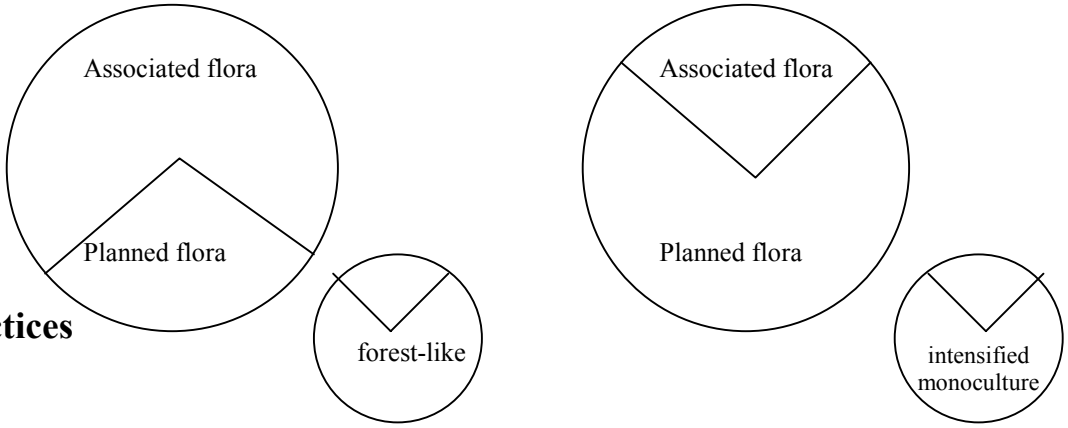
Village	Ivarinu (traditional)	vs.	Yaro (modernizing)
X: Conservation Capital			
Natural (environmental factors)	similar		similar
Human (sustainable knowledge)	**yes (diverse)**		**yes (diverse)**
Social (institutional support)	**yes (strong)**		**yes (strong)**
Cultural (land ethics)	**yes (meaningful)**		**yes (meaningful)**
Y: Conservation Outcome			
biodiversity	**yes (diverse)**		**yes (diverse)**

Hypothesis (based on method of agreement):
Conservation may occur mainly because of personal, institutional and cultural supports.

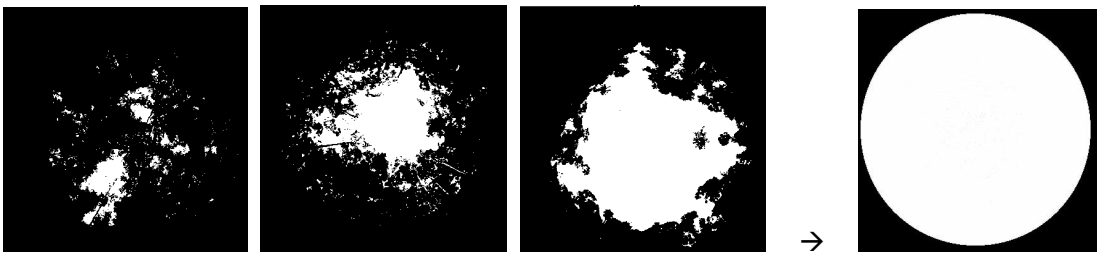
Detailed Examination of Conservation Outcome (Y)

Species vs. Managed Habitat

1. Biodiversity : Traditional Village (Ivarinu) vs. Modernizing Village (Yaro)

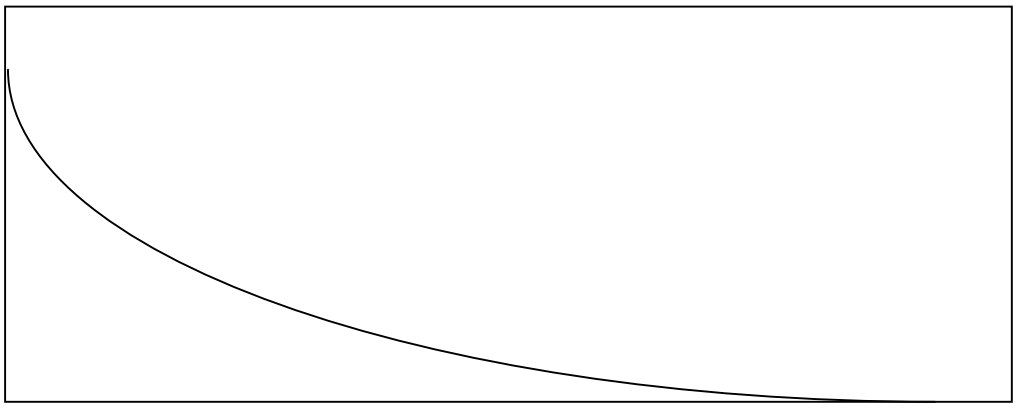


2. Land Practices



forest – fallow – orchard → dryfield – paddy – homegarden → chemical-dependent

1 2 3 4 5 6 7



Managed Habitat

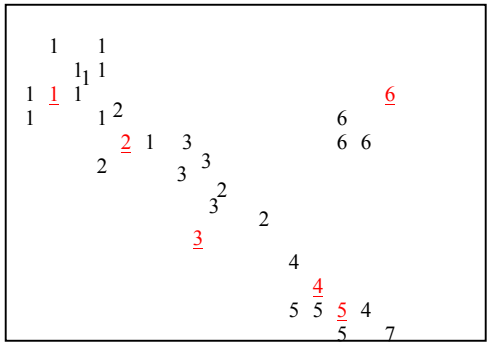
Traditional Intensified Modernizing

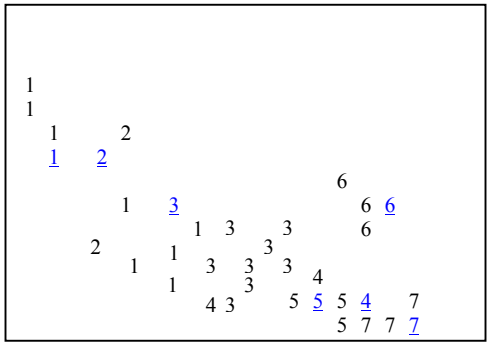
Hypothetical Comparison in Trend of Biodiversity Loss

Traditional Village vs. Modernizing Village

Associated Biodiversity : Species richness of associated fauna (ant) and flora (vegetation)

Species Number





1=forest
2=fallow
3=orchard
4=dry field
5=paddy
6=home garden
7=chem-dep farm

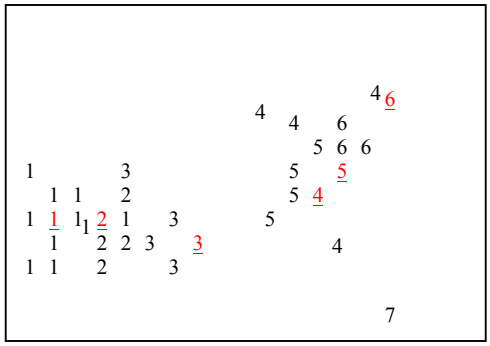
Habitat Structure ~ canopy openness

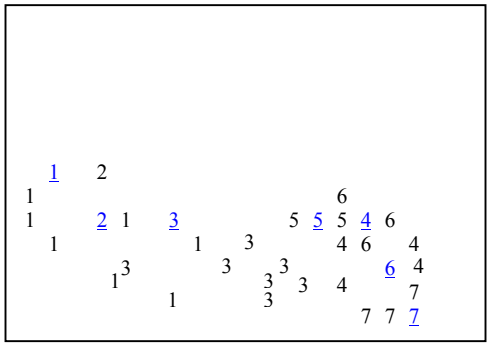
Red = Ivarinu houshold 1 Blue = Yaro household 1

H: Species richness of ant and vegetation declines faster in monoculture-dominant Yaro because of increasing forest destruction and intensified chemical-dependent farmland

Planned Biodiversity : Variety number of planned flora: taro clones and intercropping cultivation

Crop Variety Number





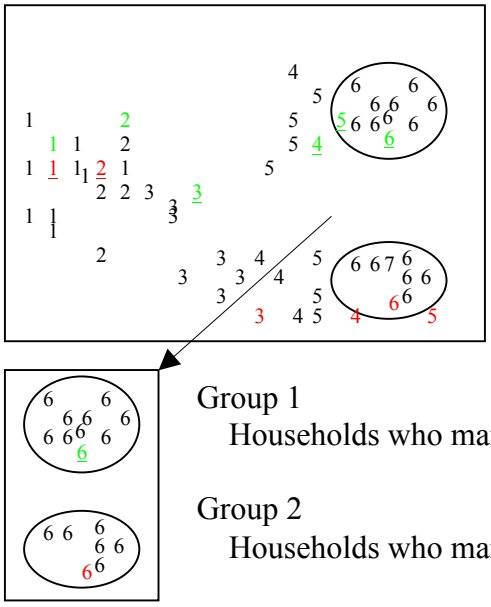
Habitat Structure ~ canopy openness

H: Crop variation in taro clones and intercropping plants is more diverse in the traditional Ivarinu village

Causal Link : Xi → Y (within case)

Statistical correlation and Causal Interpretation

taro variety number



habitat structure ~ canopy openness

Group 1
Households who manage **diverse** taro clones in home garden

Group 2
Households who manage **poor** taro clones in home garden

conceptualize explanatory variables in terms of a large number of household measures
ordinary or boolean categories
human capital 1: abundant ethnobatony knowledge
human capital 2: complicated agronomic knowledge
social capital 1: group identity
social capital 2: kinship network
social capital 3: participation in environmental institutions
cultural capital 1: land ethics (stewardship, connectedness, responsibility)
cultural capital 2: meaningful involvement with symbols and rituals

ex. Hypothesis: households who maintain rich biodiversity are likely to associate with wealth, high social status, knowledgeable elders, strong family-network support and land ethics.

Conclusion

1. examine species, land and society as a whole
2. well-crafted case studies regarding local representation of conservation that can advance our understanding of conservation both in natural and social science