

Food and income from farmers’ access to the forest zone in Indonesia: is land sparing feasible?

Betha Lusiana^{1,2}, Noviana Khususiyah¹, S. Suyanto¹, Meine van Noordwijk¹

¹World Agroforestry Centre/ICRAF Southeast Asia Program, Bogor, Indonesia

²Institute for Plant Production and Agroecology in the Tropics and Sub-Tropics (380), Hohenheim University, Stuttgart, Germany



BACKGROUND

Both land-sparing and -sharing approaches have two valued objectives: livelihoods and conservation. Poverty statistics are positively correlated with magnitude of forest areas across Indonesia. Allowing access to State Forest areas for poor people through Community Based Forestry Management (CBFM) program was intended support livelihoods while still maintaining a land-sparing policy aiming to protect forest functions.

1. Does CBFM effectively target landless households?

Although CBFM program is designed for landless farmers, permits to access State Forest land are often being transacted allowing private land owners to have access to state land.

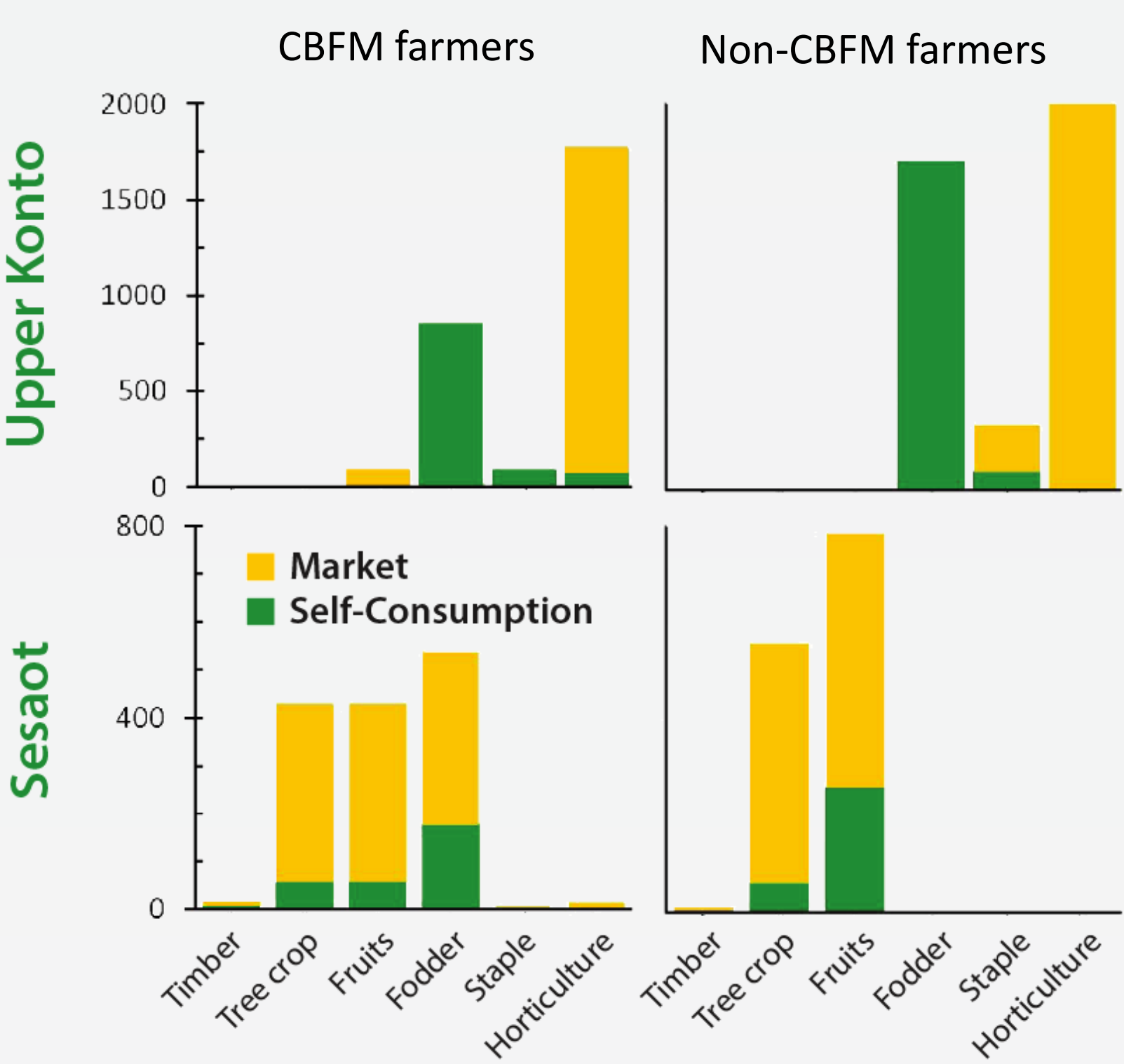
Landholding (ha)

Study site	CBFM farmers			Non-CBFM farmers	Private land ratio, CBFM : Non-CBFM	Total holding ratio, CBFM : Non-CBFM
	Private	State	Total	Private		
Upper Konto	0.19	0.47	0.66(120)	0.37(30)	51%	178%
Sesaot	0.13	0.49	0.62(80)	0.64(40)	20%	97%

- Numbers in brackets represent number of respondents
- Landless CBFM farmers: 43% in Upper Konto, 78% in Sesaot

2. CBFM land use: what systems and how productive?

Production (USD/ha/year)

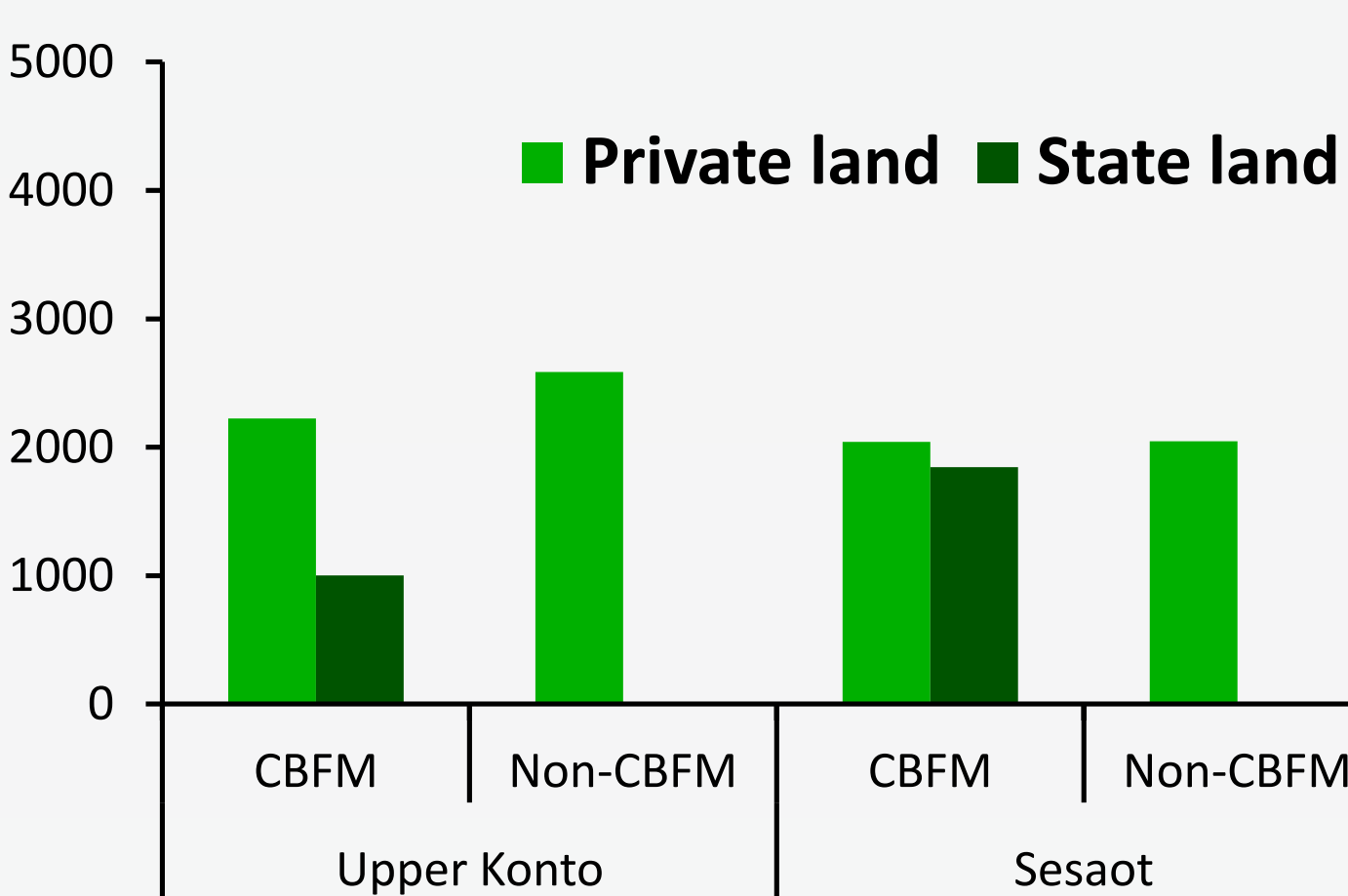


Land use on CBFM land mirrors that in private land in the same location.

Production primarily aimed for market.

- Fodder supports market-oriented dairy cattle systems.
- Household refers to household that manage the systems.

Productivity (USD/ha/year)



Land productivity is relatively similar across sites and farmer types, except for state land of CBFM farmers in Upper Konto that is half as productive. Inability to produce multi-cropping may be the reason.

CONCLUSION

- The two locations show very different consequences of CBFM application. In Sesaot CBFM support forest-like land uses, in Upper Konto it allows open-field horticulture with low levels of environmental services delivery.
- The study showed that in ‘land-scarce’ situation ‘sharing’ land is important to ensure the sustainability of the conservation zone (land-sparing approach). It is equally important that land managed by farmers still maintain forest-function.

STUDY SITES

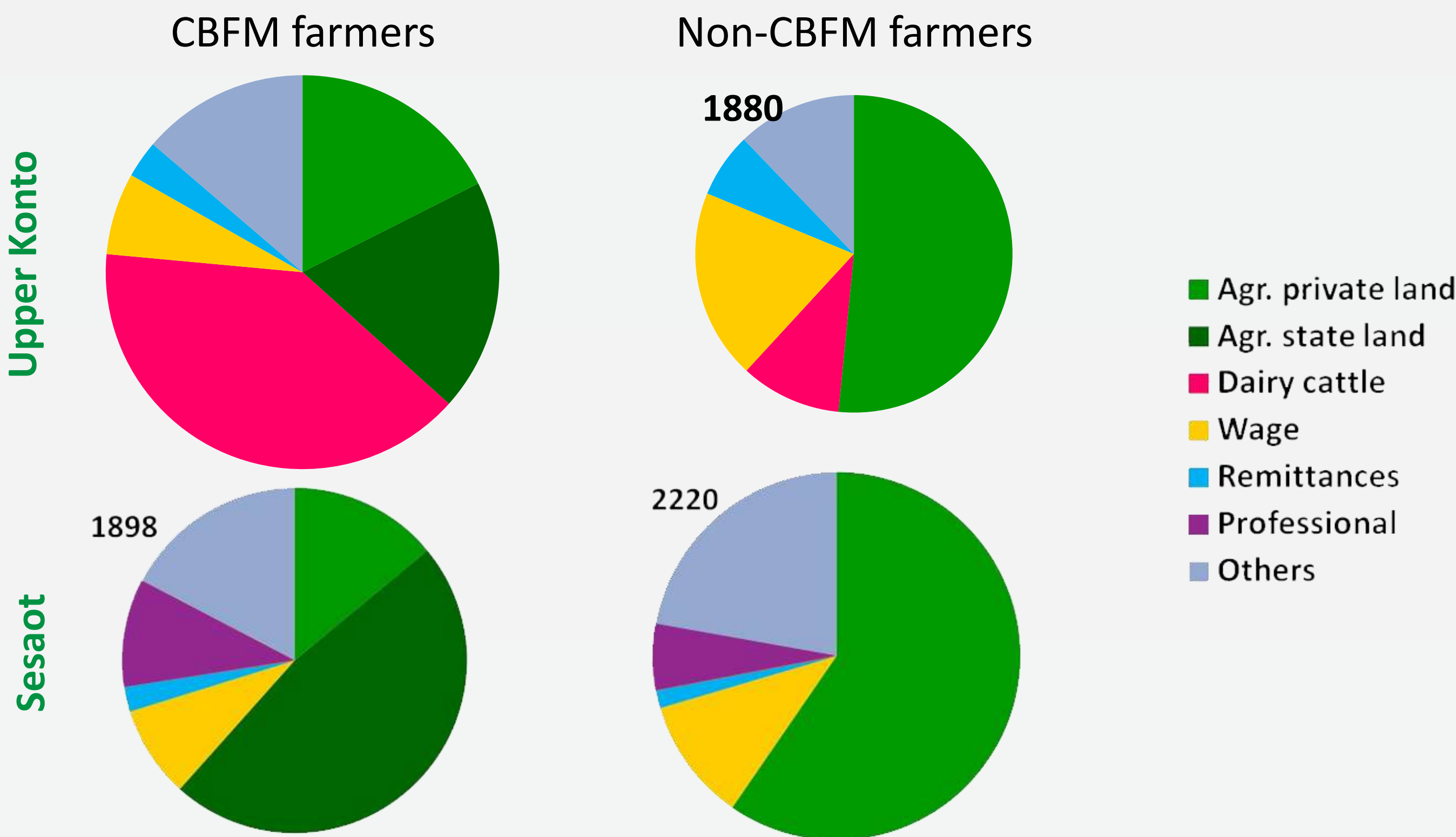


Demographic and forest fraction situation

Site	Area (km ²)	Population density outside forest (person.km ⁻²)	Forest area (fraction)	Human Development Index
Upper Konto	233	798	0.45	71.1
Sesaot	158	858	0.36	59.4

3. Does CBFM effectively increase income and reduce inequity?

Income (USD/household/year)



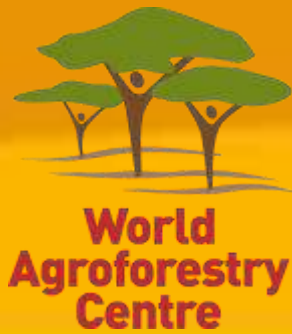
For CBFM farmers in Upper Konto, income contribution from state forest is equal to that from private land, while in Sesaot the state forest land contributed more. Non-CBFM farmers have lower income than CBFM farmers, while the opposite occurred in Sesaot

Equity in income

Study area	Upper Konto		Sesaot	
	CBFM	Non-CBFM	CBFM	Non-CBFM
Income (USD/capita)	1.5	1.01	1.34	1.52
GINI TOTAL	0.53	0.51	0.33	0.31
Sources of income	Coefficient concentration*			
Agriculture				
Private land	0.61	0.62	1.31	0.62
State land	0.51	-	0.8	-
Dairy cattle	0.56	0.86	-	-
Remittances	0.39	0.24	1.2	-
Professional	-	-	2.3	0.5
Others	0.06	0.19	0.7	1.7

*Higher values refer to higher inequity.

CBFM reduced inequity by providing the landless with opportunity to cultivate and raise income from land-based activities.



For further information please contact:
betha.lusiana@cgiar.org
World Agroforestry Centre (ICRAF) - Southeast Asia
Jl. CIFOR, Situ Gede, Sindang Barang, Bogor 16115
PO Box 161, Bogor 16001, Indonesia
Tel: +62 251 8625415; Fax: +62 251 8625416
www.worldagroforestry.org/regions/southeast_asia