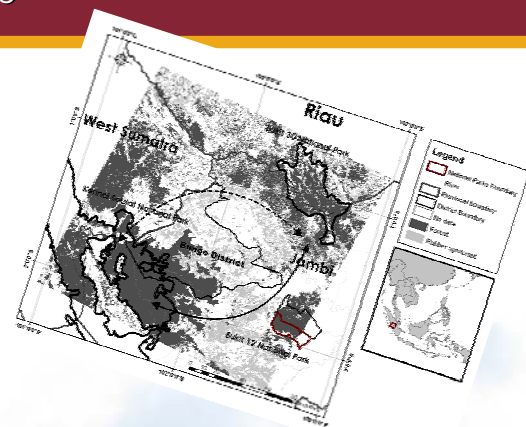


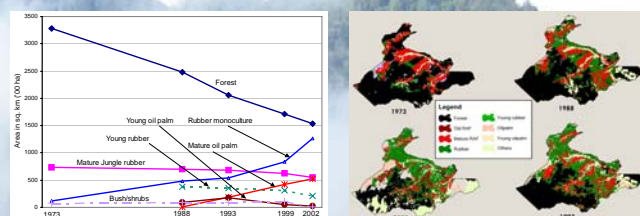
Like many places in Indonesia, Bungo District is experiencing massive deforestation, the “mega-biodiversity” in the area is fast disappearing. The species rich traditional rubber agroforests or ‘jungle rubber’ are now important reservoirs for biodiversity and habitat conservation. Millions of people also depend on these agroforests for their daily income, nutrition, firewood, timber and other (agro)forest products.

However, farmers regard their rubber agroforests as a second best management system, after the more intensive monoculture system they would adopt if they had the resources. Rubber agroforests also represent a second-best biodiversity option, after natural forests.

Jungle rubber has similar richness and diversity to natural forest, but a much higher proportion of rubber and other economically valuable plants. Available data indicate that rubber agroforests sequesters more carbon than rubber monocultures. Hydrological principles suggest that rubber agroforests can better handle watershed services than monocultures. These make jungle a potential system for bundling environmental services, i.e. biodiversity, water and carbon, for PES (Payment for Environmental Services) schemes.



## Land use change in Bungo between 1973 and 2002



## Villagers average income from different sources



## Environmental services comparison between three different landscapes

	Rubber Agroforests	Rubber Monoculture	Palm Oil
<b>Carbon sequestration</b>	+++	+(+)	+
<b>Biodiversity</b>	60%	5%	5%
<b>Hydrology:</b>			
<b>Erosion</b>	0	low	low
<b>Infiltration</b>	high	medium	medium
<b>Catchments</b>	medium	medium	high

One of the main benefits of rubber agroforests is that it can provide various of forests products such as fruits, medicinal and rattan in addition to rubber. Tapping rubber can still provide the major proportion of household income to the rubber farmers. If a feasible PES scheme can be developed, these rubber farmers can receive multiple benefits from the system – direct harvest of products and the “reward” for their role in biodiversity conservation. An example of such reward mechanism is the market recognition through eco-certification currently pursued by the RUPES-Bungo team.

A jungle rubber farmer group now exists in Bungo that is active in preservation of biodiversity and habitat management. Capacity strengthening of the group through skill development, on both social and technical aspects such as rejuvenation technique of old rubber plots without plot-clearing and enrichment with high value forest crops, are underway.

The local farmers have established their own micro-hydro power generator using the water from traditional rubber agroforests. Consistent and quality water supply is recognized as an important service of these agroforests. Even in the absence of external reward, the local community has embarked on a mission to habitat conservation. The local government and NGOs are providing necessary support for this initiative in Bungo.

