

## Papua New Guinea (as a country)

Excluding the landmass portion towards the western, Papua New Guinea's landmass comprises the eastern portion of the New Guinea Island, the numerous islands and the archipelagos. This landmass together with New Guinea's western portion is the largest tropical island in the world that contains the third largest tropical rainforest after Amazon Basin and Congo Basin. Scientifically known as the centre for biological endemism and diversification, PNG's tropical rainforest currently is relatively well conserved arguably due to its rugged topographical geography. This argument is substantiated by the PNG Forest Authority (PNGFA)'s recent national forest base map produced with assistance from Japan International Cooperation Agency and the remote sensing based national forest assessment conducted with the assistance of the UN-REDD. Both studies showed that 80% of country's land area is covered by forests with 60% of the forests are still undisturbed (table 1). Nevertheless, the forest is coming under increasing pressure due to resource extraction, especially through logging, and also from land clearing for mining and agriculture (Fig. 1).

IPCC Land Use Category	Initial Land Use		Current Land Use		Land use %
	Plot Count	Area (ha)	Plot Count	Area (ha)	
Forestland	19,453	36,225,470	19,314	35,963,273	77.97
Cropland	3,061	4,910,816	3,191	5,158,633	11.18
Grassland	1,318	2,444,645	1,317	2,442,680	5.27
Wetland	1,108	2,132,460	1,105	2,126,505	4.61
Settlement	237	370,120	248	388,495	0.84
Other land	32	55,352	34	59,277	0.13
Total	25,209	46,138,863	25,209	46,138,863	

Table 1 shows uncertainty analysis using the spreadsheet developed by FAO for the Land Use Category and Conversion during 2000-2015. Far right column shows PNG's land use composition in 2015 classified in accordance with the IPCC land use categories (adopted from Gamoga 2019).

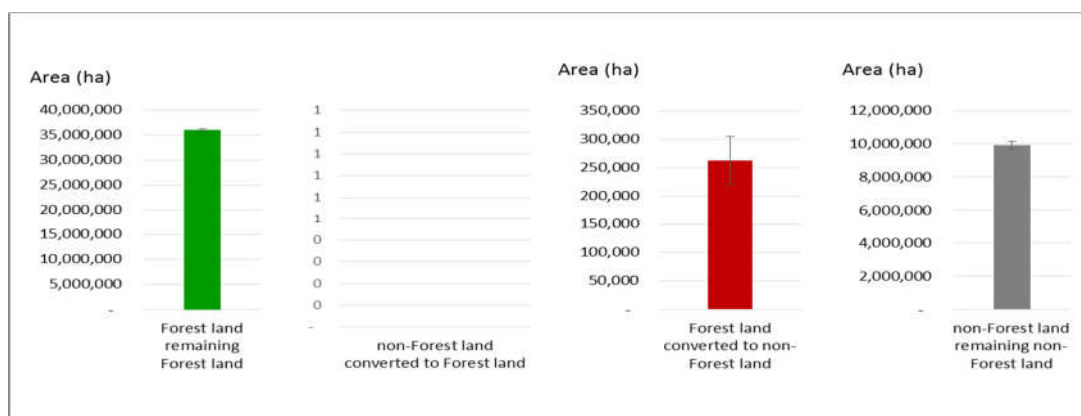


Figure 1 shows the sampling error of area estimate and uncertainties of each land use category of initial land use and current land use respectively. The results suggest that the assessment work overall was exceptionally performed where the uncertainty is generally low. Gamoga argues that the higher uncertainty of 'Other land' is quite high because only a small area was sampled (Gamoga 2019).

Despite the extent, size and rich diversity, PNG forests continues to be subjected to various forms of deforestation and degradations according to Gamoga (2019) (table 2 & Fig 2) and are still poorly known scientifically. Whilst the EU-FAO funded PNG's first multipurpose national forest inventory in 2011 has made some significant scientific contribution to understanding PNG's tropical rainforest and the

biodiversity within, the project felled short in covering the whole country. Of PNG's twenty-two provinces, only six provinces were covered under the project funding duration and plans are underway to source additional funds to cover the remaining provinces.

Forest types	Human Impacts (ha)				None (ha)	Total (ha)
	Logging	Fire	Gardening	Other		
Low altitude forest on plains and fans	2,379,795	160,449	645,816	119,804	5,621,495	8,927,359
Low altitude forest on uplands	1,230,894	88,256	983,856	121,922	8,702,804	11,127,733
Lower montane forest	33,240	128,388	1,126,124	51,318	6,666,762	8,005,831
Montane forest		19,477	10,207		361,131	390,815
Dry seasonal forest	100,097	96,172	31,403	80,471	2,043,166	2,351,310
Littoral forest	3,927	1,957	9,810		130,533	146,226
Seral forest	7,814	5,888	11,761	7,800	287,277	320,540
Swamp forest	77,363	37,320	99,227	49,212	2,199,666	2,462,788
Savanna		276,843	3,905	13,674	329,467	623,889
Woodland	15,681	238,518	46,938	74,560	680,067	1,055,764
Scrub	4,424	29,384	3,918	3,925	178,511	220,161
Mangrove	5,890	1,942	15,628	33,346	225,044	281,850
Plantation	11,821	13,661	1,988	7,828	13,710	49,008
	3,870,945	1,098,253	2,990,581	563,859	27,439,635	35,963,273
	10.8	3.1	8.3	1.6	76.3	

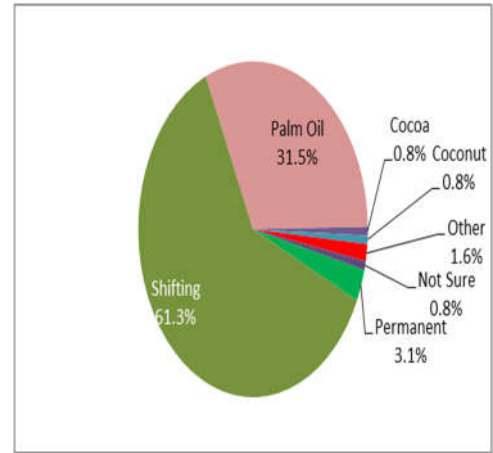


Table 2: Human impacts on PNG's forest types. Fig 2 depicts shifting and Oil palm accounted for major forest deforestation in PNG (Gamoga 2019)

With increasing appreciation for conserving the biodiversity conservation either pure or commercial in nature plays significant roles in adding values to the EU-FAO funded multipurpose project efforts to date. It is anticipated that all initiatives will go in a long way to protecting/preserving different ecosystems/forest types in PNG (table 2). Newly commercial conservation efforts by Eco-share globally would gain momentum when it hits the ground running in PNG. Table 3 outlines the ES commercial conservation initiatives for terrestrial-marine ecosystems with number of traditional landowning tribes, clans in PNG.

Table 3 ECOSHARE's LANDOWNER GROUPS IN PNG

Province /(District)	ILG	Forest type	Ecosystem type (ha)	Status
1 East Sepik (Ambunti)	1. April-Salumei	Lower montane	Terrestrial/river	Registered
	2. Bahinamo (Wagu)	Lower montane	Terrestrial/lake	(not registered)
2 Manus (Rambutso) (Manus - mainland)	3. Seluh	Lowland primary	Terrestrial/marine	(not registered)
	4. Potonkanei	Lowland primary	Terrestrial/marine	(not registered)
	5. Pou-Lumeh-Ndriol	Lowland primary	Terrestrial/marine	Registered
	6. Seke	Lowland primary	Terrestrial	(not registered)
	7. Sulu-ik	Lowland primary	Terrestrial	(not registered)
	8. Pundramat	Lowland primary	Terrestrial	(not registered)
3 Madang	9.	Lowland primary	terrestrial	(not registered)
4 Milne Bay (Esa'ala)	10. Kila Budiyai		Terrestrial/marine	Registered
5 Morobe (Finshafen)	11. Waleck		Terrestrial	Registered
6 New Ireland	12. Anir	Lowland primary	Terrestrial/marine	(not registered)
	13. Lavongai	Lowland primary	Terrestrial/marine	Registered
7 West New Britain (Central Nakanai)	14. Aria (Kombe)	Lowland secondary	Terrestrial/marine	Registered
	15. Eno	Lowland secondary	Terrestrial/lake	Registered
8 Western (North Fly)	16. Bumgenai	Lower montane	Terrestrial	(not registered)