

Landscape Analysis of Abatement Cost in the Philippines: The Manupali Case Study

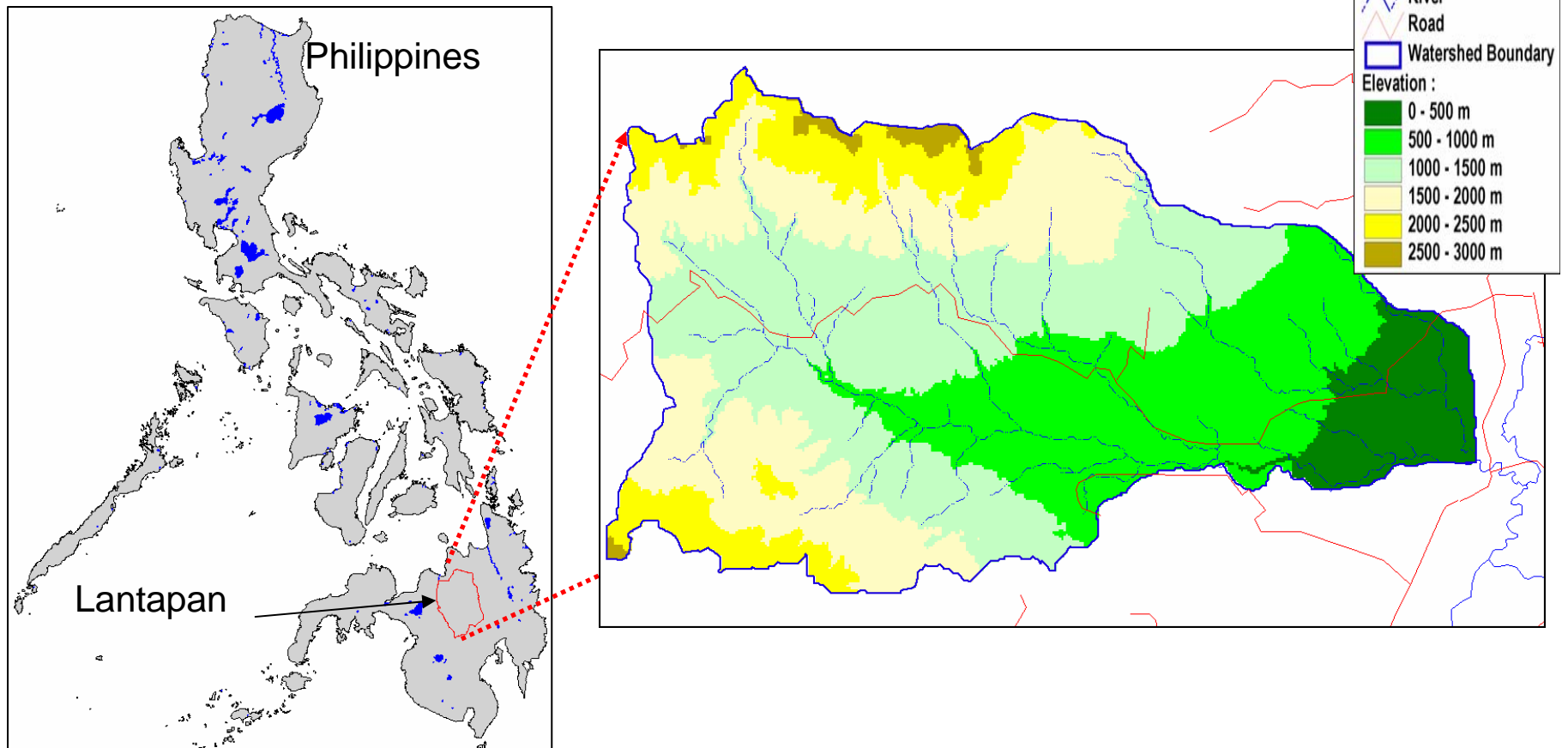


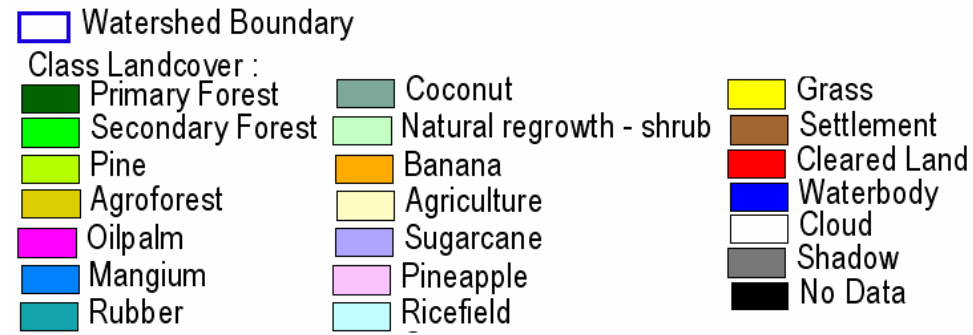
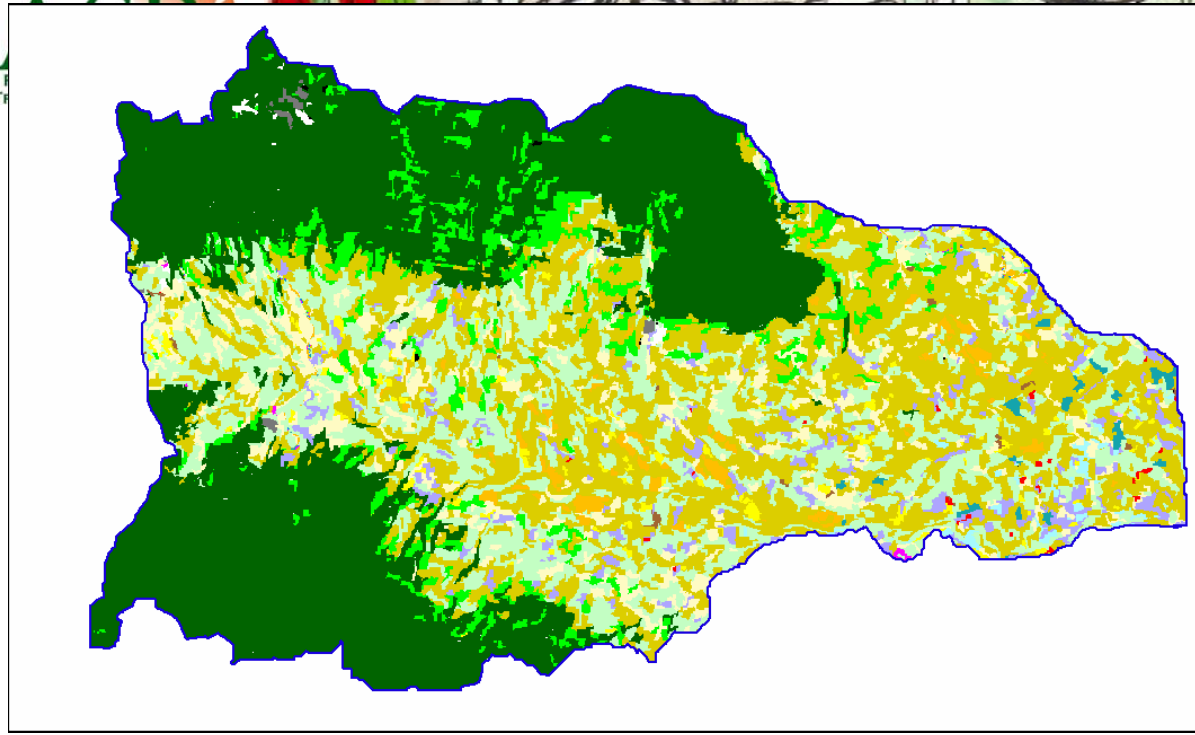
RD Lasco, J Alano, S Dewi, D Nugroho, RJ Delfino,
D Catacutan, A Mercado Jr, and FB Pulhin





LANDCOVER DYNAMICS IN MANUPALI WATERSHED, LANTAPAN - PHILIPPINES



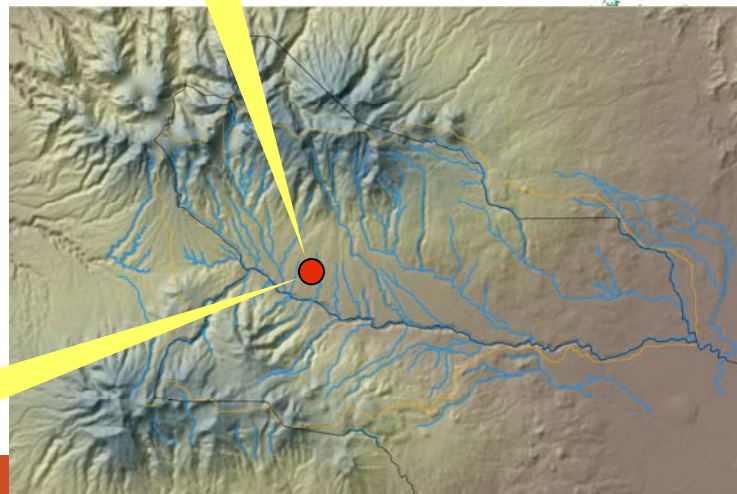


Land use/cover 2000

No	Landcover 2000	Total Area	
		(Ha)	(%)
1	Natural Forest	1803.97	37.64
2	Secondary Forest	266.60	5.54
3	Pine	0.08	0.00
4	Agroforest	1246.34	26.00
5	Oilpalm	2.56	0.05
6	Mangium	0.48	0.01
7	Rubber	19.61	0.41
8	Coconut	0.24	0.01
9	Natural regrowth - shrub	851.30	17.76
10	Banana	64.47	1.35
11	Agriculture	303.68	6.34
12	Sugarcane	132.12	2.76
13	Pineapple	0.40	0.01
14	Ricefield	19.49	0.41
15	Grass	54.56	1.14
16	Settlement	6.48	0.14
17	Cleared Land	5.92	0.12
18	Waterbody	0.00	0.00
19	Cloud	6.48	0.14
20	Shadow	7.61	0.16
21	No Data	1.84	0.04
Total		4793.23	100.00

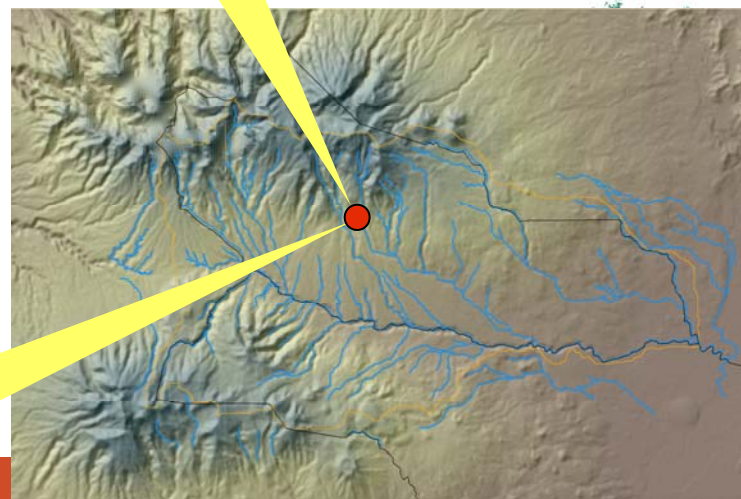
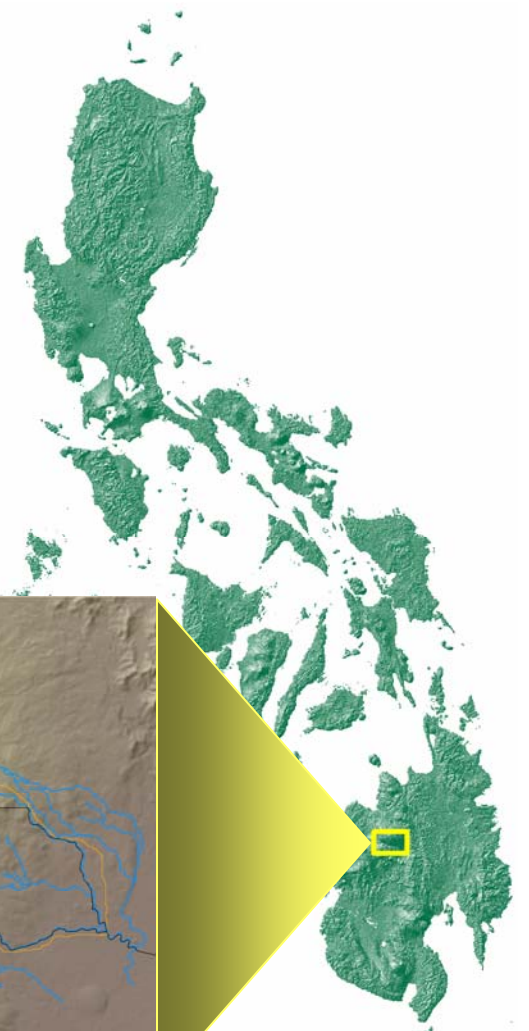
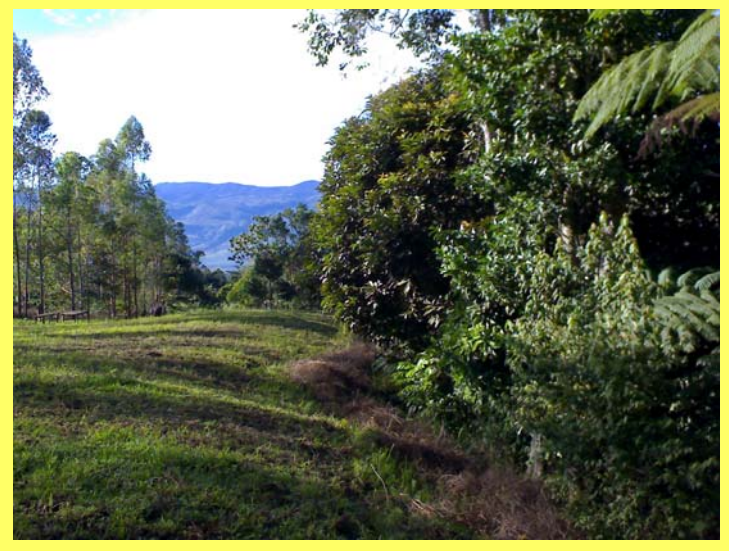


Agriculture



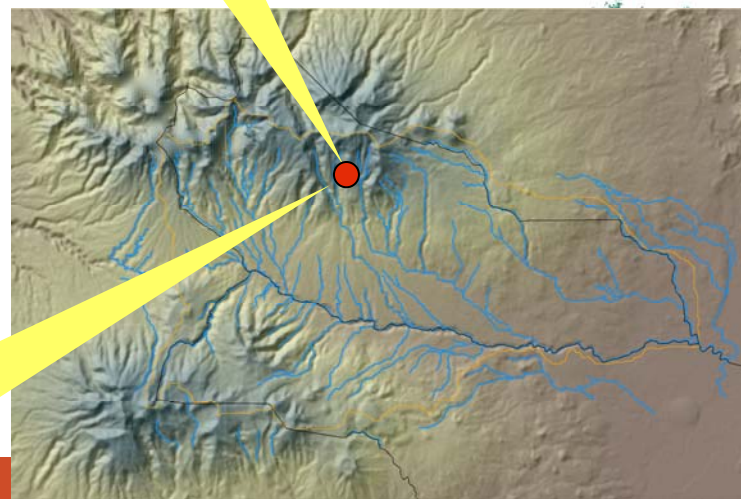
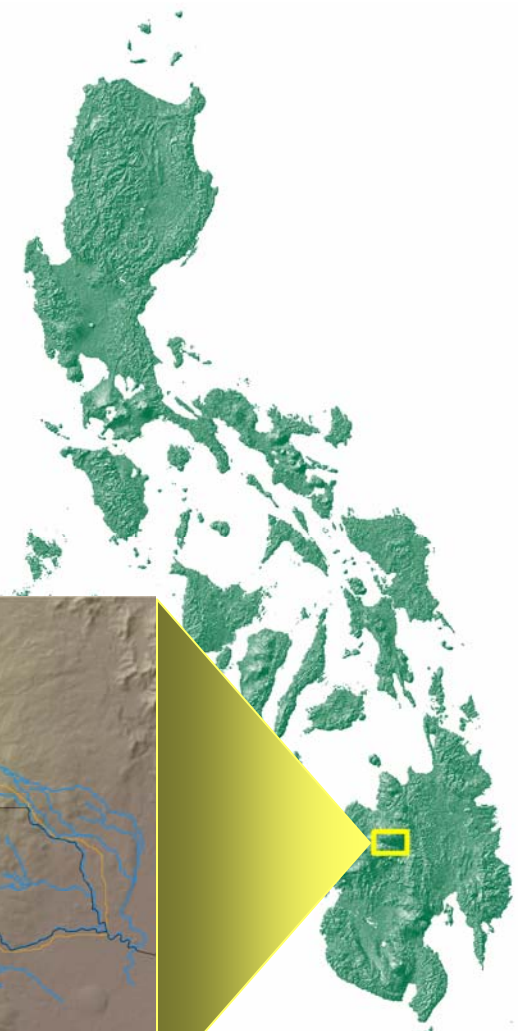


Agro-forestry



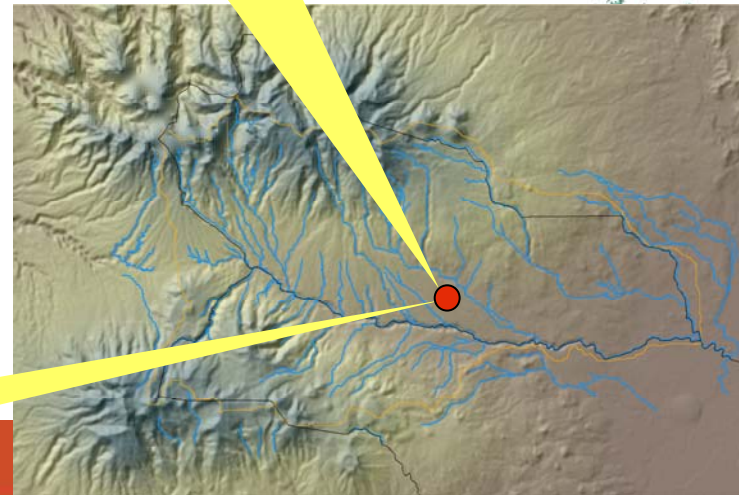
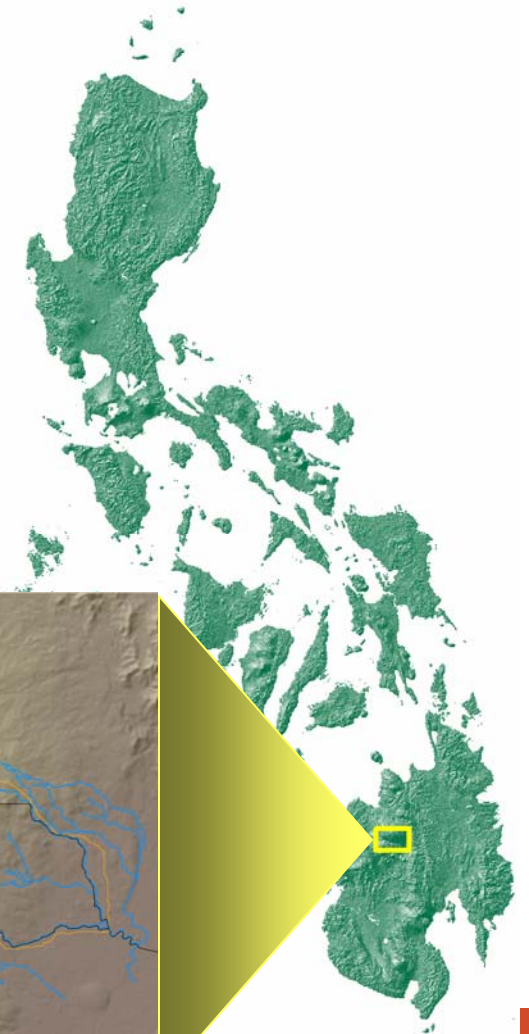


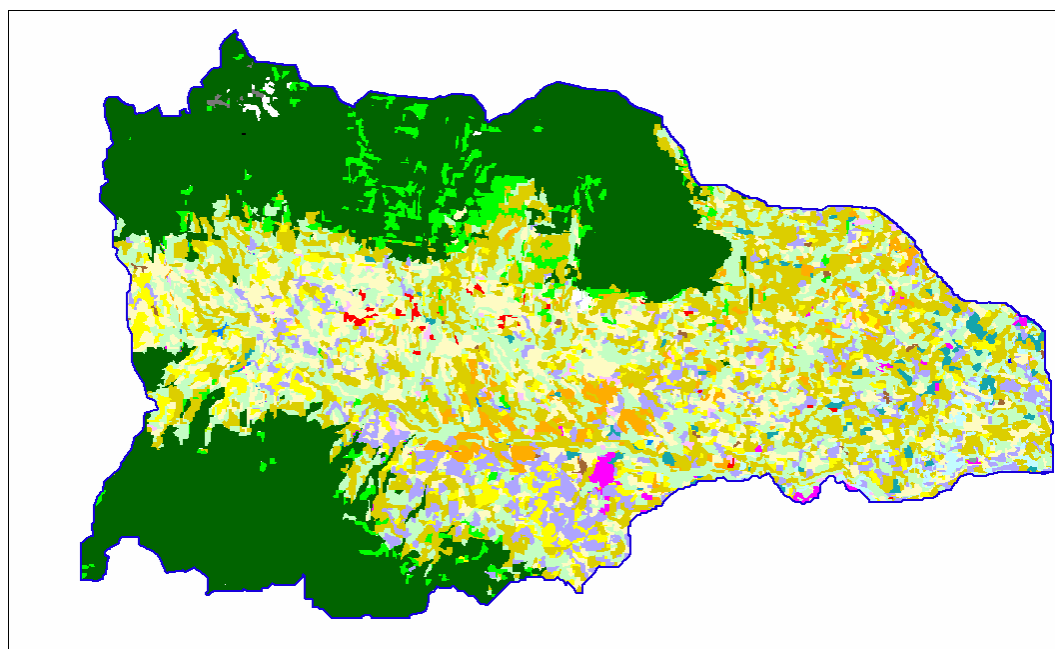
Secondary Forest (buffer zone)

























Banana





□ Watershed Boundary

Class Landcover :

 Primary Forest	 Coconut	 Grass
 Secondary Forest	 Natural regrowth - shrub	 Settlement
 Pine	 Banana	 Cleared Land
 Agroforest	 Agriculture	 Waterbody
 Oilpalm	 Sugarcane	 Cloud
 Mangium	 Pineapple	 Shadow
 Rubber	 Ricefield	 No Data

Land use/cover 2005

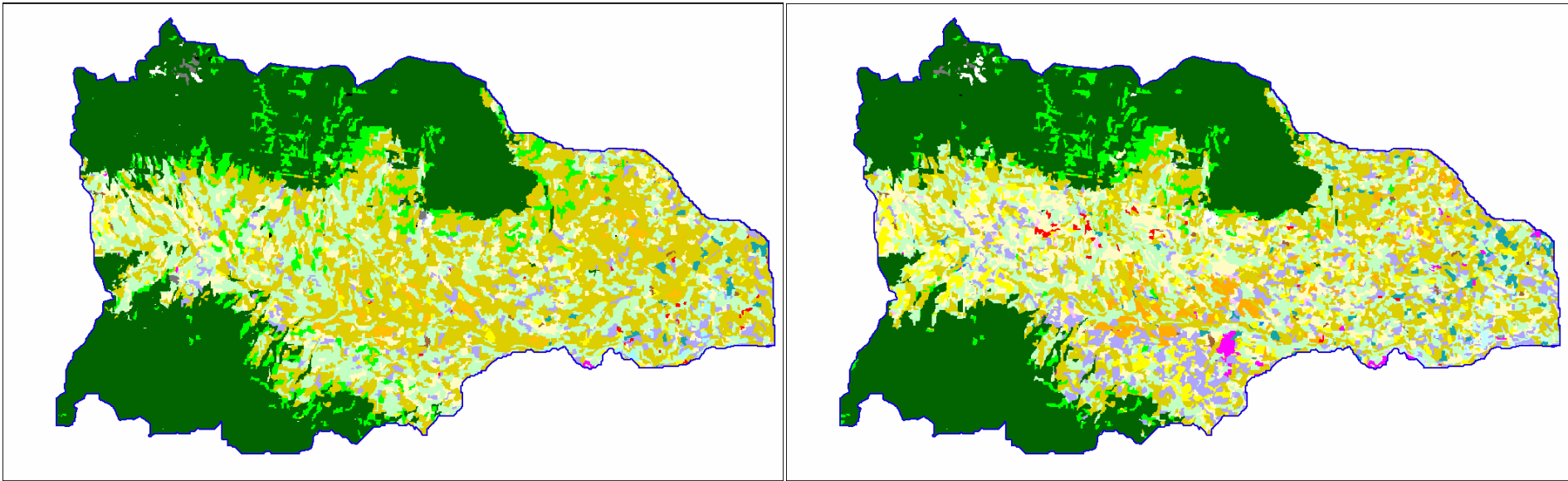
No	Landcover 2005	Total Area	
		(Ha)	(%)
1	Natural Forest	1695.47	35.37
2	Secondary Forest	159.61	3.33
3	Pine	0.56	0.01
4	Agroforest	839.52	17.51
5	Oilpalm	19.53	0.41
6	Mangium	2.80	0.06
7	Rubber	45.79	0.96
8	Coconut	0.64	0.01
9	Natural regrowth - shrub	816.15	17.03
10	Banana	104.52	2.18
11	Agriculture	511.10	10.66
12	Sugarcane	286.81	5.98
13	Pineapple	23.12	0.48
14	Ricefield	44.05	0.92
15	Grass	211.55	4.41
16	Settlement	8.16	0.17
17	Cleared Land	10.64	0.22
18	Waterbody	0.16	0.00
19	Cloud	10.01	0.21
20	Shadow	2.88	0.06
21	No Data	0.16	0.00
Total		4793.23	100.00



Drivers of Land Use Change

- Forest → corn
- Vegetable farming
- Corporate banana plantations
- Presence of two sugar mills
- Agribusiness

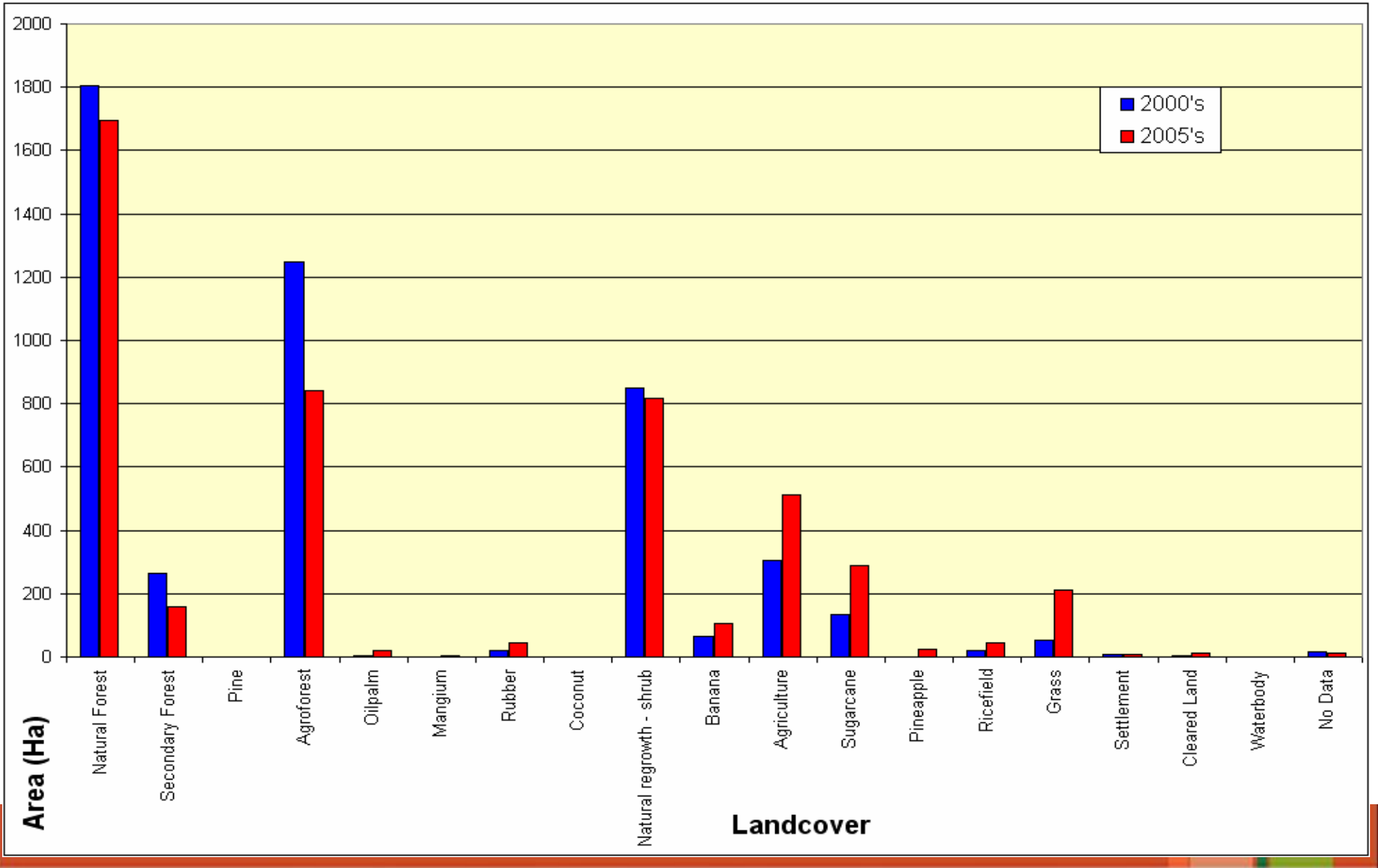


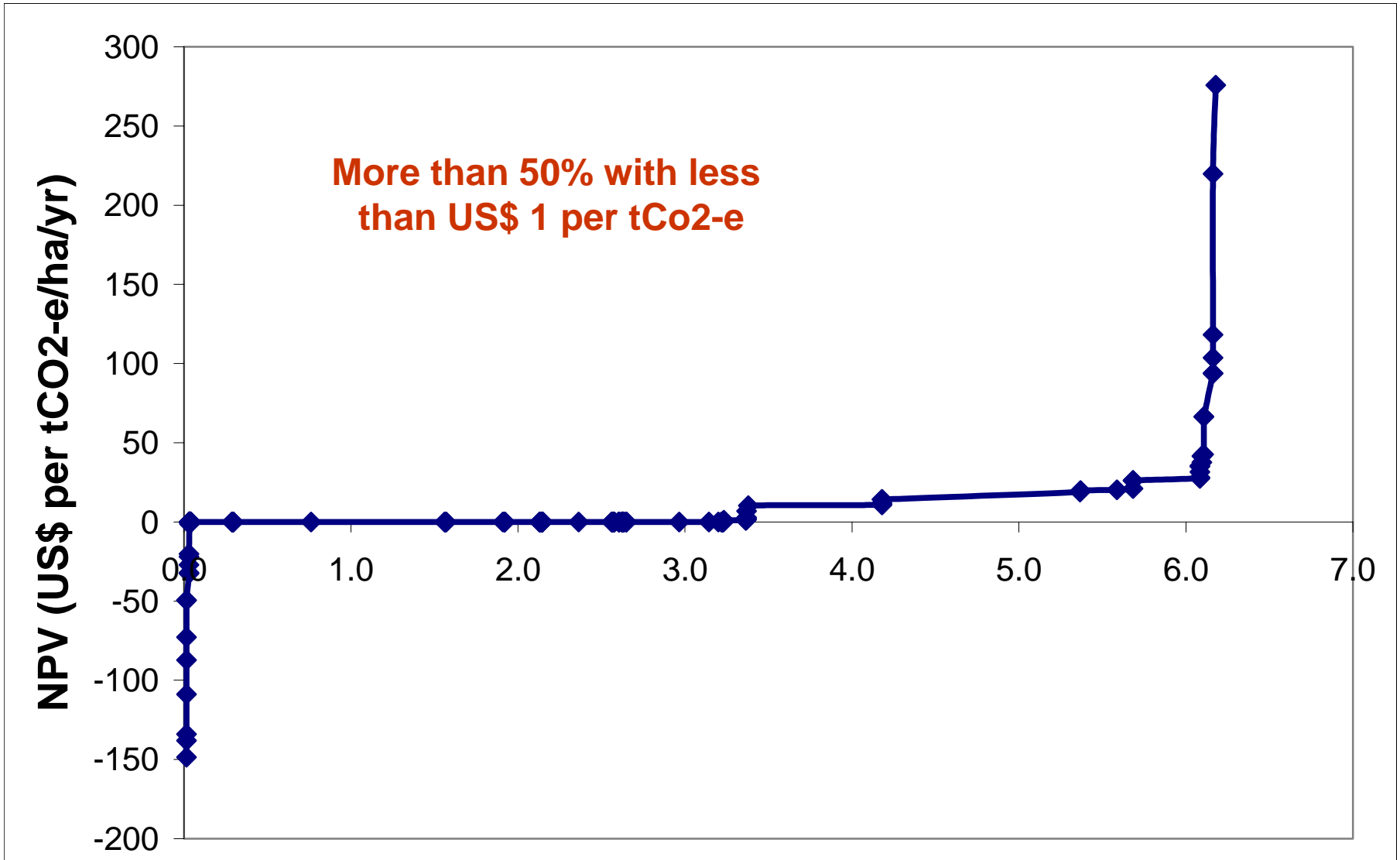


- Watershed Boundary
 Class Landcover :
- | | | |
|--|--|---|
| Primary Forest | Coconut | Grass |
| Secondary Forest | Natural regrowth - shrub | Settlement |
| Pine | Banana | Cleared Land |
| Agroforest | Agriculture | Waterbody |
| Oilpalm | Sugarcane | Cloud |
| Mangium | Pineapple | Shadow |
| Rubber | Ricefield | No Data |

Land use/cover changes 2000 - 2005





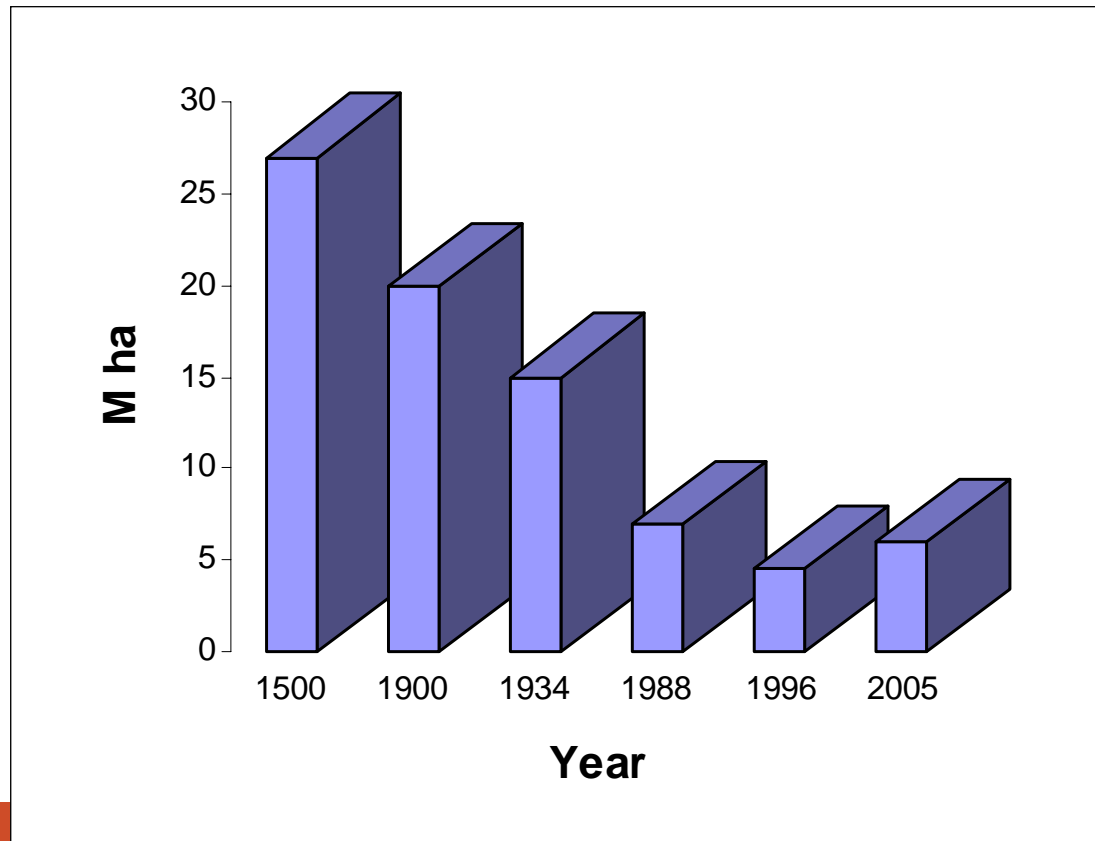


Cumulative Annual Emissions (tCO₂-e/ha/yr)



The Philippines and REDD

- Rate of deforestation is declining





The Philippines and REDD



- Forest degradation is more significant source of carbon?
- All primary forests are protected by law
 - Protection from illegal cutting
 - Biodiversity conservation
- Logging is allowed in secondary forests
 - Reduced impact logging
 - Community based forest mgt
 - Landcare groups





Thank you!

