



Mitigation of Agroforestry Sector in South Sorong District-Papua

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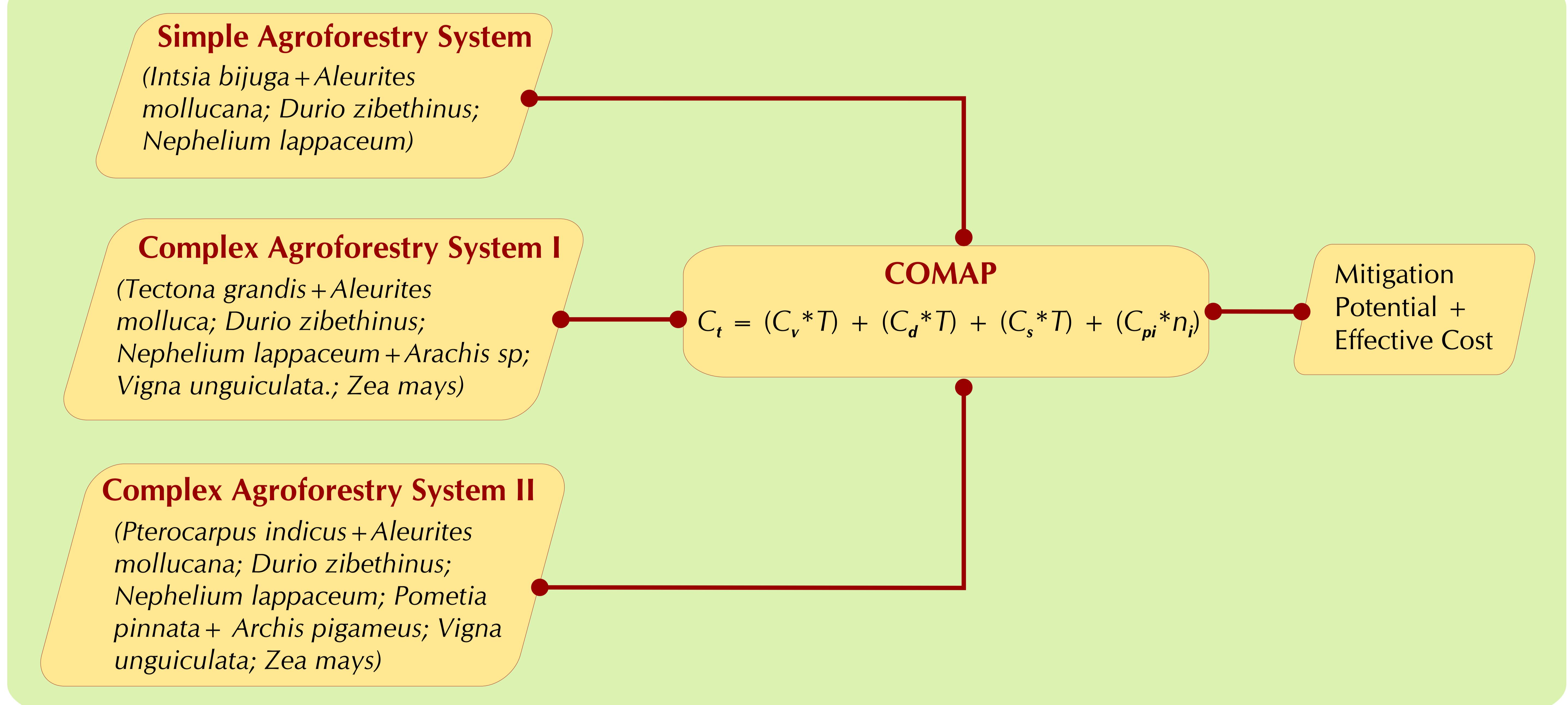


Three categories of community forestry will be used to evaluated notably simple Agroforestry system (pattern 1-4), Complex Agroforestry system-1 (pattern 5) and Complex Agroforestry system-2 (pattern 6-7) respectively.

The result show that Agroforestry system gave mitigation potential value at (~ 500 tC/ha), complex agroforestry-1 system (~ 550 tC/ha), and complex agroforestry-2 system (~ 700 tC/ ha). Both simple and complex Agroforestry system produce financial positive impact with range from US\$ 16,752 to US\$ 62,775 per ha/ rotation.

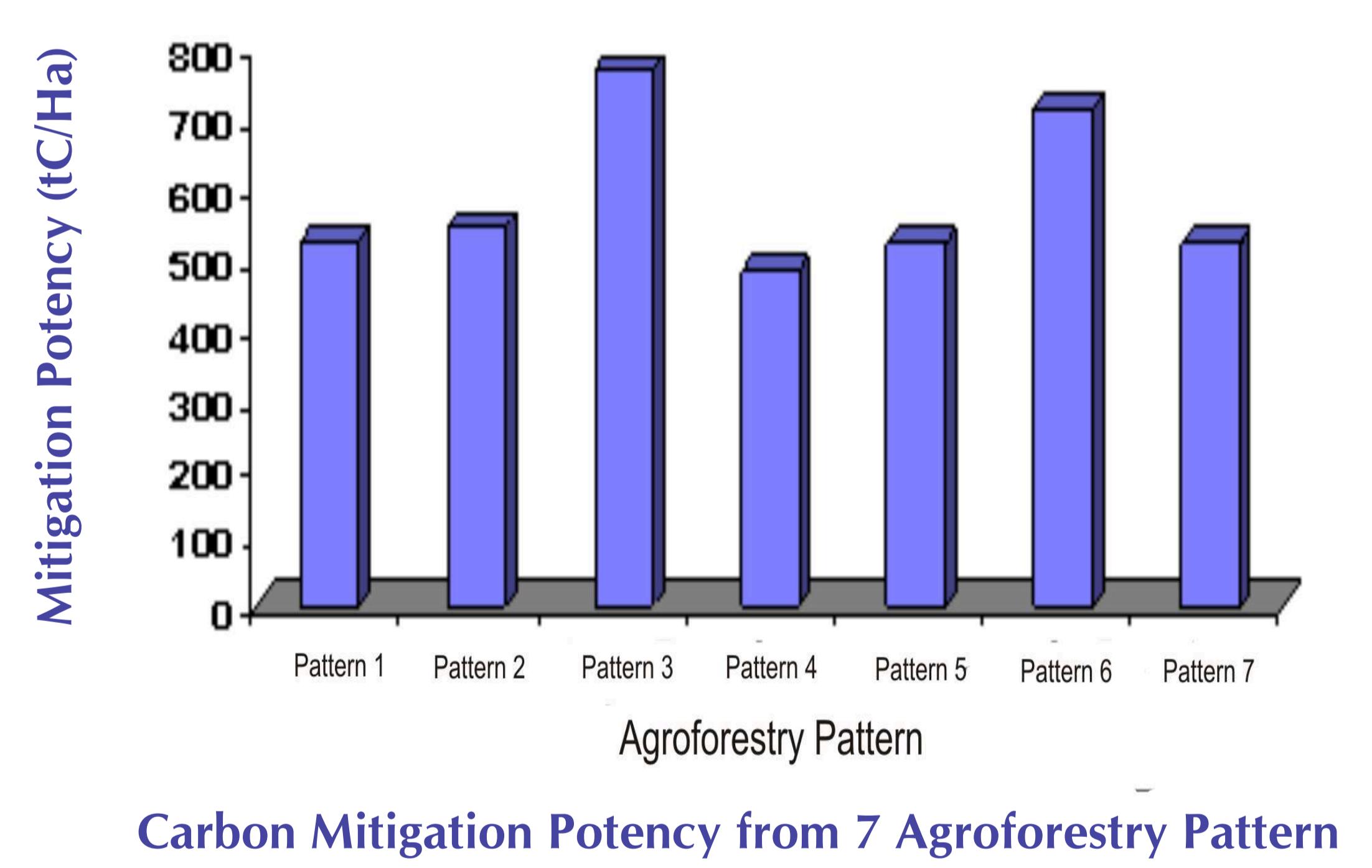


Flow Chart of the Study



Economic Parameters from 7 Agroforestry Pattern

Agroforestry Pattern	Initial Cost	Life Cycle Cost	NPV Benefit
1 <i>Tectona grandis</i> – <i>Aleurites mollucana</i> , <i>Durio zibethinus</i> , <i>Nephelium lappaceum</i>	200	749	20.103
2 <i>Tectona grandis</i> – <i>Aleurites mollucana</i> , <i>Areca catechu</i> , <i>Nephelium lappaceum</i>	184	731	16.752
3 <i>Intsia bijuga</i> – <i>Aleurites mollucana</i> , <i>Durio zibethinus</i> , <i>Nephelium lappaceum</i>	200	749	20.283
4 <i>Pterocarpus indicus</i> – <i>Aleurites mollucana</i> , <i>Areca catechu</i> , <i>Nephelium lappaceum</i>	184	731	9.314
5 <i>Tectona grandis</i> – <i>Aleurites mollucana</i> , <i>Durio zibethinus</i> , <i>Nephelium lappaceum</i> – <i>Arachis pigameus</i> , <i>Vigna unguiculata</i> , <i>Zea mays</i>	364	969	27.990
6 <i>Intsia bijuga</i> – <i>Aleurites mollucana</i> , <i>Matoa</i> , <i>Durio zibethinus</i> , <i>Nephelium lappaceum</i> – <i>Arachis pigameus</i> , <i>Vigna unguiculata</i> , <i>Zea mays</i>	364	969	32.489
7 <i>Pterocarpus indicus</i> – <i>Aleurites mollucana</i> , <i>Matoa</i> , <i>Durio zibethinus</i> , <i>Nephelium lappaceum</i> – <i>Vigna unguiculata</i> , <i>Arachis pigameus</i> , <i>Zea mays</i>	364	969	62.775



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Conclusion

1. The highest mitigation potency is found in pattern 3 for simple agroforestry system and pattern 6 in complex agroforestry system. However, the lowest mitigation potency is showed in pattern 4 for simple agroforestry system and pattern 5 for complex agroforestry system.
2. The mitigation potency of simple agroforestry system is 480 – 768 tC/ ha for 1-4 pattern, and complex agroforestry system are 521 tC/ ha for pattern 5 and 521 – 714 tC/ ha for pattern 6 and 7.
3. Pattern 5-7 in complex Agroforestry system generated more profits than the others and these systems guarantee the continuities of community income by different harvest time of the commodity in this system.