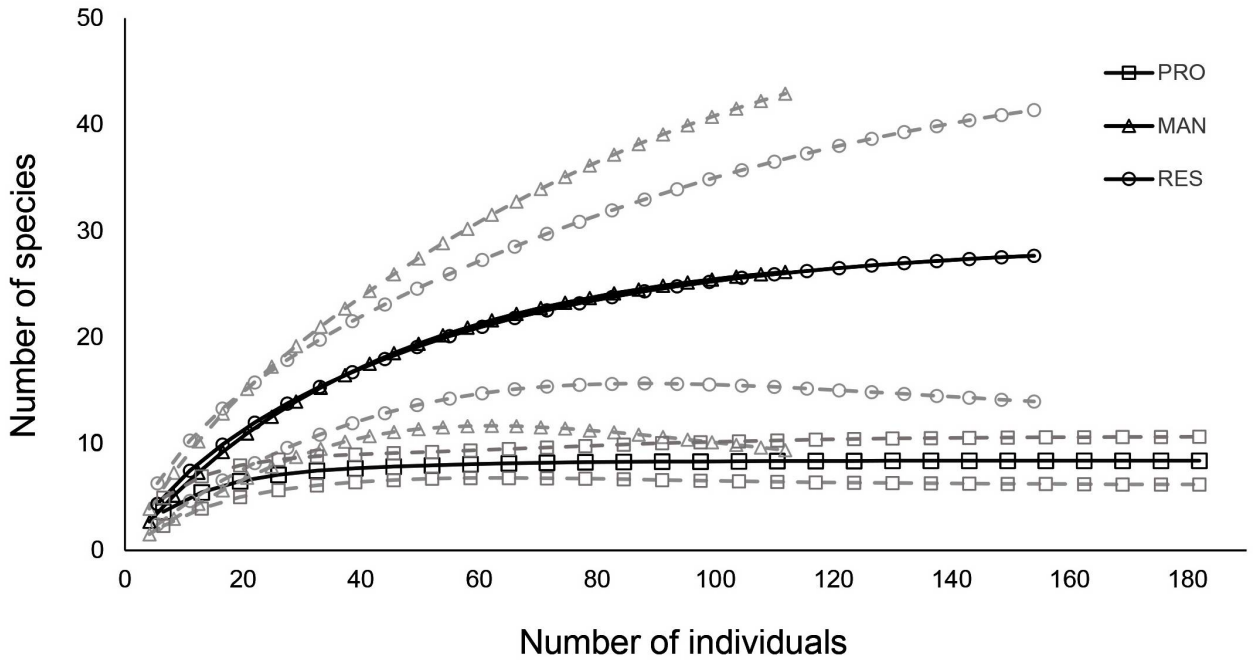
Mosconi LA, Subelza CDR, Manrique SM (2026). **Synergies and trade-offs between carbon stocks and climax community representativeness in subtropical montane forests under different management systems**
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Supplementary Material

Fig. S1 - Rarefaction curves showing species richness per site relative to the number of individuals. Dotted lines indicate the 95% confidence intervals. (PRO): protected forest; (MAN): forest under management; (RES): forest under restoration.



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Tab. S1 - Importance Value Index (IVI) by site and species. (SC): state of conservation; (LC): Least Concern; (NT): Near Threatened; (VU): Vulnerable; (EN): Endangered; (-): no status available. Case studies – (PRO): protected forest; (MAN): forest under management; (RES): forest under restoration. It is mentioned as native and/or climax of the ecoregion by: [1] Cabrera (1971); [2] Martínez & Andrade (2006); [3] Grau et al. (2016).

Species	Family	Cited as		SC	Abundance (%)			Dominance (%)			Frequency (%)			IVI (%)		
		Native [1,2]	Climax [3]		PRO	MAN	RES	PRO	MAN	RES	PRO	MAN	RES	PRO	MAN	RES
Anadenanthera colubrina (Vell.) Brenan	Fabaceae	yes	yes	LC	40.4	10.3	18.2	28.4	19.0	11.5	24.1	5.3	16.7	93.0	34.6	46.4
Cedrela balansae C.DC.	Meliaceae	yes	yes	EN		27.6	13.6		13.3	11.1		15.8	13.9		56.6	38.6
Phyllostylon rhamnoides (J.Poiss.) Taub.	Ulmaceae	yes	yes	LC	11.5	10.3	9.1	11.2	1.7	9.9	10.3	10.5	11.1	33.1	22.6	30.1
Calycophyllum multiflorum Griseb.	Rubiaceae	yes	yes	-	15.4	3.4	11.4	27.5	20.7	31.1	13.8	5.3	5.6	56.7	29.4	48.0
Maclura tinctoria (L.) D.Don ex Steud.	Moraceae	yes	yes	LC	7.7	3.4	2.3	4.7	8.7	0.5	10.3	5.3	2.8	22.7	17.4	5.5
Cordia trichotoma (Vell.) Steud.	Boraginaceae	yes	no	LC		10.3	4.5		8.7	5.0		10.5	5.6		29.6	15.1
Terminalia triflora (Griseb.) Lillo	Combretaceae	yes	no	LC		3.4			5.2			5.3			14.0	
Myroxylon peruiferum L.f.	Fabaceae	yes	yes	LC		3.4	9.1		12.2	12.9		5.3	8.3		20.9	30.4
Frangula sphaerosperma (Sw.) Kartesz & Gandhi	Rhamnaceae	no	no	-		3.4	2.3		1.5	0.4		5.3	2.8		10.3	5.5
Tecoma stans (L.) Juss. ex Kunth var. stans	Bignoniaceae	yes	no	LC		3.4			0.7			5.3			9.4	
Acanthosyris falcata Griseb.	Santalaceae	yes	no	NT		3.4			1.2			5.3			9.9	
Handroanthus impetiginosus (Mart. ex DC.) Mattos	Bignoniaceae	yes	yes	NT			2.3			5.1			2.8			10.1
Agonandra excelsa Griseb.	Opiliaceae	yes	no	LC			4.5			2.7			5.6			12.8
Parapiptadenia excelsa (Griseb.) Burkart	Fabaceae	yes	yes	LC			4.5			0.8			5.6			10.9
Trichilia claussenii C.DC.	Meliaceae	yes	no	LC			4.5			0.9			2.8			8.3
Libidibia paraguariensis (D.Parodi) G.P.Lewis	Fabaceae	no	no	VU			2.3			2.0			2.8			7.0
Senna spectabilis (DC.) H.S.Irwin & Barneby	Fabaceae	yes	no	LC			2.3			0.4			2.8	2.8		5.5
Zanthoxylum rhoifolium Lam.	Rutaceae	yes	no	-			2.3			0.6			2.8			5.7
Athyana weinmannifolia (Griseb.) Radlk.	Sapindaceae	yes	no	VU			2.3			4.0			2.8			9.0
Ceiba chodatii (Hassl.) Ravenna	Malvaceae	yes	no	-	9.6			5.5			13.8			28.9		
Myracrodruon urundeuva Allem.	Anacardiaceae	yes	no	DD	9.6			6.6			17.2			33.4		
Amburana cearensis (Allemão) A.C.Sm.	Fabaceae	yes	yes	EN	3.8			13.9			6.9			24.6		
Gleditsia amorphoides (Griseb.) Taub.	Fabaceae	yes	no	-		6.9			4.7			10.5			22.1	

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Tab. S2 - Light requirements and reproductive ecological characteristics of the species with the greatest carbon accumulation and highest IVI. (IVI): Importance Value Index; (ND): does not present dormancy; (D): presents dormancy; (*) = mentioned for other species of the same genus. (1) Humano (2020); (2) Justiniano & Fredericksen (1998); (3) Goncalves (2019); (4): Benavidez et al. (2023); (5) Brown & Pacheco (2006); (6) Martínez & Andrade (2006); (7) Galíndez et al. (2023); (8) Freitas et al. (2004); (9) Nunes et al. (2008); (10) Speranza et al. (2020); (11) Vaz et al. (2015); (12) Zanuncio et al. (2020); (13) Galíndez et al. (2015); (14) Villalba et al. (2021); (15) Silvestre et al. (2018); (16) Eibl et al. (1994); (17) Cerino et al. (2018).

Species	Lighting condition	Seed dispersal type	Germination (%)	Individual	Classification according to flower sexuality	Mating system	Flowering season	Fruiting season
A. colubrina	Heliophyte (1)	Anemochory - Autochory (2)	High, ND (2,3)	Monoecious (2)	Inflorescences heteromorphic, andromonoecious (3)	Partial self-incompatibility. Xenogamy and geitonogamy (3)	Wet (3)	Predominantly dry (3)
C. multiflorum	Sciophyte (1)	Anemochory (6)	-	Monoecious (6)	Perfect (6)	-	Wet (4)	Dry (4)
C. balansae	Heliophyte (1)	Anemochory (5)	High, ND (7)	Monoecious (6)	Perfect (6)	Partial self-incompatibility. Dichogamy*. Xenogamy (5)	Wet (5)	Dry (5)
M. urundeuva	Heliophyte (1)	Anemochory (9)	High, ND (9)	Predominantly dioecious (8)	Imperfect (8)	Xenogamy (8)	Dry (4)	Wet (4)
P. rhamnoides	Sciophyte (1)	Anemochory (2)	Low, ND (2)	Monoecious (2)	Andromonoecious (2)	-	Wet-ephemeral (4)	Wet (4)
C. trichotoma	Sciophyte (10)	Anemochory (11)	Medium, ND (11,12)	Monoecious (6)	Perfect (6)	-	Wet (6)	Dry (6)
A. cearensis	-	Anemochory (13)	High with mechanical scarification. Very low without scarifying, D (13,14)	Monoecious (6)	Perfect (6)	-	Wet (13) Reproductive stage DBH>60cm (14)	Dry-Wet (It takes 3 to 5 years to bear fruit) (13,14)
M. peruiferum	Sciophyte (1)	Anemochory (13)	Medium- high, ND (13)	Monoecious (6)	Perfect (6)	Weak xenogamy, no self-incompatibility (15)	Dry (4)	Wet (4)
G. amorphoides	-	-	Medium with mechanical scarification, D (16)	Functionally dioecious (17)	Perfect, functionally female and male flowers (17)	Xenogamy (17)	Dry- Wet (6)	Wet (6)

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