Online Ressource B. Overview of the 22 core studies comparing forest structural and biodiversity patterns among different ownership types, supplemented by the main observations of each study

↑ Higher values compared to the other ownership types
↓ Lower values compared to the other ownership types
↔ Similar or intermediate values compared to the other ownership types
To be assessed positively from a nature conservation perspektive
To be assessed negatively from a nature conservation perspektive
To be assessed neutral from a nature conservation perspektive
(following the authors of the considered studies)

#	Reference	Country	Region	Research object (biodiversity, forest structure)	Ownership types: Publicly owned – No specification	Publicly owned – State/ Country	Publicly owned – Municipal	Privately owned – No specification	Privately owned – Large private	Privately owned – Small private	Commonly owned	Observation
1	Lovett-Doust et al. (2001)	Canada	Southern Ontario	Biodiversity values (vegetation types, rare plants and birds)	↑			↓				In general, biodiversity values (including the number of vegetation community types, provincially rare vascular plants, and regionally and locally rare breeding birds) at public and mixed ownership sites were greatest, with significantly lower biodiversity values at privately-owned sites
2	Maltamo et al. (1997)	Finland	Central Finland	Tree stories, diameter range		↓			↓	↑		On moist heaths the forests in private ownership had a greater number of tree storeys and greater diameter range compared to those forests owned by forest industrial companies or by the state
3	Larrieu et al. (2017)	France	Southwestern France	Tree-related microhabitats	↑			↔				Density and diversity of tree-related microhabitats just after harvesting tended to be lower in private stands without any management plan than in public and private forests with formal management plans
4	Bergès et al. (2013)	France	Northern France	Forest plant species		↑	↑			↓		- Forest understory plant species associated with state and other public (mainly communal) forests were more often urbanophobic, ancient-forest species, barochores and myrmecochores - Private forest plant species were more often nutrient-, light-demanding, urbanophilic and endozoochorous
5	Reise et al. (2019)	Germany	Whole country	Forest bird communities		↑	↑	↓				Forest bird communities show a preference for the way state, federal and municipal forests are managed over private forests
				Deadwood volume		↑	↑	↓				The average total deadwood volume of state-owned forests and municipal forests was considerably higher than deadwood volumes in private forests
				Percentage of mature forests		↑	↑	↓				State-owned forests had the highest percentage of mature forests older than 160 years, followed by municipal forests and privately-owned forests
6	Johann & Schaich (2016)	Germany	Southwestern Germany	Tree-related microhabitats		↓	↓			↑		Density of tree microhabitats per hectare was more than twice as high in small-scale private forests than in municipal or state-owned forests
7	Schaich & Plieninger (2013)	Germany	Southwestern Germany	Structural diversity, dead wood, carbon storage capacity		↓	↓			↑		Small-scale private forests comprise significantly higher levels of structural diversity, more dead wood and greater carbon storage capacity than state-owned and municipal forests
8	Rendenieks et al. (2015)	Latvia	Northern Latvia	Vertical canopy structure, tree species richness		↓	↓			↑		- State forest stands were dominated by three tree species and a stable harvesting level - Municipal forest had the most even size of age classes in age structures - Private forests were characterized by lower road density, more complex vertical canopy structure and higher tree species richness
9	Bujoczek et al. (2021)	Poland	Whole country	Deadwood volume		↑		↓				Deadwood volumes are significantly higher in public than in privat forests
10	Kuemmerle et al. (2009)	Poland	Southeastern Poland	Anthropogenic disturbance		↓		↑				In the post-socialist transition time, anthropogenic disturbance rates in private forests were about five times higher than on public lands
11	Żmihorski et al. (2010)	Poland	Central Poland	DBH and basal area		↑				↓		Lower DBH and basal area in private forests compared to state forests
				Share of non-native species		↑				↓		The share of non-native tree species was higher in state forests
12	Torras et al. (2012)	Spain	Northeastern Spain	Biodiversity indicators	↔					↑		Forest development in unmanaged stands: Private lands showed greater short-term increases than public forests in all biodiversity indicators, except for large-diameter trees
13	Holmgren et al. (2010)	Sweden	Central and northern Sweden	Biodiversity indicators		↔			↔	↔	↔	Estimates of biodiversity-related indicators suggest that forests managed in common do not seem to be either environmentally more, or less, successful than forests of other ownership categories
14	Hobart et al. (2019)	USA	Sierra Nevada, California	Benefits to spotted owls	↔			↑				Private lands in mixed-ownership landscapes may contribute to spotted owl conservation by conferring different benefits to owls than public lands
15	Maslo et al. (2015)	USA	New Jersey	Forest bird species		↑	↑	↓				Three mature forest bird species were found more often on public lands than expected by chance
16	Zheng et al. (2010)	USA	New England states	Forest aboveground biomass	↑			↓				Mean forest aboveground biomass observed in public lands (156 Mg/ha) was 30 % higher than in private lands as a whole (120 Mg/ha, after area weighting)
				Landscape fragmentation	↓			↑				Public land had lower values of egde density, patch density, and landscape shape index than private lands, indicating a less fragmented landscape in public land
17	Riitters et al. (2012)	USA	Eastern United States	Fragmentation of forest communities	↓			↑				Fragmentation of forest communities was higher on privately owned forestland than on public forestland
18	Kennedy et al. (2008)	USA	Coastal Oregon	Dead wood		↑		↓				Public lands typically had higher amounts of dead wood and more large dead wood than private lands
19	Ohmann et al. (2007)	USA	Coastal Oregon	Late successional and old-growth forest		↑			↓	↓		Federal lands provided most of the late successional and old-growth forest
				Diversity of forest ages and structures		↑			↔	↓		State lands contained a range of forest ages and structures, including diverse young forest, abundant legacy dead wood, and much of the high-elevation true fir forest
				Early-successional forest, mixed hardwood-conifer forest, legacy down wood		↔			↑	↔		Forest industry lands encompassed much early-successional forest, most of the mixed hardwood-conifer forest, and large amounts of legacy down wood
				Diverse young forest, abundance of hardwood trees		↓			↓	↑		Nonindustrial private lands provided diverse young forest and the greatest abundance of hardwood trees, including almost all of the foothill oak woodlands
20	McComb et al. (2007)	USA	Coastal Oregon	Predicted future bird habitats		↑			↔	↔		Predicted future habitat for bird species with very large home ranges occured largely on federal lands with habitat on private lands being supplemented from adjacent federal lands
21	Stanfield et al. (2002)	USA	Coastal Oregon	Mature forest cover		↑			↓	↓		Public forests were associated with mature forest cover
				Diversity of cover classes		↓			↓	↑		Nonindustrial private forest owners were associated with a wide diversity of cover classes
22	Easterday et al. (2018)	USA	California	Declines in large trees	↔			↔				Since 1930: All land ownership classes experienced declines in large trees, while private timberlands (average loss 83 %) and national parks and wilderness areas (average loss71 %) experienced the most extreme change

Core studies

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