

ECOLOGIA FUNCIONAL COMO FERRAMENTA PARA PLANEJAR E MONITORAR A RESTAURAÇÃO ECOLÓGICA DE ECOSISTEMAS

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Tabela A1. Síntese do número de estudos conforme cada categoria abordada nessa revisão.

Categorias	Resultado
Foco do estudo	Monitoramento (59); Teórico/experimental (52); Planejamento e monitoramento (10); Planejamento (7); Banco de dados (1)
País	Estados Unidos (36); Brasil (17); Austrália (8); Alemanha e China (7); França (6); demais países (menos de 4 estudos cada)
Tipo de ecossistema	Aberto (56); Floresta (47); Aquático (10); Semi-natural (7); Não informado (10)
Tipo de descritor funcional	Atributo (76); Grupo (44); Atributo e grupo (9)
Característica do descritor	Qualitativo e quantitativo (35); Quantitativo (33); Qualitativo (17)

Tabela A2. Lista de artigos incluídos na revisão sistemática (129 artigos).

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
1	Horvitz, CC; Pascarella, JB; McMann, S; Freedman, A; Hofstetter, RH. 1998. Functional roles of invasive non-indigenous plants in hurricane-affected subtropical hardwood forests. <i>ECOLOGICAL APPLICATIONS</i> 8, 947-974.	monitoramento	EUA	floresta	grupo	qualitativo
2	Bossuyt, B; Hermy, M. 2000. Restoration of the understorey layer of recent forest bordering ancient forest. <i>APPLIED VEGETATION SCIENCE</i> 3, 43-50.	monitoramento	Bélgica	floresta	grupo	qualitativo
3	Gondard, H; Sandrine, J; Aronson, J; Lavorel, S. 2003. Plant functional types: a promising tool for management and restoration of degraded lands. <i>APPLIED VEGETATION SCIENCE</i> 6, 223-234.	teórico/ experimental	França e Tunísia	floresta; aberto	atributo	qualitativo
4	Poschlod, P; Kleyer, M; Jackel, AK; Dannemann, A; Tackenberg, O. 2003. BIOPOP - a database of plant traits and Internet application for nature conservation. <i>FOLIA GEOBOTANICA</i> 38, 263-271.	banco de dados	Alemanha	NA	atributo	quantitativo
5	Bakker, JD; Wilson, SD. 2004. Using ecological restoration to constrain biological invasion. <i>JOURNAL OF APPLIED ECOLOGY</i> 41, 1058-1064.	planejamento e monitoramento	Canadá	aberto	grupo	qualitativo
6	Laughlin, DC; Bakker, JD; Stoddard, MT; Daniels, ML; Springer, JD; Gildar, CN; Green, AM; Covington, WW. 2004. Toward reference conditions: wildfire effects on flora in an old-growth ponderosa pine forest. <i>FOREST ECOLOGY AND MANAGEMENT</i> 199, 137-152.	monitoramento	EUA	floresta	grupo	qualitativo
7	Herault, B; Bouxin, G; Thoen, D. 2004. Comparison of the regeneration patterns of woody species between Norway spruce plantations and deciduous forests on alluvial soils. <i>BELGIAN JOURNAL OF BOTANY</i> 137, 36-46.	monitoramento	Luxemburgo	floresta	grupo	qualitativo
8	Li, YG; Li, LH; Jiang, GM; Niu, SL; Liu, MZ; Gao, LM; Peng, Y; Jiang, CD. 2004. Traits of chlorophyll fluorescence in 99 plant species from the sparse-elm grassland in Hunshandak Sandland. <i>PHOTOSYNTHETICA</i> 42, 243-249.	planejamento	China	aberto	atributo e grupo	qualitativo e quantitativo
9	Polley, HW; Derner, JD; Wilsey, BJ. 2005. Patterns of plant species diversity in remnant and restored tallgrass prairies. <i>RESTORATION ECOLOGY</i> 13, 480-487.	monitoramento	EUA	aberto	grupo	qualitativo

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
10	Herault, B; Honnay, O; Thoen, D. 2005. Evaluation of the ecological restoration potential of plant communities in Norway spruce plantations using a life-trait based approach. <i>JOURNAL OF APPLIED ECOLOGY</i> 42, 536-545.	monitoramento	Luxemburgo	floresta	grupo	qualitativo
11	Eler, K; Vidrih, M; Batic, F. 2005. Vegetation characteristics in relation to different management regimes of calcareous grassland: A functional analysis using plant traits. <i>PHYTON-ANNALES REI BOTANICAE</i> 45, 417-426.	teórico/ experimental	Eslovênia	aberto	atributo e grupo	qualitativo e quantitativo
12	Moore, MM; Casey, CA; Bakker, JD; Springer, JD; Fule, PZ; Covington, WW; Laughlin, DC. 2006. Herbaceous vegetation responses (1992-2004) to restoration treatments in a Ponderosa pine forest. <i>RANGELAND ECOLOGY & MANAGEMENT</i> 59, 135-144.	monitoramento	EUA	floresta	grupo	qualitativo
13	Piper, JK; Schmidt, ES; Janzen, AJ. 2007. Effects of species richness on resident and target species components in a prairie restoration. <i>RESTORATION ECOLOGY</i> 15, 189-198.	planejamento e monitoramento	EUA	aberto	grupo	qualitativo
14	Blanke, V; Schulze, B; Gerighausen, U; Kuster, S; Rothe, R; Schulze, H; Sineriz, M. 2007. The power of regeneration: Lessons from a degraded grassland. <i>RESTORATION ECOLOGY</i> 15, 307-311.	monitoramento	Alemanha	aberto	grupo	qualitativo
15	Dzwonko, Z; Loster, S. 2007. A functional analysis of vegetation dynamics in abandoned and restored limestone grasslands. <i>JOURNAL OF VEGETATION SCIENCE</i> 18, 203-212.	monitoramento	Polônia	aberto	grupo	qualitativo
16	Peterson, DW; Reich, PB; Wrage, KJ. 2007. Plant functional group responses to fire frequency and tree canopy cover gradients in oak savannas and woodlands. <i>JOURNAL OF VEGETATION SCIENCE</i> 18, 3-12.	monitoramento	EUA	aberto	grupo	qualitativo
17	Pottier, J; Bedecarrats, A; Marrs, RH. 2009. Analysing the spatial heterogeneity of emergent groups to assess ecological restoration. <i>JOURNAL OF APPLIED ECOLOGY</i> 46, 1248-1257.	teórico/ experimental	França	semi-natural	atributo	qualitativo
18	Liira, J; Issak, M; Jogar, U; Mandoja, M; Zobel, M. 2009. Restoration management of a floodplain meadow and its cost-effectiveness - the results of a 6-year experiment. <i>ANNALES BOTANICI FENNICI</i> 46, 397-408.	monitoramento	Estônia	aberto	grupo	qualitativo

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
19	Rodrigues, RR; Lima, RAF; Gandolfi, S; Nave, AG. 2009. On the restoration of high diversity forests: 30 years of experience in the Brazilian Atlantic Forest. <i>BIOLOGICAL CONSERVATION</i> 142, 1242-1251.	planejamento	Brasil	floresta	grupo	qualitativo
20	Aubin, I; Ouellette, MH; Legendre, P; Messier, C; Bouchard, A. 2009. Comparison of two plant functional approaches to evaluate natural restoration along an old-field - deciduous forest chronosequence. <i>JOURNAL OF VEGETATION SCIENCE</i> 20, 185-198.	monitoramento	Canadá	floresta	atributo	qualitativo e quantitativo
21	Gosper, CR; Vivian-Smith, G. 2009. Approaches to Selecting Native Plant Replacements for Fleshy-Fruited Invasive Species. <i>RESTORATION ECOLOGY</i> 17, 196-204.	teórico/ experimental	NA	NA	atributo	qualitativo e quantitativo
22	Ansley, RJ; Boutton, TW; Mirik, M; Castellano, MJ; Kramp, BA. 2010. Restoration of C-4 grasses with seasonal fires in a C-3/C-4 grassland invaded by <i>Prosopis glandulosa</i> , a fire-resistant shrub. <i>APPLIED VEGETATION SCIENCE</i> 13, 520-530.	monitoramento	EUA	aberto	grupo	qualitativo
23	Roberts, RE; Clark, DL; Wilson, MV. 2010. Traits, neighbors, and species performance in prairie restoration. <i>APPLIED VEGETATION SCIENCE</i> 13, 270-279.	planejamento e monitoramento	EUA	aberto	atributo e grupo	qualitativo e quantitativo
24	Matthews, JW; Endress, AG. 2010. Rate of succession in restored wetlands and the role of site context. <i>APPLIED VEGETATION SCIENCE</i> 13, 346-355.	monitoramento	EUA	aquático	grupo	qualitativo
25	Mahaney, WM. 2010. Plant controls on decomposition rates: the benefits of restoring abandoned agricultural lands with native prairie grasses. <i>PLANT AND SOIL</i> 330, 91-101.	teórico/ experimental	EUA	aberto	atributo	quantitativo
26	Zhang, XD; Xu, WT; Yang, B; Nie, M; Li, B. 2011. Seed germination traits of two plant functional groups in the saline deltaic ecosystems. <i>JOURNAL OF PLANT ECOLOGY</i> 4, 169-177.	teórico/ experimental	China	NA	grupo	qualitativo
27	Massad, TJ; Chambers, JQ; Rolim, SG; Jesus, RM; Dyer, LA. 2011. Restoration of Pasture to Forest in Brazil's Mata Atlantica: The Roles of Herbivory, Seedling Defenses, and Plot Design in Reforestation. <i>RESTORATION ECOLOGY</i> 19, 257-267.	teórico/ experimental	Brasil	floresta	grupo	qualitativo

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
28	Sandel, B; Corbin, JD; Krupa, M. 2011. Using plant functional traits to guide restoration: A case study in California coastal grassland. <i>ECOSPHERE</i> 2, -.	teórico/ experimental	EUA	aberto	atributo	quantitativo
29	Pywell, RF; Meek, WR; Loxton, RG; Nowakowski, M; Carvell, C; Woodcock, B. 2011. Ecological restoration on farmland can drive beneficial functional responses in plant and invertebrate communities. <i>AGRICULTURE ECOSYSTEMS & ENVIRONMENT</i> 140, 62-67.	teórico/ experimental	Grã-Bretanha	semi-natural	grupo	qualitativo
30	Burylo, M; Rey, F; Mathys, N; Dutoit, T. 2012. Plant root traits affecting the resistance of soils to concentrated flow erosion. <i>EARTH SURFACE PROCESSES AND LANDFORMS</i> 37, 1463-1470.	teórico/ experimental	França	aberto	atributo	quantitativo
31	Brancalion, PHS; Viani, RAG; Aronson, J; Rodrigues, RR; Nave, AG. 2012. Improving Planting Stocks for the Brazilian Atlantic Forest Restoration through Community-Based Seed Harvesting Strategies. <i>RESTORATION ECOLOGY</i> 20, 704-711.	teórico/ experimental	Brasil	floresta	grupo	qualitativo
32	Clark, DL; Wilson, M; Roberts, R; Dunwiddie, PW; Stanley, A; Kaye, TN. 2012. Plant traits - a tool for restoration?. <i>APPLIED VEGETATION SCIENCE</i> 15, 449-458.	teórico/ experimental	EUA	aberto	atributo	qualitativo e quantitativo
33	Davies, GM; Bakker, JD; Dettweiler-Robinson, E; Dunwiddie, PW; Hall, SA; Downs, J; Evans, J. 2012. Trajectories of change in sagebrush steppe vegetation communities in relation to multiple wildfires. <i>ECOLOGICAL APPLICATIONS</i> 22, 1562-1577.	monitoramento	EUA	aberto	atributo	qualitativo
34	Renton, M; Shackelford, N; Standish, RJ. 2012. Habitat restoration will help some functional plant types persist under climate change in fragmented landscapes. <i>GLOBAL CHANGE BIOLOGY</i> 18, 2057-2070.	teórico/ experimental	Austrália	NA	atributo	qualitativo
35	Aradottir, AL. 2012. Turf transplants for restoration of alpine vegetation: does size matter?. <i>JOURNAL OF APPLIED ECOLOGY</i> 49, 439-446.	monitoramento	Islândia	aberto	grupo	qualitativo
36	D'Astous, A; Poulin, M; Aubin, I; Rochefort, L. 2013. Using functional diversity as an indicator of restoration success of a cut-over bog. <i>ECOLOGICAL ENGINEERING</i> 61, 519-526.	monitoramento	Canadá	aquático	atributo	qualitativo

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
37	Hedberg, P; Saetre, P; Sundberg, S; Rydin, H; Kotowski, W. 2013. A functional trait approach to fen restoration analysis. <i>APPLIED VEGETATION SCIENCE</i> 16, 658-666.	monitoramento	Suécia	aquático	atributo	quantitativo
38	Suganuma, MS; de Assis, GB; de Melo, ACG; Durigan, G. 2013. REFERENCE ECOSYSTEMS FOR RIPARIAN FOREST RESTORATION: ARE THERE ANY PATTERNS OF BIODIVERSITY, FOREST STRUCTURE AND FUNCTIONAL TRAITS?. <i>REVISTA ARVORE</i> 37, 835-847.	monitoramento	Brasil	floresta	atributo	qualitativo
39	Erktan, A; Cecillon, L; Roose, E; Frascaria-Lacoste, N; Rey, F. 2013. Morphological diversity of plant barriers does not increase sediment retention in eroded marly gullies under ecological restoration. <i>PLANT AND SOIL</i> 370, 653-669.	teórico/ experimental	França	aquático	atributo	quantitativo
40	Martinez-Garza, C; Bongers, F; Poorter, L. 2013. Are functional traits good predictors of species performance in restoration plantings in tropical abandoned pastures?. <i>FOREST ECOLOGY AND MANAGEMENT</i> 303, 35-45.	monitoramento	México	floresta	atributo	quantitativo
41	Ellsworth, LM; Kauffman, JB. 2013. Seedbank responses to spring and fall prescribed fire in mountain big sagebrush ecosystems of differing ecological condition at Lava Beds National Monument, California. <i>JOURNAL OF ARID ENVIRONMENTS</i> 96, 1-8.	monitoramento	EUA	aberto	grupo	qualitativo
42	Helsen, K; Hermy, M; Honnay, O. 2013. Spatial isolation slows down directional plant functional group assembly in restored semi-natural grasslands. <i>JOURNAL OF APPLIED ECOLOGY</i> 50, 404-413.	monitoramento	Bélgica	aberto	atributo	quantitativo
43	Liu, XZ; Lu, YX; Yang, ZY; Zhou, YH. 2014. Regeneration and Development of Native Plant Species in Restored Mountain Forests, Hainan Island, China. <i>MOUNTAIN RESEARCH AND DEVELOPMENT</i> 34, 396-404.	monitoramento	China	floresta	grupo	qualitativo
44	Andrade, BO; Overbeck, GE; Pilger, GE; Hermann, JM; Conradi, T; Boldrini, II; Kollmann, J. 2014. Intraspecific trait variation and allocation strategies of calcareous grassland species: Results from a restoration experiment. <i>BASIC AND APPLIED ECOLOGY</i> 15, 590-598.	monitoramento	Alemanha	aberto	atributo	quantitativo
45	Johnston, DB; Chapman, PL. 2014. Rough Surface and High-Forb Seed Mix Promote Ecological Restoration of Simulated Well Pads. <i>INVASIVE PLANT SCIENCE AND MANAGEMENT</i> 7, 408-424.	monitoramento	EUA	aberto	grupo	qualitativo

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
46	Laughlin, DC. 2014. Applying trait-based models to achieve functional targets for theory-driven ecological restoration. <i>ECOLOGY LETTERS</i> 17, 771-784.	teórico/ experimental	NA	NA	atributo	qualitativo
47	Suganuma, MS; de Assis, GB; Durigan, G. 2014. Changes in plant species composition and functional traits along the successional trajectory of a restored patch of Atlantic Forest. <i>COMMUNITY ECOLOGY</i> 15, 27-36.	monitoramento	Brasil	floresta	atributo	qualitativo
48	Knapp, BO; Walker, JL; Wang, GG; Hu, HF; Addington, RN. 2014. Effects of overstory retention, herbicides, and fertilization on sub-canopy vegetation structure and functional group composition in loblolly pine forests restored to longleaf pine. <i>FOREST ECOLOGY AND MANAGEMENT</i> 320, 149-160.	teórico/ experimental	EUA	floresta	grupo	qualitativo
49	Barnes, AD; Chapman, HM. 2014. Dispersal traits determine passive restoration trajectory of a Nigerian montane forest. <i>ACTA OECOLOGICA-INTERNATIONAL JOURNAL OF ECOLOGY</i> 56, 32-40.	monitoramento	Nigéria	floresta	atributo	qualitativo
50	Tischew, S; Baasch, A; Grunert, H; Kirmer, A. 2014. How to develop native plant communities in heavily altered ecosystems: examples from large-scale surface mining in Germany. <i>APPLIED VEGETATION SCIENCE</i> 17, 288-301.	monitoramento	Alemanha	aberto	atributo	qualitativo
51	Pichancourt, JB; Firn, J; Chades, I; Martin, TG. 2014. Growing biodiverse carbon-rich forests. <i>GLOBAL CHANGE BIOLOGY</i> 20, 382-393.	teórico/ experimental	NA	floresta	atributo	quantitativo
52	Hedberg, P; Kozub, L; Kotowski, W. 2014. Functional diversity analysis helps to identify filters affecting community assembly after fen restoration by top-soil removal and hay transfer. <i>JOURNAL FOR NATURE CONSERVATION</i> 22, 50-58.	monitoramento	Polônia	aquático	atributo	qualitativo e quantitativo
53	Kimball, S; Lulow, ME; Mooney, KA; Sorenson, QM. 2014. Establishment and Management of Native Functional Groups in Restoration. <i>RESTORATION ECOLOGY</i> 22, 81-88.	planejamento e monitoramento	EUA	aberto	grupo	qualitativo
54	Garcia, LC; Hobbs, RJ; dos Santos, FAM; Rodrigues, RR. 2014. Flower and Fruit Availability along a Forest Restoration Gradient. <i>BIOTROPICA</i> 46, 114-123.	monitoramento	Brasil	floresta	atributo	qualitativo

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55	Gibson-Roy, P; McLean, C; Delpratt, JC; Moore, G. 2014. Do arbuscular mycorrhizal fungi recolonize revegetated grasslands?. <i>ECOLOGICAL MANAGEMENT & RESTORATION</i> 15, 87-91.	monitoramento	Austrália	aberto	grupo	qualitativo
56	Mukherjee, JR; Jones, TA; Adler, PB; Monaco, TA. 2015. Contrasting Mechanisms of Recovery from Defoliation in Two Intermountain-Native Bunchgrasses. <i>RANGELAND ECOLOGY & MANAGEMENT</i> 68, 485-493.	planejamento	EUA	aberto	atributo	quantitativo
57	Strahan, RT; Stoddard, MT; Springer, JD; Huffman, DW. 2015. Increasing weight of evidence that thinning and burning treatments help restore understory plant communities in ponderosa pine forests. <i>FOREST ECOLOGY AND MANAGEMENT</i> 353, 208-220.	monitoramento	EUA	floresta	grupo	qualitativo
58	Fournier, B; Gillet, F; Le Bayon, RC; Mitchell, EAD; Moretti, M. 2015. Functional responses of multitaxa communities to disturbance and stress gradients in a restored floodplain. <i>JOURNAL OF APPLIED ECOLOGY</i> 52, 1364-1373.	monitoramento	Suíça	aquático	atributo	qualitativo
59	Uselman, SM; Snyder, KA; Leger, EA; Duke, SE. 2015. Emergence and early survival of early versus late seral species in Great Basin restoration in two different soil types. <i>APPLIED VEGETATION SCIENCE</i> 18, 624-636.	teórico/ experimental	EUA	aberto	grupo	qualitativo
60	Bochet, E; Garcia-Fayos, P. 2015. Identifying plant traits: A key aspect for species selection in restoration of eroded roadsides in semiarid environments. <i>ECOLOGICAL ENGINEERING</i> 83, 444-451.	planejamento	Espanha	semi-natural	atributo	qualitativo e quantitativo
61	Ilunga, EIW; Mahy, G; Piqueray, J; Seleck, M; Shutcha, MN; Meerts, P; Faucon, MP. 2015. Plant functional traits as a promising tool for the ecological restoration of degraded tropical metal-rich habitats and revegetation of metal-rich bare soils: A case study in copper vegetation of Katanga, DRC. <i>ECOLOGICAL ENGINEERING</i> 82, 214-221.	planejamento	Congo	aberto	atributo	qualitativo
62	Zhu, HX; Fu, BJ; Wang, S; Zhu, LH; Zhang, LW; Jiao, L; Wang, C. 2015. Reducing soil erosion by improving community functional diversity in semi-arid grasslands. <i>JOURNAL OF APPLIED ECOLOGY</i> 52, 1063-1072.	planejamento e monitoramento	China	aberto	atributo	NA
63	Fetcher, N; Agosta, SJ; Moore, JC; Stratford, JA; Steele, MA. 2015. The food web of a severely contaminated site following reclamation with warm season grasses. <i>RESTORATION ECOLOGY</i> 23, 421-429.	monitoramento	EUA	aberto	atributo	qualitativo

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64	Garcia, LC; Cianciaruso, MV; Ribeiro, DB; dos Santos, FAM; Rodrigues, RR. 2015. Flower functional trait responses to restoration time. <i>APPLIED VEGETATION SCIENCE</i> 18, 402-412.	planejamento e monitoramento	Brasil	floresta	atributo	qualitativo e quantitativo
65	de Melo, ACG; Daronco, C; Re, DS; Durigan, G. 2015. Tree species attributes and facilitation of natural regeneration in heterogeneous planting of riparian vegetation. <i>SCIENTIA FORESTALIS</i> 43, 333-344.	planejamento e monitoramento	Brasil	floresta	grupo	qualitativo
66	Suganuma, MS; Durigan, G. 2015. Indicators of restoration success in riparian tropical forests using multiple reference ecosystems. <i>RESTORATION ECOLOGY</i> 23, 238-251.	monitoramento	Brasil	floresta	grupo	qualitativo
67	Gilardelli, F; Sgorbati, S; Armiraglio, S; Citterio, S; Gentili, R. 2015. Ecological Filtering and Plant Traits Variation Across Quarry Geomorphological Surfaces: Implication for Restoration. <i>ENVIRONMENTAL MANAGEMENT</i> 55, 1147-1159.	monitoramento	Itália	semi-natural	atributo e grupo	qualitativo e quantitativo
68	Schnoor, T; Bruun, HH; Olsson, PA. 2015. Soil Disturbance as a Grassland Restoration Measure-Effects on Plant Species Composition and Plant Functional Traits. <i>PLOS ONE</i> 10, -.	monitoramento	Suécia	aberto	grupo	qualitativo
69	Cavaille, P; Ducasse, L; Breton, V; Dommange, F; Tabacchi, E; Evette, A. 2015. Functional and taxonomic plant diversity for riverbank protection works: Bioengineering techniques close to natural banks and beyond hard engineering. <i>JOURNAL OF ENVIRONMENTAL MANAGEMENT</i> 151, 65-75.	monitoramento	França e Suíça	aberto	grupo	qualitativo
70	Atwater, DZ; James, JJ; Leger, EA. 2015. Seedling root traits strongly influence field survival and performance of a common bunchgrass. <i>BASIC AND APPLIED ECOLOGY</i> 16, 128-140.	teórico/experimental	EUA	aberto	atributo	qualitativo e quantitativo
71	Klippel, VH; Pezzopane, JEM; da Silva, GF; Caldeira, MVW; Pimenta, LR; Toledo, JV. 2015. EVALUATION OF FOREST RESTORATION METHODS OF TABLELAND FOREST, ES. <i>REVISTA ARVORE</i> 39, 69-79.	teórico/experimental	Brasil	floresta	grupo	qualitativo
72	de Meira, MS; Pereira, IM; Machado, ELM; Mota, SDL; Otoni, TJO. 2015. POTENTIAL SPECIES FOR RECOVERY AREAS SEMIDECIDUOUS FOREST IN IRON EXPLORATION IN THE SERRA ESPINHACO. <i>BIOSCIENCE JOURNAL</i> 31, 283-295.	planejamento	Brasil	floresta	grupo	qualitativo

ID	Referência	Foco do estudo	País	Tipo de ecossistema	Tipo de descritor funcional	Característica do descritor
73	Strahan, RT; Meador, AJS; Huffman, DW; Laughlin, DC. 2016. Shifts in community-level traits and functional diversity in a mixed conifer forest: a legacy of land-use change. <i>JOURNAL OF APPLIED ECOLOGY</i> 53, 1755-1765.	teórico/ experimental	EUA	floresta	atributo	qualitativo e quantitativo
74	Guzman-Luna, A; Martinez-Garza, C. 2016. Performance of 15 tropical tree species recruited or transplanted on restoration settings. <i>BOTANICAL SCIENCES</i> 94, 757-773.	planejamento e monitoramento	México	floresta	atributo	quantitativo
75	Funk, JL; Wolf, AA. 2016. Testing the trait-based community framework: Do functional traits predict competitive outcomes?. <i>ECOLOGY</i> 97, 2206-2211.	teórico/ experimental	EUA	aberto	atributo	qualitativo e quantitativo
76	Engst, K; Baasch, A; Erfmeier, A; Jandt, U; May, K; Schmiede, R; Bruelheide, H. 2016. Functional community ecology meets restoration ecology: Assessing the restoration success of alluvial floodplain meadows with functional traits. <i>JOURNAL OF APPLIED ECOLOGY</i> 53, 751-764.	monitoramento	Alemanha	aberto	atributo	qualitativo e quantitativo
77	Rolo, V; Olivier, PI; Guldemond, RAR; van Aarde, RJ. 2016. Validating space-for-time substitution in a new-growth coastal dune forest. <i>APPLIED VEGETATION SCIENCE</i> 19, 235-243.	monitoramento	África do Sul	floresta	atributo	qualitativo e quantitativo
78	Gothe, E; Timmermann, A; Januschke, K; Baattrup-Pedersen, A. 2016. Structural and functional responses of floodplain vegetation to stream ecosystem restoration. <i>HYDROBIOLOGIA</i> 769, 79-92.	monitoramento	Europa	aquático	grupo	qualitativo
79	Mischkolz, JM; Schellenberg, MP; Lamb, EG. 2016. Assembling productive communities of native grass and legume species: finding the right mix. <i>APPLIED VEGETATION SCIENCE</i> 19, 111-121.	teórico/ experimental	Canadá	aberto	atributo	quantitativo
80	Laughlin, DC; Strahan, RT; Huffman, DW; Meador, AJS. 2017. Using trait-based ecology to restore resilient ecosystems: historical conditions and the future of montane forests in western North America. <i>RESTORATION ECOLOGY</i> 25, S135-S146.	teórico/ experimental	EUA	floresta	atributo	quantitativo
81	Merino-Martin, L; Courtauld, C; Commander, L; Turner, S; Lewandrowski, W; Stevens, J. 2017. Interactions between seed functional traits and burial depth regulate germination and seedling emergence under water stress in species from semi-arid environments. <i>JOURNAL OF ARID ENVIRONMENTS</i> 147, 25-33.	teórico/ experimental	Austrália	aberto	atributo	quantitativo

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82	Boigne, A; Bureau, F; Huste, A; Levesque, S; Delorme, A; Quillet, L; Langlois, E. 2017. Effects of waterlogging levels on <i>Holcus lanatus</i> response traits in different created topsoils. <i>FLORA</i> 234, 106-118.	monitoramento	França	aquático	atributo	quantitativo
83	Engst, K; Baasch, A; Bruelheide, H. 2017. Predicting the establishment success of introduced target species in grassland restoration by functional traits. <i>ECOLOGY AND EVOLUTION</i> 7, 7442-7453.	monitoramento	Alemanha	aberto	atributo	qualitativo e quantitativo
84	Cole, I; Prober, S; Lunt, I; Koen, T. 2017. Establishment of native grasses and their impact on exotic annuals in degraded box gum woodlands. <i>AUSTRAL ECOLOGY</i> 42, 632-642.	monitoramento	Austrália	aberto	grupo	qualitativo
85	Giannini, TC; Giuliotti, AM; Harley, RM; Viana, PL; Jaffe, R; Alves, R; Pinto, CE; Mota, NFO; Caldeira, CF; Imperatriz-Fonseca, VL; Furtini, AE; Siqueira, JO. 2017. Selecting plant species for practical restoration of degraded lands using a multiple-trait approach. <i>AUSTRAL ECOLOGY</i> 42, 510-521.	teórico/ experimental	Brasil	floresta	atributo	qualitativo e quantitativo
86	Laughlin, DC; Strahan, RT; Moore, MM; Fule, PZ; Huffman, DW; Covington, WW. 2017. The hierarchy of predictability in ecological restoration: are vegetation structure and functional diversity more predictable than community composition?. <i>JOURNAL OF APPLIED ECOLOGY</i> 54, 1058-1069.	monitoramento	EUA	floresta	atributo	quantitativo
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89	Silva, RRP; Vieira, DLM. 2017. Direct seeding of 16 Brazilian savanna trees: responses to seed burial, mulching and an invasive grass. <i>APPLIED VEGETATION SCIENCE</i> 20, 410-421.	planejamento e monitoramento	Brasil	aberto	atributo	qualitativo e quantitativo
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91	Douda, J; Boublik, K; Doudova, J; Kyncl, M. 2017. Traditional forest management practices stop forest succession and bring back rare plant species. JOURNAL OF APPLIED ECOLOGY 54, 761-771.	monitoramento	República Tcheca	floresta	atributo	qualitativo e quantitativo
92	Rosenfield, MF; Muller, SC. 2017. Predicting restored communities based on reference ecosystems using a trait-based approach. FOREST ECOLOGY AND MANAGEMENT 391, 176-183.	monitoramento	Brasil	floresta	atributo	quantitativo
93	Byun, C; Lee, EJ. 2017. Ecological application of biotic resistance to control the invasion of an invasive plant, <i>Ageratina altissima</i> . ECOLOGY AND EVOLUTION 7, 2181-2192.	teórico/ experimental	Coréia do Sul	floresta	atributo	qualitativo e quantitativo
94	Yannelli, FA; Koch, C; Jeschke, JM; Kollmann, J. 2017. Limiting similarity and Darwin's naturalization hypothesis: understanding the drivers of biotic resistance against invasive plant species. OECOLOGIA 183, 775-784.	teórico/ experimental	Alemanha	aberto	atributo	qualitativo e quantitativo
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97	Kerns, BK; Day, MA. 2018. Prescribed fire regimes subtly alter ponderosa pine forest plant community structure. ECOSPHERE 9, -.	monitoramento	EUA	floresta	grupo	qualitativo
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106	Charles, LS. 2018. Plant Functional Traits and Species Selection in Tropical Forest Restoration. TROPICAL CONSERVATION SCIENCE 11, -.	teórico/ experimental	NA	floresta	atributo	qualitativo e quantitativo
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109	Toledo, RM; Santos, RF; Baeten, L; Perring, MP; Verheyen, K. 2018. Soil properties and neighbouring forest cover affect above-ground biomass and functional composition during tropical forest restoration. <i>APPLIED VEGETATION SCIENCE</i> 21, 179-189.	monitoramento	Brasil	floresta	atributo	quantitativo
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111	Werden, LK; Alvarado, P; Zarges, S; Calderon, ME; Schilling, EM; Gutierrez, M; Powers, JS. 2018. Using soil amendments and plant functional traits to select native tropical dry forest species for the restoration of degraded Vertisols. <i>JOURNAL OF APPLIED ECOLOGY</i> 55, 1019-1028.	teórico/ experimental	Costa Rica	floresta	atributo	quantitativo
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114	Demenois, J; Carriconde, F; Bonaventure, P; Maeght, JL; Stoke, A; Rey, F. 2018. Impact of plant root functional traits and associated mycorrhizas on the aggregate stability of a tropical Ferralsol. <i>GEODERMA</i> 312, 6-16.	teórico/ experimental	Nova Caledônia	NA	atributo	quantitativo
115	Van de Peer, T; Mereu, S; Verheyen, K; Saura, JMC; Morillas, L; Roales, J; Lo Cascio, M; Spano, D; Paquette, A; Muys, B. 2018. Tree seedling vitality improves with functional diversity in a Mediterranean common garden experiment. <i>FOREST ECOLOGY AND MANAGEMENT</i> 409, 614-633.	teórico/ experimental	Itália	floresta	atributo	quantitativo
116	O'Leary, B; Burd, M; Venn, SE; Gleadow, R. 2018. Integrating the Passenger-Driver hypothesis and plant community functional traits to the restoration of lands degraded by invasive trees. <i>FOREST ECOLOGY AND MANAGEMENT</i> 408, 112-120.	monitoramento	Austrália	semi-natural	atributo	quantitativo
117	Czerwinski, M; Woodcock, BA; Golinska, B; Dembek, W. 2018. Plant traits explain the success of vacuum harvesting as a method of seed collection for the restoration of species-rich grasslands. <i>LANDSCAPE AND ECOLOGICAL ENGINEERING</i> 14, 147-155.	teórico/ experimental	Polônia	aberto	atributo	qualitativo e quantitativo

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121	Hanberry, BB; Dey, DC. 2019. Historical range of variability for restoration and management in Wisconsin. <i>BIODIVERSITY AND CONSERVATION</i> 28, 2931-2950.	teórico/ experimental	EUA	floresta	grupo	qualitativo
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123	Halassy, M; Botta-Dukat, Z; Csecserits, A; Szitar, K; Torok, K. 2019. Trait-based approach confirms the importance of propagule limitation and assembly rules in old-field restoration. <i>RESTORATION ECOLOGY</i> 27, 840-849.	teórico/ experimental	Hungria	aberto	atributo	qualitativo e quantitativo
124	Jing, GH; Cheng, JM; Su, JS; Wei, L; Hu, TM; Li, W. 2019. Community-weighted mean traits play crucial roles in driving ecosystem functioning along long-term grassland restoration gradient on the Loess Plateau of China. <i>JOURNAL OF ARID ENVIRONMENTS</i> 165, 97-105.	monitoramento	China	aberto	atributo	quantitativo
125	Janssen, P; Piegay, H; Pont, B; Evette, A. 2019. How maintenance and restoration measures mediate the response of riparian plant functional composition to environmental gradients on channel margins: Insights from a highly degraded large river. <i>SCIENCE OF THE TOTAL ENVIRONMENT</i> 656, 1312-1325.	teórico/ experimental	França	aquático	atributo	quantitativo
126	Bell, MD; Lulow, ME; Balazs, KR; Huxman, KA; McCollum, JR; Huxman, TE; Kimball, S. 2019. Restoring a Mediterranean-climate shrub community with perennial species reduces future invasion. <i>RESTORATION ECOLOGY</i> 27, 298-307.	teórico/ experimental	EUA	aberto	grupo	qualitativo

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127	Pitz, C; Mahy, G; Harze, M; Uyttenbroeck, R; Monty, A. 2019. Comparison of mining spoils to determine the best substrate for rehabilitating limestone quarries by favoring native grassland species over invasive plants. ECOLOGICAL ENGINEERING 127, 510-518.	teórico/ experimental	Bélgica	aberto	atributo	qualitativo e quantitativo
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