



MAPBIOMAS [BR]

## LEGEND DESCRIPTION COLLECTION 4.0

Level 1	Level 2	Level 3	Biomes	Brief description	IBGE (1999; 2012) Classification	FAO (2012) Classification	GHG National Inventory (2015) Classification
Forest	Natural Forest Formation	Forest Formation	Amazon	Dense Ombrophilous Forest, Evergreen Seasonal Forest, Open Ombrophilous Forest, Semi-deciduous Seasonal Forest, Deciduous Seasonal Forest, Wooded Savannah, Areas that had fire or logging, Forest resulting from natural successional processes, after total or partial primary vegetation suppression by anthropogenic actions or natural causes, which may have remaining trees of primary vegetation. Alluvial Open Ombrophilous Forest established along the watercourses, occurring in periodically or permanently flooded plains and terraces, where in the Amazon represent the physiognomies of igapó and lowland forests, respectively.	Da, Db, Ds, Dm, Ha, Hb, Hs, Ld, La, Aa, Ab, As, Am, Fa, Fb, Fs, Fm, Ca, Cb, Cs, Cm, Vsp	FDP, FEP, FSP, FEM, FDM, FSM	FMN, FM, FSec
			Caatinga	Vegetation types with predominance of continuous canopy - Wooded Steppe Savanna, Semi-deciduous and Deciduous Seasonal Forest.	Td, Cs, Cm, Fm, Fs, Pa, As, Fb, Pf, Pm, Fa, Cb, Ds, Am, Ab, Sd	FEP, FEM	FMN, FM
			Cerrado	Vegetation types with predominance of tree species, with continuous canopy formation (Riparian Forest, Gallery Forest, Dry Forest and Forested Savanna) (Ribeiro & Walter, 2008), as well as Semi-deciduous Seasonal Forests.	Aa, Ab, As, Cb, Cm, Cs, Da, Dm, Ds, F, Ml, Mm, P, Sd, Td	FEP, FDP, FSP	FMN, FM
			Atlantic Forest	Dense, Open and Mixed Ombrophilous Forest, Semi-deciduous and Deciduous Seasonal Forest, and Pioneer Formation.	D, A, M, F, C, Pma	FEP, FSP	FMN, FM
			Pampa	Vegetation with predominance of tree species and continuous canopy. It includes forest typologies: Ombrophilous, Semi-deciduous and Deciduous and part of the pioneer formations.	Da, Db, Ds, Dm, Ma, Ms, Mm, Ml, Fa, Fb, Fs, Fm, Ca, Cb, Cs, Cm, P, Pa, Pm	FEP, FDP, FSP	FMN, FM
			Pantanal	Tall trees and shrubs in the lower stratum: Deciduous and Semi-deciduous Seasonal Forest, Wooded Savanna, Wooded Steppe Savanna, and Fluvial and/or Lacustre Influenced Pioneer Formations.	Ca, Cb, Cs, Fa, Fb, Fs, SN, Sd, Td, Pa	FEP, FSP	FMN, FM
		Savanna Formation	Amazon	n.a.			
			Caatinga	Vegetation types with predominance of semi-continuous canopy species - Wooded Steppe Savanna and Wooded Savanna.	Ta, Sa,	FDP,FSP, FDM, FSM	FMN, FM
			Cerrado	Savanna formations with defined tree and shrub-herbaceous stratum [Cerrado Stricto Sensu (Dense, Typical, Sparse and Rupestrian Savanna) and "Park Savanna"].	Sa, Ta	WS	FMN, FM
			Atlantic Forest	Steppe, Forested and Wooded Savannas.	Sd, Td, Sa, Ta	FDP, FSP, WS	FMN, FM
			Pampa	n.a.			
			Pantanal	Small tree species, sparsely arranged in the shrub and herbaceous continuous vegetation. The herbaceous vegetation mixes with erect and decumbent shrubs.	Sa, Sp, Sa, Sg, Td, Ta, Tp	FDP, FSP, WS	FMN, FM
		Mangroves		Dense and Evergreen Forest formations, often flooded by tide and associated with the mangrove coastal ecosystem.	Pf	FEP, FEM	FMN, FM
	Forest Plantation			Planted tree species for commercial use (e.g. Eucalyptus and Pinus)	R	FPB, FPC, FPM	Ref
			Amazon	n.a.			

Non Forest Formation	Non-Forest Formation in Wetland	Caatinga	n.a.			
		Cerrado	n.a.			
		Atlantic Forest	n.a.			
		Pampa	Wetlands (fluvial and lake influence) and marshes (marine influence).	P, Pa, Pm	OM	GNM, GM, GSec
		Pantanal	Wetland areas of plains, subject to periodic or permanent flooding, located along watercourses and in lowlands areas that accumulate water. Herbaceous / shrub vegetation and/or arboreal and pioneer formations (ex: swamps, "cambarazal", "paratudal", "carandazal").	Tg, Sp, Pa, Tp		GNM, GM, GSec
	Grassland Formation	Amazon	n.a.			
		Caatinga	Vegetation type with predominance of herbaceous species (Park Steppe Savanna, Herbaceous-Woody Steppe Savanna, Park Savanna, Herbaceous-Woody Savanna) + (Flooded areas with a interconnected ponds net, located along waterways and in lowlands areas that accumulate water, vegetation predominantly herbaceous to shrub).	Tp, Sg, Rm, Sp, Tg, Rl	WG, OG, WS	GNM, GM, GSec
		Cerrado	Grassland formations with predominance of herbaceous stratum (dirty, clean and rupestrian fields).	Sp, Sg, Tp, Tg	WG, OG	GNM, GM, GSec
		Atlantic Forest	Savannas, Park and Grassland Steppe Savannas, Steppe and Shrub and Herbaceous Pioneers.	Sp, Sg, Tp, Tg, E, Pa	WS,OG	GNM, GM, GSec
		Pampa	Field formations with predominance of herbaceous or herbaceous-woody stratum. It also includes patches with a developed shrub-herbaceous stratum. In particular in the Pampa and Pantanal biomes, part of the area classified as Grassland Formation also includes pasture areas.	E, Ea, Ep, Eg, T, Ta, Tp, P, Pa, Pm	WG, OG	GNM, GM, GSec
		Pantanal	Grassland / herbaceous vegetation that allow cattle in natural or planted pasture. In particular in the Pampa and Pantanal biomes part of the area classified as Grassland Formation also includes pasture areas.	Sg, Sp	WG, OG	GNM, GM, GSec
	Salt flat		"Apicuns" or Salt flats are formations often without tree vegetation, associated to a higher, hypersaline and less flooded area in the mangrove, generally in the transition between this area and the continent.			
	Rocky outcrop	Amazon	n.a.			
		Caatinga	Naturally exposed rocks in the terrestrial surface without soil cover, often with partial presence of rock vegetation and high slope.			
		Cerrado	n.a.			
		Atlantic Forest	Naturally exposed rocks in the terrestrial surface without soil cover, often with partial presence of rock vegetation and high slope.	Ar	OX	
		Pampa	Naturally exposed rocks in the terrestrial surface without soil cover, often with partial presence of rock vegetation.	Ar	OX	
		Pantanal	n.a.			
	Other Non-Forest Formation	Amazon	Savanna, Park Savanna (Marajó), Steppe Savanna (Roraima), Woody-Grassland Savanna , "Campinarana".	Sd, Sa, Sp, Td, Ta, Lb, Lg	FDP, WS, FSP	GNM, GM, GSec, FMN, FM
		Caatinga	n.a.			
		Cerrado	n.a.			
		Atlantic Forest	n.a.			
		Pampa	n.a.			
		Pantanal	n.a.			

Farming	Pasture		Pasture areas, natural or planted, related with farming activity. In particular in the Pampa and Pantanal biomes part of the area classified as Grassland Formation also includes pasture areas.	AP, PE, PS	OP, OG	Ap
	Agriculture	Annual and Perennial Crop	Areas predominantly occupied by annual crops and, in some regions (mainly in Northeast) with the presence of perennial crops.	ATp, ATc	OCA, OCP, OCM	Ac
		Semi-perennial Crop	Areas cultivated with the sugarcane plantation.	ATc	OCA, OCP	Ac
		Crops mosaic (Caatinga)	Areas occupied with different agriculture types (different cycles and agricultural crops) and with intermittent or sporadic crops.	ATpc	OCA, OCM, OP, OG	Ac
	Mosaic of Agriculture and Pasture		Farming areas where it was not possible to distinguish between pasture and agriculture.	AP, PE, PS, ATp, ATc, ATpc	OCA, OCM, OP, OG	Ac, Ap
Non vegetated area	Beach and Dune		Sandy areas, with bright white color, where there is no vegetation predominance of vegetation of any kind.	Dn		
	Urban Infrastructure		Urban areas with predominance of non-vegetated surfaces, including roads, highways and constructions.			S
	Mining		Areas related to large mineral extraction, with clear soil exposure due to heavy machinery. Only areas belonging to DNPM's chart (SIGMINE) are considered.	MCA	OQ	O
	Other non vegetated area	Amazon	Non-permeable surface areas (infrastructure, urban expansion or mining) not mapped into their classes			S
		Caatinga	Non-permeable surface areas (infrastructure, urban expansion or mining) not mapped into their classes			
		Cerrado	Non-permeable surface areas (infrastructure, urban expansion or mining) not mapped into their classes			
		Atlantic Forest	Non-permeable surface areas (infrastructure, urban expansion or mining) not mapped into their classes and regions of exposed soil in natural or crop areas			
		Pampa	Areas with exposed sandy surfaces including mainly river and sandy beaches. It also contemplates non-permeable surfaces (roads and infrastructure of rural infrastructure).			
		Pantanal	Exposed soil areas (mainly sandy soil) not classified as Grassland Formation or Pasture.		OX	
Water	River, Lake and Ocean		Rivers, lakes, dams, reservoir and other water bodies		IRP, IRS, IL, ID	A, Res
	Aquaculture		Artificial lakes, where aquaculture and/or salt production activities predominate			
Non Observed						NO