diversity

MDPI

Table S1. Bioclimates, thermotypes, and ombrotypes present in Cabo Verde (adapted from Rivas-Martínez et al. [28]).

Bioclimates	Thermoclimatic types	Thermotype horizons	Ombroclimatic types	Ombric horizons
Tropical Pluviseasonal	Infratropical	Upper infratropical	Ultrahyperarid	Upper ultrahyperarid
Tropical Xeric	Thermotropical	Lower thermotropical	Hyperarid	Lower hyperarid
Tropical Desertic		Upper thermotropical		Upper hyperarid
Tropical Hyperdesertic	Mesotropical	Lower mesotropical	Arid	Lower arid
		Upper mesotropical		Upper arid
	Supratropical	Lower supratropical	Semiarid	Lower semiarid
				Upper semiarid
			Dry	Lower dry
				Upper dry
			Subhumid	Lower subhumid

Table S2. Plant communities present in Cabo Verde (excluding ruderal communities), bioclimatic characterization and respective syntaxonomic framework [Class (Cl.), Order (Or.), Alliance (Al.), Association (As.)] (adapted from Rivas-Martínez et al. [28]).

Plant community type*	
***Ficus* woodlands** Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Dichrostachyo platycarpae-Acacietalia caboverdeanae; All.: Fico gnaphalocarpae-Acacion caboverdeanae	
Ficus sycomorus woodlands	Ass.: *Cocculo penduli-Ficetum gnaphalocarpae* Mesophanerophytic micro-woodland desertic savanna community, growing on seasonal temporarily mostly sandy wet soils with fleeting superficial hydromorphy in plains, depressions and torrents. In infra-thermotropical, mostly arid bioclimate.
	Ass.: *Forsskaoleo procridifoliae-Ficetum gnaphalocarpae* Micro-mesophanerophytic woodland savanna community, growing on seasonal temporary moist shallow soils, on plains and torrents with fleeting superficial temporary hydromorphy. In thermotropical, arid to lower semiarid bioclimate.
Ficus sur woodlands	Ass.: *Dichrostachyo platycarpae-Ficetum sur* Micro-mesophanerophytic woodland savanna community, growing on near deep soils with a temporary seasonal short moist period. In tropical xeric, thermotropical, semiarid to low dry bioclimate.
	Ass.: *Euphorbio tuckeyanae-Ficetum sur*

	Mesophanerophytic woodland savanna community, growing on temporarily seasonal deep moist soils and in rocky torrents. In mesotropical upper arid, semiarid to lower dry bioclimate.
***Sideroxylon marginatum* woodlands** Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Dichrostachyo platycarpae-Acacietalia caboverdeanae; All.: Fico gnaphalocarpae-Acacion caboverdeanae	
	Ass.: *Sideroxyletum marginatae* Evergreen meso-microwoodland savanna community, mostly growing on near inaccessible wall and rocky leptosols. In thermotropical, arid bioclimate.
Woody savannas of *Acacia caboverdeana* Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Dichrostachyo platycarpae-Acacietalia caboverdeanae; All.: Fico gnaphalocarpae-Acacion caboverdeanae	
	Ass.: *Forsskaoleo procridifoliae-Acacietum caboverdeanae* Microphanerophytic climactic deciduous micro-woodland savanna community, growing on lithic andosols and regosols. In tropical desertic, thermotropical, arid bioclimate.
	Ass.: *Cocculo penduli-Acacietum caboverdeanae* Micro-woodland savanna community growing on lithosols and andosols. In tropical desertic, in infra-thermotropical, upper arid bioclimate.
	Ass.: *Dichrostachyo platycarpae-Acacietum caboverdeanae* Climactic phanerophytic deciduous microwoodland savanna community, growing on andosols and leptosols. In upper infra and thermotropical, upper arid, semiarid and lower dry bioclimate.
***Dracaena caboverdeana* communities** Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Dichrostachyo platycarpae-Acacietalia caboverdeanae; All.: Fico gnaphalocarpae-Acacion caboverdeanae	
	Ass.: *Dracaenetum caboverdeanae* Evergreen micro-mesowoodland community, growing on leptosols, colluviums and rocky stations. In thermotropical and lower mesotropical, subhumid to dry bioclimate.
***Phoenix atlantica* communities** Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Dichrostachyo platycarpae-Acacietalia caboverdeanae; All.: Phoenicion atlanticae	
	Ass.: *Cocculo penduli-Phoenicetum atlanticae* Palm microforest savanna community, on riparian streams, near the coast, with temporary variable depth hydromorphy, on allochthonous arenic or regosolic fluvisols favoured by bars or coastal dune deposits limited to exorheic runoff into sea. In infra-thermotropical, hyperarid to arid bioclimate.
***Tamarix senegalensis* thickets** Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Dichrostachyo platycarpae-Acacietalia caboverdeanae; All.: Tamaricion senegalensis	
	Ass.: *Cocculo penduli-Tamaricetum senegalensis* Nano-microphanerophytic tamarisk savanna thickets, growing on temporary watercourses and torrents, with generally scarce intermittent flow, developed on allochthonous arenic or fractopetric soils, with near permanent deep temporal hydromorphism. In thermotropical, hyperarid to semiarid bioclimate.
Perennial grasslands and herbaceous xeric savannas	

Cl.: Heteropogonetea contorti; Ord.: Melinio grandiflorae-heteropogonetalia contorti; All.: Enneapogonion desvauxii	
	Ass.: *Bothriochloo bladhii-Enneapogonetum desvauxii* Xeromorphic perennial short grassland savanna, growing on sandy lithosols in most of lowlands. In infra-thermotropical, hyperarid to arid bioclimate.
Cl.: Heteropogonetea contorti; Ord.: Melinio grandiflorae-heteropogonetalia contorti; All.: Heteropogonion melanocarpo-contorti	
	Ass.: *Dichanthio foveolati-Heteropogonetum contorti* Xeromorphic perennial grassland savanna, growing on leptic andosols. In upper thermotropical to lower mesotropical, lower semiarid to dry bioclimate.
	Ass.: *Heteropogonetum melanocarpi* Xeromorphic perennial short grassland savanna, growing on leptic andosols. In thermo to lower mesotropical, semiarid to dry bioclimate.
Annual grasslands and herbaceous desertic savanna Cl.: Tetraenetea simplicis; Ord.: Aristido cardosoi-Tetraenetalia simplicis; All.: Aristido cardosoi-Tetraenion simplicis	
	Ass.: *Aristido cardosoi-Tetraenetum simplicis* Xeromorphic ephemeral annual grassland community. In desertic infra-thermotropical aridic bioclimate.
	Ass.: *Asphodelo mariolousae-Aristidetum cardosoi* Annual ephemeral grassland savanna community, growing in high mountains, on lapilli tepha and sandy soils. In tropical xeric mesotropical semiarid to dry bioclimate.
	Ass.: *Sehimatetum ischaemoidis* Desertic infra-thermotropical hyperarid ephemeral annual open grassland savanna, growing on small sandy deposits.
Shrub communities Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Euphorbio tuckeyanae-Sarcostemmetalia daltonii; All.: Asparago squarrosi-Sarcostemmion daltonii	
	Several communities (for details see Rivas-Martínez et al. [28]) Climactic and edaphoxerophilous desertic and hyperdesertic shrub and dwarf scrub open savanna communities, on leptosols, under strong euhyperoceanic bioclimate; on poorly developed arenosols, andosols or regosols, arenic, skeletic, leptic or tephric. In infra-thermotropical, from ultrahyperarid to lower arid bioclimate.
Cl.: Cocculo penduli-Sarcostemmetea daltonii; Ord.: Euphorbio tuckeyanae-Sarcostemmetalia daltonii; All.: Globulario amygdalifoliae-Periplocion chevalieri	
	Several communities (for details see Rivas-Martínez et al. [28]) Desertic and xeric climactic tropical and edaphoxerophilous tall shrub savanna community, developed on leptosols, andosols, colluvial and tephric soils. In thermo-mesotropical and occasionally lower supratropical, from upper arid to upper dry and occasionally subhumid bioclimate.
Sand dune communities Cl.: Frankenio pseudoericifoliae-Suaedetea caboverdeanae; Ord.: Frankenio pseudoericifoliae-Suaedetalia caboverdeanae; All.: Polycarpaeo caboverdeanae-Tetraenion waterlotii	

	Ass.: *Polycarpaeo caboverdeanae-Tetraenetum waterlotii* Perennial dwarf-shrub microphyllous succulent community, growing on coastal sand dunes. In thermo-infratropical ultrahyperarid to low arid.
	Ass.: *Tetraenetum vicentinae* Perennial dwarf-shrub microphyllous succulent hyperarid community, growing on northwest coastal sand dunes. In lower thermotropical and lower hyperarid bioclimate.
	Ass.: *Sporobolo spicati-Cyperetum crassipedis* Pioneer perennial grassland dwarf savanna community, growing in sand dunes. In arid and hyperarid coasts.
	Ass.: *Loto brunneri-Pulicarietum diffusae* Dwarf-shrub and subshrub pioneer community, growing in coasts and foothills, on hard sandy dune soils and basaltic substratum slightly covered by mobile sand. In infra- to thermotropical ultrahyperarid-arid bioclimate.
Saltwater marshes Cl.: Arthrocnemetea franzii; Ord.: Artrocnemetalia franzii; All.: Arthrocnemion franzii	
	Ass.: *Arthrocnemetum franzii* Permanent succulent halophilous nanophanerophyte community, growing on coastal sandy soils only occasionally and temporarily flooded soils. In infra-thermotropical desertic arid to ultrahyperarid coasts of the eastern islands of Cabo Verde and in African coasts.
	Ass.: *Cressetum salinae* [SL, BO, M, SN] Psammo-halophyte coastal annual and biennial community, growing on temporary humid halophilic sandy soils. In infra-thermotropical hyperarid-arid, coasts and lagoons of the eastern islands of Cabo Verde and in the littoral of tropical Sahara (Morocco, Mauritania and Senegal).
Cl.: Arthrocnemetea franzii; Ord.: Sesuvietalia sesuvioidis; All.: Sesuvion sesuvioidis	
	Ass.: *Sesuvietum sesuvioidis* Halophilous succulent community in saline and subsaline wet coastal stations, waterlogged and flooded by saltwater.
	Ass.: *Sesuvietum portulacastri* Halophilous succulent community on margins of temporarily flooded saline sandy.
	Ass.: *Blutaparontetum vermicularis* Coastal aerohaline community. In infra-thermotropical ultrahyperarid to arid bioclimates.
Hydrophytic communities Cl.: Magnocarici elatae-Phragmitetea australis; Ord.: Phragmitetalia australis; All.: Phragmition australis	
	Typha domingensis community
Cl.: Magnocarici elatae-Phragmitetea australis; Ord.: Rorippo nasturtii-aquaticae-Glyceretalia fluitantis; All.: Rorippion nasturtii-aquaticae	
	Rorippa nasturtium-aquaticum community

Chasmophytic communities	
Cl.: Adiantetea capilli-veneris; Ord.: Adiantetalia capilli-veneris; All.: Adiantion trifidi	
	Ass.: *Adiantetum trifidi* Perennial community growing on basaltic rich wall under water runoff. In infra-thermotropical hyperarid-semiarid.
	Ass.: *Hypodematio crenati-Campanuletum bravensis* Perennial community in humid and shady hard basaltic walls. In infra-thermotropical arid to semiarid.
Cl.: Asplenietea trichomanis; Ord.: Kickxietalia elegantis; All.: Kickxion elegantis	
	Ass.: *Kickxietum webbianae* Community on mafic volcanic rocky fissures that kept the moist for some time after periods of rainfall. In thermotropical arid to semiarid.
	Ass.: *Diplotaxio hirtae-Kickxietum elegantis* Chasmophytic community growing on ultramafic cliff rocks well exposed to the north. In thermotropical semiarid to dry.
	Ass.: *Umbilico schmidtii-Cheilanthetum acrosticae* Growing on basalt rock crevices and men-built walls.
	Ass.: *Campanuletum jacobaeae* Chasmophytic community growing on volcanic rocks and cliffs. In thermo-mesotropical semiarid to dry.
	Ass.: *Campanulo bravensis-Launaetum thalassicae* Chasmophytic community growing on volcanic rocks. In thermotropical arid to semiarid.
Cl.: Parietarietea judaicae; Ord.: Parietarietalia judaicae; All.: Adiantion inciso-philippensis	
	Ass.: *Adiantetum inciso-philippensis* Community growing on nitrogen-rich urban and rural shadow and often wet walls. In thermotropical arid to dry.

* Most communities are very variable in floristic composition (according to the particular flora of each island); for species details and distribution areas see Rivas-Martínez et al. [28].