

Plant Communities in Kuwait

1. Haloxyletum: The community covers 22.7% of the total area distributed in the north-east, north-west and west of Kuwait.
2. Rhantereitum: The community has significantly receded in its geographic distribution showing 2.1% area.
3. Cypertum: The community showed 26.9% distribution
4. Stipagrostietum: It extends in the west and southwest of Kuwait covering 39.3% of total area
5. Zygothylletum: Commonly found in coastal areas and depressions covering 0.3% distribution.
6. Centropodietum: Commonly found in south-west of Kuwait with 1.0% distribution.
7. Panicetum: It has 0.7% distribution.
8. Halophyletum: This community with 1.9% distribution.

Haloxyletum

- This community is dominated by the species *Haloxylon salicornicum*
- Family: Chenopodiaceae
- a low shrub that grows up to 60 cm in height in summer.
- It is associated with other shrub species of less spatial distribution such as *Astragalus spinosus* (Forssk.) Muschl, and *Chrozophora* spp.
- The community covers 22.7% of the total area distributed in the north-east, north-west and west of Kuwait.



Rhanterium

- This community is dominated by the species *Rhanterium epapposum*
- *Family: Compositae*
- It is a shrub, when mature, it can reach 80 cm in height, forming fibrous stems and roots that are often used as fuel in the past.
- The dominating plant species *Rhanterium epapposum* is highly susceptible to grazing.
- The community has significantly receded in its geographic distribution showing 2.1% area.
- It is in association with *Convolvulus oxyphyllus*, *Moltkiopsis ciliata*, *Helianthemum lippi*, *Centropodia forsskalii*, and *Stipagrostis plumosa*
- Other plant species that are associated with the community are: *Gynandris sisyinchium* in shallow depressions; *Cornulaca aucheri* in disturbed mobile sandy areas; and *Anthemis deserti* Boiss., *Schimpera arabica* Hochst & Steud ex. Boiss., *Arnebia decumbens* Vent. Coss & Kralik., and *Arnebia tinctoria* Forssk. in stable and well developed soils. *Salsola imbricata* Forssk.



Cypertum

- The community is dominated by the species *Cyperus conglomeratus*
- *Family: Cyperaceae*
- It is a perennial grass, that colonizes mainly on sandy areas.
- The plant is about 60 cm tall, forming a dense cluster at the base.
- It is an excellent sand stabilizer as small ridges of fine sand are accumulated on the leeward side of the plant.
- The plant is usually associated with annual species such as *Astragalus annularis* Forssk., *Brassica tournefortii* Gouan. and *Plantago boissieri* Hausskn. & Bornm.
- The community showed 26.9% distribution.



Stipagrostietum

- This is dominated by *Stipagrostis plumosa*.
- Family: Gramineae
- It is perennial grass
- The community is expanding in areas that have been heavily used or disturbed.
- It extends in the west and southwest of Kuwait covering 39.3% of total area.
- The associated species are *Moltkiopsis ciliata*, *Plantago boisieri* and *Stipa capensis*.

Zygophylletum

- The community is dominated by *Zygophyllum qatarense*
- Family: Zygophyllaceae
- It is a medium-sized shrub commonly found in coastal areas and depressions.
- it has 0.3% distribution.
- The community is associated with salt-tolerant annuals and perennials such as *Salsola imbricata*, *Cressa critica* L., and *Aizoan hispanicum* L.



Centropodietum

- This community is dominated by the species *Centropodia forsskalii*
- Family: Gramineae
- It is a perennial grass that has recently become abundant in the south-west of Kuwait with 1.0% distribution.
- The community is usually associated with *Sipagrostis plumosa*.

Panicetum

- This community is dominated by *Panicum turgidum*
- Family: Gramineae
- It is a perennial desert grass forming tangled bushes up to 1 m tall.
- It has 0.7% distribution.
- Associated species are *Aeluropus lagopoides* (L.) Trin. Ex. Thwaites., and *Pennisetum divisum*.



Halophyllum

- Many halophytic plant communities, such as *Tamarix aucheriana*, *Nitraria retusa*., *Halocnemum strobilaceum*, and *Siedlitzia rosmarinus*, dominate this community with 1.9% distribution.
- High water table and occasional flooding from surface runoff characterize the community.
- *Tamarix aucheriana* is a large shrub, about 3 m high, with scale-like leaves. It favors saline flats. Family: Tamaricaceae
- *Nitraria retusa* is a stiff-branched shrub, 1–2 m high. It forms small ridges, with gray woody twigs. The habitat where *Nitraria retusa* grows best is sabkha near the coastal areas in the south. Family: Zygophyllaceae
- Other community types in this community include *Halocnemum strobilaceum* (Family: Chenopodiaceae), which is found in the northern and southern coastal zones, and *Siedlitzia rosmarinus* (Family: Chenopodiaceae)

Tamarix aucheriana



Nitraria retusa



Halocnemum strobilaceum, and
Siedlitzia rosmarinus