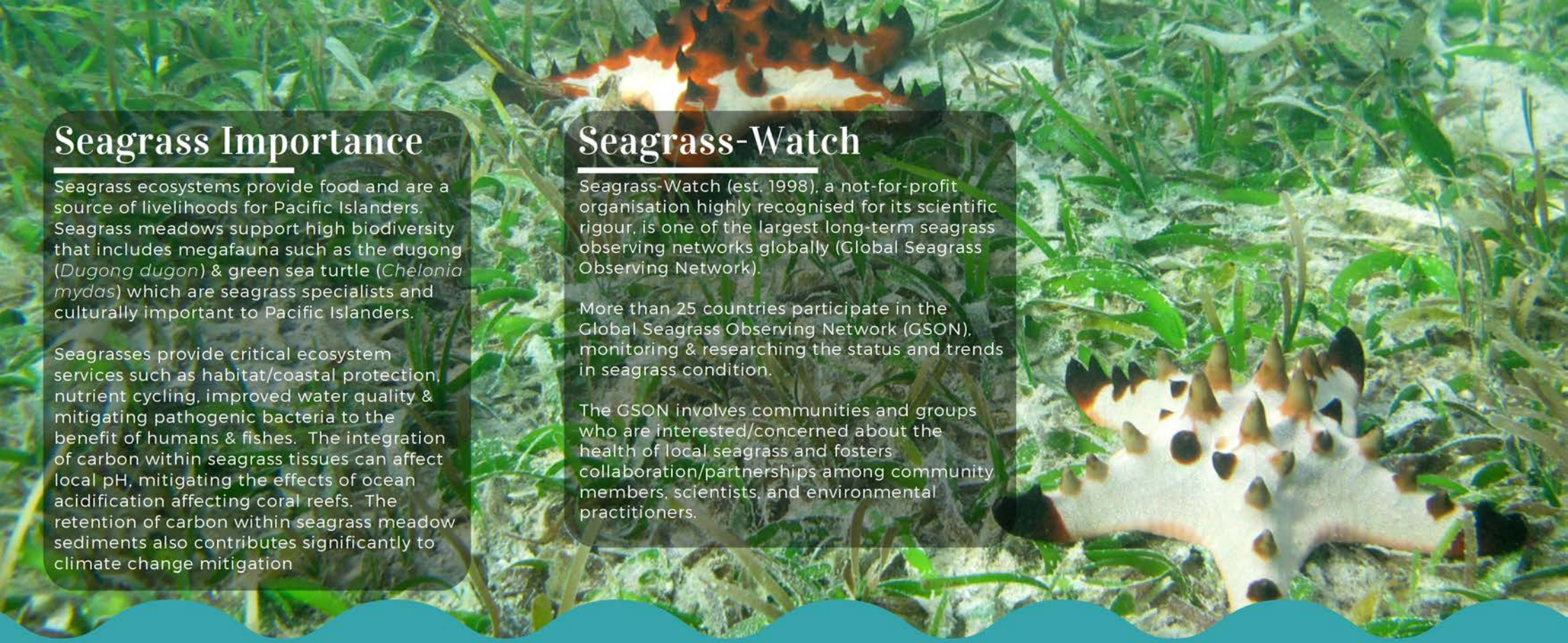

Seagrass Importance

Seagrass ecosystems provide food and are a source of livelihoods for Pacific Islanders. Seagrass meadows support high biodiversity that includes megafauna such as the dugong (*Dugong dugon*) & green sea turtle (*Chelonia mydas*) which are seagrass specialists and culturally important to Pacific Islanders.

Seagrasses provide critical ecosystem services such as habitat/coastal protection, nutrient cycling, improved water quality & mitigating pathogenic bacteria to the benefit of humans & fishes. The integration of carbon within seagrass tissues can affect local pH, mitigating the effects of ocean acidification affecting coral reefs. The retention of carbon within seagrass meadow sediments also contributes significantly to climate change mitigation

Seagrass-Watch

Seagrass-Watch (est. 1998), a not-for-profit organisation highly recognised for its scientific rigour, is one of the largest long-term seagrass observing networks globally (Global Seagrass Observing Network).

More than 25 countries participate in the Global Seagrass Observing Network (GSON), monitoring & researching the status and trends in seagrass condition.

The GSON involves communities and groups who are interested/concerned about the health of local seagrass and fosters collaboration/partnerships among community members, scientists, and environmental practitioners.

Protecting Seagrass

Seagrasses are economically and ecologically valuable to both humans and marine life. Seagrass is one of the most productive natural ecosystems in the world.

Seagrasses improve water quality by acting as nutrient sinks, buffering or filtering nutrient and chemical inputs to the marine environment. They also stabilise coastal sediments, helping to mitigate erosion.

Seagrass meadows are fragile ecosystems. Human impacts such as sewage discharge, oil spills, coastal runoff, dredging, boat propellers and anchors/moorings can damage or destroy seagrasses.

Contact

PO BOX 4
Clifton Beach, QLD 4879
admin@seagrasswatch.org

Join
The Global Seagrass Observing Network,
so marine life & oceans can have a future.

Local eyes, Global wise

www.seagrasswatch.org

Vanuatu
Seagrasses

Vanuatu seagrasses

Twelve seagrass species have been confirmed from the waters of Vanuatu, with the earliest record being of *Cymodocea rotundata* on the reef at Lamap (Port Sandwich, Malekula) in 1935-36. The most widespread species are *Cymodocea rotundata*, *Enhalus acoroides*, *Halodule uninervis*, *Halophila ovalis* and *Thalassia hemprichii*.

Cymodocea rotundata

- leaf tip rounded with smooth edge
- leaf 2-4mm wide with 9-15 parallel veins
- leaf sheath scars continuous around stem
- old sheaths forming a fibrous mass at the base of each shoot

Cymodocea serrulata

- leaf tip rounded with serrated edge
- leaf 4-9mm wide with 13-17 parallel veins
- leaf sheath broadly flat and triangular, not fibrous
- leaf sheath scars not continuous around upright stem

Enhalus acoroides

- large plant, leaves >30 cm long, >1 cm wide
- inrolled edges of leaves
- long, black bristles protruding from thick rhizome

Halodule pinifolia

- leaf tip rounded
- narrow leaf blades 0.25-1.2mm wide
- leaf with 3 distinct parallel veins, sheaths fibrous
- rhizome usually white with small black fibres at the nodes

Halodule uninervis

- leaf tip tri-dentate or pointed, not rounded
- leaf blades 0.5-5mm wide
- leaf with 3 distinct parallel veins, sheaths fibrous
- rhizome usually white with small black fibres at the nodes

Seagrass distribution

Seagrass distribution is most likely influenced by shelter, sediment characteristics, water clarity and tidal exposure. Much of Vanuatu's seagrass meadows appear restricted to narrow fringing and inner reef areas or sheltered lagoons (e.g. Erakor, Éfaté), bays (e.g. Palikoulo Bay, Espiritu Santo), inlets (e.g. Mosso Islet, Éfaté), where they are generally reported to occur in scattered patches or form small meadows (e.g., <100m wide zones). Extensive meadows, however, can occur on the comparatively wide intertidal areas around the Maskelyne Islands and along the east and southeast coast of Malakula (e.g. Crab Bay and Lamap).

Halophila capricorni

- fine hairs on one side of leaf blade
- leaf margins finely serrated
- leaf 15-30mm long and 5-9 mm wide
- 9-14 cross vein pairs, occasionally forked

Halophila decipiens

- leaf margins finely serrated
- fine hairs on both sides of leaf blade
- leaf apex rounded to slightly pointed
- leaf 10-25mm long and 3-10mm wide
- 6-8 cross vein pairs

Halophila ovalis

- cross veins 8 or more pairs
- leaf 5-40mm long & 5-20mm wide
- leaf margins smooth
- no leaf hairs

Halophila minor

- less than 8 pairs of cross veins
- leaf 5-15mm long and 3.5-6mm wide
- leaf margins smooth
- no leaf hairs

Seagrass habitat

Denser meadows of predominately *Cymodocea rotundata*, *Enhalus acoroides*, *Halodule uninervis*, and *Thalassia hemprichii* occur in shallow lagoons, bays and intertidal areas, particularly where the major or only substrate is sand. Seagrass diversity and abundance is generally lower at reef habitats where sediments are coarser, the sediment depth is less and the physical disturbance from waves is greater. Little is known of deepwater (>10 m) seagrasses, however, *Halophila decipiens* and *Halophila capricorni* have been reported from the channels and deep outer reef slopes of southern Espiritu Santo. The rarest species is *Ruppia maritima*, which occurs in the brackish waters of river mouths (e.g. Adisone River, Espiritu Santo) or coastal ponds (e.g. Port Resolution, Tanna).

Ruppia maritima

- leaves fine and thread-like
- leaf tip pointed, sometimes serrated
- leaves up to 15cm long
- rhizome fragile
- inflorescence on a long stalk, sometimes spiralled

Syringodium isoetifolium

- leaves noodle/spaghetti like and taper to a point
- leaves contain air cavities
- leaves 7-30cm long

Thalassia hemprichii

- leaf tip rounded, may be slightly serrated
- leaf 4-12mm wide with 9-11 parallel veins
- leaf with obvious red flecks, 1-2mm long
- leaf often distinctly curved
- rhizome thick with distinct scars, usually triangular in shape
- one short root per rhizome node

Local eyes, Global wise