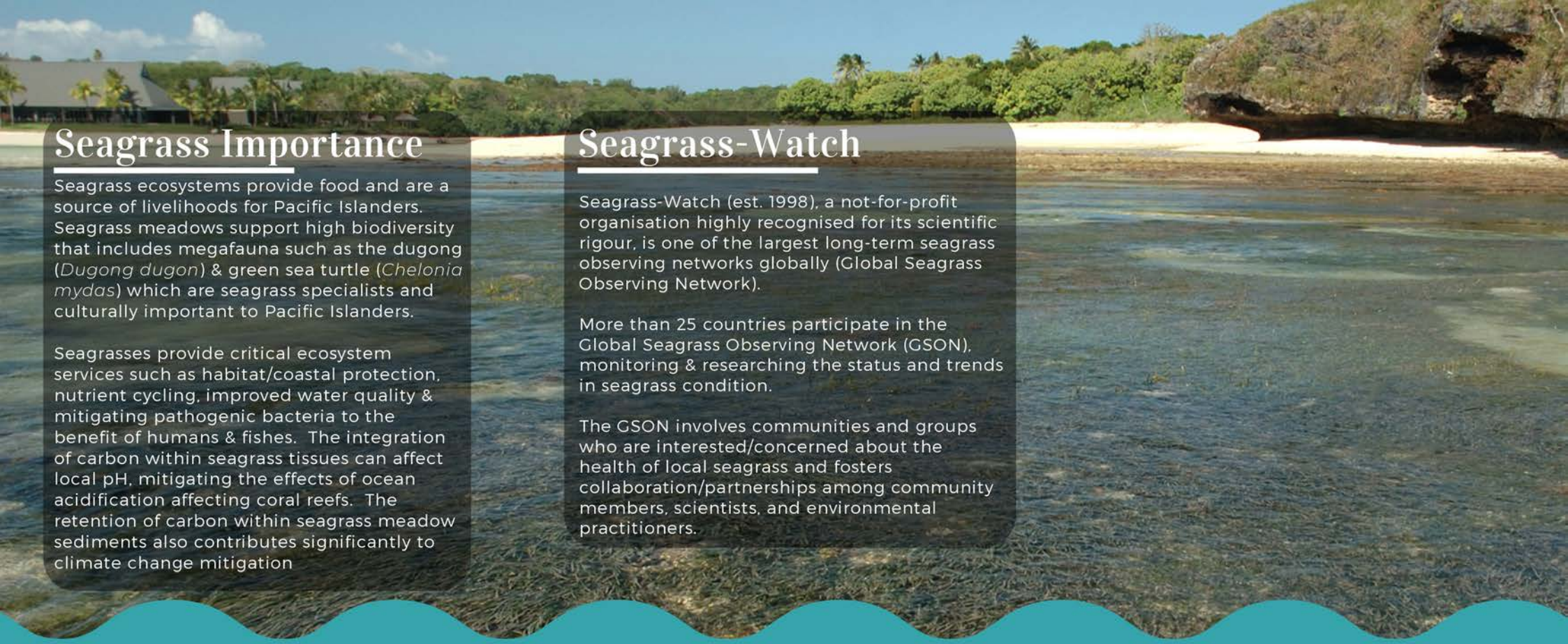

Seagrass Importance

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

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Clifton Beach, QLD 4879
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Join
The Global Seagrass Observing Network,
so marine life & oceans can have a future.

Local eyes, Global wise

www.seagrasswatch.org

SEAGRASS-WATCH
GLOBAL SEAGRASS OBSERVING NETWORK

Seagrasses of Melanesia

Pacific Islands of Melanesia

The Pacific Islands of Melanesia are located in the southwest Pacific and cover an area of approximately 5,500,000 km2. The region includes the key nations of Fiji, Papua New Guinea, Solomon Islands, and Vanuatu. Additionally, it encompasses the French overseas collectivity of New Caledonia.

Seagrass species richness

Melanesia is the Pacific region with the highest seagrass species richness, followed by Micronesia and Polynesia, respectively. Fifteen species of seagrass have been recorded from Melanesia. The greatest diversity of seagrasses is reported from Papua New Guinea (13 species), and attenuates eastward across the Pacific.

Seagrasses of Melanesia

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

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

Halophila spinulosa

- leaves arranged opposite in pairs
- leaf margin serrated
- 10-20 pairs of leaves per shoot
- leaf 15-20mm long and 3-5mm wide

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

Thalassodendron ciliatum

- distinct upright stem
- clusters of curved leaves (>5 mm wide), margins serrated
- stem and rhizome woody

Zostera muelleri

- leaf with 3-5 parallel-veins
- cross-veins form mesh-like pattern across leaf blade
- leaf tip smooth and rounded, may be dark point at tip
- rhizome usually brown or yellow in younger parts
- prophyllum present, i.e. single leaf originating from rhizome instead of from vertical, leaf bearing shoot.

Local eyes, Global wise