SeagrassNet is a global seagrass monitoring program, active throughout the North Pacific. SeagrassNet scientifically monitors seagrass beds so that changes in their health and structure can be determined with accuracy over time. All data collected are sent to a website/database for display and analysis: www.SeagrassNet.org.

Besides finding new information on the status and trends of seagrass health, SeagrassNet is committed to the long-term protection of seagrasses. SeagrassNet monitoring has shown that seagrass near populated and rapidly developing areas does poorly, while seagrass in more remote, pristine and protected areas is still largely healthy.

Threats to seagrass

- human activities on land
- aquaculture
- anything that decreases water clarity
- fertilizers/pesticides entering the ocean
- nutrients entering the ocean
- sediments entering the ocean
- dredging and coastal development
- some boating and fishing activities
- docks and piers

Protecting seagrass

- reduce runoff & wastewater discharge
- practice sustainable aquaculture
- avoid overboard discharge
- minimize dredging and filling
- use careful boating practices
- build high narrow docks
- clean up coastal areas
- support Marine Protected Areas

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NEW HAMPSHIRE CHARITABLE FOUNDATION AND TOM HAAS

UNIVERSITY of NEW HAMPSHIRE

WORLD SEAGRASS ASSOCIATION

February 2010

Seagrass

North Pacific

Seagrasses

- Underwater flowering plants
- Valuable coastal ecosystem
- Form vast meadows to small patches
- 15 species in the North Pacific
- Nurseries, shelter and food for fish
- Sea turtles and Brant eat seagrass
- Recognize and protect them

North Pacific Seagrass

Asia

Zl

Zostera caulescens
- Flat leaves 10-100cm with a short sharp tip
- Flowering shoot to 5m with many leaves

Zs

Zostera caespitosa
- Flat leaves to 70cm with rounded notched tip and short rhizome internodes with persistent sheath

Pj

Phyllospadix japonicus
- Flat leaves to 100cm with rounded tip and black rhizome internodes fibers
- 3 leaf veins

Pi

Phyllospadix iwatensis
- Flat leaves to 150cm with rounded tip and yellowish/ brown rhizome
- 5 leaf veins

Asia/America

Zm

Zostera marina
- Flat leaves to 3m with a rounded leaf tip and creeping rhizome
- Seeds 3-4mm brown and ridged

Zj

Zostera japonica
- Flat leaves to 30cm with notched uneven leaf tip and thin rhizome
- No erect stems

Za

Zostera asiatica
- Flat wide leaves to 150cm with a flattened or notched tip and thick rhizome
- Seeds 3-5mm brown and smooth

America

Pr

Phyllospadix serrulatus
- Flat leaves to 40cm with rounded/flattened tip with serrated leaf edges
- 5-7 leaf veins

Ps

Phyllospadix scouleri
- Flat leaves to 200cm with rounded/flattened/ notched tip and rhizome internodes with yellow/ gray fibers
- 3 leaf veins

Pt

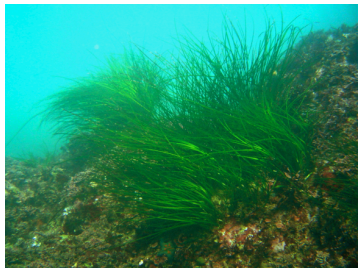
Phyllospadix torreyi
- Rolled leaves to 20(cm with rounded to slightly notched tip
- 3 leaf veins

SeagrassNet

www.SeagrassNet.org

Seagrass functions and values

Seagrass contributes to a healthy coastal marine environment. Seagrass provides habitat for commercially and recreationally important fish and shellfish species. It is a nursery for young marine creatures. Seagrass filters the water of sediments and pollution. The seagrass root mat adds stability to the coastal zone, and seagrass leaves lessen the impact of wave energy on the shoreline. As dead seagrass breaks down, it becomes part of the coastal food chain, supporting snails, shrimp, beche de mer, and fish. Throughout the Indo-Pacific, people harvest sea food from seagrass meadows as a major source of protein.



Turtles and Brant

Brant and sea turtles eat seagrass, as do some fish and birds. In vast seagrass meadows, divers and snorkelers can observe "feeding trails" of dugongs, where these sea mammals have plowed along the bottom, eating seagrass as they go. A healthy seagrass resource is essential to dugongs and turtles.

Reef – seagrass – mangrove connection

Seagrasses, mangroves, and coral reefs form a three-part marine coastal ecosystem. Each part contributes to a healthy ocean. Mangroves filter the water coming off the land and create a stable shoreline. Seagrass further filters runoff and provides nursery areas for many of the fish that live in coral reefs as adults. Seagrass, as it dies and decomposes, provides a link in the food chain essential to coral reef animals. The seagrass-coral reef environment is a productive area of high biodiversity and beauty. Together, healthy seagrasses, mangroves, and coral reefs create a coastal resource for fisheries and tourism.