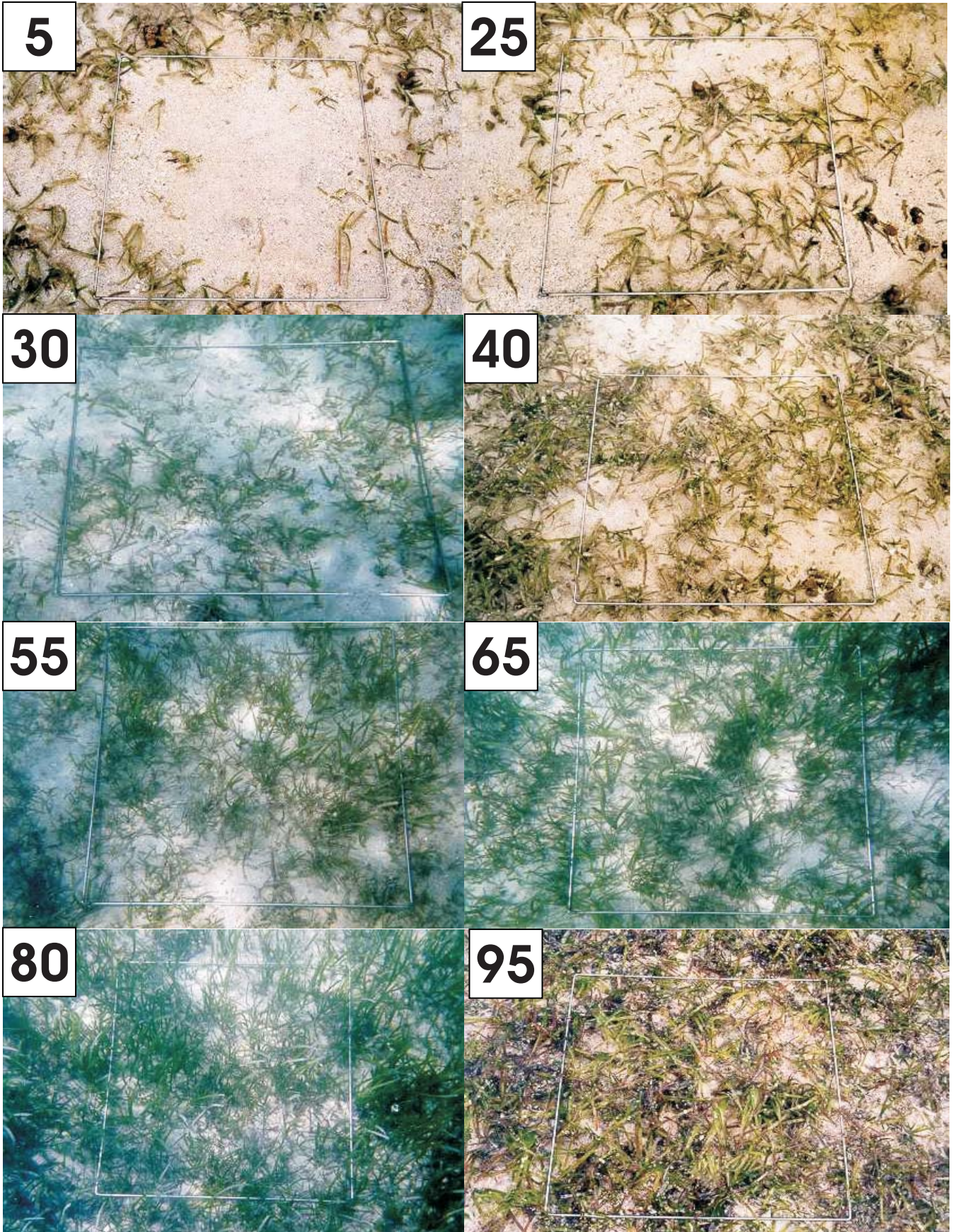
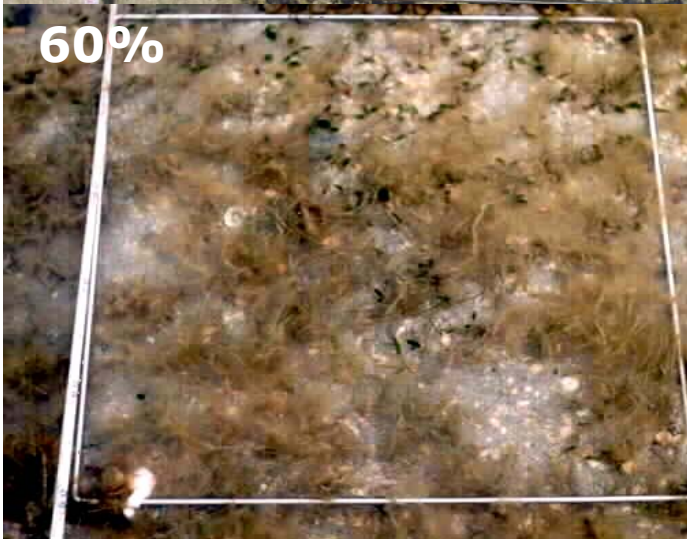
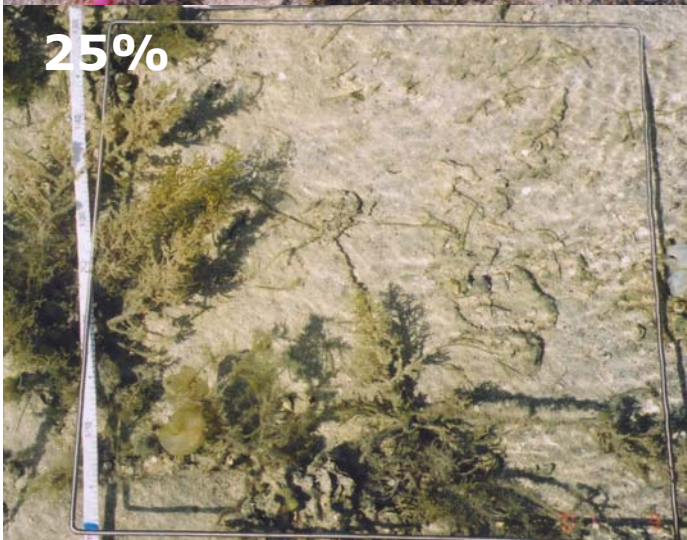
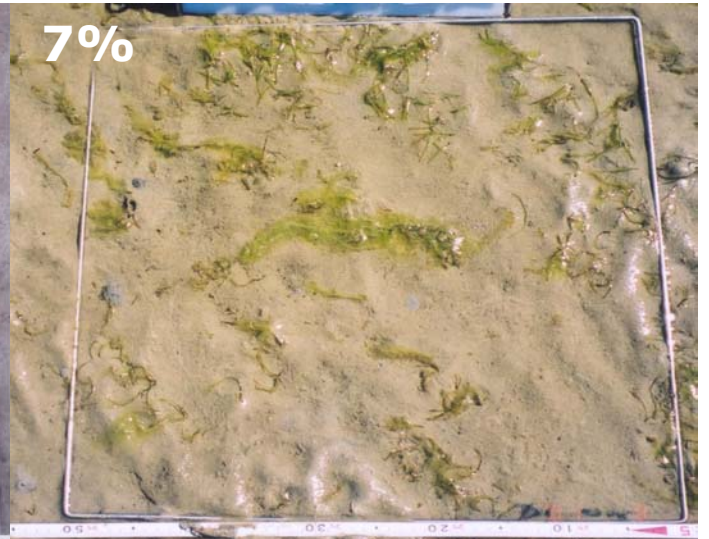
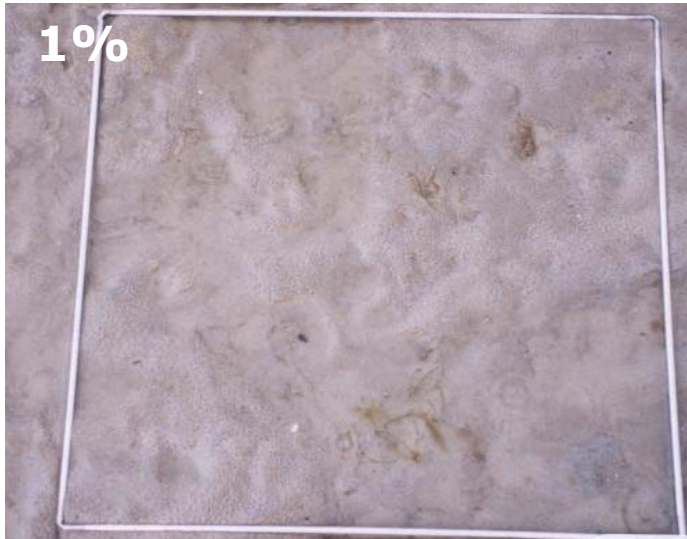


# Seagrass Percentage Cover

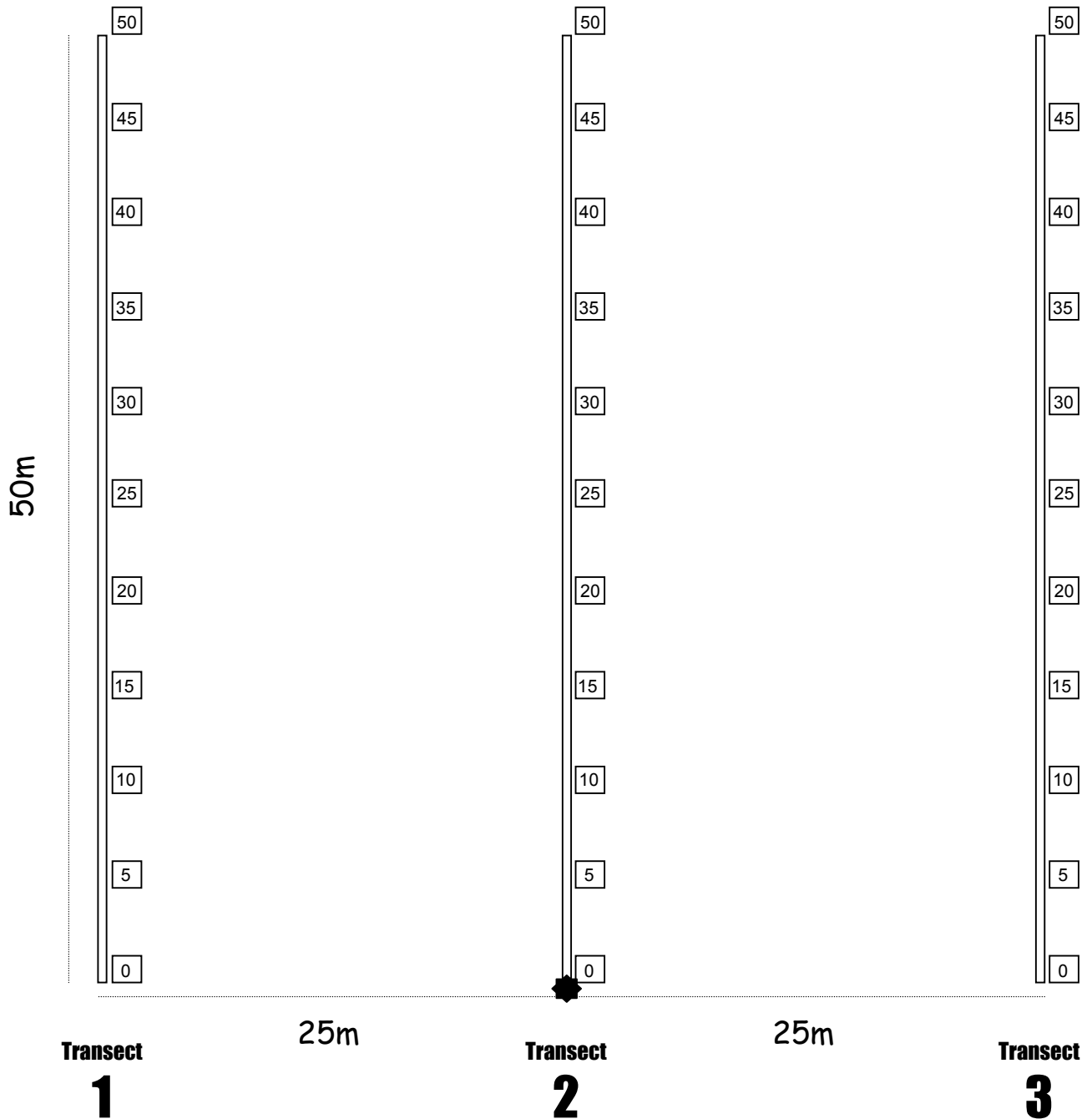




# Algal percent cover standards



# Seagrass-Watch seagrass monitoring site layout



**Quadrat code = location+site + transect+quadrat**  
e.g., FJ1225 = Fiji, site 1, transect 2, 25m quadrat

# Seagrass-Watch Western Pacific Monitoring Methods: Summary

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Once you have established a monitoring site, you will need:

## *Necessary equipment and materials*

- ❑ *3x 50metre fibreglass measuring tapes*
- ❑ *6x 50cm plastic tent pegs*
- ❑ *compass*
- ❑ *1x standard (50cmx50cm) quadrat*
- ❑ *Magnifying glass*
- ❑ *Monitoring datasheets*
- ❑ *Clipboard, pencils & 30 cm ruler*
- ❑ *Camera*
- ❑ *Quadrat photo labeller*
- ❑ *Percent cover standard sheet*
- ❑ *Seagrass identification sheets*

## Quarterly sampling

Within the 50m by 50m site, lay out the three 50 transects parallel to each other, 25m apart and perpendicular to shore (see site layout). Within each of the quadrats placed for sampling, complete the following steps:

### *Step 1. Take a Photograph of the quadrat*

- Photographs are usually taken at the 5m, 25m and 45m quadrats along each transect, or of quadrats of particular interest. First place the photo quadrat labeller beside the quadrat with the correct code on it.
- Take the photograph from an angle as **vertical** as possible, which includes the entire quadrat frame and the quadrat label. Try to avoid having any shadows or patches of reflection off any water in the field of view. Check the photo taken box on the datasheet for that quadrat.

### *Step 2. Describe sediment composition*

- To assess the sediment, dig your fingers into the top centimetre of the substrate and feel the texture. Describe the sediment, by noting the grain size in order of dominance (e.g., Sand, Fine sand, Fine sand/Mud).

### *Step 3. Estimate seagrass percent cover*

- Estimate the total % cover of seagrass within the quadrat – use the percent cover photo standards as a guide.

### *Step 4. Estimate seagrass species composition*

- Identify the species of seagrass within the quadrat and determine the percent contribution of each species to the cover. Use seagrass species identification keys provided.

**Step 5. Measure canopy height**

- Measure canopy height of the seagrass ignoring the tallest 20% of leaves. Measure from the sediment to the leaf tip.

**Step 7. Estimate algae percent cover**

- Estimate % cover of algae in the quadrat. Algae are seaweeds that may cover or overlie the seagrass blades. Use “*Algal percentage cover photo guide*”.

**Step 8. Describe other features and ID/count of macrofauna**

- Note and count any other features which may be of interest (eg. number of shellfish, sea cucumbers, sea urchins, evidence of turtle feeding).

**Step 9. Take a voucher seagrass specimen if required**

- Seagrass samples should be placed inside a labelled plastic bag with seawater and a waterproof label. Select a representative specimen of the species and ensure that you have all the plant part including the rhizomes and roots. Collect plants with fruits and flowers structures if possible.

## At completion of monitoring

**Step 1. Check data sheets are filled in fully.**

- Ensure that your name, the date and site/quadrat details are clearly recorded on the datasheet. Also record the number of other observers assisting.

**Step 2. Remove equipment from site**

- Remove all tent pegs and roll up the tape measures. If the tape measures are covered in sand or mud, roll them back up in water.

**Step 3. Wash & pack gear**

- Rinse all tapes, pegs and quadrats with freshwater and let them dry.
- Review supplies for next quarterly sampling and request new materials
- Store gear for next quarterly sampling

**Step 4. Press any voucher seagrass specimens if collected**

- The voucher specimen should be pressed as soon as possible after collection. Do not refrigerate longer than 2 days, press the sample as soon as possible.
- Allow to dry in a dry/warm/dark place for a minimum of two weeks. For best results, replace the newspaper after 2-3 days.

**Step 5. Post sampling procedures**

- Mail  
original datasheets, photos or cameras to:

**Seagrass-Watch WP  
Northern Fisheries Centre  
PO Box 5396  
Cairns QLD 4870 AUSTRALIA**

herbarium sheets to:

**SeagrassNet  
Jackson Estuarine Laboratory  
85 Adams Point Road  
Durham NH 03824 USA**

# SEAGRASS-WATCH WP MONITORING

ONE OF THESE SHEETS IS TO BE FILLED OUT FOR EACH TRANSECT YOU SURVEY

START of transect (GPS reading)

Latitude: ..... ° ..... 'S Longitude: ..... ° ..... 'E

OBSERVER: JOE BLAKE DATE: 12 / 5 / 02  
 LOCATION (Country): AUSTRALIA  
 SITE no.: QL2 TRANSECT no: 3  
 Start TIME: 3.04 pm End TIME: 3.35 pm

Quadrat (metres from transect origin)	Sediment (eg. mud/sand/shell)	Comments (eg 10x mud wheelks, 4x sea cucumbers)	Canopy height (cm)	Total % Seagrass coverage	% cover of each species				Total % cover Algae
					EA	CR	TH	HU	
1 (0m)	M/S	SEA CUCUMBER X 1	3,4,2	20	10	10			10
2 (5m)	M/S	SHELLFISH X 2	5,4,1,5	15	5	10			2
3 (10m)	M	RIPPLES	2,5,4,3	12	5	5	2		1
4 (15m)	M	SEA CUCUMBER X 2	6,6,6	2	1		1		3
5 (20m)	M/S	SEA URCHIN X 3	7,6,5	28	20	2	6		16
6 (25m)	S/M	MOLUSC X 5	4,5,4	45	10	5	10	20	25
7 (30m)	S/M	WORM X 4 SHELLFISH X 2	3,7,2	57	5	40	5	7	30
8 (35m)	M	TURTLE GRAZING	5,7,8	43	3	20	20		4
9 (40m)	FS	RHIZOMES EXPOSED	6,5,5	65	5	50		10	5
10 (45m)	FS	WORM HOLES	4,5,5	32	10	18	2	2	45
11 (50m)	FS/M	DUGONG FEEDING TRAILS	4,4,3	25				25	16

END of transect (GPS reading)

Latitude: ..... ° ..... 'S Longitude: ..... ° ..... 'E



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