

# Chapter 5

## Methods for Monitoring Seagrass Status

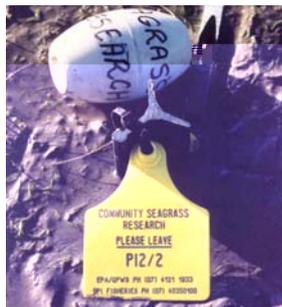
### 5.1. Setting up & relocating a monitoring site

Once the type of monitoring design is decided (see 4.2. Designing a monitoring plan, page 32), the monitoring sites will need to be established. The monitoring site will need to be established before monitoring can begin.

#### *Necessary materials & equipment*

You will need:

- 2 star pickets (or stakes)
- A mallet
- Sub-surface buoy and rope/stainless steel trace
- 2 site labels (e.g., PI2/2 marked on plastic cattle tags)
- plastic cable ties
- 3x 50metre fibreglass measuring tapes
- 6x 50cm plastic tent pegs
- compass
- GPS (Global Positioning System)
- Datasheet (see Appendix I)
- Clipboard
- Pencils & erasers
- Map – anticipated plan for site location



*Example of a Seagrass-Watch site marker label*

### ***Additional materials & equipment for subtidal monitoring***

- ❑ *1x 100m weighted ropes (marked at every 10m interval)*
- ❑ *Datasheets photocopied onto permanent underwater paper*
- ❑ *Clipboards with large rubber bands (to stop datasheets flapping underwater).*
- ❑ *Small boat/s with outboard motors and safety equipment*
- ❑ *2x 40-50cm diameter plastic buoys with rope (approx 15m).*
- ❑ *2 small danforth anchors – to set the weighted ropes at each end*
- ❑ *Dive flag secured to buoy, with rope to be tethered to one of the SCUBA divers.*
- ❑ *Personal SCUBA gear (wet suits, BCD, tanks)*

### **General Field procedure**

If you plan to establish and mark a permanent site, then please check with local authorities (Parks & Wildlife, Marine Parks, *etc*) to ensure such activity is legal or whether it may require a permit. In many parts of Queensland (and the rest of Australia), permits may be required to conduct research and fix permanent markers in particular marine areas. For instance, in the Great Barrier Reef World Heritage Area you may need to apply for a Marine Plant Permit from the Department of Primary Industries (Queensland Fisheries Service), and a permit from the Great Barrier Reef Marine Park Authority to conduct research in the World Heritage Area.

Choosing a place to establish a site for monitoring should be done with care. The site needs to represent the seagrass communities at that location. Using all available information collected when the status of seagrass meadows was determined, locations for monitoring and positions for sites can be chosen.

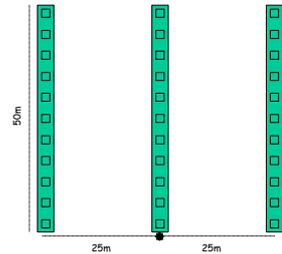
**Before establishing a new monitoring site, please check with the Seagrass-Watch Coordinator**

A good monitoring site is

- a seagrass community typical of the location
- a seagrass community of low variability, and
- a place where revisitation is not logistically difficult.

## Fixed transects site

This type of site is recommended for monitoring intertidal seagrass meadows, but can also be used for subtidal meadows using SCUBA. The following procedure is only for intertidal monitoring.



### Factors to consider when establishing a site

The aim of monitoring is to pick up any broad changes in a meadow, not necessarily changes between transects within a meadow.

- ⚡ Make sure the site is evenly shaped – not topographically mixed with high sand or mud ridges and troughs.
- ⚡ Ensure seagrass is the dominant habitat at the site.
- ⚡ The seagrass community should be representative of that locality.
- ⚡ The seagrass presence should be similar in coverage across the site.
- ⚡ The site should be logistically (e.g., weather, access, safety) feasible.
- ⚡ Walk over the 50m by 50m area you would like to establish a site, ensuring that its selection meets these requirements.



If you know the bearing of the site you will be establishing and it is located in deep or sticky mud, ensure that you access the site directly in line from your nearest bearing so that you reduce difficult walking across the mud flats.

### Marking a site for the first time

When you have found a suitable site, you will need to mark it for future reference. In order to reduce the amount of equipment deployed in the field, only the middle transect will be marked.

- Knock a plastic star picket into the ground, down to 10 cm above the surface.
- Run a stainless steel wire trace through the plastic buoy and attach the wire snap to the trace wire.
- Make sure the snap is firmly locked.
- Using a plastic cable tie, attach the tethered buoy to the star picket through the stainless steel split ring, along with a site tag through the hole at the top of the star picket.



The site tag is marked with a code signifying the location, the site number and the transect number. The transect number will always be '2' because only the middle transect is being marked. For example, the location will be signified by two letters, the site by a number generally between 1 and 3, and the middle transect number 2. Usually the inshore star picket, or the star picket at the end of the transect closest to your approach is marked to help locate the site when accessing the area.

### **Relocating a site which has been established**

- ⌘ Locate the start of transect 2 using the coordinates of the site and your Global Positioning System (GPS).
- ⌘ Look out for the site marker (e.g., the small white marker buoy attached to the star picket).
- ⌘ Upon locating the marker buoy and start picket, check the tag for the site code.
- ⌘ Clean any algal growth or other fouling material off the buoy and site tag. Replace any components of field equipment if necessary or advise your local co-ordinator.



If you know the bearing of the site you are trying to locate, and the site is in deep or sticky mud, ensure that you access the site in a line directly from the nearest position on the beach.

### **Laying out the monitoring site**

- ⌘ Using your compass, you will need to take a bearing of the direction the transect will run. Typically this will be perpendicular to the shoreline, but might vary depending on the topography of the site. If unsure of how to take a bearing, see section 4.1.2, page 28.
- ⌘ Record the bearing on your data sheet, e.g. 80°.
- ⌘ Pick something on the horizon at the compass bearing. Keeping your eye on that point or object, hold the tape in your right hand and run the transect tape out for 50 metres along the compass bearing.
- ⌘ As sampling is always done to the right hand side of the tape, keeping to the left ensures that you won't leave foot holes or depressions where you will be sampling.
- ⌘ At the end of the transect check your position back along the bearing to the start of the transect.
- ⌘ Knock in another star picket down to 10 cm above the surface.
- ⌘ Attach the second site marker tag to the top hole of the star picket with a cable tie.



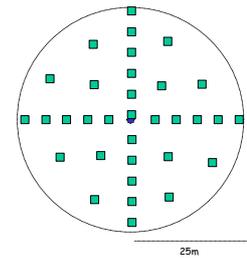
### Establishing the second and third transect

Transects 1 and 3 will lie 25 metres to the left and right respectively of the origin of transect 2. Set up each transect in the same way as transect 2.

You can now go to section 5.2. The seagrass monitoring procedure (page 48) and begin monitoring as per section 5.2.1 (page 48).

## Fixed point site

An alternative approach to establishing transects to monitor, is to sample around a point within a set radius, with quadrats either being thrown randomly or spread relatively evenly. This type of site can be conducted either intertidally or subtidally. This type of monitoring is not recommended for muddy sites.



## Factors to consider when establishing a site

The aim of monitoring is to pick up any broad changes in a meadow, not necessarily changes between transects within a meadow.

- Make sure the site is evenly shaped – not topographically mixed with high sand or mud ridges and troughs.
- The seagrass presence should be similar in coverage across the site.
- Walk over the 25m radius area you would like to establish a site at ensuring that its selection meets these requirements.

## Marking a site

When you have found a suitable site, you will need to mark it for future reference. In order to reduce the amount of equipment deployed in the field, only the centre point is marked.

- ✎ Knock a plastic star picket into the ground, down to 10 cm above the surface.
- ✎ Using a plastic cable tie, attach the tethered sub-surface buoy along with a site tag through the hole at the top of the star picket.
- ✎ Take the GPS reading for the site and also record the position on the site using compass bearings from prominent land feature. Note all these details clearly and legibly on the sheet of paper. You may even sketch the position of the site – all this will be valuable when you come back to find the site in 3 to 6 months time.

## Relocating a site

- ⚡ Locate the central point for the site using the coordinates and your Global Positioning System (GPS).
- ⚡ Upon locating the marker buoy and start picket, check the tag for the site code.
- ⚡ Clean any algal growth or other fouling material off the buoy and site tag. Replace any components of field equipment if necessary or advise your local co-ordinator.

You can now go to section 5.2. The seagrass monitoring procedure (page 48) and begin monitoring as per section 5.2.2 (page 50).

## ***Fixed single transect***

This type of site is recommended for monitoring subtidal seagrass meadows using SCUBA. Although similar in some respects to the fixed transects site, in this case only a single transect is laid and the length may be longer than 50m.

- ❖ *IT IS VERY IMPORTANT THAT YOU ARE IN COMMUNICATION WITH THE VESSEL MASTER or SKIPPER AT ALL TIMES.*

## Factors to consider when establishing a site

When deciding which area of seagrass to monitor, the following factors should be considered for diving on subtidal seagrass meadows.

- select a homogeneous area (not patchy), with uniform coverage of seagrass:
- Ensure the area is safe for divers. Check conditions for boat traffic, large swells or fast currents, and tides for that day. Ensure that the depth range is 15m or less to ensure enough bottom time for divers throughout the day and for safety reasons. Be aware of potential dangerous marine animals and take precautions [animals may include: crocodiles, sharks, box jellyfish, irukanji jellyfish, stone fish, moray eels and fire corals].
- Relatively clear waters are essential for sampling. A visibility of at least 2 m is necessary.
- Difficulty in relocation of sites including high costs of vessel charter, depth of the meadow and variable sea states.

## Marking a site

Direct the vessel master to the locality of the proposed monitoring site. When you are at the origin of the transect, mark the site with a large bright buoy on enough rope and an anchor.

When you have put the large bright buoy in, you will need to mark it for future reference. This can be done permanently with a star picket with a sub-surface buoy, or by using the GPS to relocate that area to be monitored. If you are permanently marking the site, mark only the transect origin to reduce the amount of equipment deployed in the field.

If you **do** leave a permanent marker at the site, the tag is marked with a code signifying the location, the site number, the transect number and contact phone number. Usually the inshore star picket, or the star picket at the end of the transect closest to your approach is marked to help locate the site when accessing the area.

If you **do not** leave a permanent structure (ie if you are not permitted by an agency to do so), have the coordinates of the site stored safely in the GPS **AND** written down in a safe place.

You can now go to section 5.2. The seagrass monitoring procedure (page 48) and begin monitoring as per section 5.2.3 (page 51).

### *Spots in defined area*

This type of site is recommended for monitoring subtidal seagrass meadows by free-diving (mask & snorkel) at a much larger scale (kilometres). The defined area to be monitored may be a bay or inlet. In this procedure, there are no permanent markers, only a set number of GPS or compass positions, and requires fit and skilled free-divers.

Before monitoring, decisions need to be made on the distance between set points and the number of points to be examined. Points are usually along set compass bearings, as this is logistically easier and less time consuming than randomly sampling over such a large area.

You can now go to section 5.2. The seagrass monitoring procedure (page 48) and begin monitoring as per section 5.2.4 (page 52).

Seagrass-

## 5.2.

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## 5.2.



arrow marked on its end,  
level to sight the direction



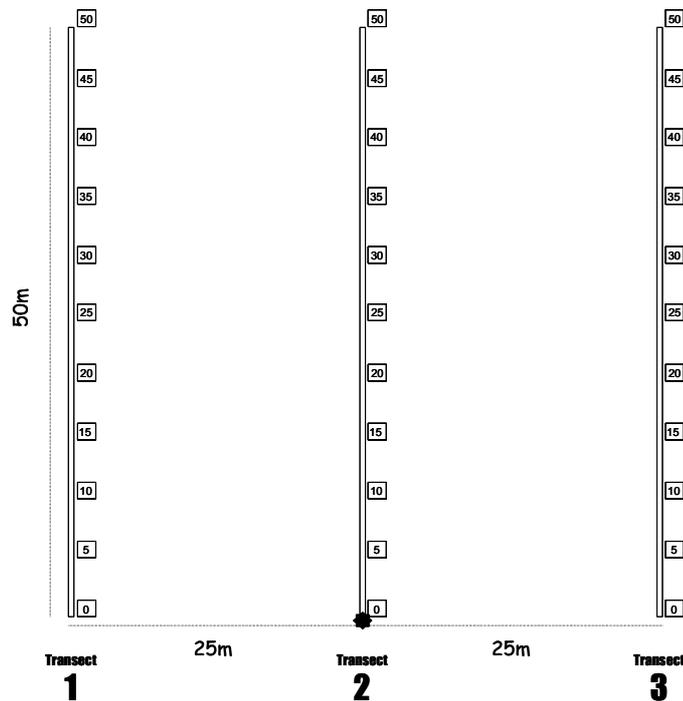
Sampling is done to the right hand side of the tape, therefore you should always walk to the left of a transect to avoid footprints where you will be sampling.

your right hand, run  
the given bearing until you  
and marked with another star  
site identification tag. Ensure the



tape is as straight as possible between the two star pickets. Attach the end of the tape (50 m mark) to another tent peg pushed into the substrate.

- ☞ You have just marked out transect 2. Leave the tape in place and mark out transects 1 and 3.
- ☞ Transects 1 and 3 always lie 25 metres to the left and 25 metres to the right of transect 2, respectively.
- ☞ Leave all three tapes in place, held down with the tent pegs, until all sampling is completed.

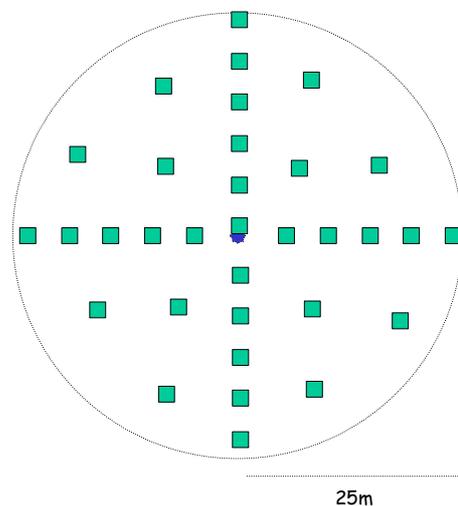


- ☞ Once the fibreglass tapes have been laid, measure the cover of seagrass and other parameters within a single standard quadrat at every 5 metre mark for the 50 metres, as per section 5.3 (page 53).
- ☞ At the position of the starting marker, place a quadrat on the 0 metre mark. The quadrat is always placed on the right hand side of the tape measure and let it fall forward along the tape.
- ☞ Continue to the next 5 metre mark and repeat the procedure. Continue along the transect sampling every 5 metres until the transect is completed. Record the finish time on your datasheet. Then repeat the process along transects 1 and 3.



## 5.2.2. Fixed point site

- ⌘ Once the central marker (star picket) has been relocated, Observer 1, holding the tape handle in their right hand, runs the tape out in any direction until they reach the 25m mark (*there is no need to use a compass as the bearing does not have to be the same on each visit starts from the central star picket*).
- ⌘ Ensure the tape is as straight as possible between the Observer 1 and the star picket. Observer 1 then pushes a plastic tent peg into the substrate and attaches the handle of the tape.
- ⌘ Place a quadrat at the position of the 0 metre mark on the tape. The quadrat is always placed on the right hand side of the tape measure and let it fall forward along the tape.
- ⌘ Measure the cover of seagrass, sediment, within a single standard quadrat at every 5 metre mark for the 25m as per section 5.3 (page 53).
- ⌘ Continue to the next 5 metre mark and repeat the procedure. Continue along the tape measure sampling every 5 metres until the 25m is completed.
- ⌘ Then run another 25m tape perpendicular to the first. You can either use a second tape, or use the original tape but leaving the sand pegs in place to assist alignment.



- ⌘ When all the quadrats along the second tape has been completed (*remembering that the 0m quadrat at the star picket is not repeated*), then place the quadrat at 3 haphazardly chosen positions within each quarter of the intersecting transects (see figure layout) measuring each of the required parameters within each quadrat.
- ⌘ Run a third and fourth 25m tapes perpendicular to the other, repeating the procedure until all quadrats (see figure layout) are complete..

### 5.2.3. Fixed single transect

In this procedure, single quadrats are sampled along a fixed/unfixed subtidal transect.

- ⌘ Locate position for start of transect with GPS
- ⌘ Attach a sand anchor to the 100m end of the weighted rope, place this neatly in the bottom of a fish crate, and coil the weighted rope neatly on top.  
*The weighted rope is used instead of fibreglass tape measures in subtidal areas, as it is not buoyant and less disturbed by currents and wave action.*
- ⌘ Make sure that there is a mark (ink/paint or flagging tape) every 10m with the distance from origin clearly marked ie. 10m, 20m, 30m etc.
- ⌘ Attach another sand anchor to the origin end of the rope, and drop the anchor over the side of the vessel.
- ⌘ Take a compass bearing. If you have been given a bearing to follow, set the compass bezel as above and move the compass until you locate that bearing. If your compass has an arrow marked on its end, either use the arrow or simply the degree bearing on the bezel, to sight the direction to steer the boat.
- ⌘ Focus on a point or object on the horizon in line with the bearing. Instruct the vessel master or skipper to head the boat toward that object, or set the bearing on the GPS while letting out the weighted rope transect.
- ⌘ Put the fish crate at an appropriate spot in the boat to freely let out the anchors and weighted rope.
- ⌘ Once the anchor is secure to the sea floor, feed the rope out slowly with a little tension on the rope to keep it straight out from shore.
- ⌘ Have a person attend to the rope as it is spooling over the side of the boat to keep it from spooling too quickly or too slowly or to stop it from twisting up.
- ⌘ Let the rope out the full 100m and set the anchor (with buoy) at the other end.
- ⌘ Mark this other end at the 100m mark with another large coloured buoy that is quite visible.
- ⌘ At the end of the transect check your position back along the bearing to the start of the transect. (You can grab the end of the transect at the buoy and swing it around using the boat if the transect is skewed)
- ⌘ Anchor vessel near origin of transect and divers descend at start of transect
- ⌘ Place a quadrat at the 0m (origin) of the transect and record information (as per section 5.3 (page 53) from the quadrat onto the datasheet. The quadrat is placed

at right hand side of tape at every 10m. If unsure of a seagrass species, harvest a sample and hold in mesh bag.

- ✎ At end of transect, check the datasheet, make sure it is filled out correctly – if you've missed something, its easy to go back along the transect at this stage.

#### 5.2.4. Set points in defined area

For this procedure, a subtidal seagrass meadow is monitored by free-diving (mask & snorkel) and examining replicate quadrats at predetermined spots. It can be done using a single free-diver, or with a buddy. The defined area to be monitored may be a bay or inlet. There are no permanent markers, only a set number of GPS or compass positions.

Before monitoring, decisions should have been made on the distance between spots and the number of spots to be examined. Spots are usually along set compass bearings, as this is logistically easier and less time consuming than randomly sampling over such as large area.

- ✎ Locate the position of the first spot to be sampled
  - ❖ *IT IS VERY IMPORTANT THAT YOU ARE IN COMMUNICATION WITH THE VESSEL MASTER or SKIPPER AT ALL TIMES.*

- ✎ When on site, the vessel is put out of gear and the free-diver/s descend to the seabed with a quadrat in hand.

- ✎ Free-divers place the quadrat on the seabed and visually record information (see section 5.3, page 53). Due to time constraints, canopy height is generally not measured. A total of 3 quadrats are examined in an area approximately 5m radius. This can be done on the same breath or over several free-dives depending on the skill and experience of the free-diver.



- ✎ Upon returning to the surface, the free-diver checks their observations against the standard cover estimates (see Appendix II) and then relays the quadrat measures to a data recorder.

- ✎ After the 3 quadrats have been examined, the free divers board the vessel and the vessel then moves to the next spot and the procedure is repeated.

- ✎ At the completion of the last spot, check the datasheets and make sure it is filled out correctly and that no spots have been missed.

### 5.3. Seagrass monitoring measures within a quadrat

Within each of the quadrats placed for sampling, complete the following steps: An example of a completed datasheet can be found in Appendix I (page 80)

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

Photographs are taken at the 5m, 25m and 45m quadrats along each transect and of quadrats of particular interest (eg. Dugong grazing trail, high algal abundance, lots of gastropods). Photos are taken before any other measures, to avoid resuspending sediments by walking in the area which would affect the photo quality.

We recommend using disposable cameras (preferably splash/water proof) which can be sent for processing to the Seagrass-Watch Coordinator. Digital images are acceptable, however salt-water environments are not benign to electronics.

- ☞ First place the photo quadrat labeller beside the quadrat with the correct locality, site number, transect, and quadrat code on it.

- ☞ Next, 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. Record that a photo has been taken on the data sheet for that quadrat.



- ☞ In some instances (due to tide height), you may also need to take another photograph from an **oblique** angle (e.g., 45 degrees), which includes the entire quadrat frame and the quadrat label. Similarly, try to avoid having any shadows or patches of reflection in the field of view.

An alternative to taking a still photograph is capturing a video image. By using a video camera in an underwater housing, observers can capture permanent images or footage of seagrass meadows. These images can then be played back to compare and check for any changes that have occurred within that meadow over time. Video sampling is becoming more and more popular in monitoring since it is a very versatile and complements traditional sampling methods, serving as an “underwater eye” for the observer.



## Step 2. Describe sediment composition

- ☞ Next, note the type of sediment
- ☞ To assess the sediment, dig your fingers into the top centimetre of the substrate and feel the texture. Remember that you are assessing the surface sediment so don't dig too deep!!
- ☞ Describe the sediment, by noting the grain size in order of dominance (e.g., sand, fine sand, fine sand/mud).
  - mud - has a smooth and sticky texture. Grain size is less than 63  $\mu\text{m}$
  - fine sand - fairly smooth texture with some roughness just detectable. Not sticky in nature. Grain size greater than 63  $\mu\text{m}$  and less than 0.25mm
  - sand - rough grainy texture, particles clearly distinguishable. Grain size greater than 0.25mm and less than 0.5mm
  - coarse sand - coarse texture, particles loose. Grain size greater than 0.5mm and less than 1mm
  - gravel - very coarse texture, with some small stones. Grain size is greater than 1mm.
- ☞ If you find that there are also small shells mixed in with the substrate – you can make a note of this.

## Step 3. Estimate seagrass percent cover

- ☞ Determine the total cover of seagrass within the quadrat – use the percent cover photo standards as a guide (Appendix II)

## Step 4. Estimate seagrass species composition

- ☞ Identify the species of seagrass within the quadrat and determine the percent contribution of each species to the total cover.
- ☞ Use seagrass species identification keys provided (Appendix III).
- ☞ Two methods have been used for determining the percent contribution of each species to the total cover. The most popular method is for the composition to equal 100% of the seagrass present in the quadrat, regardless of the total cover. The alternative method is that the composition must equal the total cover of seagrass. Both methods have been used successfully in Queensland and the Western Pacific, respectively. Whichever method you use, ensure it is clear on the datasheets.



### Remember

Composition of all species equal 100 %, regardless of the total cover

eg.

*Zostera capricorni* 70%, *Halophilla ovalis* 30%, or *Zostera capricorni* 100%

### Step 5. Measure canopy height

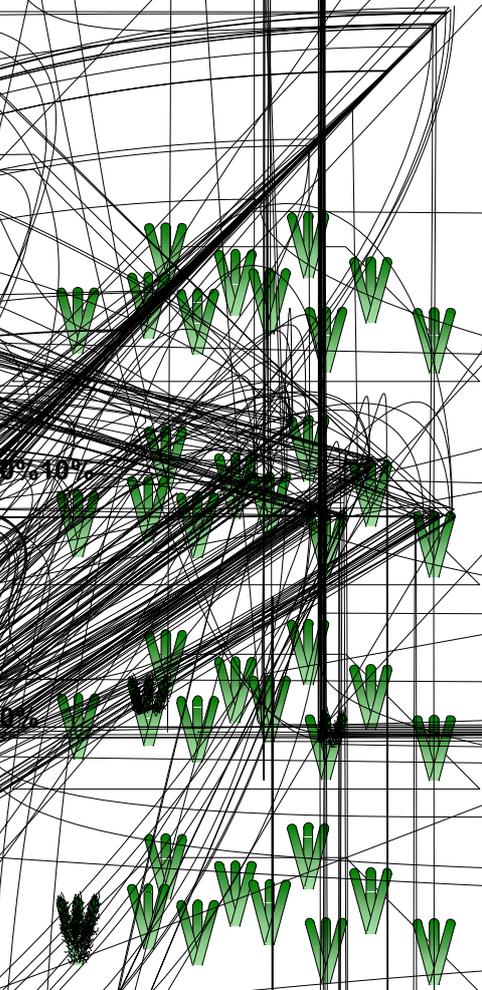
- Using a ruler, measure in centimetres the average length of the leaf blades. Do this by haphazardly selecting 3 to 5 leaf blades from within quadrat, ignoring the tallest 20% of leaves. Extend each leaf to its maximum length/height, without uprooting, and measure from the sediment to the leaf tip. Record each leaf length or the average length.

### Step 6. Estimate epiphyte abundance

- Next, determine the percent cover of epiphytes. Epiphytes are algae that grow (attached) on seagrass blades. The percentage cover of epiphytic algae is measured by estimating the percentage of total surface area of leaves covered by algal growth. The diagram to the right shows how the distribution of epiphytes on seagrass leaves can vary throughout quadrat. In this example:

- the top quadrat has no epiphytes present.
- the second quadrat has epiphytes on 2 leaves in the quadrat and 1 leaf with epiphytes.
- In the third quadrat, some leaves may be covered by epiphytes, and
- In the bottom quadrat – only 1 shoot is totally covered by epiphytes.

*Note that the last 3 quadrats equate to 10% epiphyte cover.*



### ***Step 7. Estimate algae percent cover***

- ⌘ Next, determine the percent cover of non-epiphytic algae in the quadrat. Non-epiphytic algae are those plants that are not attached to the seagrass but they may cover or overlie the seagrass blades. Algal cover is recorded using the same visual technique used for seagrass cover (Appendix IV).

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

- ⌘ Note any other features which may be of interest (eg. Dugong grazing trails, number of crab/yabby burrows, number of gastropods and worms, ripples in the sand, etc). The detail of identifications and comments is at the discretion of the observer. Keep in mind collection of information, which may be of a use determining the level of use of the seagrass meadow/habitat, and features that may be an indicator of some impact.

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

Correctly pressed and preserved seagrass specimens are invaluable for future reference material. If stored properly, the specimens will provide a record that not only supports data and published reports, but increases in value over time.

- ⌘ A seagrass voucher specimen should be collected of each species present when a sites is monitored for the first time or when the species identification is unsure.
- ⌘ When collecting the seagrass sample select a representative specimen of the species and ensure that you have all the plant part including the rhizomes and roots. Target plants with flowers or fruits if possible. Only take a small sample, you do not need a handful, just 2 or 3 complete plants.
- ⌘ The seagrass sample should be placed inside a labelled plastic bag with seawater and a waterproof label for pressing later. Don't let the sample dry or over heat as the plant will discolour.

## **5.4. At completion of Seagrass 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 pegs and roll up the tape measures. If the tape measures are covered in sand or mud, roll them back up in water.
- ⌘ Before leaving the site, double check that you have left nothing behind.

### Step 3. Wash & pack gear

- ☞ Before returning the sampling kit and all the equipment to the local co-ordinator, please rinse all tapes, pegs and quadrats with fresh water and let them dry.
- ☞ If you used a video camera, wash the underwater housing in fresh water immediately after use. Discharge batteries before storage of camera equipment and before recharging for use. Replace O-rings on underwater housing at least once per year.

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

- ☞ Voucher specimens should be pressed as soon as possible after collection. If it is going to be more than 2 hours before you press the specimen then you should refrigerate to prevent any decomposition. Do not refrigerate longer than 2 days, press the sample as soon as possible.
- ☞ Wash the seagrass sample in clean water and carefully remove any debris, epiphytes or sediment particles.
- ☞ Layout specimen on a clean sheet of white paper, spreading leaves and roots to make each part of the specimen distinct.
- ☞ Fill out specimen labels with site information (including: location & site code, lat/long, depth, %cover, substrate, other species present, collector, comments) and place the label on lower right hand corner of paper.
- ☞ Place another clean sheet of paper over the specimen, and place within several sheets of newspaper.
- ☞ Place the assemblage of specimen/paper within two sheets of cardboard and then place into the press, winding down the screws until tight (do not over-tighten).
- ☞ 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. Send on datasheets & photographs***

- ⌘ Remember to pass on your completed datasheets to your local coordinator or send them directly to the Seagrass-Watch Coordinator. Keep a photocopy for your own records and send originals.
- ⌘ If you have taken any photographs, pass the exposed roll of film (or disposable camera in some cases) on to your Local Coordinator or send them directly to the Seagrass-Watch Coordinator for processing. If you have taken video footage rather than still images, you can either send the original tape or send a copy. Original (master copies) of the tapes will be returned and a copy stored at the Northern Fisheries Centre in controlled conditions.
- ⌘ The data should be accompanied by any caveats on data reliability e.g., changes in data quality because of physical changes such as sea state.
- ⌘ If you collected any seagrass voucher specimens, give one specimen per sample, with a complete label to your Local Coordinator. Keep the other sample in your own herbarium for reference (and in case the other one gets lost in the post!).



#### **Seagrass-Watch Coordinator**

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Cairns Qld 4870**

