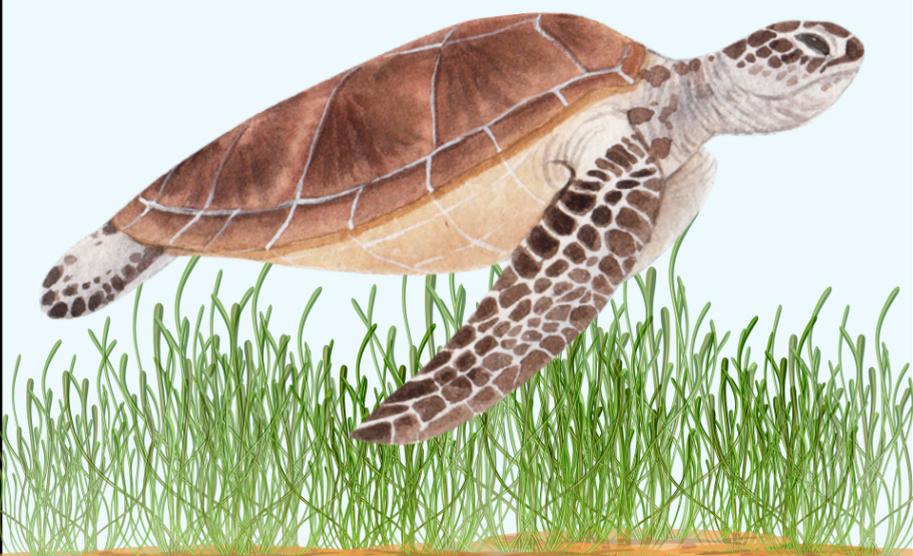


SEAGRASSES AND GREEN TURTLE DISTRIBUTION IN THE KADMAT LAGOON



Seagrass meadows of Lakshadweep

In the mid-2000s, a sudden surge of green turtles devastated the lush seagrass meadows of Lakshadweep. Green turtles moved from lagoon to lagoon, reducing expansive seagrass meadows to barren sand patches. The rich array of marine life associated with the meadows disappeared with the seagrass. Fish yield in the subsistence lagoon fishery and the baitfish vital for the island's pole and line fishery declined. Two decades later, seagrass is found in small, scattered patches in the lagoons. The once dominant climax species of *Thalassia hemprichii* and *Cymodocea rotundata* have been replaced by pioneering species of seagrass such as *Halodule* sp. and *Halophila* sp. The presence of seagrass meadows significantly influences green turtle movement and distribution.

Understanding their movement is important since green turtle herbivory has ecological and social ramifications. At Dakshin, we work with local dive professionals to understand the journey of green turtles in the Lakshadweep Islands. The facial scutes of green turtles are unique identifiers, like fingerprints on a human. Our dive partners send photos they take of green turtles, and we assign a unique ID to each from the shape and position of each scale on their face. This allows us to track the movement of individual turtles across the archipelago through photo identification over time.

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Monitoring in the Kadmat Lagoon

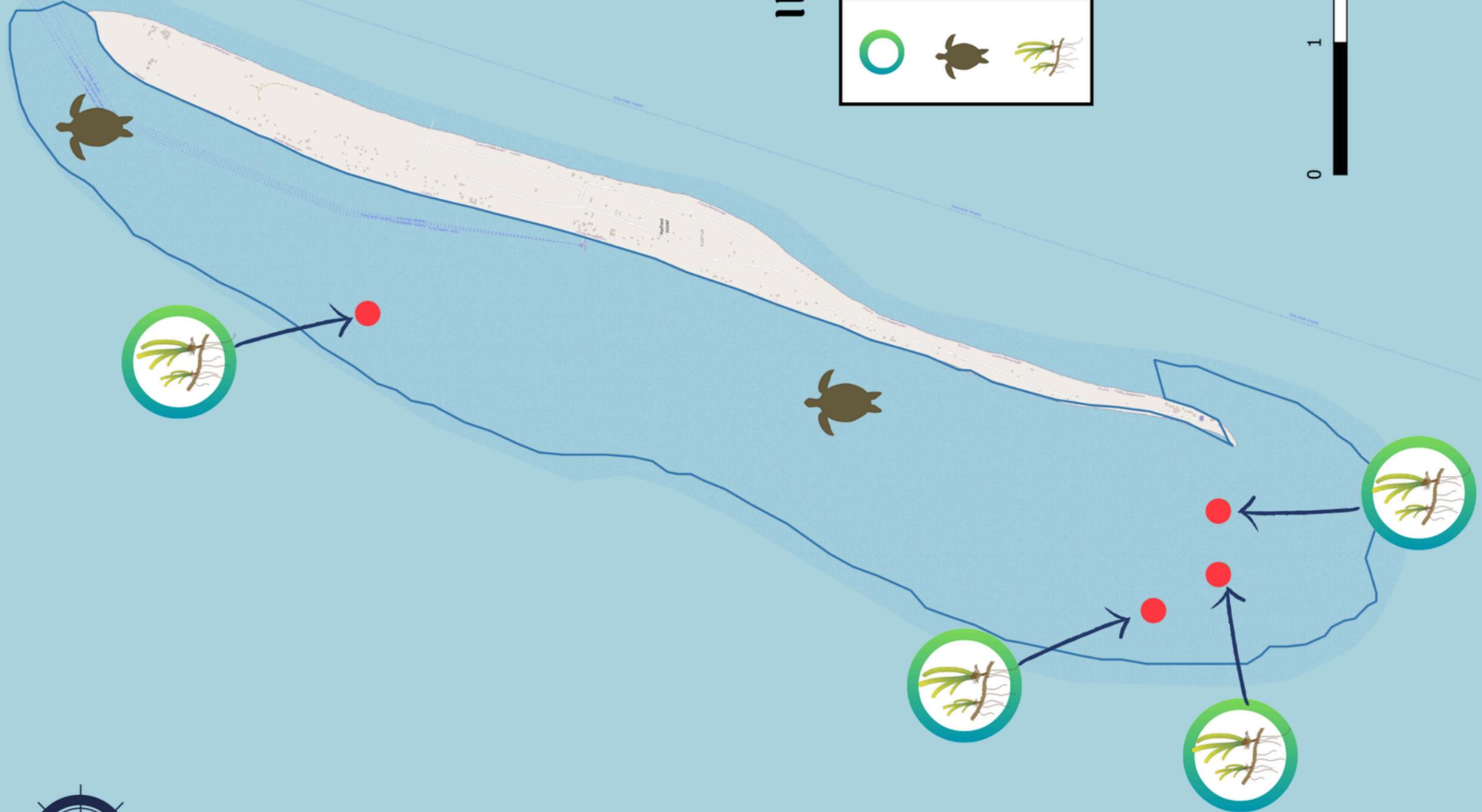
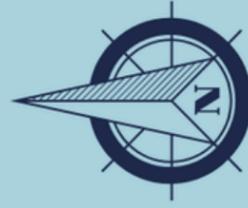
Green turtles have not been recorded in the Kadmat Lagoon since 2018. The seagrass meadows have now disappeared save a few sparse shoots of *Thalassia* and *Cymodocea*. In addition, some mature shoots still survive among patches of corals that might protect them from herbivory.

Species of seagrass recorded in 2024



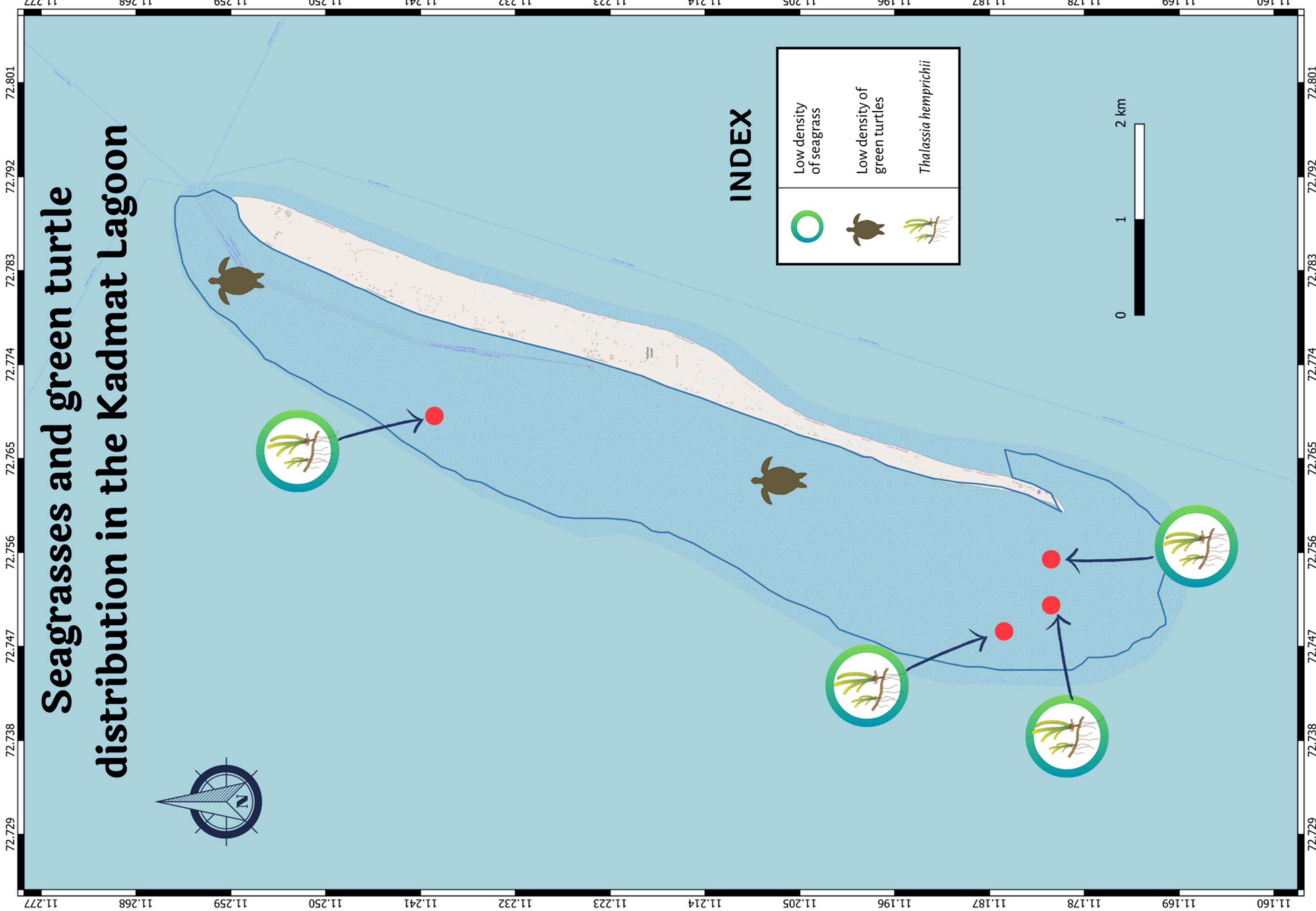
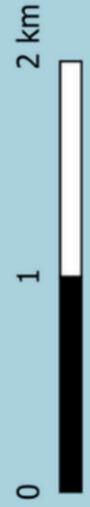
Thalassia hemprichii

Seagrasses and green turtle distribution in the Kadmat Lagoon

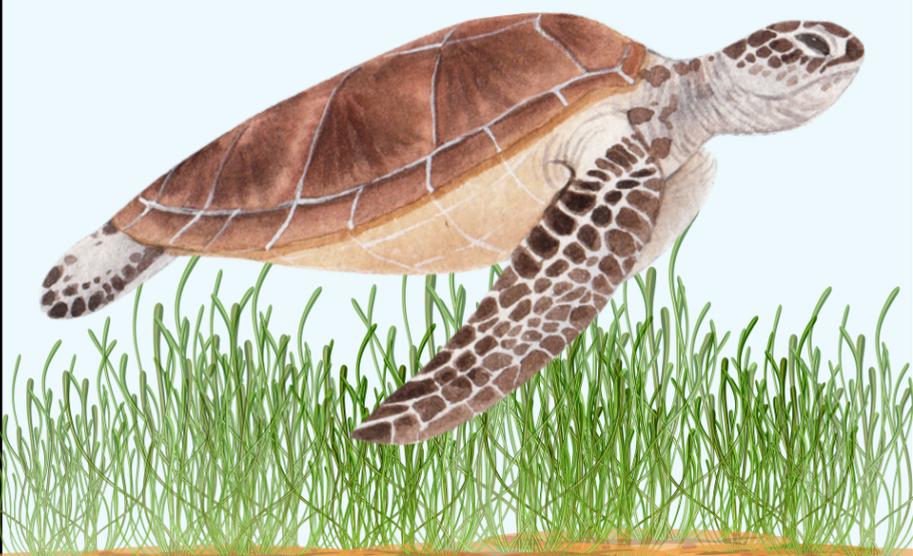


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	Low density of seagrass
	Low density of green turtles
	<i>Thalassia hemprichii</i>



SEAGRASSES AND GREEN TURTLE DISTRIBUTION IN THE AGATTI LAGOON



Seagrass meadows of Lakshadweep

In the mid-2000s, a sudden surge of green turtles devastated the lush seagrass meadows of Lakshadweep. Green turtles moved from lagoon to lagoon, reducing expansive seagrass meadows to barren sand patches. The rich array of marine life associated with the meadows disappeared with the seagrass. Fish yield in the subsistence lagoon fishery and the baitfish vital for the island's pole and line fishery declined. Two decades later, seagrass is found in small, scattered patches in the lagoons. The once dominant climax species of *Thalassia hemprichii* and *Cymodocea rotundata* have been replaced by pioneering species of seagrass such as *Halodule* sp. and *Halophila* sp. The presence of seagrass meadows significantly influences green turtle movement and distribution.

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Monitoring in the Agatti Lagoon

We recorded 3 genera of seagrass (*Halodule* sp., *Halophila decipiens* sp., and *Syringodium* sp.) in the Agatti Lagoon. Green turtles initially acted as disturbers of the climax meadows of *Thalassia* and *Cymodocea*. Once the dominant species were grazed down to low densities, these pioneer species began to colonise the available space. Densities of green turtles have now been slowly increasing in the lagoon again post-2008 to feed on these patches. Although we did not record *Thalassia* sp. and *Cymodocea* sp. in our sampling sites, they are still present in very low densities in the lagoon.

Species of seagrass recorded in 2024

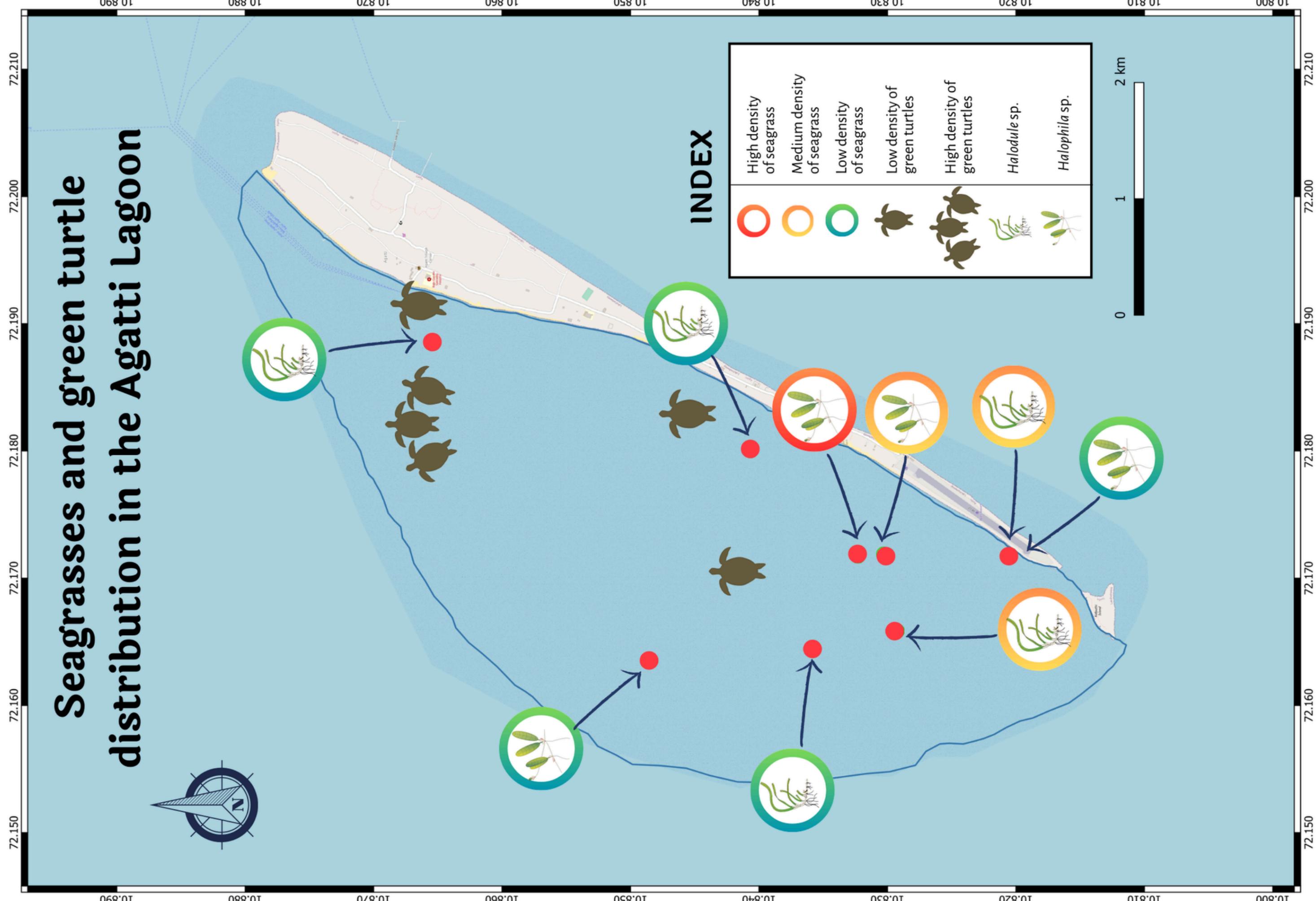
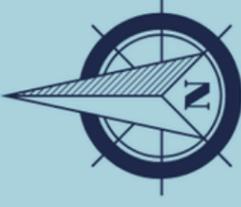


Halodule sp.

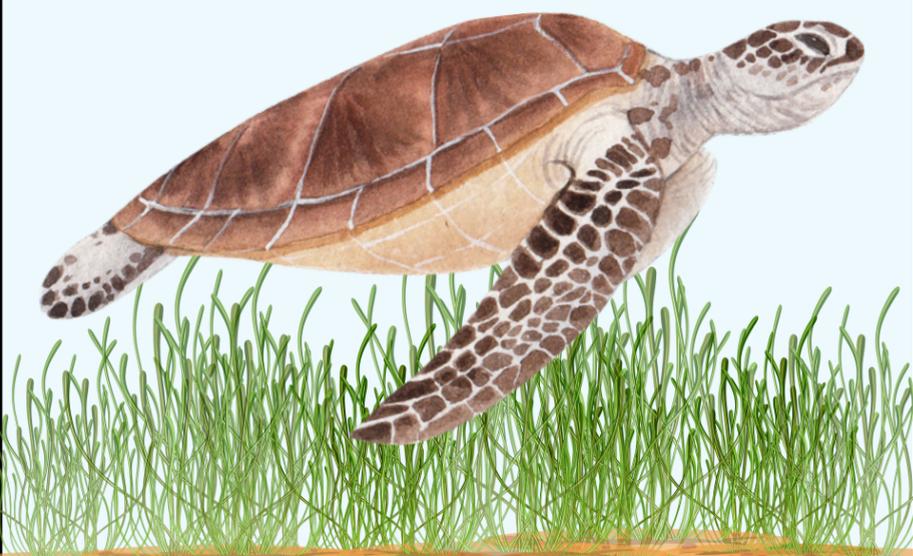


Halophila sp.

Seagrasses and green turtle distribution in the Agatti Lagoon



SEAGRASSES AND GREEN TURTLE DISTRIBUTION IN THE KALPENI LAGOON



Seagrass meadows of Lakshadweep

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Monitoring in the Kalpeni Lagoon

In 2016, green turtles left the Kalpeni Lagoon after grazing down the meadows. Since then, a dense patch of *Halodule uninervis* has colonized the northern part of the lagoon near the shore of Cheriyam. Green turtles are still present in the lagoon but at very low densities. However, the now dense patch of *Halodule* sp. is expected to attract green turtles in the coming months.

Species of seagrass recorded in 2024



Thalassia hemprichii

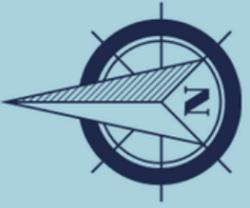


Cymodocea rotundata



Halodule uninervis

Seagrasses and green turtle distribution in the Kalpeni Lagoon



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