



## CC4. Ecosystem Disruption Group Activity

**Part 1:** Start by looking at the map of the important habitats in the Cayman Islands. How many different ones can you see? Looking at the map and thinking about what you already know of climate change, what areas do you think might be at risk?

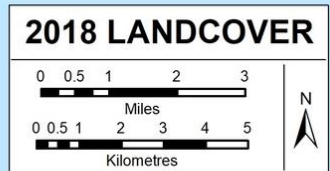
**Part 2:** Create a map of at-risk areas in the Cayman Islands, across all 3 Islands.

Steps to follow:

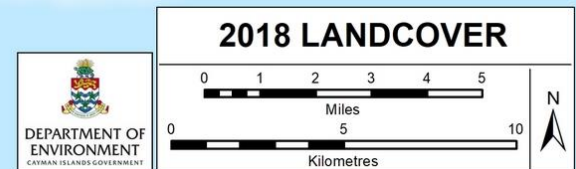
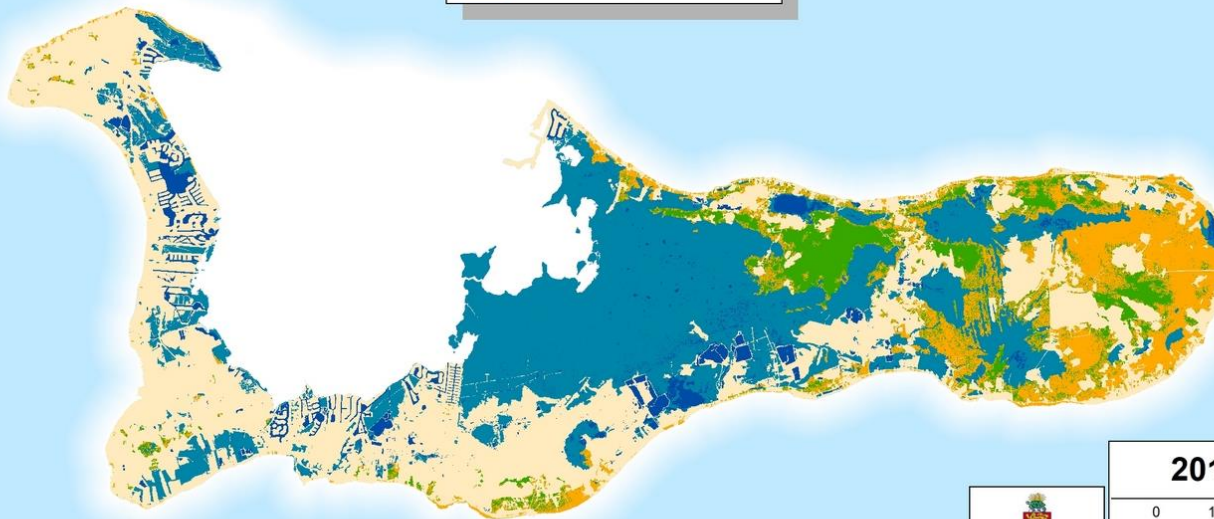
- *Cut out the map below and stick it in the center of your poster.*
- *Cut out the boxes with information on all major habitats in the Cayman Islands and match them with the correlated habitat using lines and arrows.*
- *Read through the fact sheet with potential threats to ecosystems due to climate change and humans.*
- *As a group, discuss potential adaptations or changes within these ecosystems due to climate change and add your answers under the boxes for each habitat.*
- *Lastly, add your own ideas about why these habitats are important to you somewhere on the map.*

*Little Cayman*

*Cayman Brac*



*Grand Cayman*



Cut out



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### Wetlands

Mangroves hold sediments in place, prevent erosion, and stabilize the coastline. They also provide habitat for many species that find protection from predators or places to grow among the roots. This sediment holds huge amounts of carbon and the plants themselves pull carbon out of the atmosphere, thereby slowing climate change.

### Water

Freshwater is scarce in the Cayman Islands and every source is critical for wildlife. Saline ponds have their own unique biodiversity and are important feeding sites for a range of resident and migratory birds.

### Ocean

Tropical oceans are home to seagrass beds, sandy sediments, coral reefs, and open ocean environments and can be fringed by mangroves, sandy beaches, or rocky shorelines. Each area has its own species that require that habitat type, but most species move between the regions either daily or throughout their life cycle. Each ecosystem is therefore critical to overall ocean health.

### Xerophytic Shrubland

This environment is dry and experiences little rainfall for most of the year. For this reason, the plants and animals here are specially adapted to the challenging conditions. This habitat type is very sensitive to disturbance because it is difficult to survive here even without added pressures.

### Dry Forest

Seasonally dry tropical forest is the most threatened tropical forest in the world. Though its overall species diversity is lower than in tropical rainforests, species endemism is high, and many of Cayman's endemic species evolved here. It is characterised by hardwood trees growing on elevated outcrops of limestone with little soil.

### Man Modified

These are areas that have been changed by humans for their use including for housing, roadways, shopping, quarrying, agriculture, and other needs. Although humans require areas for these uses, we should site them in locations where they will cause the least disturbance while protecting key ecosystems.