

# MANGROVE JUGGLE

Developed by: Geneva Isaacson,  
Adam McKnight, Gianluca  
Panza

Developed with:



**WPI**



This game is adapted from the  
Red Cross/Red Crescent  
Climate Centre:  
[https://www.climatecentre.org/  
games/2512/farming-juggle/](https://www.climatecentre.org/games/2512/farming-juggle/)



# MANGROVE JUGGLE

Number of people: 10 - 15

Age Range: 10+

Game Environment: Indoors or outside with enough space to form a circle with a 10 foot diameter.

Materials: 6 tennis balls

Learning Outcomes:

- Understand common threats facing mangroves and how they can be overcome
- Understand that one or two threats is manageable by mangroves, but these can compound to more serious issues
- Serve as a way to energize a group with a physical activity



## Instructions:

1. Gather everyone into a circle, yourself included.
2. Explain that everyone in the circle is part of a coastal community and it is their job to manage the mangroves in the area.
3. Announce that “community members” must toss a ball to each other when music is playing and must stop once the music stops. The ball should not touch the floor or remain in anyone's hand for more than 2 seconds.
4. Throw the first ball to a "community member", announcing that management of mangroves is going well.
5. Begin playing music and allow the group to find their rhythm.
6. At any point, stop the music and introduce a new ball into the circle, announcing a new threat facing mangroves in the community (look at examples below).
7. Continue playing music and have the participants try to keep all the balls off the ground.  
Keep adding balls into the circle until the play becomes too chaotic, with balls being dropped very often.



## Debrief Questions:

1. How did the game change as more balls were added to the circle?
2. Was there a strategy when playing the game?
3. What are some threats to mangroves?
4. Did the types of threats change over the course of the game?
5. Are we able to prevent or mitigate these threats?
6. Was there a point where it became too difficult to keep the balls in the air?
7. What was the most challenging aspect of the game?
8. How does this compare to real life?

## For the Facilitator:

1. Explore different learning outcomes:
  - a. Human Related involvement with mangroves
    - i. Filling for ports
    - ii. Heavy pollution from increased tourism
    - iii. New Housing and hotels
    - iv. Airports
    - v. Industrial Sites
    - vi. Dumping of Garbage
    - vii. Draining for agriculture and aquaculture
  - b. Science Related involvement with mangroves
    - i. Increase in Flooding
    - ii. Changes in water levels blocking channels
    - iii. Fire
    - iv. Pollution from sewage/Contamination of soil
    - v. Increased coastal damage from natural disasters
    - vi. Increases salinity
    - vii. Chemical Runoffs
    - viii. Global warming causing sea level
  - c. Ecological Related involvement with mangroves
    - i. Loss of fisheries
    - ii. Birds finding new homes
    - iii. Termites eating away all of the dead trees and causing blockages
    - iv. Loss of other forms of vegetation
    - v. Changes in the sediment due to contamination
    - vi. Cyclone damage
    - vii. Drought
    - viii. Hurricane
    - ix. Tsunami