**Perceptions of Environmental Change Participatory Mapping Protocol – Pemba, Tanzania 2022**

**Overview:**

**Required Materials:**

* 10 Red, black permanent markers
* Two button types
* 11 Maps (one extra for presentation)
* Tape to put presentation map on a wall
* Sodas and biscuits for participants
* Payments for participants (5,000 tsh X 10)
* 10 Paper surveys
* 10 Pens

**Procedure:**

1. Meet participants at location, find seating for each participant, and provide them with sodas and biscuits.
2. Give introduction:

-Thank participants for coming.

-Give research team introductions.

-Explain that we are here for research, not for donating money or for implementing conservation.

-Explain that they were chosen from a random sample.

-Not related to politics in any way, just for research.

-Explain that the purpose of this research is to study peoples’ perceptions of mangrove change.

-We want to know how each individual person thinks about mangroves and how they are changing, so it’s expected and okay if people have different answers.

-This is not a test. Participants should answer to the best of the ability and will not be penalized in any way if an answer is incorrect.

-All participants are free to leave at any time. Participants may also leave questions blank if they are uncomfortable answering for any reason.

-Participants are free to ask questions at any time or about any part of the data collection process.

-Explain that information collected during this process will not be connected to participants’ names and will be completely anonymous during any presentation of project results.

-Ask if participants have any questions.

1. Provide all participants with a map of the study community. Explain that this map will be used to collect perceptions of environmental change in their community and will be followed with a survey.
2. Do a map orientation explaining the cardinal direction and locations of important community locations such as mosques, bodies of water, etc.
   1. Talk about different areas of forest and ask if anyone can give local names for different areas. Write on presentation map.
   2. Ask about any other particularly important community areas, particularly in regard to the forest.
3. Ask participants to place a white button on **all** squares that contains mangrove forest
4. Ask participants to place a black button on **all** squares that they are not sure if they contains mangrove forest or not.
5. All other squares are left blank
6. Ask participants to outline each square with a white button with a red permanent marker.
7. Ask participants to outline each square with a black button with a black permanent marker.
8. While participants are doing this, Matt & assistant(s) count the number of mangrove squares and number of unknown squares. Record on participants’ data sheets.
9. Remove all buttons.
10. Ask participants to now think about which areas have changed forest cover in the last year.
    1. Explain that mangrove cover changes up until January of 2021 does not matter for this exercise. We only care about the last 12 months.
11. Using a black permanent marker, participants will put a “+” sign in squares that have increased tree cover.
    1. This might be from planting, conservation, or some other process causing the mangroves to be used less than in the past.
12. Using a black permanent marker, participants will put a “-” sign in squares that have decreased tree cover.
    1. This might be from legal or illegal harvest of mangroves or from natural processes such as sea level rise.
13. Using a black permanent marker, participants will put a “?” sign in squares that they are not sure about.
14. Matt and assistant(s) record the number of “+”, “-“, and “?” signs in mangrove squares on participants’ data sheets.
15. After participants are finished, record number of “+”, “-“, and “?” signs.