

Mangrove Restoration Site Research Questions



This document outlines critical research questions that should be asked to assess the suitability of a site for mangrove restoration. The questions are divided into two sections: biophysical site conditions and social research. The biophysical questions aim to understand the environmental factors affecting the site, such as hydrology, elevation, soil conditions, and species health. The social questions focus on gathering community input, historical knowledge, and understanding local livelihood needs. Together, these questions will provide a comprehensive understanding of the site's restoration potential, the causes of degradation, and whether restoration is feasible and sustainable.

Biophysical research questions

- Is the hydrology at the site functioning well? Are there any blocked or altered channels?
- Does the site drain effectively at low tide?
- In which intertidal zone is the site located? (low, mid, or high zone)
- Is there any freshwater input into the site?
- What are the local mangrove species at the site? How many species are there?
- Is there an even distribution of species, or is one species dominant?
- What is the overall plant health? Are there signs of stress, such as stunted growth of trees, small leaves, or leaf loss?
- Is there evidence of natural regeneration? If so, what species are regenerating?
- Is the site exposed to high wave energy?
- What is the soil composition? Is it more sandy, muddy, or a mixture of both?
- What is the soil pore water salinity? (Dig a 15 cm hole, allow it to fill with soil pore water, and test for salinity.)
- What is the surface water salinity at the site?
- What is the pH level of the soil water?
- Is there evidence of sedimentation or erosion occurring at the site?
- Are there any signs of animals grazing in the area?
- What is the surrounding context of the site? Are there nearby villages, cities, roads, or dams?



Social research questions

- Did the site previously support mangroves? If so, when, and what species were present?
- Do community members know the cause of mangrove degradation at the site?
- Do they know when the site was healthy?
- What are the livelihood needs of the local community? Do people rely on the mangroves for resources?
- Is there overharvesting of wood in the area? If so, for what purposes?
- How is wood extracted from the area used? (e.g., fuel, construction, trade)
- Have there been any previous attempts to restore mangroves at the site?
- If so, what restoration work was done and was it successful?
- Who owns the land where the restoration is proposed?
- Is there a Community Forest Management system in place?
- Are there pressures from encroachment or development?

