



SEYCHELLES MARINE SPATIAL PLANNING (MSP) INITIATIVE

Proposed Methodology for Draft Zoning Design

To: Technical Working Group

From: MSP Technical Team

Date: 17 October 2014

Version: 1.1

To analyse and allocate marine uses and activities in time and space for a multi-objective marine planning process, rules or criteria need to be discussed and defined so that this process is systematic, transparent and approved by the Seychelles MSP Initiative governance (e.g., Steering Committee). The spatial aspects of marine planning will ultimately need to be supported by management plans that provide the in-depth direction for recommended uses in a given zone, the conditions for these uses, and identify a process for decision-making in the event of conflicts. This work will largely occur during Phase 2.

Below is the proposed methodology for identifying the first draft of a zoning design in the Seychelles EEZ. Please provide your input and recommendations. This methodology will be presented to the Steering Committee at the next meeting for their approval.

A. Process or rules to define and/or identify possible spatial zones:

1. Representing current uses – GIS layers. Spatial data representing existing and possible future uses are the foundation for decision-making when creating zone boundaries.
2. Identify the “best areas” for a use (e.g., fishing, tourism, recreation, oil & gas). Each user group needs to provide the process with a comprehensive map of their priority areas using the “best available” data or information.
3. Identify conflicts and compatibility – use planning tools such as compatibility matrix, stakeholders, etc. Once each group provides a map of their priorities or “best areas”, compatibilities and conflicts between groups can be analyzed.
4. Represent values for uses, methodology could include:
 - a. Set representation goals. For example, what percentage of the high use fishing areas needs to be captured?
 - b. Set using a certain distance and query for distance or other metric. For example, tourism is most intense within 2 km of beaches with nearby hotels.
5. Stratify spatially – nearshore and offshore:
 - a. Nearshore – Planning Unit summary and closest distance to uses gives the most use.
 - b. Offshore – Scaled out, and fewer uses that create conflict.



Seychelles Marine Spatial Planning Initiative
www.seychellesmarinespatialplanning.com

B. Options for Defining Zones:

- Marxan with Zones: Data-driven (algorithm) approach to minimise conflicts. Requires data across space for each user group. Challenges: How to create from sparse inputs? Use distance from known use areas as a proxy for likelihood of use by that group? What are other options?
- "Hand-drawn": Visually inspect and use data summaries of activities in specific areas to hand-draw zones. Minimise overlap after defining space. Use compatibility matrix and information about uses to inform drawing.

C. A recap for representing values for the uses:

- Identify high priority areas for given uses, and then identify the distance each high priority area is from a potentially conflicting use. Identify areas with high conflict for a given user and distance to another user. For example, how close am I to conflict between user x and y? Maximise the distance between two users in conflict.
 - How do we represent future vision, spatially? Future uses: Wind suitability layers. Tradewinds. Substrate availability for platform development vs. reclamation. Use available models.
- Groups identify the “best areas” for a particular use. Participatory mapping and structured interview process.
- Spatial proxies, distance weighted by a particular feature.

