

Resource Mapping

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Table of Content

RESOURCE MAPPING	1
Purpose	2
Required inputs	2
Proposed Steps	2
Output.....	3
Strengths	4
Variations.....	4
STRATIFIED RESOURCE MAPPING	5
Outputs	5
GENDERED MAPPING	5
Proposed steps.....	5
Uses5	
TWO-STAGE RESOURCE MAPPING	6
Proposed steps:.....	6
Outputs	6
Strengths	6
Limitations	7
General considerations and recommendations to mapping	7
Resource Map	8

RESOURCE MAPPING

Resource Mapping is a method for collating and plotting information on the occurrence, distribution, access and use of resources within the economic and cultural domain of a specific community. Variations are introduced in selecting particular participant groups (e.g., gender) or in adding a further stage to generate topographic map related information sets through a two-stage resource mapping process.

Resource mapping is best associated with other tools and in particular with transects, which contribute to a more critical analysis of the individual resource. Resource mapping should be conducted at the onset of a community based activity, but only after rapport has been established with the community. Knowledge on the social structure of the participating community is a prerequisite for the facilitator. This is because the community may consider resource distribution, use and access as sensitive issues. At given intervals, similar exercises can be repeated for monitoring and evaluation purposes. Follow-up in depth resource mapping (i.e., of a particular resource) can be done at any time of the project cycle, possibly generating qualitative and quantitative information.

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Resource mapping can apply to all ecosystems known to the community and it can be elaborated up to different levels of definition.

Purpose

This tool helps people in picturing resources and features on a given base and in graphically manifesting the significance they attach to them. Outputs may differ according to the specific purpose the exercise is conducted for and to the characteristics of participants.

Resource mapping is ideally preceded by a resource historical transect, which provides for a preliminary checklist of resource-related issues relevant to the community. The resource map offers the opportunity to orient the transect walk, which generally follows. Information generated during the conduct of the latter further complements the outputs of the resource mapping exercise.

Resource maps:

- May be used by the community itself (with or without facilitators) for internal discussions or to relate to outsiders
- Are essential inputs both for insiders and outsiders for planning and monitoring purposes
- Support researchers in the conduct of in depth assessments of particular resources

Required inputs

Human resources

- Participants (5-15 persons)
- Facilitator
- Co-facilitator
- Documenter

Supplies and materials

- Craft paper or Manila paper (at least 1 x 2 m)
- Pencils and chalks, assorted colours
- Fixative spray (e.g., hair spray)
- Markers
- Masking tape

Optional

- Compass and ruler
- Topographic map and or nautical chart (original, coloured)
- Topographic map blow-up (1:25.000), 2 to 3 copies

Any surface can be used. The map can be drawn with chalk on a concrete floor, or on the ground with a stick. Resources and features may be pictured by the use of local materials like stones, leaves, sticks, shells or other. Nevertheless, these kinds of maps need to be transferred to a more durable and mobile base (paper) in order to preserve the generated information over time.

Proposed Steps

1. Identify the participant group.

2. Describe purpose and scope of the mapping exercise.
3. Invite the group to select key informants knowledgeable on the resources to be described (i.e., farmers should predominate in describing farmland, while forest dwellers in picturing forest resources). Should access and use of resources be culturally or socially related, and should this be critical for Resources Management, then participants may further be stratified according to ethnicity, gender or age.
4. Collate checklist of resources or features to be mapped. A selection of topics is listed in box form for your ease of reference. Consider that only a limited number of topics can be mapped.
5. Position the paper if possible in a place, which has a good view of the area to be mapped.
6. Facilitate the preparation of a base map on craft paper. Make sure that participants have a common understanding of the orientation. The size of the map (i.e. 1m x 2m) should allow several people to contribute at the same time. Ask people to draw landmarks, reference points or reference lines. The sequencing is important. Start with watercourses, followed by roads, mountain peaks, paths, human settlements, etc. Ask participants to name the features by local name.
7. Ask participants to locate on the map the listed resources and features. Allow for additions they (and you) think are important in relation to the resources' occurrence, distribution, use or access. Symbols and colours should be used to represent various sets of information and a corresponding legend should be generated.
8. Allow for validation of the information by a wider forum.
9. Once the output is agreed upon, fix chalk and pencil by use of the fixative spray.
10. Draw copies of the maps. Leave the original with the community and, if necessary, copies with other concerned parties.

Examples of mappable topics:

- Water courses and water sources;
- Farmland and areas devoted to specific crops;
- Wood-lots and community forestry areas;
- Distribution of given species;
- Access (rights or limitations) to resources usage;
- Resource tenure;
- Areas of conflict
- other



Output

The output consists of a map and a written report of the process.

The composition of the map reflects the perception and vision of the participants of the resources and features they have been portraying and provides an insight into the intimate relation between the participating group and the resources. For example, issues on resources important to the participants

Make sure that the documentor properly records the process and that issues debated among participants are taken note of.

Make sure that the map is provided with a LEGEND, describing the different symbols and colours used

might appear exaggerated in size or colourful versus minor issues which are pictured small. The most important resources or features will appear first in the map. Documenting of this process is an essential part of the output.

Strengths

The process of resource mapping allows community members to identify, locate and classify (present and past) resource occurrence, distribution, use, tenure and access, and reveals the significance the participants attach to them. Critical locations such as areas known for illegal logging or fishing, pollution, siltation, etc can be identified and mapped. Compared to other tools it allows the establishment of relations between information sets and their spatial location (e.g., establishing visual relations between resources and/or issues).

Resource maps represent a good starting point for participatory problem analysis and planning.

The tool is easily understood and implemented.

Limitations

The sketch-map format encounters difficulties in being used as supporting documentation in formal or legal contexts.

Limitations apply to sketch mapping when participants are asked to map the outer edges of their economic domains. If available, topographic maps or aerial photography are of great help.

Sketch maps may contain a limited number of information sets (less than 10). Nevertheless a sufficiently large map (1x2m) allows for more information to be entered.

Variations

Variations of the tool, like dividing participant groups into gender, age, ethnic origin or other categories, hereafter called Stratified Resource Mapping, are extremely useful in identifying relationships of social groups and resources. This knowledge is essential for planning purposes, especially when selected strata of the community have, exclusive or limited access to given resources.

Further variations utilising a topographical map as a base provide relatively precisely located information. The latter may be used by the community in dealing with formal institutions on particular issues related to tenure, usage rights, right of way, etc. . The outputs obtained by this variation can be transferred with minimal distortion to more sophisticated information storage systems (i.e., Geographic Information System) and be used for planning and monitoring purposes on broader geographical areas.

STRATIFIED RESOURCE MAPPING

This set of variations applies filters like Gender, Ethnicity, Age or other. The outputs differ according to the perception and the control each group has on the analysed resource. This approach generates stratified information of valuable use in identifying customary rights in resource use, access and tenure and in the allocation of resource management responsibilities.

The steps in conducting these variations are similar to the steps described before. Nevertheless the facilitator needs to conduct a preliminary assessment of the community to get a deeper insight into its social structure, to identify appropriate venue and timing for gathering the selected group of participants.

Outputs

Stratified resource maps are gender, ethnicity or age related resource maps. The outline of the resources strongly reflects the domains of interest of the participating group.

GENDERED MAPPING

This is the variation, which highlights men's and women's perceptions regarding the importance of certain resources. There are resources and practices that are associated with gender. Gendered mapping is conducted by groups of either men or women. The tool is gender sensitive: remarkably different outputs might be achieved if the filter is applied.

Proposed steps

The following are additional steps to be considered by the facilitator:

1. Ask the participants to identify symbols to represent men and women.
2. For each of the resources or features in the sketch map, request the group to determine whether it is predominantly associated with men, women or both and apply symbols accordingly.

Uses

- Gendered maps may be used for:
- Raising and discussing issues and concerns.
- Identifying existing and potential conflicts and forming the basis for appropriate discussion.
- Identifying livelihood opportunities for men and women.

TWO-STAGE RESOURCE MAPPING

The second variation, Two-stage Resource Mapping, involves transposing of the information from the sketch map to a conventional topographic map. In order to maintain momentum among participants, the process of data transfer occurs before the completion of the sketch map. The following are some additional steps to be considered by the facilitator:

Proposed steps:

Expose the topographic map (in a suitable scale) close to the developing sketch map, respecting the North-South direction. Participants will slowly start to refer to it as reference. Allow for some time for the participants to familiarise themselves with the topographical map, eventually assist them in conducting the first steps and in interpreting illustrations, like contour lines.

Ask some participants to start transposing the information spotted on the sketch map, directly on the topographic map. Symbols and colours should be uniformly used in representing individual sets of information. Should one topographic map be crowded a second one can be used.

Landmarks, rivers, mountain peaks and settlements should be named. Make sure that a legend appears on each map.



Make sure that both maps are being completed. Ask participants to list their names at the bottom of the maps.

Allow for validation of the generated information sets by a wider forum.

Fix chalk and pencil by use of a fixative spray.

Draw copies of the maps. Leave originals with the community.

Outputs

Two-stage resource mapping generates two outputs: the resource sketch map (stage 1) and the elaborated topographic map (stage 2). The first is richer in people's perceptions. The second adds precision in the location of the information, allowing for a larger number of information sets to be mapped because of spontaneous drawing closer to scale by participants.

Strengths

Two-stage resource mapping facilitates the communication between insiders and outsiders, because the media is understood and valued by both sides.

Translating information from a resource sketch map onto a topographic map allows:

- Information to be defined in terms of occurrence and most significantly in terms of extent.
- The collection of local names not necessarily available from centralised information sources.
- The generation of an output readily linkable to secondary information.
- The use of it within an evaluation process, because the topographic base map remains the same over time.
- The transfer of the information into a computerised format, providing a valuable contribution in addressing forthcoming scientific research or comprehensive resource management planning.

Limitations

Limitations apply to the second stage of the process in cases where topographical maps are not available or inaccurate, or when the physiography of the area is constantly changing like in estuarine areas.

General considerations and recommendations to mapping

The process explored in the first half of the paper may be applied to generate other types of maps like social maps, economic maps, health maps, etc., or providing useful information on resource tenure and rights.

The conduct of mapping may take one day. An additional half-day may be necessary to produce copies of the outputs and to consolidate the notes taken by the documenter. The validation may occur on the same day and generally takes about one hour.

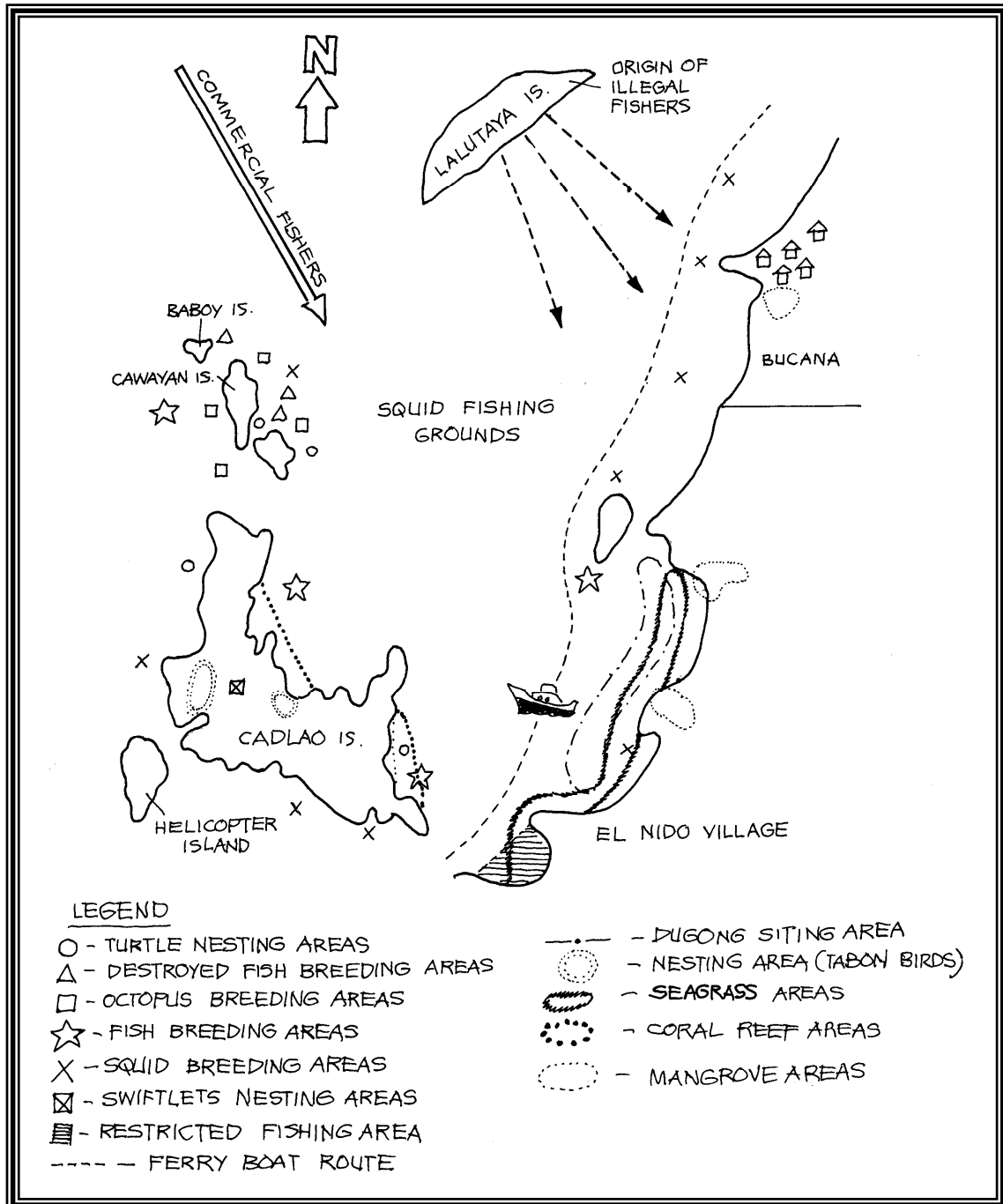
The cost of conducting mapping includes the acquisition of the necessary supplies, travel expenses and out of station allowances for the facilitating team and some representation expenses especially if the participants work over lunchtime.

Differently from inland communities, the economic domain of coastal communities may stretch over several kilometres of coastline and coastal waters. Prepare your supplies accordingly. In the case of topographical maps make sure that they contain a reference scale in the form of a line of a given length and that the coastline is clearly identified.

Consider the opportunity of complementing or cross-checking the generated information, in replicating the same exercise among a second community located relying on the same domain for its livelihood.

Resource Map

Resource map, modified from the originals drawn by fisherfolk of Barangay Bucana and Barangay Manlag, Municipality of El Nido, Palawan, Philippines (January 1997)



Source: (1988) International Institute of Rural Reconstruction (IIRR), Participatory Methods in Community-based Coastal Resource Management, Volume 2, Silang, Cavite, Philippines, pp. 222-236