1.1. Tamil Nadu State-Level Training Workshop on the SSF Guidelines

FishMarc Office, Chennai

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Organizers and Resource Persons

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A one-day training workshop on mapping and GIS was held in Chennai for fishworker participants from Tamil Nadu as a sequel to the National Workshop held here in October 2022. The workshop was held at the FishMarc office and included theory and practical sessions.

Introduction

In her introductory remarks, Shridhar referred to the Training of Trainers Workshop held in October 2022 in Chennai where each state had listed priorities for training, and for Tamil Nadu, the priority requirement for training was in mapping. Hence, this one-day training programme focussed on the theoretical and practical aspects of mapping.

Mapping Theory

Najeebul, who had done extensive fieldwork in mapping coffee plantations, demonstrated using a hand-held GPS device that could be used to take the readings. This device could not only show latitude-longitude of a place but altitude as well. Similarly, depth readings could be taken and the terrain underwater could be mapped (bathymetry).

As for maps, he said that starting from a base map, layers could be added and be used for answering various questions. For example, in the case of fisheries, a base map could have the following layers: location of fish landing centres and fish markets, population of various localities, the fish-eating populations in various areas and so on. Multiple layers could be added and a layer could be selected to answer specific questions.

Ephrem pointed to the importance of such maps in participatory rural appraisal exercises, where hand-drawn maps are the norm but these digital maps would be more accurate.

Najeebul explained that the first step in creating maps should be to define the purpose of the map, that is, what are the questions sought to be answered by creating a map. This is important to ensure that the appropriate data is collected. The complexity of any map would depend both on the data available and the data required to build the map. It is important for the map to be clear so that they can be understood by the user. The trainer also explained

some of the features of Google Earth, such as historical imagery that can be used to see what a place was like in the past.

He said that the hand-held unit would enable collecting point data which would then be transferred to Google Earth (or ArcGIS) to develop the map. The hand-held device would work only in the open where it could receive satellite signals. Hence the demonstration of the unit could be done only outdoors. For the field visit, he said that while taking readings, it is necessary to write down a description of the point where the reading is taken because it would be impossible to remember where which point is clicked, as the unit is recorded only in a sequence of numbers.

Field Visit

The participants went to Foreshore Estate, an extension of the Marina Beach. This area has a number of fishing hamlets. The participants went to Nambikkai Nagar to learn how to map the hamlet.

The participants were divided into two groups with each group equipped with a hand-held unit. Since it was the first time the participants were using such a unit, it was agreed that they would initially walk together and later do short exercises separately.

Nambikkai Nagar is a rectangular area west of the road along the seashore. Hence the participants started from a point on the road, walked west, turned south, walked east and then north and then came back to the starting point. The two groups used the hand-held GPS units to register the coordinates. It was explained that the unit had to be held in position for 10 to 15 seconds for the GPS to stabilize after satellite triangulation and only then clicked to mark location. Otherwise, small errors would creep into the readings.

After completing the outline of the hamlet, the teams went on to register the coordinates of buildings such as the church and the community centre. They also took point data to register the metro water pipe, a handpump and a flagpost located within the community. The teams then crossed the road and marked shops, shoreline, net mending sheds and other spaces on the beach.

Exercises Based on the Field Visit

The GPS coordinates registered in the two hand-held units were transferred to the computer and copied into Google Earth on the participants' laptops. Najeebul showed how the points had to be chosen for various locations. For example, to draw the outline of the hamlet, the first set of coordinates was chosen. There was slight discrepancy between the data from the two units due to the slight locational discrepancy while taking the reading, the fact that one of the two hand-held devices was an older model and also because Google Earth coordinates may not be as accurate, resulting in offset errors. Najeebul showed how corrections would need to be applied. He also explained that this is why a total station survey is required for ensuring accurate locational measurements.

The next key point made was the importance of symbology. Consistent use of colours and icons for indicating anything (e.g., fish vending stall, fishing craft, water pump) is essential so that different members of a team use the same symbols to avoid confusion while preparing maps. He also showed the various facilities within Google Earth that could be used for creating layouts. Pins are to be used for points, polygons for buildings and other spaces and path for roads.

The participants then put the theory they learnt into practice. They paired themselves and worked on four laptops. They mapped the site visited using Google Earth. Following this, Najeebul showed how once the points are plotted on Google Earth they could then be exported into a software called ArcGIS—a geospatial tool to view, edit, manage and analyze geographic data. The software enables users to create maps based on the data available/collected. However, ArcGIS being a paid software, Najeebul said he would look into other free software available to carry out similar analysis. He stated that GIS as a subject is vast and would require the user to be clear about why they would want to use it. To demonstrate this, Najeebul gave an assignment to the participants: each of them had to come up with three questions they would like to address for which GIS could give the solution. Once the questions were ready, Najeebul offered to do an online session as a follow-up to the training workshop to teach the participants on how to go address their questions using GIS.

Feedback

Most participants shared that the GIS was very new to them, however they found it relevant to the work they did and were keen to learn in depth about its applications. Ephrem added that with the extensive data that he and his team had collected over the years, GIS could help in creating maps that could be helpful to the community, administrators and others.