



Case Study 22

HR/OD Intervention Focus: Spatial Information

Applying Spatial Competencies in Mapping Resources

Sylvia Esperanza has been with NAMRIA (National Mapping and Resource Information Authority) for almost 16 years. As NAMRIA's senior remotes and technologies officer, she is expected to prepare accurate coastal resource maps.

In 2011, Esperanza was chosen to be one of the recipients of the prestigious Australia Awards Scholarships (AAS). With this opportunity, she was able to enhance her competencies in

geographic information systems (GIS). Taking a year off from work, she went on to complete her Masters in Science and Technology, Spatial Information at the University of New South Wales (UNSW) in Sydney. She found the environment at UNSW conducive to learning, and she was particularly impressed with the university's learning resources and advanced technologies.

Upon her return to NAMRIA, she moved full steam ahead on her REAP. She focused on the development of automated tools for vulnerability mapping. As Esperanza explains, her REAP was driven by the need to standardise mapping procedures that can be applied to all of the country's 81 provinces. "We do spatial analysis of different national data and this involves complex procedures. Because these are complex, they are subject to inconsistencies."

According to Esperanza, standardisation is crucial for a mapping agency such as NAMRIA if the goal is to produce a more accurate output. With the automated tools in place, she adds that this desired standardisation now becomes achievable.

From vision to fruition

Evaluating the task at hand, Esperanza concluded that she had to work with their current Geographical Information Systems (GIS) software and bring it to a level of automation that would help produce the output needed. As she explains it, GIS is a powerful analytical tool that has the capability to store, analyse and integrate data from a variety of sources. For NAMRIA, this is particularly useful as the software sifts through data from different sets of maps to help them come up with one accurate, comprehensive map.

Esperanza discloses that instituting the standardisation process and achieving the desired outcome took a lot of work, from conducting research to establishing the criteria and

formulations. “The project had to be defined first before I could start formulating my tools. And all of these had to be incorporated in the tools for these to run and come up with the final output,” Grateful for the support of her supervisor, she says the project would not have successfully gotten off the ground without his nod. She says, “Without his support, I would not be able to work on what I wanted to do. At the same time, he gave me the resources I needed in terms of equipment. Not much financial assistance was needed because the computer and the system – the software – had already been provided.”

Esperanza shares that since her REAP was contained in her division and aligned with the project of the Resource and Analysis branch where she is connected, she has been able to implement it quite smoothly. When she returned from Australia, the office was in the process of obtaining International Organisation for Standardisation certification, and one of the initiatives identified was on environment and resource mapping. “That was one of the main concerns of the branch. Our objective was to create timely and accurate maps and give these maps to our clients. With that direction, my REAP was aligned since my output is to standardise the process to make it more accurate.” Her REAP was in place by the end of 2013, and NAMRIA continues to use it to this day. “It’s already complete. The tool that I have formulated for my REAP is still being used now for the production of maps. It’s a tool that is embedded in the GIS software that we are using,” she explains.

A new challenge

Not to sit back idly, Esperanza continues to contribute to the agency’s objective of creating maps that meet their targets and the needs of their clients and stakeholders.

Since she is currently involved in coastal mapping, her remote sensing subject during her scholarship in Australia is now serving her well as she has been able to apply her learnings. “We use satellite GPS to be able to map the coastal resources, the corals, the sea grass and basically how the mapping should be,” she explains. With a direct stake in producing these maps, she has been concretely helping her organisation meet its goals.

She also reckons that these maps are of particular importance to stakeholders in the provinces. “It is very important for them because it is input, especially for the LGUs (Local Government Units) in their planning, say for their coastal resources,” she stresses. According to Esperanza, a good base map is necessary for those involved in environment and natural resources operations so they can be cognisant of information such as where the corals and sea grass are, where they can be collected, how much of it is available, and other similar data.

Ms. Esperanza admits, though, that they have yet to integrate the data and ensure that the details are accurate since the project just took off. “For now, we are still in the process of finalising the output for the whole Philippines.” Once done, the output can eventually be released to the public and distributed to the stakeholders. “We are still pursuing the direction of continually improving our quality systems for us to improve our products and services.” The challenge is clearly there, and fortunately for NAMRIA and the people it serves, Esperanza seems only too keen to take it.

Sylvia Esperanza finished her Master of Science and Technology in Spatial Information from the University of New South Wales in 2011. Her REAP focused on Development of Automated Tools for Vulnerability Mapping Using ArcGIS Model Builder