

## Experiencing fisheries data management enhancement as a Pacific Island Fisheries Professional at SPC

Lavinia Vaipuna<sup>1</sup>

I never dreamed of working for the Pacific Community (SPC) as a Pacific Island Fisheries Professional (PIFP). But, I had been dreaming and longing for SPC's assistance and support for my work with the Tonga Ministry of Fisheries as a computer programmer for over 20 years. I have been responsible for all data management systems that have been developed locally by the Ministry or by regional agencies such as SPC, which are used by the Ministry to manage fisheries data. Collecting and submitting quality and accurate data in a timely manner has been and is still an issue across the region. To ensure informed management decisions can be taken, there is a need to improve the way we collect and manage our data at the national level.

The PIFP programme is a 12-month working opportunity offered by SPC. It aims at building the capacity and professional development of nationals and residents of Pacific Island countries and territories who are employed in a fisheries-related role.

Being offered the PIFP job was beyond my expectations but, on 13 February 2019, I took it knowing that this was the support I had been longing for.

My one-year contract as a PIFP with the Data Management Section of the SPC Fisheries, Aquaculture and Marine Ecosystems Division has been very productive in many ways. The experience accumulated, the skills and knowledge developed, the self-confidence gained, the opportunity to network with professionals have been priceless.

My experience with database development relied heavily on the Microsoft Access database and applications. All the local systems that I have built for our data collection at the Ministry of Fisheries are based on Access database systems. I knew and heard of other programming platforms, but never had the chance or time to study or try them out. During my PIFP time, I learned about Vue.js and its concepts. I learned about Node.js, JavaScript and the WebStorm environment. I also learned to code in SQL as it was necessary for the support of my local system in Tonga. And I was keen to use all these new skills to the coding of a new online Tonga's export application system. I made progress in developing the first phase of this application while at SPC. Now that I have learned another programming language and all its concepts and have developed the export application, I am taking it back to Tonga Fisheries and will work on it to replace my current local export permit application. I am sure Tonga will benefit from having this new online web application, as less data entry, and less processing time will be needed. And, of course, it will be accessible from anywhere and any device. Exporters won't have to drive to the Ministry of Fisheries office to request their permit, they will just have to apply online. Maintenance will be done online and in a timely manner. This will save time and money.

On my return, I am planning to install the system on our server. I will work with our network administrator to make sure this online system can be utilised in Tonga. I will, of course, continue to seek the assistance of SPC's programming experts when necessary. When this project is successful, I will transfer the rest of my local access system to an online web-based system. At the same time, I will continue my training by taking online courses in programming languages to further my career in database and data management system development.

As I have now completed my one-year contract, and just before returning to my homeland, I wish to encourage my Pacific Island colleagues to take advantage of this PIFP programme opportunity. It has been set-up to help us develop and refine our skills and knowledge, build our professional capacities, and use what we have learned to help in the management of our own fisheries at home. Take it up!

I would like to conclude by acknowledging SPC for the opportunity to work within the Data Management Section of its Oceanic Fisheries Programme. Mālō 'aupito



Lavinia Vaipuna and SPC colleagues Benoit Pohl and Andrew Hunt.

<sup>1</sup> Computer Programmer, Head of ICT Section, Ministry of Fisheries, Kingdom of Tonga; and SPC Pacific Island Fisheries Professional (from 13 February 2019–12 February 2020). Email: laviniav@tongafish.gov.to