

# NATIONAL REPORT FOR THE 12<sup>TH</sup> WMO/UNEP OZONE RESEARCH MANAGERS MEETING

## SAMOA

### 1. OBSERVATIONAL ACTIVITIES

Presently, Samoa lacks the capability and resources to engage in ozone monitoring and observational endeavors. The country heavily relies on monitoring efforts carried out by other nations and scientific institutions like NOAA. Specifically, data sourced from American Samoa at the NOAA Station located at Cape Matatula serves as the most relevant information accessible to Samoa. This data can be accessed via the following link: <https://gml.noaa.gov/obop/smo/>

### 2. DESSEMINATION OF OZONE INFORMATION

Due to Samoa's absence of observational activities, the information disseminated primarily consists of updates on the status of the ozone layer, which are provided by NOAA, NASA, and assessments conducted by the Scientific Assessment Panel of the Montreal Protocol. These updates are provided to stakeholders through various channels, including emails, social media platforms, and the Ministry's official website as well as printed materials such as pamphlets and brochures disseminated during awareness campaigns.

### 3. PROJECT, COLLABORATION, TWINNING AND CAPACITY BUILDING

#### 3.1. National Ozone Unit collaboration with NIWA

Discussions were held with NIWA following the 10th ORM regarding the potential provision of a situ ozone analyzer for Samoa's observations. Despite encountering challenges that prevented the successful execution of the project, notable efforts were made. Although the analyzer was an older model, successful development of data logging was achieved. It operated in conjunction with a calibrated ozone analyzer to ascertain calibration coefficients for the older unit. The data logging software, written in Python, utilized a USB-connected Labjack U12 data acquisition unit (<https://labjack.com/products/u12>), originally intended to accompany the ozone analyzer



*NIWA Situ ozone analyser (photo credit: Richard Querel)*

### **3.2. Twinning and Capacity building with the American Samoa Meteorological Office**

The NOU continues to participate in the annual meeting between the two Samoa Meteorological Offices. The collaboration allows for the NOU staff to visit the NOAA Global Monitoring Division at the Cape Matatula American Samoa. The last visit before COVID was on the 8-10 May 2019. The visit familiarized NOU staff with existing equipment at the monitoring station.

## **4. IMPLEMENTATION OF THE RECOMMENDATIONS OF THE 11th OZONE RESEARCH MANAGERS MEETING**

Drawing upon the recommendations of the 11th ORM, the NOU has incorporated a research component into the responsibilities of newly recruited staff. This initiative intends to foster endeavors aimed at understanding ozone monitoring, what efforts are possible in the country and what resources can be accessible in the Pacific Region for such project.

Moreover, staff with the opportunity to visit the NOAA observatory in American Samoa are encouraged to engage in self-directed learning in comprehending systematic observations and devising strategies to address gaps in the global coverage of atmospheric monitoring of controlled substances.

## **5. FUTURE PLANS**

As the NOU is based with the Meteorological Division of the Ministry of Natural Resources and Environment, there is potential for initiation of ozone monitoring, aiming to establish a comprehensive data repository covering weather, climate, ozone, seismic and geomagnetic data. In doing so, a proposal is planned to request funding under the Trust Fund for a short-term project. At present, more research is needed to identify the most feasible project - one that can be implemented effectively providing great benefits. Furthermore, there are aspirations to integrate air quality monitoring into these observations.

## **6. NEEDS AND RECOMMENDATIONS**

While there is willingness to launch a project for ozone monitoring, there exists a deficiency in resources and expertise in this domain. Consequently, there is a pressing need for;

- i) Capacity building, with the likelihood of necessitating international expertise to train current staff members;
- ii) Procurement of resources i.e. equipment/apparatus, analyzers etc.
- iii) Identify appropriate location for observations;
- iv) Conduct an assessment/feasibility study and provide analysis of data correlations if compared with the NOAA station in American Samoa.