Have you ever heard the word “diatoms”? It might be alien to most people, but not to Cynthia Wayoi, a Biology student at the Faculty of Mathematics and Natural Sciences, University of Papua. Diatoms, which is a certain type of phytoplankton, was studied by Cynthia in the Young Papuan Scientist research competition a year ago.

The 24-year-old woman from Serui, Yapen Islands Regency, Papua Province, conducted a study on diatoms as a bioindicator of water quality in the Pami Amban River, Manokwari. Thanks to this interesting topic, Cynthia's research was successfully selected as one of the ten best proposals in last year's IMP competition. It's not surprising, because Cynthia has been a "good friend" of Papuan nature through the science she has learned on the campus. In addition to being one of the researchers selected for IMP 2020, Cynthia has also been supporting the EcoCamp activity at Villanova High School, Manokwari, in the same year. Fascinating, isn’t it?

Why diatoms? According to Cynthia, diatoms greatly affect lives in the waters for the important role they played as a food source for various aquatic organisms. Diatoms won several advantages over other organisms for their wide distribution, large numbers of species, and responsiveness towards environmental changes. In addition, the research of diatoms regarding water quality has never been done in the Pami Amban River. This is the opportunity that Cynthia took to learn more about life inside one of the rivers in Manokwari.

She conducted the research in October-November 2020, where she took samples of diatoms in the Pami Amban River, then analyzed them at the Zoology Laboratory, Department of Biology, University of Papua. Cynthia uses an analytical model known as Principal Component Analysis (PCA) to study the connection between diatoms and water quality, based on the diatoms community structure and water physicochemical parameters.

As a result, she found that there were a total of 13 genera of diatoms at three points in the Pami Amban River where she took the samples. At each sampling point, the diatoms contained in it are affected by various factors, such as air temperature, oxygen content, river width, air current velocity, and pH level. The diatom content which is influenced by these factors can help identify the level of river water pollution. Based on these findings, Cynthia concluded that the Pami Amban River had experienced mild pollution.

Cynthia's research can not only be applied in the Pami Amban River, but also in all kinds of aquatic ecosystems in Papua. We are proud to call her a Young Papuan Scientist by this impressive work. If she can contribute to The Land of Papua, why can't you?

Now is the time for you to be like Cynthia by joining the 2021 Young Papuan Scientist! Check out the complete information by clicking this [hyperlink untuk download concept note], and register yourself here [hyperlink ke formulir registrasi] before July 31, 2021.

Let's contribute to the Land of Papua by becoming a Young Papuan Scientist!