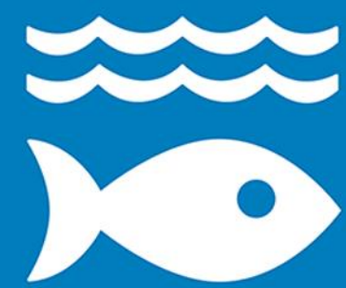
MOUNTAIN PROVINCE STATE POLYTECHNIC COLLEGE
1969

SUSTAINABLE DEVELOPMENT GOALS

14 LIFE BELOW WATER



2022 REPORT

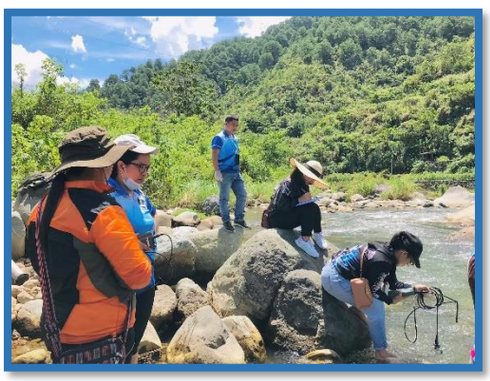
CONSERVE AND SUSTAINABLY USE THE OCEANS, SEA AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

One research project titled Ensuring Water Security and Climate Change Resilience for Mountain Indigenous Communities of the Cordillera commenced in 2021 and ended in August, 2023. The project conducted the following studies in 2022:

Physico-Chemical and Microbiological Assessment of Domestic Water Supply in Bontoc, Mountain Province

1. Challenges Faced by the Municipal Water Works Management in Improving Water Supply Adequacy and Distribution in Bontoc, Mountain Province
2. Optimization of Existing Water Supply Distribution System using Technology-Based Tools in a Rural Community of Mountain Province, Philippines
3. Analysis of Water Consumption using GIS Spatial Statistical Tools: A Case in Bontoc, Mountain Province

Members of the CordiWaters project team conducted Fieldwork along Chico River on Upstream Sabangan - Lagan - Balitian - Amlosong - Agoyo - Samoki - Lower Stream Bontoc Dumpsite

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A total of four (4) research studies were proposed 2022 to support SDG14: Land below Water.

1. Status of Freshwater Macro Fauna in Upper Chico River in Mountain Province

   This study aims to determine the status, diversity, and conservation measures of macro fauna in Upper Chico River in Bontoc, Mountain Province. The study will use a combination of descriptive-classification, descriptive-status, and comparative design. Water quality parameters will be measured, and macro-benthic invertebrates will be collected and identified. The conservation status of each species will be determined using the IUCN Red List. Freshwater ecosystems, although small in size, support a significant percentage of all recorded species. Species richness and biodiversity will be assessed using the Shannon-Weiner Diversity Index. Statistical analysis will be conducted to determine significant differences among sampling stations.

2. Water Quality Analysis and Geographic Information System Mapping of Water Sources at Bontoc, Mountain Province

   This study aims to assess the water quality of Bontoc, Mountain Province through water quality analysis and Geographic Information System (GIS) mapping. It is anchored to Sustainable Development Goal #6 on Clean Water and Sanitation. The study will identify safe and at-risk water sources, map out factors for contamination, and analyze the occurrence of waterborne diseases. The research will employ a descriptive research method and use a triangulation approach between quantitative and qualitative research. Water samples will be analyzed for microbial and physico-chemical attributes. The study will benefit the Department of Health and the residents of Bontoc by providing water quality information for management programs and ensuring safe drinking water. It will also serve as an entry point for environmental education programs and provide valuable information for resource management and regulatory agencies.

3. Species Ripeness and Riparian Vegetation in Bontoc Chico River, Mountain Province

   Biological diversity refers to the variety of genes, plant and animal species, and ecosystems in a defined area. The study focuses on the composition and diversity of plants in riparian areas in Bontoc, Mountain Province. It aims to provide baseline information for conservation and management strategies. The study will identify plant species, measure biodiversity using species richness and Shannon Index, and identify threatened and invasive species.

The study will also involve field surveys, data analysis using Excel or R software, and collection of plant specimens. Permission will be obtained from the DENR and a wildlife permit will be acquired. The study will also involve preliminary surveys and communication with local officials. The importance of headwaters and the calculation of diversity indices are also mentioned. The work plan and line-item budget are included.