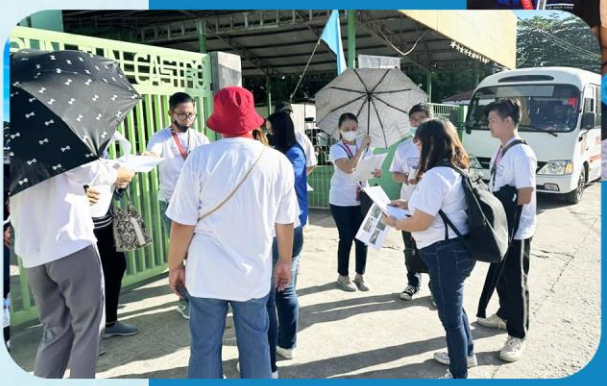
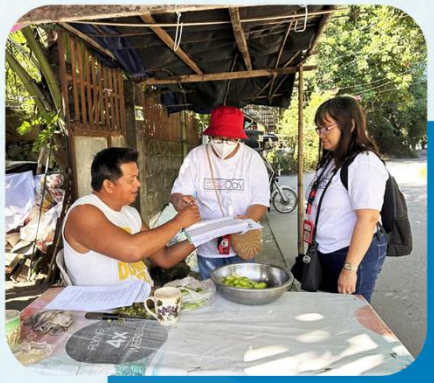
GOAL

14 LIFE BELOW WATER



GOAL 14: LIFE BELOW WATER

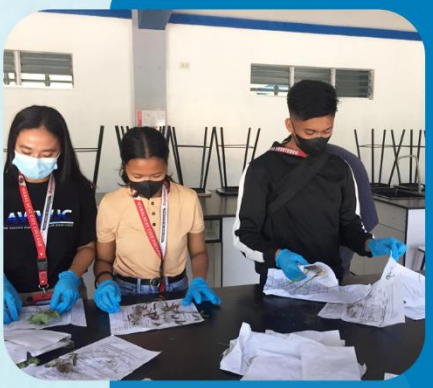
SUPPORTING AQUATIC ECOSYSTEM THROUGH EDUCATION

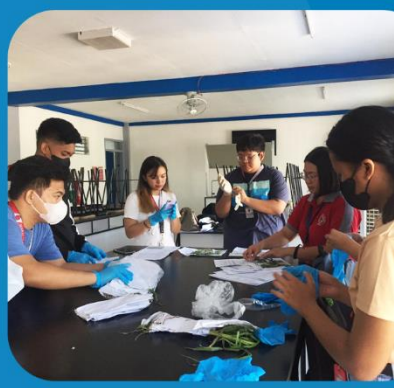


MCC, in partnership with the City Environment Office, worked for the protection of the Sapang Balen stream. As mentioned in other SDG reports, the said stream has a historical significance and can be a major source of fishes as means of living. However, as evidence like water assessment revealed, the stream's water faces challenges particularly on pollution. As spearheaded by the Institute of Arts and Sciences, community education was conducted for several household surrounding the stream. Citizens, in partnership with community officials (Barangay) were informed about the danger of dumping waste in the stream. The initiative's impact goes beyond the local benefit as it contributes also to the national government's goal of restoring bigger water system (Manila Bay) that is connected to streams like the Sapang Balen.

Based on the assessment and research conducted by the Biology Department: "Total coliform counts were measured at 54,000 MPN/100mL in the upstream and 35,000 MPN/100mL in the middle stream, while heterotrophic plate counts reached 21,000 CFU/mL and 20,000 CFU/mL, respectively. Thermotolerant coliform levels also surpassed safe limits, with 4,600 MPN/100mL in the upstream and 4,900 MPN/100mL in the middle stream. These values exceed the permissible thresholds outlined by the Philippine National Standards for Drinking Water (PNSDW), indicating severe pollution and a potential public health risk." This information was an eyeopener to communities like Brgy. Poblacion, Brgy, Mangalit, and Brgy. Sta. Ines.

SUPPORTING AQUATIC ECOSYSTEM THROUGH ACTION





In its goal to preserve the Sapang Balen stream, the institution took time to document the existing plants in the stream. Various kinds of plants were identified for different purposes. Some plants can be source of food for various forms of life; some are helpful in maintain the cleanliness of the water; while others for the purpose of stream protection and preservation. However, some flora and fauna contributed to negative impacts on the stream. As stated in their study: The identified plants in the riparian system of Sapang Balen have both positive and negative impacts on its freshwater ecosystem. Certain species, such as M. cordata, C. capsularis, E. prostrata, can provide control to soil erosion through roots, fibers (Raman et al. 2018), and symbiotic relationship (Duc et al. 2021). Other plants, such as C. mucunoides and M. pudica, contribute to nitrogen fixation that can improve soil fertility (Ferreira et al. 2016). However, most of the plants are fast-growing often leading to competition for space and resources. Some are also known to release allelochemicals (M. cordata) (Hossain et al. 2016) and toxic compounds (R. communis) (Landoni et al. 2023) that can alter the ecosystem balance," significant actions can now be identified for bigger actions.