STATEMENT OF THE PROBLEM

The Philippines is highly exposed to flooding, the consequence of severe cyclones and heavy rainfall. The risks from flooding are worsen by land-use change such as urbanization and logging [The World Bank Group, 2021 <https://climateknowledgeportal.worldbank.org/country/philippines/vulnerability> ]. On November 12-13, 2020, typhoon Ulysses lashed the main island of Luzon with heavy rainfall triggering extensive flooding affecting several regions. Tens of thousands of homes in low-lying suburbs of the national capital were submerged in roof-level floods, trapping residents in their rooftops while awaiting rescue [Office for the Coordination of Humanitarian Affairs Services, 2020 <https://reliefweb.int/report/philippines/philippines-typhoon-vamco-ulysses-worst-flooding-decades-cagayan-valley-region-16> ]. Local authorities in the Philippines called it the worst in the region in four decades. In these times of calamities, it is crucial to have a flood monitoring and alerting system to warn residents with the danger of an upcoming flood. Implementing an Arduino-based flood monitoring and alerting system is one of the most effective methods that can help prevent the possibility of flood victims.