**RATIONALE**

The risk factor is defined as including multiple factors, namely the ingestion of unsafe water, lack of water linked to inadequate hygiene, poor personal and domestic hygiene and agricultural practices, contact with unsafe water, and inadequate development and management of water resources or water systems. In many developing countries, dirty or contaminated water is being used for drinking without any proper former treatment. One of the reasons for this happening is the unawareness of public and administration and the lack of water quality monitoring system which creates serious health issues. Also natural phenomena such as volcanoes, algae tints, rainstorms, and earthquakes also change the quality and ecological status of water.

The purpose of this study is to research the water quality status for safe drinking water. Assessing water quality is of crucial importance to both society and the environment. Drinking from unsafe water can cause any illness to the body. Having a clean and safe drinking water helps to maintain a healthy body. Some places have no clean water or water that is not safe to drink. Adventurers, hikers are want to drink water from the river, spring, falls and in this case, they don’t know if the water is clean. It has been surveyed that water pollution is the leading cause of deaths and diseases worldwide.

The researchers chose this project to help places that have polluted water which might be contaminated and it is not safe for drinking water. It is very easy to test the quality of water because it is portable or easy to carry.