Assessment of Ground Water Quality and Quantity in Yangon Downtown Areas Near Hlaing River

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Vision

- To mitigate the rate of ground water table depletion.

Issue to solve

- In Yangon, groundwater use is increasing due to the high groundwater level and the inflow of salt water into the river.
- Ground water play as in important source for water supply in Yangon. There is insufficient supply of surface water. Bounded rivers and creeks are influenced by tidal action to some.

Technology features

- Some of the groundwater parameters (Electric Conductivity, Total Dissolved Solids, pH and Total Hardness) are tested in 15 tube wells to assess their concentration along the buffer distance from 400m, 600m 800m, 1000m and 1200m from Yangon river.
- Area-based ground water tables for next 30 years are predicted for three scenarios using MODFLOW model. Scenario 1 is considering variable discharge rate at the existing discharge rate. In scenario 2, the existing population and the future population rate is considered for the pumping discharge. Half and one third of the pumping rate for both of existing and future population groundwater usage is considered in scenario 3.

Possible implementation

- It can be employed in areas where there are problems such as salt intrusion and landslides, mainly in areas where groundwater discharge is high.
- It is intended for all water resource users in Yangon downtown areas.
- The support of relevant organizations that can determine the compliance with groundwater laws is needed.
- The market will grow in densely populated urban areas.