



Atmospheric Water Generator



- ❑ Atmospheric Water Generator condenses atmospheric humidity to generate drinking water
- ❑ Temperature and humidity sensors used to read the values and adjust fan speed and condenser
- ❑ Water quantity increased and lesser electricity consumed
- ❑ Control possible through remote access

Used Case 01 : Surface Water height and flow measurement system

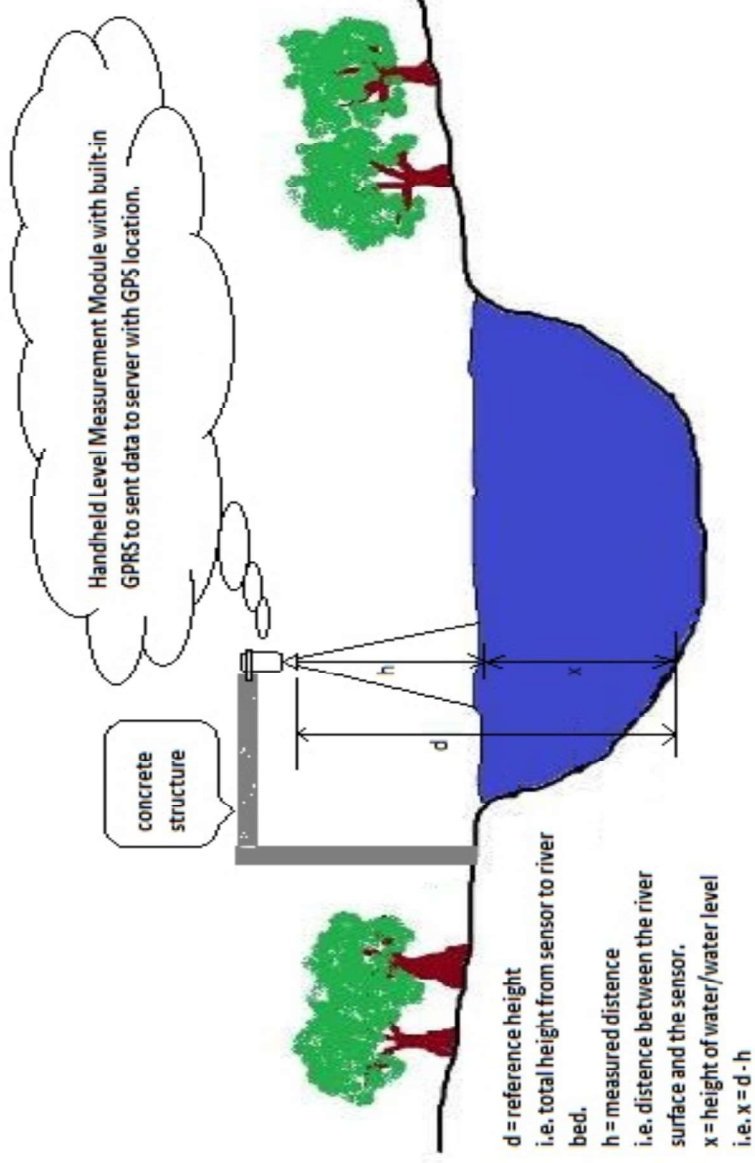


- Sensor for Surface Water Height :
 - Weather Resistant(IP67) Ultrasonic Range Finder
 - Radar Range Finder
- For Surface Water Flow Measurement :
 - To calculate the flow or the amount of water discharge, we require the water body's cross-sectional profile with proper mathematical equation.

Surface water height management



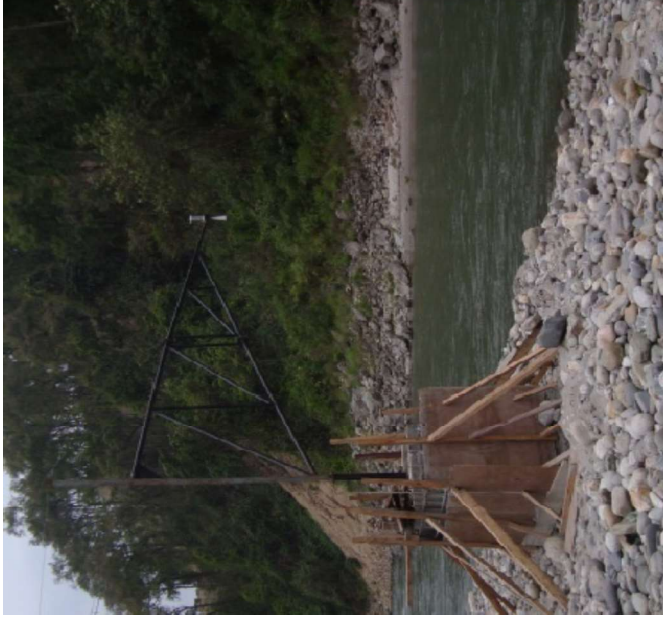
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Used Case 02: River Water Discharge and Rain Monitoring System



- This system is installed on the river Dharal in Jalpaiguri district in West Bengal, to measure and monitor the river water level and discharge.



Technical Description



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- To enhance irrigation process, several check dams were developed in West Bengal. To monitor the water levels of the check dams and periodic rain falls, telemetry instruments have been installed at different places. Water level and rain fall are continuously monitored and transmitted wirelessly to a central server. This site is a central hub for instant monitoring of current data and also previous historical data of all such measuring nodes.

Used Case 03 : Minor Irrigation



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The above displayed system is installed at village Uludanga in Barasat district of West Bengal.

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Technical Description



- Solar power is being used for driving irrigation pumps(5 HP). All the field installations are equipped with remote data acquisition system for collecting various parameters and acquiring data centrally in the web server through wireless GPRS. All instantaneous field data can be observed through this website. The server is also used to provide historical data. This facilitates remote observation and analysis of all such solar irrigation installations over different places of West Bengal.

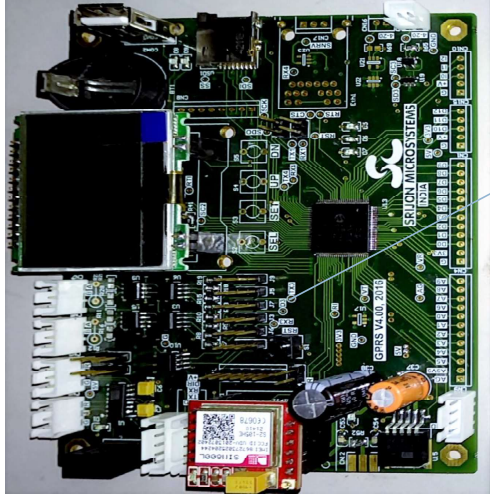
Used Case 04: Automatic Weather Station



Solar powered GPRS based Remote Wireless Data Acquisition, Monitoring and transmitting unit for Automatic Weather Station.

- ❑ Rainfall sensor
- ❑ Ambient Temperature Sensor & Relative Humidity
- ❑ Barometric Pressure Sensor
- ❑ Solar Radiation Sensor
- ❑ Wind Speed and direction sensor
- ❑ Evaporation sensor with Pan Evaporator

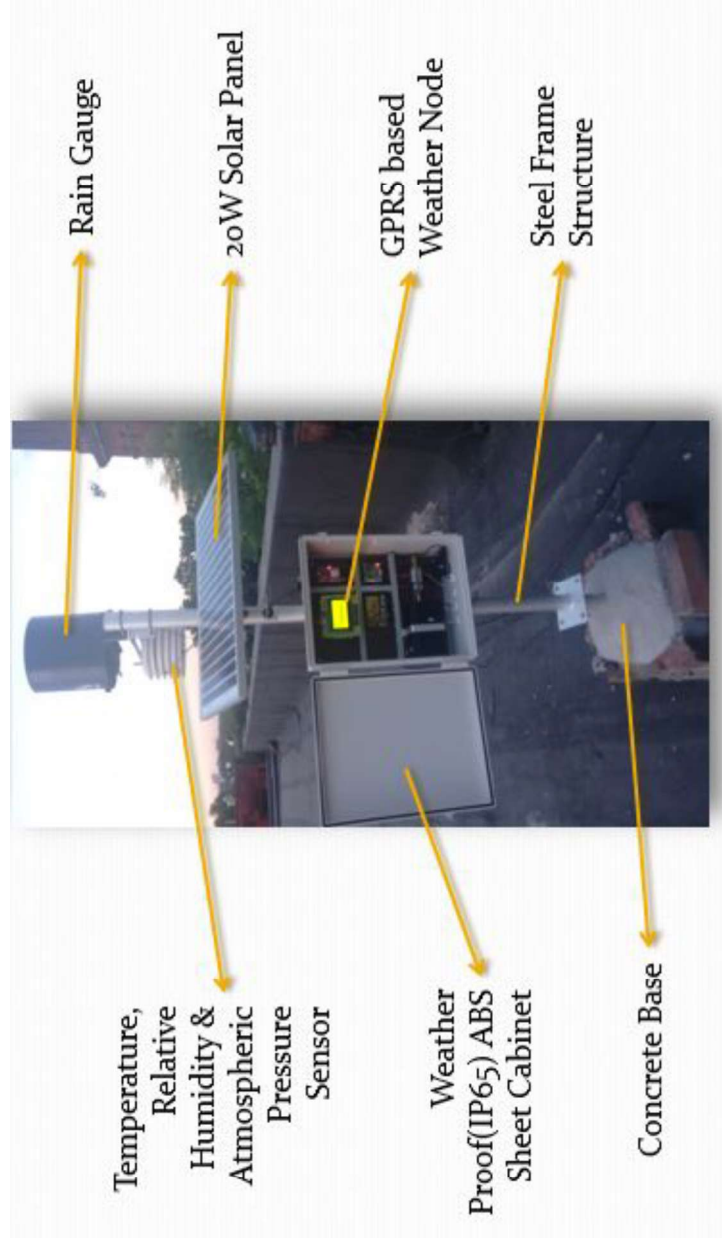
Automatic Weather Station (Cont..)



Main controller board

Complete Weather Station

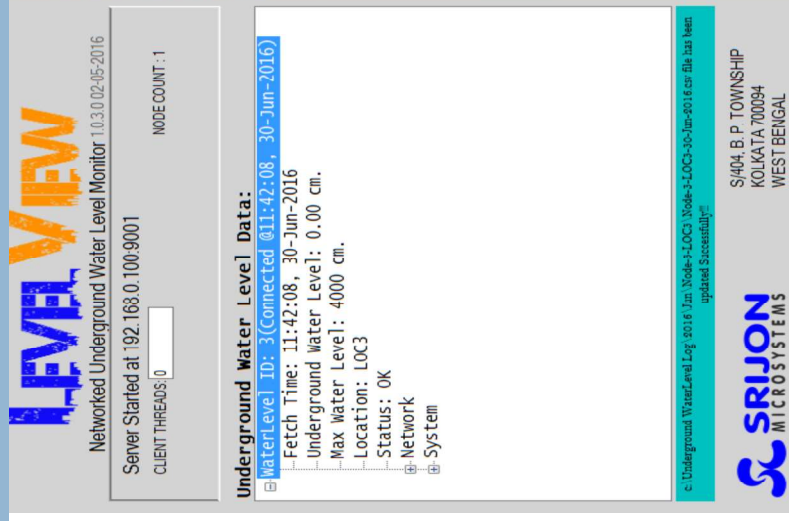
Weather System:



Underground Water Height Measurement system

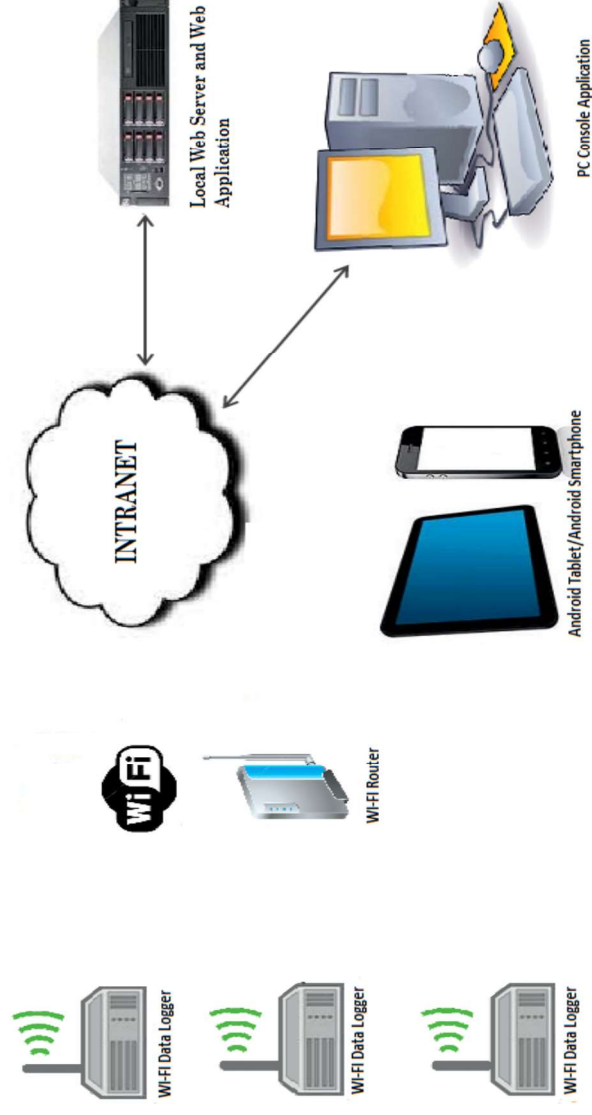


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- Windows based application for fetching the data from the Wi-Fi Underground Water Height measurement nodes and then storing the data in a database/excel file.

System Overview



Technical Description



- The frequency of under ground water-level measurements is among the most important components of a water-level monitoring program. Although often influenced by economic considerations, the frequency of measurements should be determined to the extent possible with regard to the anticipated variability of water-level fluctuations in the observation wells and the data resolution or amount of detail needed to fully characterize the hydrologic behavior of the aquifer.

Used Case 05 : Smart Irrigation

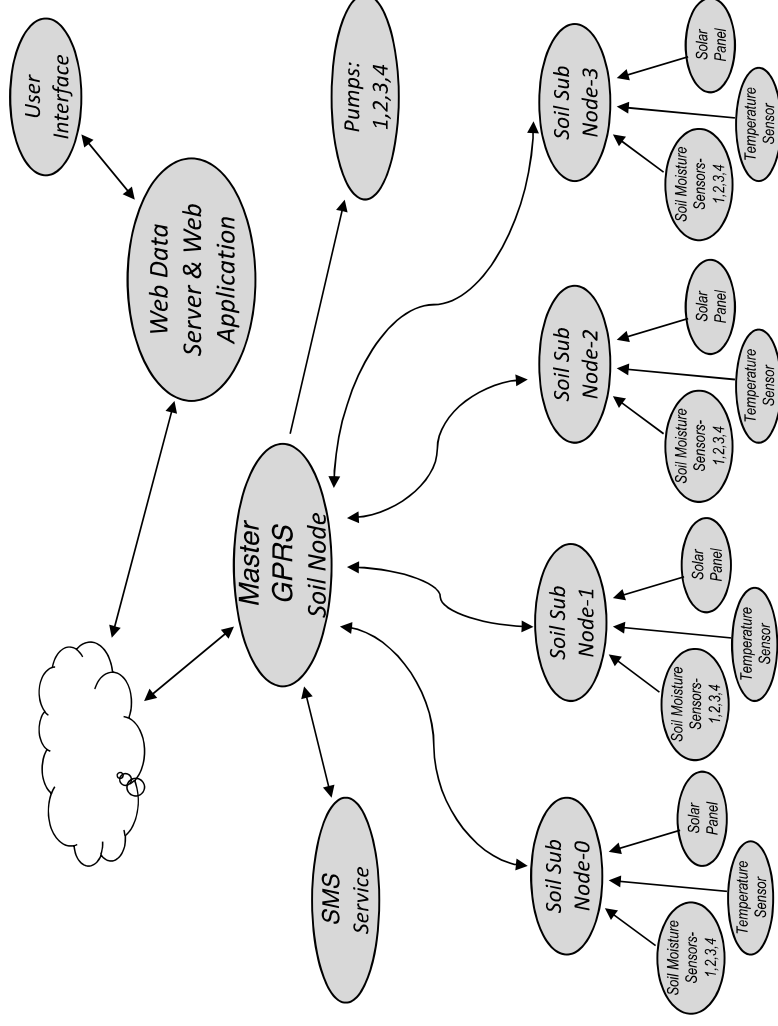


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System Overview

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Technical Description



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- Unsustainable exploitation of surface and groundwater resources for irrigation with inefficient management practices has resulted in alarming groundwater depletion in many agriculture-dominated watersheds/regions across India. Improved agricultural productivity via increased efficiency in farm practices, choice of crops, and improved irrigation practices are needed to ensure food and fresh water security for growing population..