

Application Note – Controlling Algal Blooms in a River System

Customer Requirements

It was necessary to ascertain the factors that contributed to the outbreak. To this end the client required detailed knowledge of the weather conditions at the surface of the water and a picture of temperature stratification within the river itself. It was hoped there was a way of allowing natural forces within the river to inhibit algae growth, given the river is also dammed at frequent intervals by a system of locks and weirs.

Algal bloom forms as a rapid temporary increase in the population of aquatic photosynthetic microorganisms (eg, phytoplankton or cyanobacteria) to the extent that the water becomes discoloured and, if the microorganisms are toxin-producers, unfit for drinking.



Algal Bloom

Equipment

DT505
15 Watt Solar Panel
GSM Modem
DeLogger™ 4 Pro

Sensors

Temperature, Relative Humidity, Solar Radiation, Wind Speed and Direction, Vertical column of 20 Thermistors

Datataker Solution

A floating pontoon was used to mount a weather station on the river. The solar panel supplied current to run the sensors as well as the vertical column of twenty thermistors supplying water temperature readings.

The *dataTaker* DT505 data logger is programmed to accept the analog signals from the sensors at predetermined intervals convert them to digital form and store them for later downloading to a notebook PC.

The researchers visited the station on a weekly basis to retrieve the data, however had it been required the data could have been stored for much longer periods. A modem was also used enabling researchers in the city to access the data.

[If you need more detail on this application please contact joyce.reid@datataker.com.au](mailto:joyce.reid@datataker.com.au)

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