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WaterGolf

Wireless distributed intelligent system for
irrigation optimisation and early turf
disease prevention and treatment
on golf courses





Consortium partners of the R&D project called WATERGOLF are pleased to inform the public that the project has been launched on the 1st January 2013. The development targets the recreational water use and is expected to contribute significantly towards an efficient irrigation on golf courses

Recreational water use is usually a very small but growing percentage of total water use and is mostly tied to reservoirs. If a reservoir is kept fuller than it would otherwise be for recreation, then the water retained could be categorized as recreational usage. Recreational usage is usually non-consumptive. The report from the European Environment Agency (EEA) reveals that Europe has so far concentrated on increasing the supply of water rather than exploring ways to limit its demand. Golf courses are often targeted as using excessive amounts of water, especially in drier regions. Some governments have labelled golf courses' usage as agricultural in order to deflect environmentalists' charges of wasting water.

The objective of WATERGOLF project is to develop a system based on wireless and artificial intelligence that provides support to irrigation processes on golf courses, thus resulting in at least one third of water saved.

The system integrates both on-field underground sensing of parameters such as underground humidity, underground salinity, underground temperature, soil Ph and nitrate and on-surface sensing of parameters such as visible color sight, wind speed and direction, while it includes also a number of ambient sensing at different zones.

All the measurements will be transmitted by means of low consumption battery powered wireless technology with specific antenna design. An Artificial Intelligence driven software - using the sensor measurement information and other input such as 3D Golf course mapping, drainage, compacting soil degrees, weather forecast, etc. - will suggest the parameters for irrigation for the different zones and will also inform of existing or coming turf diseases conditions and possible treatments if needed.