Project Factsheet

Updated: January 2009

Low cost, easy to use Intelligent Irrigation Scheduling System (WATER-BEE)

Programme area:	Research for the Benefit of SMEs
Status:	Ongoing

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Website:	www.water-bee.eu		

Abstract: Agriculture, the largest industry in the world, is also the biggest threat to the environment. According to the WWF, agriculture wastes 60% or 1,500 trillion litres, of the 2,500 trillion litres of water it uses each year - which is 70% of the world's accessible water. One of the main culprits is inefficient water irrigation systems. Looking at the European context, 65% of total water consumption, irrigated agriculture now constitutes the biggest water consumer in the Mediterranean, where drought is becoming an increasing problem. If water is not managed more wisely, drought will become chronic and people will suffer more as water for other basics such as drinking, hygiene and cooking will become scarce. And this is not a problem that is merely confined to the Mediterranean region of Europe, as there are increasing reports of water shortages and drought in such regions as South East England, Germany and many other parts of Europe. Drought is currently having a devastating effect on the European economy, costing about €11 billion in Europe in 2003. In summer 2005, in Spain alone the agricultural sector lost more than €2 billion as a result of drought.

In light of a real need to improve the efficiency of irrigation systems and prevent the misuse of water, the overall aim of this project is to develop an intelligent irrigation scheduling system which will enable irrigation farmers to optimise the use of water and only irrigate where and when need for as long as needed. The system will integrate innovations in the field of low cost wireless sensor networks, soil sensor technology, intelligent software in order to arrive at a solution that will be easy to use for farmers and that will be flexible and robust enough for its use in farm environments. Such an intelligent irrigation scheduling system would have a major impact in terms of water and cost savings and environmental protection.

Keywords:	Irrigation Scheduling, Wireless Sensor Networks, Soil Sensors, Intelligent Software

Duration:	10/2008 – 09/2010