There is now overwhelming evidence that the current organisation of our economies and societies is seriously damaging biological ecosystems and human living conditions in the very short term, with potentially catastrophic effects in the long term. The enforcement of novel policies may be triggered by a grassroot approach, with a key contribution from information and communication technologies (ICT).

Nowadays low-cost sensing technologies allow the citizens to directly assess the state of the environment; social networking tools allow effective data and opinion collection and real-time information spreading processes. In addition, theoretical and modeling tools developed by physicists, computer scientists and sociologists have reached the maturity to analyse, interpret and visualize complex data sets. This project intends to integrate all crucial phases (environmental monitoring, awareness enhancement, behavioural change) in the management of the environment in a unified framework, by creating a new technological platform combining sensing technologies, networking applications and data-processing tools; the Internet and the existing mobile communication networks will provide the infrastructure hosting such a platform, allowing its replication in different times and places.

Case studies concerning different numbers of participants will test the scalability of the platform, aiming at involving as many citizens as possible leveraging on the low cost and high usability of the sensing devices. The integration of participatory sensing with the monitoring of subjective opinions is novel and crucial, as it exposes the mechanisms by which the local perception of an environmental issue, corroborated by quantitative data, evolves into socially-shared opinions, eventually driving behavioural changes. Enabling this level of transparency critically allows an effective communication of desirable environmental strategies to the general public and to institutional agencies.

Logo:

Project abstract:

Enhance Environmental Awareness through Social Information Technologies

Project duration:
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Intelligent Access to Information

Status of the Project: