



## **Sustainable and non-conventional monitoring systems to mitigate natural hazards in low income economies: the 4onse project approach.**

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Environmental monitoring systems in low economies countries are often in decline, outdated or missing with the consequence that there is a very scarce availability and accessibility to these information that are vital for coping and mitigating natural hazards. Non-conventional monitoring systems based on open technologies may constitute a viable solution to create low cost and sustainable monitoring systems that may be fully developed, deployed and maintained at local level without lock-in dependances on copyrights or patents or high costs of replacements. The 4onse research project, funded under the Research for Development program of the Swiss National Science Foundation and the Swiss Office for Development and Cooperation, propose a complete monitoring system that integrates Free & Open Source Software, Open Hardware, Open Data, and Open Standards. After its engineering, it will be tested in the Deduru Oya catchment (Sri Lanka) to evaluate the system and develop a water management information system to optimize the regulation of artificial basins levels and mitigate flash floods. One of the objective is to better scientifically understand strengths, criticalities and applicabilities in terms of data quality; system durability; management costs; performances; sustainability. Results, challenges and experiences from the first six months of the projects will be presented with particular focus on the activities of synergies building and data collection and dissemination system advances.