**The role of public and participatory geographical information system in climatic adaptation decision-making processes for agricultural water management : an example from Senegal.**

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**Abstract** :.

Face of change and climate variability, vulnerable communities develop adaptation strategies. This is the case of the Sahel farmers faced in decades to the impacts of climatic hazards. These strategies based on local knowledge are not sufficiently valued. They apply in an isolated manner. They may be effective but are not always sustainable. That is why it is important to promote access to scientific information farmers. This is the case InfoClim project (Participatory Information Platform for the Adaptation of Communities Vulnerable to Climate Change). This paper presents an original implementation of information technology and communication that allowed producers to use the information to adapt better.

An information system was created to stimulate discussion in the forums and contribute to the management of climatic hazards. This software package is an instrument consisting of a database of geographic, climatic data and technical data sheets. Data were collected and updated in a participatory manner with the assistance of scientific partners, producers and decentralized technical services. However, the implementation of these technologies for adaptation of farmers' organizations and farmers, presents many challenges: creating a suitable interface, develop a series of data and relevant information, manage data and institutionalize the instrument.