

Water resources vulnerability in small islands developing states: A case in the Comoros Islands

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Small Island Developing States (SIDS) are island and low-lying coastal nations that face common barriers to sustainable development, including limited resources, poor economic resilience, and vulnerability to sea level rise and natural disasters as stipulated by the UN-DESA (<http://www.un.org/esa/sustdev/sids/sidslist.htm>). The Union of the Comoros is no exception. The national territory composed of three islands aligned in the Mozambique Channel is spread over a surface area of 1862 km². The Comoros islands exhibit one of the most vulnerable cases to climate change impacts among the other SIDS for the main controversial situation that these islands are more exposed to accelerated deforestation, soil aridity and water scarcity whilst their communities are strongly dependent on natural resources for their survival. In addition to that, financial, educational and technical capacities are limited to help implement adaptation strategies. Combined effects of climate disturbances and anthropogenic pressure may evolve towards irreversible processes like depletion of water resources. In deed the threat on water resources generated by climatic disturbances is superimposed by high rates of uncontrollable deforestation which in turn results in reduction of infiltration rates into the coastal aquifer and reduction/decline of rivers' recharge. The Comoros Union has ongoing projects aiming to implement adaptations measures to help increase resilience to the impacts of climate change on a global, regional and national level. These projects involve strengthening of institutions, policy and regulations, planning at the same time the improvement of infrastructure facilities. The objective of this paper is to present the existing situation related to the water resources based on field surveys and discuss adaptation measures to climate change impacts.