Water resources management in Africa in the context of climate change: challenges, initiatives and management tools.

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There is no doubt that water resources are of paramount importance for the socio-economic development of African countries and indeed for the achievement of MDGs. The accessibility to safe clean water by the majority of Africans is still a challenge and needs billions of dollars of investment each year. Climate change with its potential impacts on the availability of water resources will be an important constraint to be considered for water resource mobilization and sustainable management. This communication will first highlight the challenges facing African countries related to water resources and the different commitments made by African leaders to address them such as the African water vision 2025 and different AMCOW declarations on the issue.

The second part of the communication will cover the scientific issues for a sustainable management of water resources in the context of climate change in Africa with a focus on the West Africa region. The state and the main characteristics of water resources in the sub-region and the potential impacts of climate change and implications for planning and management are discussed. The situation of the sub-region and the initiatives and actions towards a sustainable management of water resource are described.

The last part of the communication will present three decision making tools used or which can be used for the management of water resources in the sub-region. The first tool is the seasonal forecast of discharge for the main rivers in the sub-region which has been considered since 1999. The second tool is the application of hydrological model (Geo-SFM model) for the monitoring of water resources in the sub-region by the AGRHYMET regional center. The last tool is the Africa drought monitor developed by the Princeton team with the support of UNESCO-IHP and actually in a test phase.