ABSTRACT

Sinha, Akanksha. M.S., Purdue University, August 2012, A Holistic Framework for Capacity Building to achieve Sustainable Water Management System in Arid and Semi-arid lands of Africa Major Professor: Dr. Makarand Hastak.

Arid and semi arid land comprises more than 40% of the earth's land surface and supports 20% of the total human population (ILRI 2008). Two thirds of Africa is classified as deserts or dry lands. These are concentrated in the Sahelian region, the Horn of Africa and the Kalahari in the south. Africa is especially susceptible to land degradation and bears the greatest impact of drought and desertification (UN Economic and Social Council 2007). The 2011 drought in Horn of Africa was considered to be the worst in past 60 years which affected 13.5 million people in these regions. Disaster events like droughts have far reaching adverse impacts on human health, food security, economic activity, physical infrastructure, natural resources and the environment, and national and global security. Although drought has several definitions, the central element in these definitions is water deficit. Water interventions by Government and NGOs in ASALs of Africa are short term relief programs and do not accommodate the long term water needs of the community.

A capacity building framework is proposed in this research to achieve sustainable water management system in ASALs of Africa. The objective is to select a suitable indigenous water management system and integrate it with strategies planned to overcome the limitations in current water management systems in Africa. Main focus of this research is to study different types of capacities at various levels which are required to achieve a sustainable water management system and to develop a framework that involves defined phases of capacity building. The first phase involves preparing a list of all those capacities which are required to build a sustainable water management system. Second phase is an assessment of the capacities to understand the capacity gap, third phase involves short term and long term planning and fourth phase discusses the implementation of the capacity building activities. In the final phase the impact of capacity building is evaluated. Current practices of capacity building are short lived and limited to training people; this research aims at broadening the scope of capacity building by considering defined approach towards long term planning.