

EARTH OBSERVATION SYMPOSIUM (B1)  
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SPACE BASED TECHNOLOGY, CLIMATE CHANGE AND WATER MANAGEMENT: CASE STUDY  
OF THE LAKE CHAD BASIN REGION OF AFRICA

**Abstract**

The “Lake Chad” is one of the worlds largest and most historical lakes located in the Sahelian region of Africa bordering the Sahara desert in the North and in between the borders of the West and Central African regions (North-Eastern Nigeria, North-Western Cameroon, South-Eastern Niger and South Western Chad republics) which was once Over 25,000 KM square due to continues impacts of climate change and adaptation to this change within this region as a blockages of the major feeder rivers as a result of damming and irrigational activities along the major feeder rivers of the Lake by some African governments; like the blockage of the river “Shari” flowing through Cameroon from the republic of Chad as a result of the construction of a Dam by the Cameroonian government along the river, the Damming of the river “Yobe” at Kano state by some state governments in Nigeria and many others has presently reduced the Lake to just one tenth (1/10) of its original size (2,500 KM square) and still keep shrinking over time, but yet the Lake is still sustaining the livelihood of over 10 million peoples in Africa living within the Lake Chad basin areas of Nigeria, Niger, Chad and Cameroon by providing water for their domestic activities such as drinking and cooking and for their economic activities such as fishing, farming and Industrial as well as mining activities; potassium extractions from the shores and bed of the Lake. Today with the help of Space technology all relevant stakeholders working in the areas of managing/sustaining the Lake Chad including governments, experts, members of the civil societies /local communities are able to use satellite imageries in identifying the position, shrinking, dynamic nature as well as the size of the Lake in performing their various activities in managing this Lake for example the NASA observations maps as well as satellite maps of the Lake obtained from the US Geological survey below are indicating the various positions of the lake between 1960-2001 .