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Spatial analysis from remotely sensed observations of Congo basin of East African high Land to drain water using gravity for sustainable management of low laying Chad basin of Central Africa

B. Modu¹ and B. Herbert²

¹No. 14, F10 Close, Citec Mbor Estate, Abuja, Nigeria

²No.1 Eldoret Street, off Aminu Kano Crescent, Wuse 2, Abuja, Nigeria

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Abstract. The Chad basin which covers an area of about 2.4 million kilometer square is one of the largest drainage basins in Africa in the centre of Lake Chad .This basin was formed as a result of rifting and drifting episode, as such it has no outlet to the oceans or seas. It contains large area of desert from the north to the west. The basin covers in part seven countries such as Chad, Nigeria, Central African Republic, Cameroun, Niger, Sudan and Algeria. It is named Chad basin because 43.9% falls in Chad republic. Since its formation, the basin continues to experienced water shortage due to the activities of Dams combination, increase in irrigations and general reduction in rainfall. Chad basin needs an external water source for it to be function at sustainable level, hence needs for exploitation of higher east African river basin called Congo basin; which covers an area of 3.7 million square km lies in an astride the equator in west-central Africa-world second largest river basin after Amazon. The Congo River almost pans around republic of Congo, the democratic republic of Congo, the Central African Republic, western Zambia, northern Angola, part of Cameroun, and Tanzania. The remotely sensed imagery analysis and observation revealed that Congo basin is on the elevation of 275 to 460 meters and the Chad basin is on elevation of 240 meters. This implies that water can be drained from Congo basin via headrace down to the Chad basin for the water sustainability.

[Conference Paper](#) (PDF, 500 KB)

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