The sedimentary basins of Tanzania - reviewed

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Abstract

The sedimentary basins of Tanzania have been classified into four morphotectonic groups: the coastal basin, the Karoo rift basins, basins found within the present East African rift valley and the cratonic sag basins. Except for the cratonic sag basins, each of these basin group has been affected by rifting at one time or another. The geology of each basin is discussed, structural evolution is evaluated and the prospectivity is thence looked into.

Coal is exploited at Songwe-Kiwira coalfield and is found in potentially economic quantities in other Karoo basins. Prospecting for hydrocarbon resources has been going on since the 50s. Gas has been discovered in Songosongo and Mnazi bay fields, uneconomical quantities of oil have also been reported in Songosongo. Being basically rift basins which have reached different stages of development, source rocks normally associated with Initial-rifting, synrifting as well as post-rifting processes are probably well developed. Reservoir rocks, traps and cap rocks are normally not rare in such tectonic environments. Thermal gradients associated with the rifting stage are normaly high to effect maturation of source rocks even at low sedimentary thicknesses. Studies done so far are still inconclusive, because while testing has mainly been focused on structural traps stratigraphic traps seems to be more promising.