

A STUDY ON FEASIBILITY OF DIVERSION OF WATER IN NETRAVATHY BASIN BY GARLAND CANAL

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ABSTRACT

The National Water Development Authority (NWDA) has been assigned with the herculean task of forming the National Water grid, in which Himalayan component and Peninsular component are of important.

NWDA has proposed several river links in the peninsular component, which includes the diverting of West housing Nethravathy to Hemavathy and Bhadra rivers, which flow to east.

Gravity diversion of water in Nethravathy by gravity by providing Garland Canals in the Western Ghat region, a dream project of Sri G.S. Paramashivaiah, is in talk for over two decades.

Sri G.S.Pramashivaiah, a retired irrigation engineer, has prepared a detailed report on Garland Canals and submitted it to Government of Karnataka and has highlighted the available quantity of water which is draining into sea without any use. He has shown that a part of this water can be diverted to east in order to serve the drought prone regions in the eastern parts.

The aim of present study is to investigate further on the report and to confirm the availability of quantity of water as reported by Sri G.S. Paramashivaiah. A study stretch of 45 km in the proposed total alignment of 234 kms is selected and detailed studies are carried out in the stretch. The investigations are explained exhaustively in three chapters and concluded with the results in the fourth chapter.

Chapter 1 explains the introduction part, wherein the concept of origin of diversion of water from west flowing hallas to east is explained with the hydrological aspects of the garland canals. The objections rised by several people in the western region and suitably clarified by Sri G.S.Paramashivaiah and his team are also included in this chapter. **Chapter 2** explains exhaustively the study area and the literature review studies carried out in the Western Ghat regions, including the geological aspects in the regions, hydrological aspects of Hilly areas, stream flow components & the concept of Rainfall & infiltration intensities. **Chapter 3** explains the methodology adopted for the feasibility study, including study of canal alignment, delineation of catchment area and the concept on distribution of rainfall in the catchment area. **Chapter 4** explains the feasibility based on the results obtained from the studies and the conclusions about taking up the project for execution. The present work shows that the proposed gravity diversion by Garland canals would not help fetch the required quantity of water. It is found that further research is required to be taken up before venturing in to the project, for tapping water flowing in streams, in order to meet the demand .