ENGINEERING AND TECHNOLOGY IN INDIA
Volume 3 | Issue (1) | April, 2012 | 16-19

RESEARCH ARTICLE

The impact of the man-made river project in providing domestic water in Benghazi Plain, Libya

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ABSTRACT : This article focuses on examining the contribution of the man-made river project (MMRP) – Water Transfer Project of Libya in providing domestic water in the plain of Benghazi, Libya. The MMRP documents literature reports and journals are the main sources of secondary data. Besides, this study applies a questionnaire survey carried out on July 2010 to a sample of 200 respondents in order to assess the role of the MMRP in providing the plain of Benghazi with potable and domestic water. The study compares the sources of potable and domestic water in the plain of Benghazi before and after the MMRP. The survey findings reveal that MMRP provides the plain of Benghazi with enough water for domestic use. About 87 per cent of respondents mentioned that the MMRP provided their needs of domestic water. The remaining 13 per cent of the respondent make a claim that the MMRP has not provided for their domestic water needs. However, it has not been able to provide enough potable water, as 69.5 per cent of respondents said that the MMRP did not provide enough potable water. Only 29.0 per cent mentioned that it could provide potable water.

Key words : Man-made river project

How to cite this Article : Mansor, G.S. and Toriman, M.E. (2012). The impact of the man-made river project in providing domestic water in Benghazi Plain, Libya. *Engg. & Tech. in India,* **3**(1&2) : 16-19.

Article Chronicle : Received : *09.09.2011;* **Revised :** *28.11.2011;* **Accepted :** *30.01.2012*

INTRODUCTION

In the early sixties of the last century and while search for new oil in the desert of south Libya led to the discovery of major oil reserves as well as of aquifers containing huge quantities of fresh groundwater. Most of this fossil water was collected over 35,000 years ago. Hence soon after this discovery of fresh groundwater reserves, a plan was conceived to pump and transport water from these aquifers in the desert to Libya's Mediterranean coast where around 80 per cent of its people live. This project is called the Man-made River. The construction of this 'river' of pipes, pumps and reservoirs began in the mid 1984s and continues today (Loucks, 2004).

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The Man-Made River is a network of pipes that supplies water to the north part of Libya, from the Nubian Sandstone Aquifer System fossil aquifer in south Libya. It is the largest underground network of pipes and aqueducts in the world. It consists of more than 1,300 wells, most of them more than 500 m deep, and supplies 6,500,000 m^3 of freshwater per day to the cities of Tripoli, Benghazi, Sirt and elsewhere (Anonymous, 2010d. www.gmmra.org.com).

Benghazi is considered the second large city in Libya. The Benghazi region has suffered water shortages. GEFLI (1972) indicates that the plain of Benghazi is in need of 61.52 million cubic metres of water per year for the purpose of irrigation, which accounts for 86 per cent of the total water needed by the plain for various uses (71.54 million cubic metres annually), a study focused on the Benghazi plain water basin and carried out on some of the wells in the field of Benina (the main groundwater basin in the plain of Benghazi) shows that there was a decline in water levels as a result of a great withdrawal, which amounted to 1.57 metres by 0.31 metres/ year (Libyan Arab Republic. 1977).

Policymakers in Libya established the MMRP to transport