



A study of Groundwater in Haryana

Sonu* Nisha Kumari**

Abstract: This paper finds out the impacts of groundwater pumping irrigation on level of ground water. It has been observed that continuous pumping caused decreasing of groundwater level after Green Revolution. Groundwater has speedily emerged to occupy a paramount role in India's agriculture after green revolution. In Haryana groundwater pumping has become the main means of irrigation and it now accounts for over about 54 percent of the irrigated area in state. Intensive agriculture dominated by paddy- wheat mono-culture has led to overexploitation of groundwater in Haryana. It is leading for a crisis and needs most urgent attention and understanding in India mainly in original Green Revolution states comprising, Punjab, Rajasthan and Haryana vulnerable to severe water scarcity. As per the latest assessment by the Central Ground Water Board (CGWB), Delhi, Punjab, Rajasthan and Haryana consume much more groundwater than their rechargeable limit every year, making them vulnerable to severe water shortage. In Punjab and Haryana, the offender is the indiscriminate use of groundwater in agriculture (India water portal organization). The paper is based on both primary and secondary data.

Keywords: pumping irrigation, green revolution, vulnerable, monoculture.

Introduction: During the past four decades, there has been a phenomenal increase in the growth of groundwater abstraction structures due to implementation of technically viable schemes for development of the groundwater resource, backed by liberal funding from institutional finance agencies, improvement in availability of electric power and diesel, good quality seeds, fertilizers, government subsidies, etc. Growing demand of water in agriculture, industrial and domestic sectors has brought problems of over-exploitation of the groundwater resource, continuously declining groundwater levels, seawater ingress in coastal areas, and groundwater pollution in different parts of the country. The falling groundwater levels in various parts of the country have threatened the sustainability of the groundwater resource, as water levels have gone deep beyond the economic lifts of pumping. The Central Groundwater Board has established more than 15,000 network- monitoring stations in the country to monitor groundwater level and its quality. Water levels in major parts of the country generally do not show any significant rise/fall. In Haryana requirement protective irrigation increased yearly and dependency on groundwater pumping irrigation also increased. But continue extraction of groundwater through tube well, the lap of earth has been drying. State has 8lac 44thousand tube well which are extracting water from the lap of earth. Ground water decline rate in case of Haryana had been estimated about 35 cm per annum (Chatterjee and Purohit, 2009). From 1999 to 2017 the depth of the underground water in state has reached double time (Amar Ujala, 16April, 2017).

Groundwater quality and pollution: The groundwater quality dimension is addressed by describing pollution sources, namely (a) groundwater salinity (inland and coastal), (b) geogenic contaminants (arsenic, fluoride, and iron), and (b) anthropogenic contaminants from mining, industrial, tanneries, landfills and garbage dumps, agriculture, and poor sanitation and wastewater disposal. The report highlights the need for groundwater quality management if groundwater use is to be sustainable.

Groundwater governance framework: The main findings related to groundwater governance are:

- Even though the 1998 National Water Policy (NWP) and the 2002 amended version do not have statutory status, and thus cannot be legally enforced, they are the outcome of intensive political

