Chapter 14
An Approach to Sustainable Watershed Management:
Case Studies on Enhancing Sustainability with Challenges of Water in Western Maharashtra

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ABSTRACT

Western Maharashtra consists of drought prone villages, which around seventy years ago were facing drastic challenges regarding water requirements. People living in such areas started to migrate from these villages in need of food and water. The chapter focuses on few case studies of drought prone areas of Western Maharashtra which made a move towards sustainability and has created an excellent model of watershed projects. Several practices like ban on cutting trees, terrace farming, contour bunding, drip irrigation, sprinkle irrigation, introduction of cooking stoves, rotational grazing, efficient water distribution and change in cultivation of agricultural crops according to the climate were followed which led the village to become a model for Aadarsh Gaon (An Ideal Village). The author has used secondary data from previous research work and critically analyses the case studies on water management in drought prone areas of Western Maharashtra which managed to become a model for sustainable use of water.

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INTRODUCTION

The State of Maharashtra is located in the Western parts of India and is classified into five regions namely, Konkan, Desh (Pune region), Vidharba, Khandesh and Marathwada. Along the Arabian Sea the state has a coastline of 720 km. Maharashtra is home to renowned historical monuments, caves, temples, festivals and a bustling lifestyle. Moreover, it is housed by large number of educational institutions, industries and service sector organizations and 45% of total population in the state lives in urban area. As the second most populous state, Maharashtra is one of the most developed states of India and plays a key role in the overall economic development of country as major educational and financial institutions are located in this state. The current population of Maharashtra is 121 million people accounting for over 9.29% of the total population of India.

With time large population has been shifted towards urban areas, while rural areas have undergone limited shifts in their boundaries. Cities like Thane, Mumbai, Raigarh, Ratnagiri and Sindhudurg are separated by the Western Ghats which receive heavy rains (>1000 mm) whereas the rain-shadow region towards the east of the Western Ghats suffers from low rainfall. Furthermore, far Eastern regions of Maharashtra again receive a good rainfall. Western region comprises of Nashik, Satara, Sangli, Kolhapur, Solapur, Ahmednagar, Aurangabad and Pune which has comparatively low rainfall than other district of Pune since they lie in the rain shadow region of the Western Ghats. The rain shadow regions receive an average rainfall of 500-600 mm. The state has a pleasant climate throughout its season with rainfall exceeding to 6000 mm in Western Ghats to 500 mm in the rain-shadow regions. The state has been surrounded by Krishna, Godavari, Tapi, Narmada and Konkan River providing water for the need. About 50% of the Maharashtra region lies in the drought prone area of Deccan plateau (nidm.gov.in/pdf/dp/Maharashtra.pdf). In the past few years it has been noticed that the Western region of the state is facing severe water scarcity problems. Most of the water supply in this region is happening through water tankers. Water being the life is essential at every step of day-to-day activity and therefore must be sustained for a better living.

This chapter focuses on the key approach towards watershed management, a topic of great concern in present era of climate change. Watershed management is an approach towards life of the earth since excess water flow leads to soil erosion, floods and other natural calamities which ultimately destroy the resources of living and scarcity of water again concludes to drought (Dixon & Easter, 1991). Western Maharashtra consists of drought prone villages which around seventy years ago was facing drastic challenges regarding water requirements. People living in such areas started to migrate from these villages in need of food and water (Foster et al., 2009). Then a commerce student Mr. Popatrao Pawar took an initiative to become Sarpanch (Head) of the Hiware Bazar village and tried to change the history of the village. Several practices like ban on cutting trees, terrace farming, contour bunding, drip irrigation, sprinkle irrigation, introduction of cooking stoves, rotational grazing, efficient water distribution and change in cultivation of agricultural crops according to the climate were followed which led the village to become a model for Aadarsh Gaon (Phand & Arya, 2007). Mr. Anna Hazare thirty years ago also took an initiative to achieve watershed resources by implementation of Programs through public participation in Ralegan Siddhi village of Parner (Sharma, 2006).

The authors in the present chapter have used secondary data from previous research work and critically analyses the case studies on water management in drought prone areas of Western Maharashtra which managed to become a model for sustainable use of water. The objective of the chapter is to focus on case