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## INTERNATIONAL SEMINAR ON DROUGHT AND AGRICULTURE

### PREDICT, PLAN, PREPARE: STOP DROUGHT BECOMING A FAMINE

FAO, 19 JUNE 2017

#### SESSION 1: INTEGRATING AND ALIGNING WATER AND SOIL MANAGEMENT STRATEGIES TO MAXIMIZE RESPONSE TO DROUGHT

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##### TOWARDS RESILIENCE IN THE FACE OF DROUGHT: THE CASE-STUDY OF KUMBHARWADI, MAHARASHTRA, INDIA

BY MARCELLA D'SOUZA, WATERSHED ORGANISATION TRUST (WOTR), INDIA [WWW.WOTR.ORG](http://WWW.WOTR.ORG)

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Kumbharwadi village of 910 hectares, housing 171 households, lies in the rain-shadow of the Western ghats. The average annual rainfall is 476 mm received during the monsoon season. Lands of this region are degraded and water scarcity is a common experience. Prior to watershed development, the people migrated in search of unskilled wage work for 6 – 7 months; water scarcity, agriculture productivity and food security were a problem. Women spent long hours in fetching water and fuel wood. From March to May almost every year, water for domestic consumption was made available by tankers.

Today, even in a drought year (eg in year 2012 the village received 287 mm rainfall), approximately 318 ha of land is cultivated which meets their food security and some cash income. They have relatively good milk production and water is available for domestic use. In a year of normal rainfall (eg 2011), farmers cultivate 415 ha growing both food and cash crops. With enhanced land productivity, employment is available almost all year round. The village has sufficient water for domestic use. While the costs for implementation, inclusive of the opportunity costs for migratory labour income, agriculture and livestock income for the period 1998 to 2012 was US\$ 3,950,380, for the same period the total benefit was US\$ 9,020,520 for the village as a whole and US\$ 29,650 per HH.

What made the difference? Participatory watershed development was implemented from 1998 to 2002. Watershed Development aimed to restore degraded watersheds in rainfed regions to enhance their capacity to capture and store rainwater, reduce soil erosion and improve soil nutrient and carbon content, thus to produce greater agricultural yields, benefit livestock production and provide other benefits. Various land treatments: continuous contour trenches, water absorption trenches, afforestation, farm bunds; and drainage line treatments: gully plugs, nala bunds, gabions, check dams etc were appropriately located. But more important was the active participation of the local community. A Village Development Committee (VDC) selected by the local community having a 35-50% women's representation was capacitated. The community agreed on a 20% local contribution by way of sweat equity, to protect the saplings planted and to work together with their VDC. The result was a community that regenerated and maintained their lands and water resources.

As of March 2017, Watershed Organization Trust (WOTR) has supported through capacity building as well as direct implementation WSD in 1516 villages in 7 states of India, covering 910,787 hectares of land, benefiting a population of 1,412,285. WOTR has developed the capacities of 153 NGOs. Besides this, WOTR has provided

handholding support for implementation of projects in Somaliland and Malawi and trainings for government implementers in Nigeria.