# WATERSHED DEVELOPMENT PLANS AS AN APPROACH TO RE-INVENT LOST CROPS IN SARGUJA DIVISION OF CHHATTISGARH, INDIA

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## ABSTRACT

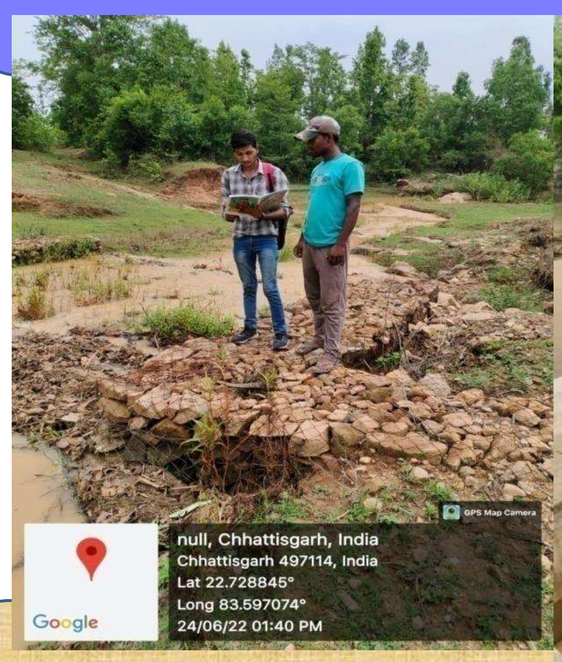
## INTRODUCTION

- The major problem of the country is the environmental degradation and the lack of water for the agriculture and the domestic purposes. This leads to decline in the per capita production of the agriculture produce.
- To address the sustainable agricultural productivity in the rainfed areas furthermore the Government of India has adopted the Watershed development policy since 2003 .

## METHODOLOGY

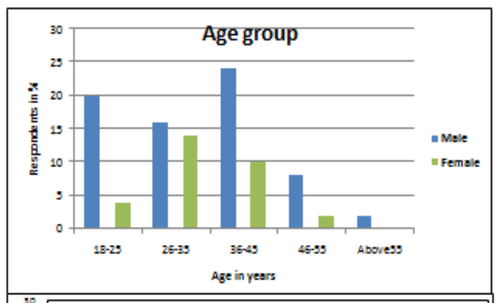
- Field surveys were performed to explore the impact of watershed development programs on-site as well as off-site through semi-structured questionnaires method.
- The study site of the Sarguja division consists of Ambikapur, Sitapur and Batauli.
- In the interview total 150 informants from all age groups, randomly selected, except children below 18 years were interviewed for the related information.
- Informants were also requested to accompany to the field. In cases of illiterate informants, the questionnaires were filled from their responses.

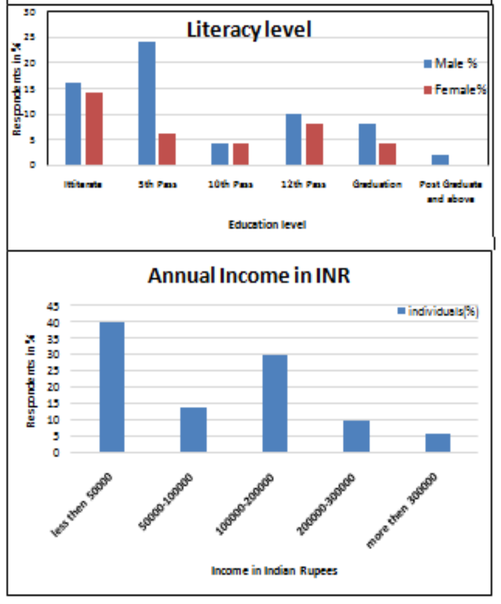
## RESULTS AND DISCUSSION






**Demographic profile**







**Watershed management is the process of directing and planning how land and other resources are used in a watershed to produce desired goods and services while minimizing negative effects on soil and water resources.**

**In the study site, the watershed structure is a micro-level attempt to accomplish the goals of the watershed management program.**

**Watershed development structures -Boulder check dam, Gabion check dam, Dabri/pond, Kuaa (well), Deepening the pond.**

**Cropping season status in relation to the cultivated area**

**Observed**

- Increase in ground water level
- Rise in surface water and stream flow
- Reduction in runoff and soil erosion — *Soil erosion reduction which was recorded to reduce by more than 50%.*
- Change in land use and cropping patterns
- Increased agricultural and dairy production
- Improved livelihood
- Employment generation — *Welcome back "MILLETS"*
- Economical and ecological Rise

*On average, 60% of the cultivable wastelands are utilized, especially those that are close to the newly developed irrigation infrastructure.*

**Table 1: Change in Agriculture recorded in percentage area of Cultivation after construction of Watershed Structure.**

| Before Watershed Structure | | | After Watershed Structure | | |
|---|---|---|---|---|---|
| Kharif | Rabi | Zaid | Kharif | Rabi | Zaid |
| Rice (30-50%) | Pulse (20-30%) | Fallow | Rice (60-70%) | Pulse (35-40%) | Cucumber (25-30%) |
| Maize (10-12%) | Vegetable (10-12%) | Fallow | Maize (15-20%) | Vegetable (30-35%) | Melons (20-40%) |
| Vegetable (8-10%) | Wheat (30-35%) | Fallow | Vegetable (25%) | Wheat (40-45%) | Vegetable (35-40%) |

**Millets were reintroduced in the Cropping system**

- In an effort to establish Chhattisgarh as the millet hub of India, the state government there announced Mission Millet Chhattisgarh in September 2021. Promoting the growing of Kodo millet(*Paspalum scrobiculatum*), small millet ( *Panicum sumatrense*), and finger millet (*Eleusine coracana*), often known as ragi in India.
- The Oraon tribe once saw these millets as poor people's bread; nevertheless, they now welcome these millets in their cropping method.
- The largest area under cultivation is for finger millet (ragi), which is followed by kodo and small (kutki) millets, respectively.

## CONCLUSIONS

- With available water harvesting structure farmers are inclined to new cropping pattern and agricultural diversification. Both agricultural diversification and intensification lead to increase in agricultural productivity in the regions where watershed programmes are effective. There was a rise in production in Kharif and Rabi as the cultivation area increased and farmers started taking crop in zaid which was otherwise fallow.
- Due to a rise in demand for millets as well as the Watershed Program, which supported farmer efforts, millets (Kodo, Kutki and Ragi) have found a place in cropping systems.

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