Author's Accepted Manuscript

How did the 2012 drought affect rural livelihoods in vulnerable areas? Empirical evidence from India

Parmeshwar D. Udmale, Yutaka Ichikawa, Sujata Manandhar, Hiroshi Ishidaira, Anthony S. Kiem, Ning Shaowei, Sudhindra N. Panda



 PII:
 S2212-4209(15)30049-2

 DOI:
 http://dx.doi.org/10.1016/j.ijdrr.2015.08.002

 Reference:
 IJDRR256

To appear in: International Journal of Disaster Risk Reduction

Received date: 15 April 2015 Revised date: 2 August 2015 Accepted date: 22 August 2015

Cite this article as: Parmeshwar D. Udmale, Yutaka Ichikawa, Sujata Manandhar, Hiroshi Ishidaira, Anthony S. Kiem, Ning Shaowei and Sudhindra N. Panda, How did the 2012 drought affect rural livelihoods in vulnerable areas? Empirical evidence from India, *International Journal of Disaster Risk Reduction*, http://dx.doi.org/10.1016/j.ijdrr.2015.08.002

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

How did the 2012 drought affect rural livelihoods in vulnerable areas? Empirical evidence from India

Parmeshwar D. Udmale^{1#}, Yutaka Ichikawa², Sujata Manandhar³, Hiroshi Ishidaira¹, Anthony S. Kiem⁴, Ning Shaowei¹, and Sudhindra N. Panda⁵

¹International Research Center for River Basin Environment (ICRE), University of Yamanashi, Takeda 4-3-11, Kofu, Yamanashi 400-8511, Japan

²Department of Civil and Earth Resources Engineering, Graduate School of Engineering, Kyoto University, C1, Kyoto-Daigaku-Katsura, Nishikyo-ku, Kyoto-shi, Kyoto 615-8540 Japan ³Department of Civil Engineering, Tohoku University, Aoba-yama 6-6-06, Sendai, Miyagi 980-8579, Japan

⁴Centre for Water, Climate and Land Use (CWCL), School of Environmental and Life Sciences, Faculty of Science and Information Technology, University of Newcastle, Callaghan, NSW 2308, Australia

⁵Agricultural and Food Engineering Department, Indian Institute of Technology, Kharagpur, West Bengal 721302, India

[#]Corresponding author; e-mail Address: <u>pd.udmale@gmail.com</u>

Abstract

This study identifies the severity of impacts of drought in 2012 on domestic water supply, crop production, unskilled rural employment, and financial status of rural households in a drought-prone area of India. It is based on secondary and primary data collected by interviewing 223 households. The data were analyzed using descriptive and inferential applications in SPSS. As a consequence of drought, access to domestic water supply was cumbersome and time spent on water collection activities almost doubled compared with the time required in years with normal rainfall. On average, a respondent household suffered a loss of about 86% in production of major crops. High reductions in on-farm unskilled employment opportunities and an increase in unskilled labor in off-farm rural employment activities were reported. It was found that about 69% of respondents were availing loans and 79% of them delayed repayment of loans due to the consequences of drought. Our results indicated that the extent of drought damage varied according to household size, annual income, landholding size, farming system in use, and drought intensity. The effects of these factors on farming communities are reported with empirical evidence. Respondents with large family size, low to marginal land holding size, low income, and rainfed farming systems are found to be more vulnerable to drought impacts; special attention should be given towards increasing their resilience when designing drought management strategies.

Keywords: Agriculture; Water supply; Rural employment; Farm income; Indebtedness; Drought resilience.

Download English Version:

https://daneshyari.com/en/article/7473311

Download Persian Version:

https://daneshyari.com/article/7473311

Daneshyari.com