

Dairy Farmers Perception and Attitude towards Flooding of Uttarakhand, India

H R Meena¹, Gopal Sankhala² and B S Meena³

^{1,2,3}ICAR- National Dairy Research Institute, Karnal -132001, Haryana (India)

Abstract—Flooding has the potential to cause social, economic and environmental damage. Thus flooding is capable of disrupting sustainable development initiatives. In Himalayan region of India, flooding events are influenced by a range of factors including: the overflow of the numerous rivers that transverse the region, unprecedented rainfall amounts and intensity, dam breaks and levee failure, the unavailability and/or insufficient drainage systems and the underutilization of dams in some parts of the country. In some locations, illegal dumping of refuse along water ways and drainages has influenced flooding events in urban cities. Flooding can easily be tagged as the most extensive and expensive natural disaster in India. The flooding events during the week of 20th to 26th June 2013 has been in excess by 37 per cent of normal rainfall. During this period, the Uttarakhand state received 73.3 centimeters of rain while the normal rainfall is usually 53.6 centimeters. The heavy rains in the region have led to extensive flooding, landslides and destruction to property and lives. With changing climatic conditions, such flooding events are not only likely to reoccur but with impacts and damages that are more devastating. Thus there is need for systems efficiency and perception studies. This study is based on both secondary and primary data collected via a survey of 228 farming households. The study used a questionnaire that was piloted on a small number of people in the Uttarakhand prior to commencement. The questionnaires were administrated in the form of a semi-structured interview which took about 15-20 minutes on the average. The detailed questionnaire collected socio-economic and demographic characteristics of respondents, their perception of flooding impacts and adjustment systems. This included data on awareness of impending flooding, assessment of government agencies in dealing with the flooding, communication processes, and available adjustment systems (insurance). The results show that flooding destroys livelihood, limits development and perceived impacts vary from sector to sector but are largely seen as 'severe impacts'. Of the six sectors evaluated, agriculture, housing and economic activities are perceived as worst hit in relation to health, transport and water. A notable driver for this differential perception is the value system in the region, thus this makes a case for adaptation prioritization. Decisions to stay in the area despite acknowledging possible reoccurrence is influenced their occupation; strong connection with the area and no better relocation option. With provision of relief materials by government agencies largely perceived as insufficient and unjustly distributed, new lines of communal divide can arise and ultimately complicate challenges faced by victims-the destruction of existing community cohesion and support systems. Financial adjustment systems such as insurance are non-existent among households in the survey communities. Thus to make adjustments, households use their savings, dispose assets or raise funds from informal sectors. Finally, findings from this study implies that poor communication, weak institutional support system, household-based adjustment exacerbates impacts of flooding in rural communities and there need to be a comprehensive national flood disaster action plan specially for agriculture and animal husbandry sector.