

Research Paper

Drought Analysis: behavior management and its influencing factors in nomad of Darila region, Gachsaran County

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ABSTRACT

This study aims at analyzing drought management behavior and its influencing factors in nomads of Darila in Gachsaran area under drought condition. The methodology of this research is mixed method and content analysis and the population includes number of 200 nomad households in Darila region. Accordingly, based on Bartlett et al. sample size table, 132 heads of nomad households were selected as sample of the study. A structured questionnaire was administered face-to-face. A panel of experts confirmed the questionnaire. The instruments were pilot- and field-tested using 30 heads of nomad households who were not targeted in the study. The Cronbach's alpha coefficient (0.46- 0.82) indicated the optimality of the questionnaire. The findings revealed that although nomads of Darila applied both technical and non-technical adaptive strategies, the non-technical adaptations were the most commonly used strategies. Furthermore, the results of path analysis suggested that the "quality of life" ($\beta= 0.46$) and "attitude toward drought" ($\beta= 0.08$) had significant direct and indirect effects on the nomads' behavior to drought, respectively. Also, "access to information", "intention to manage drought", "perceived control of drought", and "social norms" had significant direct effects on nomads' managerial behavior in drought condition. Finally, recommendations with regard to drought management policies were provided to reduce nomads' vulnerability and encourage them to continue their activities and production.

Key words:

Rural development,
Nomad, Drought,
Coping strategy,
Darila, Gachsaran

Extended Abstract**1. Introduction**

Theories Drought occurrence as a normal characteristic of climate changes seems inevitable. This hydrological climate induced change is considered to be the most complex, and indeed compared to any other natural hazards, least realized by the affecting

people. This slow-onset natural disaster has widespread consequences on rural and nomadic regions. This phenomenon provides disrupt or destroys physical and environmental conditions needed for different groups and especially nomadic communities. Therefore, nomads are one of the major groups that due to the nature of their lives face a lot of damage from drought phenomenon. They are clearly at the forefront of drought and its management challenges, suffer most from the life-threatening consequences of drought and have the greatest influence on its

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mitigation. They react to and manage drought according to their awareness, attitudes, knowledge, etc., about the phenomenon. Therefore, understanding nomads' behavior in face of drought requires considering underlying factors contribute to such behavior. Accordingly, investigating nomads' awareness, attitudes, knowledge, etc. which effect on their actions and behaviors toward drought, is fundamental to establishing effective sustainable development planning and policies. Therefore, this study aims at analyzing drought management behavior and its influencing factors in nomads of Darila in Gachsaran area under drought condition.

2. Methodology

The methodology of this research is mixed method and content analysis. The population of this study was composed of the nomad households (200 households) in Darila region. Accordingly, based on Bartlett et al. sample size table, 132 heads of nomad households were selected as sample of the study. Participants were a representative sample taken from five clans in Darila region of Gachsaran County (Aghaei, Hajati, Olad-Nabi, Lak, and Narehei) that were selected using proportional random sampling technique. Because of the low literacy level in the nomad population, structured questionnaires were administered face-to-face. To increase the consistency of data collection across the region, all participants were interviewed orally regardless of their ability to read or write. A panel of experts confirmed the content face validity of the questionnaire. The instruments were pilot- and field-tested using 30 heads of nomad households in Pakouh, Sichanloo, and Gach-e-Seyed-Allahdad who were not targeted in the study. The Cronbach's alpha coefficient (0.46- 0.82) indicated the optimality of the questionnaire. All statistical analysis was performed using SPSS software (version 19). For analyzing the data, the descriptive and inferential statistics such as Mean, Standard Deviation (SD), Coefficient of Variation (C.V.), correlation coefficients, Analysis of Variance (ANOVA), Kolmogorov- Smirnov test, Path analysis, Mann-Whitney, and Kruskal-Wallis tests were implemented. A significance level of 0.05 was used to establish statistical significance.

3. Results

Results indicated that nomads of Darila perceived drought mainly as a threat to their resources. Although there was a high rate of awareness about drought among nomads, they had pessimistic view about the effects and consequences of drought. Nomads were very perceptive of the drought and were concerned about the future of animal husbandry and their livelihood. However, they

believe in controllability of the drought. The findings revealed that although nomads of Darila applied both technical and non-technical adaptive strategies, the non-technical adaptations such as praying, ceremony for rain, selling rangelands, selling lambs, waiting for government supports, and migrating to cities were the most commonly used strategies. Furthermore, the results of path analysis suggested that the "quality of life" ($\beta= 0.46$) and attitude toward drought ($\beta= 0.08$) had significant direct and indirect effects on the nomads' behavior to drought, respectively. Likewise, access to information, intention to manage drought, perceived control of drought and social norms had significant direct effects on nomads' managerial behavior in drought condition.

4. Discussion

The results provide an insight to nomads' behavior in drought event conditions and its' influencing factors and understanding of the characteristics of nomads and nomad households to frame better strategies to cope with drought in drought-prone nomad environments. Nomads use different management approaches to mitigate drought, which can be classified in technical and non-technical drought management.

5. Conclusion and Recommendation

Therefore, recommendations with regard to drought management policies were provided to reduce nomads' vulnerability and encourage them to continue their activities and production. Accordingly, the recommendations include:

- Provide more effective drought information services and extension programs to promote more effective technical strategies for nomads in drought-prone nomadic areas.
- Create jobs and multifunctional diversification funds aims to empower the nomads.
- Provide technical support services to empower nomads to cope with drought, especially drought-related credits and loans.
- Create social networks institutions, government and NGOs.
- Provide new job opportunities in drought-prone areas.

- Government promotes more effective services. This means that efficient coping with drought needs exact actions and participation of nomads, government and the province managers.

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