Analysis of the Role of Livelihood Diversity to Rural Household Resilience in Drought Condition
Case study of the Drought Exposed Areas of Isfahan Province

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Extended Abstract

Introduction
Over the past years, drought has inflicted considerable damage on the agriculture sector and on rural society in Iran. During the past decade, emphasis has shifted from combating natural conditions and occurrences to adapting to their reality and coping and ‘co-habiting’ with them, a capacity focused on in this study under the term ‘resilience’. Resilience is the capacity of a system, community or society to resist threats or to modify its components in order to achieve its goal or to maintain its movement and progress with an acceptable level of structure and functionality when exposed to potential risks. The objective of this research has been to examine the factors and variables affecting the resilience of an agricultural community in drought prone areas in Isfahan Province, and to present an appropriate model of resilience for drought conditions.

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Methodology
Analytical framework used in this paper is a sustainable livelihoods framework. This framework as a way to improve understanding livelihoods and vulnerability contents of rural poor starts and ends with livelihood outcomes based on mechanisms of sustainable livelihoods. This framework can be tailored to fit with the problem of the drought-induced vulnerability and mechanisms leading to adaptation and resiliency in subsistence agricultural activities. Key concepts and variables in this framework include resilience, vulnerability, livelihood assets and livelihood strategies.

The study has been carried out based on an integration of prominent theoretical frameworks in the field of resilience, with a focus on variables such as livelihood assets, adaptive capacity, knowledge system, attitudes towards drought conditions and livelihood strategies as key factors affecting resilience. A quantitative survey method has been deployed for the study, using descriptive, analytical and correlation methods for interpreting the results. 12 villages with varying degrees of drought proneness and at different levels of development were visited in Isfahan Province, and besides local institutions and experts, interviews were also carried out with 227 rural agricultural household heads.

Results
Results show that adopting a diversification approach has led to greater resilience to drought conditions among rural and farmer households. In fact, more diversification was observed in villages that were more severely exposed to drought. In contrast, farmer households in villages less exposed to prolonged drought were found to be less resilient, because their socio-economic structures were less prepared to face drought conditions.

Severity of the drought increased subsistence rural livelihood diversities. These results indicate that in villages with long experience and continuous drought livelihood diversification as a key strategy adopted for dealing with drought. The highest level of resilience show in villages with severe drought conditions and if drought reduced in village level, then resilience of rural households is reduced. Also the resilience is lowest in rural areas with low drought. Villages with a longer
history of vulnerability (drought) have also been more severe droughts, more resilience prepared to deal with this condition. Significant positive correlation with the severity of the drought on the one hand and livelihood diversification approach and significant negative correlation with migration and intensive agriculture represents a positive effect of livelihood diversification on increasing the resilience and negative effect of migration and intensive agriculture to rural household resilience. Indicators of livelihood assets in the five components showed significant positive correlation with the diversity of livelihoods and household resiliency while has a positive relationship to the indicators of institutional and infrastructural development as an intermediate factor to use livelihood approach. Meanwhile, the significant negative correlation between the migration and livelihood capital assets shows while livelihood stronger assets over there potential migration of households has declined. Also significant correlation between livelihood assets and intensive agriculture was not seen. The relationships between the variables studied and the results have confirmed the role of all aspects of livelihood assets to the use of proper approach to deal with drought conditions that in this society lead them to livelihood diversification as a suitable approach and enhancing the resilience of rural households are in severe drought conditions. In the other hand the lack of livelihood diversification even in villages that are less susceptible to drought caused low resilience in the face of drought conditions and more vulnerability in these villages have caused. Based on the results the most appropriate strategy to increase the resilience of rural households in drought conditions is diversifying sources of livelihood assets for rural households.

**Conclusion**
Therefore, based on the results of this study, the most appropriate strategy for improving resilience among villages with conditions similar to those visited in this study, would be to diversify income sources of farmer households.

**Keywords:** Drought, Resilience, Livelihood diversity, Livelihood Assets, Livelihood Strategies.
References


Ghayour, Hasanali, 2002, *Periods of Drought in Isfahan*, Faculty of Literature and Humanities (Studies and Research in Faculty of Literature and Humanities), Vol. 1-14, No. 30-31.


Twigg J., 2001, Sustainable Livelihoods and Vulnerability to Disaster, Benfield Gerig Hazard Research Centre for the Disaster Mitigation Institute (DMI).