

***The Role of Low-Depth Wells in Diversification of Rural Economy
(Case Study: Zahak Township in Sistan & Baluchestan Province)***

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Extended Abstract

Introduction

During the recent years, low-depth wells have found a special significance in the rural economy of Zahak Township. These wells have not already been used so much, due to abundance of surface waters; but in the recent years(1998-2009) more attention have been paid to low-depth wells because of discontinuous flow of Hirmand River. Digging low-depth wells is one of the techniques used by the people of this region in campaigning against drought and creating diversification in the agricultural products to which less attention has been paid in academic researches.

The rate of humidity and rainfall in this township, because of its geographical situation, is less than other parts of the country. The annual rate of rainfall the township is about 60 mm. Lack of subsurface basins (excluding the subsurface flows and drain of irrigation water in agricultural consumptions) and the dependence of the economy of this region to the fluctuations of the water gained from Hirmand River, have continuously encountered the farmers of this region with many problems. Drilling low-depth wells not only is not considered as a threat for subsurface waters flowing in the region but also due to re-supply of subsurface basins by Hirmand River, the low-depth wells prevent from coming up of the drains of the agricultural lands; especially, in Autumn, when the water of Hirmand River reaches to its minimum while the need of agricultural lands for water (the dominant product of the region is wheat and barley) is the maximum. There fore the low-depth wells can compensate this defect and may provide assured water resources for economical operations.

By digging low-depth wells and employing modern cultivation patterns such as green house cultivation and under-pressure irrigation in the recent droughts, the residents not only overcame

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this problem, but also could gain higher revenues. Considering the diversification principle in economical operations has promoted the optimal productivity of the natural, economical, social and educational facilities of the region through which the economical and social problems of the villagers will be solved and an appropriate ground will be prepared for protecting the population base of the region in order to preserve the financial and regional resources.

The present research paper, while expressing the theoretical fundamentals of diversification in rural economical activities, describes the role of low-depth wells in sectors such as culturing aquatic animals, green house culture, and animal rearing, etc. In the section allocated to the theoretical fundamentals, the authors have studied the diversification approach and the position of low-depth well in the process of campaigning against drought. In the rural communities in which the villagers are faced with problems in meeting the objectives of their life due to lack of job opportunities for them to be attracted to activities such as agriculture and animal husbandry, the diversification approach prepares the ground for creating new capacities for employment in the village. Digging low-depth well, while being one of the approaches for campaigning against drought, has provided the ground for creating diversity in the agricultural products and income sources of the villagers. Ultimately, the research paper compares the diversity of agricultural products and changing the cultivation pattern of the region resulted from the water of low-depth well.

Methodology

The method used in this research is a combination of descriptive-analytical and case-field procedures, and sampling has been done through filling out the questionnaires and interviewing the experts. Opinion polling from the agricultural exploiters has been employed for appraising the costs of drilling low-depth wells and the income obtained from this project; although similar results are gained by using other economical evaluation methods such as economical analysis. The statistical methods and techniques as well as correlation analysis have been used for analyzing the data.

Results & Discussion

On the basis of findings of this research, the regions that have access to the water of low-depth well in the summer enjoy the diversity in agricultural products and relative high level of income. They are also very hopeful about their occupational future; while the villages that have less access to the water of low-depth well have only relied on cultivation of wheat and barley. The farmers who use low-depth well for cultivation in comparison with the ones who lack them, participate more in economical and social activities and their relations with the organizations such as Bank Keshavarzi, insurance organizations and research centers are broader too. They also have employed more the modern technologies such as green house cultivation, under-pressure irrigation, and so on. Drilling low-depth wells, while providing an appropriate ground for cultivating various crop products, makes the diversification of the rural economical operations and changing the cultivation pattern possible, the result of which is satisfaction of the people living and residing in the region when the crises resulted from water insufficiency occur.

Conclusion

Therefore, the low-depth wells have provided assured and durable water resources for campaigning against drought and diversification of economical and agricultural activities.

Keywords: Low-depth well, Diversification of rural economy, Appropriate pattern of cultivation, Zahak township, Sistan & Baluchestan province.

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