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Investigation of Participatory Needs Assessment to Prioritize Sustainable Development Indicators of Rural Communities Using Hierarchical Analysis Process

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Abstract

Collaborative Needs Assessment for prioritizing and assessing problems and shortcomings is a process based on a community-based management approach that addresses different aspects of the needs of rural and local communities in arid areas and is one of the most important principles in rural planning. In this study, the role of a participatory needs assessment of rural communities in order to prioritize rural development indices using AHP hierarchical analysis method. The study area is located in the southwest of Khorasan Razavi province. In this study, a questionnaire method was used and part of the information was extracted from the rural participatory evaluation reports in the study area. Descriptive statistics were used to achieve the desired results by SPSS software. Statistical analysis is split into two types of descriptive and inferential statistics, which we use in the descriptive statistics section to summarize the large amounts of data we have. Our statistical population, which is the same set of people in the region that we surveyed through part of the questionnaire, and we generalize the results at the end, is 6 households and a total of 15 individuals. The results showed that by properly and timely identifying the needs of local utilities, in addition to appropriate decision making, the implementation of the development prospects of the area could be facilitated. The results also show that providing a framework for developing the trust and cooperation of villagers in a way that they perceive themselves as having an important role in society, will result in projects that require rural cooperation in less time and at a cheaper cost happen.

Keywords: Participatory Management, Desertification Control Plans, Rural Livelihood, Iran

Introduction

Rural areas in the Third World, with a significant share of gross national product, employment, food supply, and foreign exchange, as well as a significant population, are an important part of the development of countries. Villagers can play a significant role in implementing the people's participation policy in development programs. And due to the capacities and capabilities that exist in rural areas, it has the ability to form and establish public institutions in all fields and related issues (Sarvestani et al.). The concept of participation is like the development of a vague and ambiguous conception that has various interpretations and interpretations of it, but in general, participation can be defined as the process of involving people in determining their own destiny and the sense of responsibility towards this fate (Mohammadi, 2001). Participation is a group of attitudes, methods, and behaviors that enables people to discuss and investigate their realities and their conditions, to plan for themselves, and what activities to do and to observe and evaluate their results (Chambers & Blackburn 1996).

Rural development programs are part of the development plans of each country that are used to transform the socio-economic structure of the rural community. Therefore, achieving sustainable rural development and its epidemic depends on understanding the issues of sustainable development and establishing a progressive and organizing interaction between its dimensions and emphasizing the well-being of all members of the community (Anriquez & Stamoulis, 2007). Sustainable rural development cannot be achieved without adopting infrastructure-based approaches to public participation. Partnerships in rural development are development partnerships. This type of partnership covers all levels of society and its needs and dimensions of individual and group life (Oakley & Marsden, 2002). In general, it can be pointed out that partnerships are a network through which groups and local communities can access larger and larger decision-making arenas. Without participation, unpopular development strategies would be futile. Participation as a social reality is rooted in human social life and is a process that has evolved over time (Dehghan & Ghafari, 2006).

A participatory approach and taking stakeholders as the main hub of rural development programs is essential so that many collaborative management issues can be resolved with this approach (Mehrabi et al., 2014; Ghorbani et al., 2012). Partnerships and partnerships among the beneficiaries are one of the essential needs to tackle the degradation of natural resources and address concerns about sustainable rural management (Schulz, 2011). Hassan Nejad et al. (2011) and Nazari et al. (2001) in their research concluded that satisfaction with executed projects increases participation motivation and individuals without sub-jobs are more likely to be in groups. Become a member of Rural Development and participate more in rural activities. According to the aforementioned, the RSP method enhances the understanding of the villagers in understanding their problems and opportunities and monitoring them in their choices and programs and initiates a process of participation that can be achieved through program implementation. Or continue to manage local initiatives and at least oversee community initiatives (Heaver, 1992).

Regarding the socio-economic conditions governing rural communities, the low efficiency of factors of production in different sectors of the rural economy, the inability to use existing facilities and misuse of them are one of the most prominent economic variables that reduce the efficiency of natural resources (Bakhtiyar, 1997). The focus of man in the development process in the regions is one of the most important development tools. The increase in population and the lack of employment activities in rural areas have the

effect of increasing the vulnerability of rural households, and more often the migration of villagers to urban areas due to lack of employment and income for living in households (Langroudi et al., 2011). In fact, by appropriate management of desert control, the behavior and attitudes of humans are economically and socially correct and correct to the environment and nature and can be effective in preventing the process of leaving the village and migrating to the cities, which ultimately This approach has a sustainable development of environmental resources, such as water and soil (Sharama et al., 1995).

2. Materials and Methods

2-1 Study area

In the eastern regions of Iran, especially in the west and southwestern regions of Khorasan Razavi province, desertification is intensifying. In this area of the city of Bajestan, which is in the southwestern part of the city 290 km from the center of Khorasan Razavi province, due to severe desertification and land degradation conditions. The city has an area of 476653 hectares, which is 58 degrees 34 minutes to 58 degrees 42 minutes east longitude, 34 degrees 15 minutes 34 degrees 55 minutes north latitude. The climate of the region is warm and dry due to desertification and the average rainfall is about 150 mm. The region's water resources include 460 aqueducts and 220 deep and semi-deep wells.

Bajestan has four elements of the Desertification Public Participation Plan, which have been transferred to individuals under Article 3 and Note 5 to Article 34, all of which are active, with a total of over 2100 hectares of redeveloped desert areas and 200 hectares under forage cultivation and 150 hectares. A hectare of pistachio orchards. Implementation of the Desert Control Project started in December 2013 in the area of 202,000 hectares in the city of Bejistan, and so far the project is being implemented in 11 target villages (Biennial Carbon Sequestration Activity Report, 92-94). Figure 1 shows the location of the study area.



Figure 1: location of the study area

2-2 Socio-economic characteristics of the study area

The study area, named as Qasim Abad village, caused financial damage to agricultural lands due to its proximity to the salt desert and exposure to 120-day winds and monsoon winds and wind erosion problems. From the human dimension that the severe weakness of people's finances due to the aridity of the region and the lack of employment and thus the loss of their jobs in the countryside, has led to migration to other parts of the country, especially to Tehran, including areas that do not pass through time and future. It is far from a suitable area for the development of the desertification process. Therefore, in order to control the critical hotspots of wind erosion and desertification management, according to the existing conditions and potentials, the city of Bajestan has been selected to implement desertification control projects. And its continuation continues (Carbon sequestration project biennial report, 92-94).

2-3 Rural participatory evaluation method

Rural participatory assessment is a method used to assess rural life and conditions in order to collect data based on community information and their needs for use in community development and literacy programs. Questionnaire scrolls have also been devised to avoid many shortcomings. In the second half of the 1980s, the term participatory was also used in addition to the term rapid rural assessment. In rural participatory evaluation, locals themselves draw more than aliens on drawing, modeling, charting, ranking, rating, observation, interviewing, analysis, and planning (Chambers, 2003). The needs assessment is a way of gathering information on which to decide on a development plan that meets the needs of the community. In this study, a questionnaire method was used and part of the information was extracted from the rural participatory evaluation reports in the study area. Descriptive statistics were used to achieve the desired results by SPSS software. Statistical analysis is split into two types of descriptive and inferential statistics, which we use in the descriptive statistics section to summarize the large amounts of data we have. Our statistical population, which is the same set of people in the region that we surveyed part of the information through the questionnaire, and in the end, we generalize the results, to 6 households and a total of 15 individuals.

Needs Assessment with a participatory and community-based approach and the importance of participation, it can provide more comprehensive and at the same time more accurate information on the current status of the community and its needs. Needs assessments, actual needs or priorities, resources needed, and ways of providing these resources are performed at two individual and organizational levels in six stages (Ghorbani et al., 2016):

1- Understanding the target area for the needs assessment: In this section, the rural texture of Qasim Abad was considered.

2- Studying the theoretical foundations and observing the successful models in the same field in this section, the successful models in Khorasan Razavi province were presented to the villagers to show a successful pattern in order to gain a correct attitude.

3. Designing a needs assessment tool based on the extracted basics and patterns and fitting it to the language and literature of the context in question: In this approach, villagers were trained in the AHP method to identify their needs based on a specific and scientific method.

4- Identifying real needs and priorities with a participatory contextual approach: In this way, the needs are determined on the basis of the participatory wisdom of the local biological experience.

5. Identify educational, research, and administrative priorities to provide the necessary resources, such as training for small rural jobs.

6. Determine Appropriate Approaches to Provide Resources: Using organizational prioritization, different approaches were introduced from the perspective of villagers to solve problems and create a framework for rural development and development.

2-4 AHP methods (Hierarchical Analysis Process)

The hierarchical process of analysis is one of the methods of decision making. This process begins by identifying and prioritizing decision elements. These elements include goals, criteria, and possible options used in prioritization. In this process, the identification of elements and their relation to them creates a hierarchical structure. Therefore, creating a hierarchical structure from the subject under review is the first step in the hierarchical analysis process and the goals, criteria, options, and their relevance are shown in the same structure. The next steps in the hierarchical analysis process include the calculation of weight (coefficients), criteria and sub-criteria, the calculation of the coefficient of importance (weight) of options, the final calculation of options, and the verification of logical consistency of judgments (Saaty, 1980, 1990, 1990, 1996).

At this stage, the problem is defined and the purpose of the decision is mapped hierarchically to the factors and elements of the decision. The hierarchical analysis process requires a hierarchy of levels to break the decision problem with several indicators. In this way, the villagers make comparisons between the decision criteria and determine their scores against each other. In this study, after educating local people, they rated it like an expert. This comparison is based on the table in Table 1. The superiority of an agent or an option over itself equals one. Thus, the principle of factor inversion over the other and the preference of one for the agent or option over itself are two major properties of the binary comparative matrix in the AHP process (Ghorbani et al., 2016).

Table 1: Quantitative Comparison of Two-way Indicators in AHP Method

Explanation	Definition	Points
In objective research, two indicators are of equal importance.	Equal importance	1
Experience shows that for objective research, the importance of i is slightly above j.	A little more importance	3
Experience shows that for goal . research, the importance of i is greater than j.	more important	5
Experience shows that for goal research, the importance of i is much greater than j.	Much more importance	7
The importance of i more than j has definitely been proven.	Absolute importance	9
When there is a middle mode.	Intermediate preferences	8,6,4,2

3. Results and Discussion

The need assessment partnership was thus:

3-1 Preparing a resource map

In order to draw a social map, at meetings held with experts and village informants, people were asked to first map the local location of their village, whether inside the village or the lands and roads outside the village and then places and Specify the lands in the village. Qasim Abad village people, together with families, identified the location of the families, how the land was used, the status of the village water, the dirt roads, as well as the extent of the national lands. The meeting was designed to motivate residents, to foster a spirit of partnership among village residents, to sensitize and brighten the minds of residents and counselors about available and accessible resources, as well as to empower residents through education and partnerships. Participatory preparation of the resource map was carried out with members of the local development committee and about 40 residents of the village of Qasim Abad, including 6 women and 34 men.

3-2 Rural circulation

Qasim Abad village is located 40 km from the city of Bejestan. The village has 172 households, most of which are farmed. This approach was used to gather information on land uses and land cover, opportunities and barriers to each of the village resources outlined earlier. A field visit with a number of residents and 7 members of the Provisional Rural Development Committee to assist with the carbon sequestration project executive team's deliberate review of restrictions and capacities, including quails and pastures and agricultural land and livestock visits. The views and views of the villagers were also measured by what was done as a carbon sequestration project. At the same time, direct suggestions were made to address the major village problems.

3-3 Extracting daily and seasonal schedules

A meeting was held to justify and inform the public of the benefits of this activity at different times of the day. Each 24-hour group then assigned its activities to 24 men and women by plotting the time of day according to age and seasons. They also chart another activity that is common in the village for four seasons in a year.

Courier:

- The busiest working hours for women are between 6 and 8 am.
- The busiest working season for both men and women is spring.
- The busiest working hours for men are between 6 and 8 am.

3-4 Track the changes in infrastructure and essential resources in the formation of villages

In order to find out about the natural history of the village in recent years, questionnaires were designed that included several time intervals and asked each participant to ask about the status of the village in terms of important issues such as rural development. Infrastructure, water and pasture status, rangelands, populations, agricultural activities, and livestock and gardening are the oldest history of their village to

remember the latest. Then with the participation and the thought of the group members, the historical course, tell the village about each of them. Finally, the groups completed the questionnaires. Eventually, these topics were summarized and the process of changing the status of the village over several periods was identified.

4 Conclusion

After the list of problems and problems of the village was prioritized and the most important problems of the village were identified, the participants of the meeting were asked to discuss in their groups and draw them like tree trunks in the tree. Consider and identify the most important causes of its creation and solution and its consequences. In order to prioritize the problems and needs, the analysts were asked to discuss in their groups the barriers to realizing the development of the village and identify the problems and needs in the village. The chapter then lists the most important activities needed to improve the village situation, individually and individually, using the individual views of each individual group. This was done to prevent the periphery from being influenced by the views of leading people. The views were then collected and categorized. To prioritize the problems and needs, a pairwise comparisons matrix was used which showed which problems were more important and more important from the villagers' point of view. Table 2: Participatory Needs Assessment of Qasim Abad Villagers Based on Priority and Demand.

Table 2: Prioritization of Participatory Needs Assessment in Qasim Abad Village

Needs rating	The type of needs and desires	Priority
23	Drinking water supply	1
20	Road asphalt, ambulance, gas supply	2
19	midwife, checkpoint	3
17	Collaborative plan	4
15	agricultural development	5
14	Group business, marketing of livestock products	6
13	Rangeland restoration, livestock development	7
11	Digital Network	8
9	Conductor design, gym	9
7	kindergarten	10
6	Carpet weaving, breeding camels	11
5	Dairying, dam construction, tailoring	12
2	Green space, ostrich breeding	13
1	mushroom planting	14

Thus, according to Heaver (1992), the method of rural participatory evaluation enhances the understanding of villagers in understanding their problems and opportunities and monitoring them in their choices and programs and initiates a process of participation that can continue through program implementation or management of local initiatives and minimal community oversight of government projects. The participatory needs assessment of men and women in the village of Qasim Abad is an example of a coordinated system to empower local communities in a successful national model for defining strategies and policies in the context of rural community-based management. Based on this model, the institutional and institutional policy has been formed in the area of mental security in local communities and has shaped

regional decisions. By recognizing the needs of local utilities in a timely manner, in addition to making the right decisions, they can facilitate the implementation of a sustainable development perspective in the region and help advance the carbon sequestration project in the region. Therefore, the results show that providing a framework for the development of trust and cooperation of the villagers in a way that they perceive their people as having an important role in the society, makes the projects that require the cooperation of the villagers less time consuming and cheaper. Happen. However, what is certain, such as research by Azkia and Ghaffari (2004), is rural-based rural development, and policy-making policies will not work without regard to local beneficiaries.

Participatory workshops to determine needs can increase the active participation of rural communities in decision making. To the villagers and to the AHP literature creation needs and concept education to be a bridge between local communities and experts, it is very difficult, but creating a common language makes it easier to pursue organizational goals. It can then be concluded that communicating with local communities through collective decision-making is a process that can bring about policy and policymaking with an emphasis on local communities. Therefore, it is suggested that in each project, the context of Rural Social Partnership be provided, as the empathy of the villagers with the executable project will have the potential to achieve the project's goals, and this will be a step beyond motivation compared to a sense of responsibility. Internal and include management goals.

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