



## Management of Rural Development Programming and its Environmental Effects: A Case Study of farms of Masal County

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### Abstract

Village and ruralism has a high place and importance in Iran. No attention to the rural spaces, carelessness about rural environments, no attention toward production abilities and possibilities of rural areas, are among essential problems in access to the rural development, and by execution of exact programming we can prevent harmful effects resulting from damaging of natural environment of villages and help to make the environment clean. The region studied in this research is Masal County, one of the counties in Guilan Province which has three areas of plain, mountainside and mountainous from natural point of view, and in this research, we have used feature coefficient technique for determination of applications based on type of services and determined feature coefficient technique so that amount of development of rural districts of this county would be determined on the basis of type of services and quantities of them. Results out of this research show that rural districts of this county depends on rate of population, natural environmental conditions, placement in natural potential accessibilities and possibilities centers; and in this environment renewing process intends to change environment of the villages that we should help to keep and even improvement of it by an essential programming. Generally, programming in direction to development without damage to rural texture and space and keeping natural view of village, need a comprehensive and principal management, that this involves a special attention to regional and local programming so that priorities existing in each region would be specified exactly. Recognition and analysis of programming features of the state rural development, and investigation and analysis of obstacles and difficulties in development from programming point of view, can make the path smooth for comprehensive development of the villages. In this paper, we have tried to notice on issues such as attention to low-level rural centers, consequences of concentration in programming for rural districts and making the rural environment healthy, by execution of principal and collected program, and discuss it.

*Keywords: Rural Development, Management, Programming, Environmen*

### Introduction

As stated by Universal Bank, rural development is a strategy which has been designed to improve social and economical lives of poor villagers. Since, rural development is in fact a factor for decrease of poverty, so it should be attempted to increase production and efficiency in a very clear and appropriate manner. By accurate and principal execution of programming in rural environment and recognition of rural issues and its effects on rural environment, we can prevent incorrect programming and harmful effects resulting of it. The more standard programming in direction to development, the less effects on environment; and rural spaces will not be affected by transformations out of execution of developmental programs. Rural regions have allocated a principal part of population

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and natural fields of the country to themselves and rural society has an essential role in economical and social lives of the country. Considering importance and place of rural society in the country, difficulties and challenges that this society is faced in its development process, recognition and analysis of programming features of rural development in country and paying attention to all its dimensions is completely necessary. Rural development is a multi-dimensional process that its subject is improvement and advancement of quality of poor and vulnerable classes of society. A process that by benefiting from strategies like programming, organizing, reinforce of individual and collective self-reliance and making appropriate changes in intellectual and social structures of the villagers, is attempting to reinforce power, ability and choice for benefit from their abilities and sources so that they would change their current situation into a



more appropriate and desired situation, without any change in their environmental space. Nowadays, different programs for development of rural regions are collected and executed by the government. Rules, regulations, policies and economical, social and physical plans totally constitute rural management and development system, that each is intending to organize and develop rural districts, according to the necessities and requirements of the villagers. Among this, consideration of rural environment is necessary for programming process of rural development for rural management system. We can observe resultant of development programs in improvement of quality of rural environment. Credit of strategy of rural centers programming, increases only when a crucial distinction would be put between reinforcement of service applications of the lowest level centers and encourage of causing growth capacities of middle and high levels (Misra, 1992). In opinion of Foster, Conservatism and turning away from new phenomena have cultural support in rural communities; and the villagers are opposed to modernity, because they believe that modernity infects traditional methods. There is a kind of traditional rationalism and compulsory thinking and skepticism to government officials among them. New policies, has changed developmental strategies in agricultural researches, presentation of inputs, marketing of products, promotion, veterinary services, rural credit services and management of water resources, and in fact, a full range of rural development activities was impressed (Smith 2001). Necessity of priority and attention to rural development toward urban development is not due to this fact that majority of third world population are in rural areas, but it is because the final solution for urban unemployment and population density is to improve rural environment. By making proper balance between economical possibilities of cities and villages, and also establishment of proper situations for board participation of people in attempts taken toward national development and enjoying blessings of it, developing countries will take a major step toward realizing the true meaning of development. Rural residences are unbalanced, and in return of few dense population cities, there are low scattered residences which are not able to provide necessary services to their residents. In such cases, Urban and rural areas rather than being a single integrated and

complementary unit, they often have been against each other. Programming of rural centers is a part of regional development strategy, in which it is tried to remove the shortcomings, bottlenecks, regional, social and economical structures, and through this, position and income of rural households and their living conditions would be improved. To achieve this goal, planning of rural centers, (by reliance on low-level hierarchy of settlements) could be very useful tools (Kalantari 1997). In improvements and establishment of physical activities plan in rural areas, the aim is reviving of rural areas and creating jobs, reviving agriculture, and increase of per capita incomes of villagers, offering of infrastructure and social services such as water, electricity, health, treatment and education and generally physical development of rural areas (Sharepour 1993). Rural physical development program requires knowledge and understanding of necessary rural space. Enough knowledge and understanding of the scrutiny is gained by exact investigation and spending of enough time in rural space. In this article, the author by utilizing the theories, experiences and resources reviewed the importance and necessity for programming of rural development in Masal county and addressed such topics as research projects for specifications of the studied area to examine identification, analysis and Rural Planning and at the end has been concluded.

## Material and Methods

### The Studied Region:

The studied region, Masal County, is one of the northern counties of Caspian Sea in North of Iran and is located in northwest of Guilan Province. Masal County is located in coordinates of 37 degrees, 15 minutes up to 37 degrees and 35 minutes, northern latitude from the equator and 48 degrees and 43 minutes up to 49 degrees and 14 minutes eastern longitude from meridian of longitude. Breadth of this county is 486 km<sup>2</sup>, and from unevenness point of view, it has been formed from three areas of plain, mountainside and mountainous. Population of this county is 48091, lands under cultivation of this county are 11,000 hectares in average and annual rainfall in this region is 1000-1400 ml.



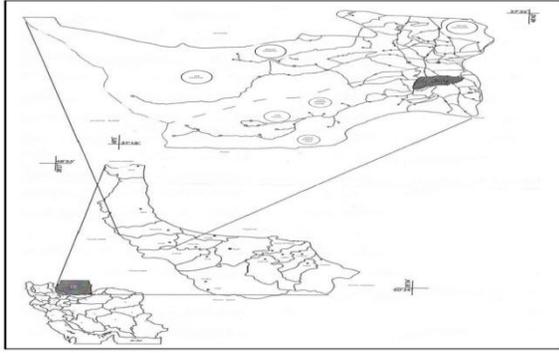


Figure1: scattering of rural points in study area

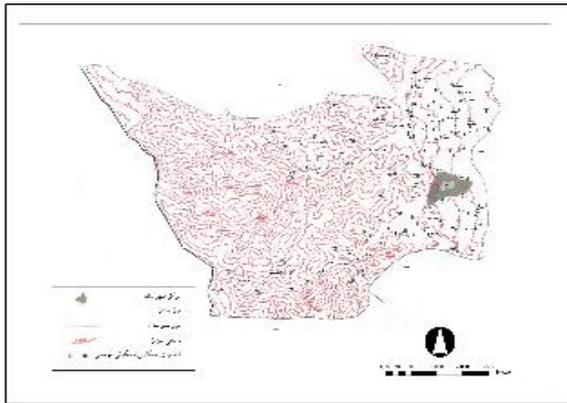


Figure2: masal township in study area

**Method of Study:**

Considering subject of the research, the required information have been used through library work – study on deeds and documents available in departments – field studies (direct observation-interview) completion of questionnaire in subjects related to the research and SPSS statistical software for analysis of the questionnaires and index model of weight centrality. Study in this county has been done considering, scattering of villages and settlement of most villages in mountainsides based on development indexes including infrastructural, surface, health and other developing indexes possibilities and services.

**Importance and Necessity of Programming for Development of Rural Centers:**

Currently, one of the most important needs of the state population is providing of food stuffs and living materials, therefore, programming in direction to restoring of water and soil resources, investment in different production fields of agriculture, activities in the fields of cultivation, educational and propagation and ...are among cases

which lead to increase in production and optimized efficiency. Economics in third world countries often relies on agriculture; and agricultural activities are also done in villages. Therefore, on one side, to improve traditional methods of agricultural production and optimized exploitation of land, production sources and distribution of agricultural products, and subsequently decrease in hunger, removing of poverty, and on the other hand, in order to social and cultural renewing of villages which itself has been extracted consideration of human issues and political necessities, subject of rural development and its importance would be appeared. Therefore, in this region, rural development has a special importance and priority because of solution of the mentioned problems and especially essential needs of the villagers. Increase of agricultural products through correct programming leads to decrease in prices and inflammation in the most important consumed goods and causes economical bullishness in total national economics; therefore, production programming in rural districts of this region which itself leads to increase in rural society income, will lead to economical bullishness of the country and providing of interests of total population of Iran. In this respect, production and agricultural programming in rural districts has a high necessity and importance. Lack of programming in rural districts of this county and weakness of living possibilities, cause intense immigrations from villages to cities and people by leaving the village will cause relative decadence and decrease of villages, and on the other hand for lack of required skills and weakness of economical condition, they became compelled to settle in suburbs and deal with unreal occupations. Programming of rural centers should put within general strategy of rural development, this should be preferably from primary stages of programming. Programming processes, usually are occurred in the form of staged approaches that are followed with a logical sequences. Generally, this type of programming includes elements such as collection of goals, identification of criteria and choices, compilation and analysis of primary and secondary data, design of program, decision making, execution of program and finally supervision and assessment that in the studied region, this issue requires having a correct and essential management and a codified



programming. Programming is a complicated process that in addition to other topics requires analytical creativity, coordination and management abilities and also insight necessary for political decision making, although decision making process is generally separate from programming process. Further, rural development programming gradually has become more comprehensive and therefore some obligations existing in beginning, have been looser. Since rural programming situation has a close relation with social and economical transformation of rural regions, combination of programming technique of rural centers in a comprehensive approach of rural development which has been chosen for that region, has a vital importance. The purpose of permanent development is not only for protection of living environment, but also is a new concept of economical growth; a growth which has prepared justice and life possibilities for all people around the world and not a few ones. In permanent development processes of economical, financial, commercial, energy, agricultural, industrial and ... policies, are designed in such a way that economical, social and environmental development would be continued. Considering conditions of the region, necessity for continuation of programming management is required and necessary.

## Results and Discussion

### Feature Coefficient Model:

One of the techniques for determination of development of villages is feature coefficient for rural services. According to results of application of this model which has been paid by using 40 indexes in 4 groups, rural districts which have more villages and subsequently more population, have more feature coefficient index and are considered as the first class rural district and the next classifications in this manner. In this method we have found developed points and specify spatial scattering of central points and their influence domain. In this method, different services offered in rural districts (or villages) are divided into health, educational, surface and ... services, then, services are used in determination of residence centers. General structure of the model:

$$Osd_{ij} = \frac{\sum_{i=1}^m X_j}{\sum_{j=1}^m X_i}$$

$Osd_{ij}$ : feature coefficient of each service in one crowd center

$\sum_{i=1}^m x_j$ : total services in crowd center of j

$\sum_{i=1}^m x_j$ : total I type services, in all crowd centers

that in this county, feature coefficient or  $Osd_{ij}$  of each service at any crowd center has been calculated separately and come to a table. Finally, grand total of any feature coefficient will be calculated at any crowd center, and on this basis, we classified crowd center or the same rural village, that the suburb rural village with feature coefficient of 05.26, is the first rank, and other rural districts by having feature coefficients of 7.24, 81.22 and 42.20 respectively have ranks of 2, 3 and 4, that this indicates development in these centers. Result of fulfilled studies, is identification of a set of public experienced patterns in physical formation and development of villages of this region that the residents have applied in construction and development of structure of their villages. Many of these patterns are a result of existence of a strong effective factor in villages. Climate, economical and social-cultural factors are considered as the most important factors effective in formation of rural texture patterns that have created the most variety in current rural texture patterns. Definitely, we cannot do a certain valuing between these factors regarding rate of effectiveness of them in formation of patterns. Importance and strength of effectiveness of any of these factors in each village is properly classifiable. Structural specifications of the village include a set of physical and observable dimensions and measurement of rural texture that is a result of interference of effective natural and human factors in a transactional environment. In this research, four structural indexes of villages including health services, surface services, infrastructure services and number of ways or accessibilities are considered. Importance of study on these specifications is mainly resulted from their importance in rural conduction plan studies and effects of these specifications in life of villages and villagers.



**Table-1: Feature Coefficient of Service Indexes of Rural Districts of Masal County According to Feature Coefficient Model**

Services Rural District	Health Services		Infrastructure Services		Surface Services		Paths		Total Services	Total Feature Coefficient	Rank
	Qt.	F.C	Qt.	F.C	Qt.	F.C	Qt.	F.C			
Shanderman	57	71.5	98	32.3	38	64.11	153	24.2	326	81.22	3
Sheikh Neshin	24	12.6	23	39.6	24	12.6	86	70.1	147	43.20	4
Suburb	55	29.5	88	20.3	19	31.15	139	25.2	291	05.26	1
Masal	18	33.7	35	28.5	13	15.10	68	94.1	133	7.24	2
Total	154	34.24	222	09.18	83	12.43	435	12.43	886	99.93	-

**Table 2 – Percentage of Service Indexes of Rural Districts of Masal County According to Feature Coefficient Model**

Services Rural District	Health Services		Infrastructure Services		Surface Services		Paths		Total Services	Total Percentages	Rank
	Qt.	%	Qt.	%	Qt.	%	Qt.	%			
Shanderman	57	59	98	99	38	88	153	90	326	336	3
Sheikh Neshin	24	40	23	35	24	76	86	89	147	230	4
Suburb	55	70	88	70	19	45	139	87	291	272	1
Masal	18	50	35	45	13	56	68	70	133	221	2
Total	154	210	233	229	83	235	435	331	-	-	-

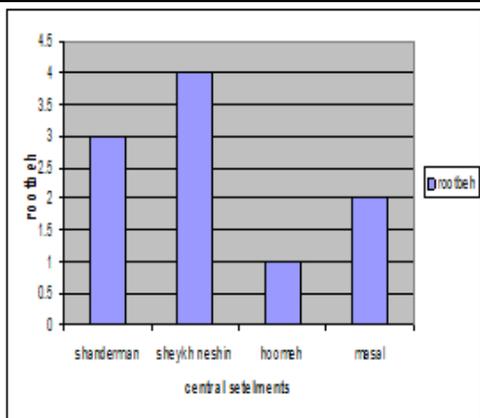


Diagram 1 – Display of Ranking of Rural Districts of Masal County

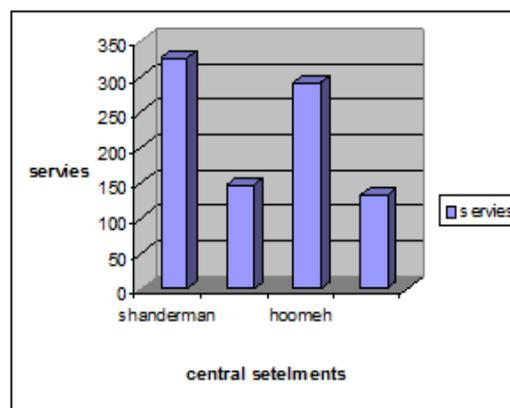


Diagram 2 – Display of Service Distribution in Masal County

**Necessity and Importance of Consideration to Rural Environment**

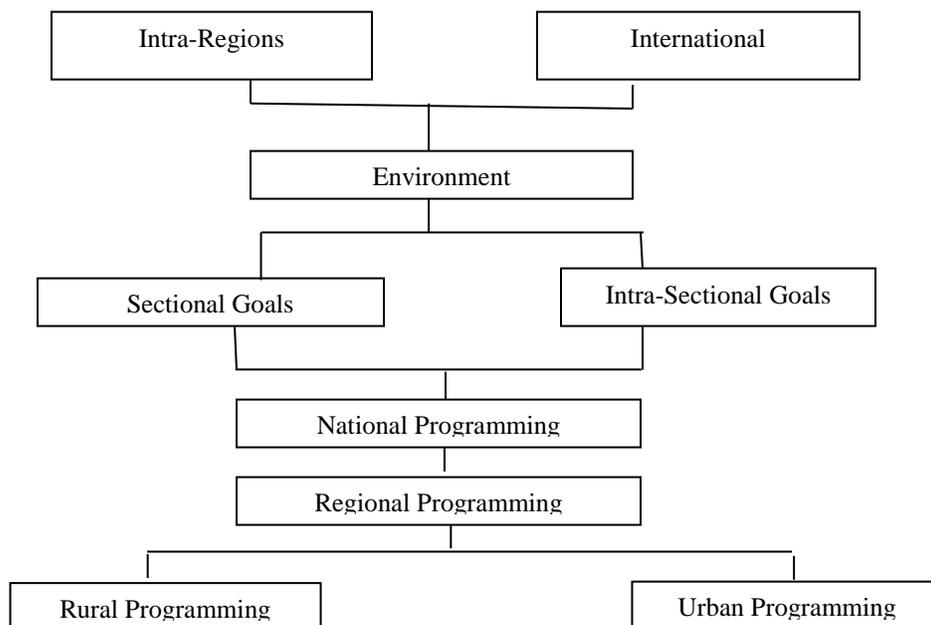
Protection of rural environment is a national duty that is necessary to be considered specially in national, regional and local programs. Protection of rural environment has different dimensions, in living environment model or keeping of living environment, village in programming process is a part of its environment or ecosystem. Ecosystem should be seen as a whole that there is a

transactional and continuous relation between the environment and living creatures within it. In spite of abilities of human populations in change and transformation of natural resources, any ecosystem is able to admit a few human beings which is called admission capacity and its range is variable as from optimized accumulation up to maximum resistible level. It is obvious that passing through resistible level limits, will cause shortage in production capacity. Current situation of spatial organization of



the state villages, especially the subject of scattering, severalty, low population of them and also lack of organized formation of residential centers and rural services are likely as an obstacle for rural growth and development and necessity for improvement of current conditions of the villages—like recent decades – are also remained. Structural texture of the villages in addition to direct interference of society members, are influenced by environmental factors. Severity of influence of these factors sometimes is decreased by human abilities, but always keeps their effects on structural

formation and spatial organization of the village. Therefore, structural specifications of the villages are formed under influence of two general groups of factors related to environment or nature and human being. Rural textures contain useful information for assessment of rate of impressibility of formation process and natural development of rural structures from different environmental – climate, economical and social-cultural factors which are appeared and continuous in some of the state villages.



**Figure 1: Place of Protection of Environment in Programming Process**

The role and place of villages in economical, social and political development processes in local, regional, national and international scales, and subsequences out of undevelopment of rural regions such as board poverty, increasing inequality, quick growth of population, unemployment, immigration, suburbanity and so on, caused consideration to rural development and even priority of it on urban development.

Rural development pays to modernizing of rural society and changes it into a community which has been combined with national economics. Therefore, "goals of rural development" are not summarized within limitations of one section, but includes cases

such as improvement and exploitation, increase of occupation, providing of minimum acceptable amount of food, house, education and health. Rural development can be effective in advancement of rural environment when it would contain all dimensions of development. It must be mentioned that natural rural environment influence on changes in programming and is considered as an important fact in advancement of optimization programs. Noticeable points for program makers in programming process of rural development are including: assessment of needs of people in the studied region, recognition and awareness of status of the area for correct and consistent

implementation of environmental programming and physical development of rural with the approach of keeping rural environment, which can be effective in advancement of the rural environment. As is clear from the findings, the environmental impact of rural development in this area is very sensible. The villages which have more population need more services and we should pay to execute development policies by a documented plan. The villages that have located in the center, have obvious differences in terms of feature coefficient with third and fourth classes villages and this shows the lack of rural development in county, so that suburban villages have more coefficients than the other rural districts. The nearest village to the central district has more facilities and population, but in other rural spots, considering increase of population, we do not see much offering of services. Investigation of every village in this county indicates that getting far from the central district or getting close to the villages in mountainside areas, distribution of facilities are decreased and we have to determine influence domain for these villages, and a central village should give services to other spots that this requires a specific organization and programming. In this pattern, considering requirements of each village we can present special privileges and prepare developmental possibilities. In this area, land indicates way of using the land in villages for providing of household needs which is done with certain conditions and goals. Land constraint in villages, on the one hand, and its vital importance on the other hand, cause importance of investigation on way of using the land in villages based on insight and wisdom of rural community toward these restrictions, needs and also interaction of the community with characteristics of the natural environment and economic trends. Land systems represent the positioning criteria for applications, determination of directions and location of physical development and rate of the land used in applications, considering limits and production value of the land is different in villages, which needs an exact programming. Way of using the land in villages depends on different factors which affect behavior and power of the community for various applications of positioning and extent of used land, with different severity or weakness. Environmental constraints, especially the shape and roughness of

land, productive value of land and its limits, are the most important effective factors in the process of application of lands in rural. Generally it can be said that in this region, preserving the natural rural environment is very important that the natural landscape and rural environment would not be out of the rural state. This has been occurred by implementation of essential programming in this area.

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