

# The role of people's participation in water shortage crisis (From the experts' vantage point)

Khadijeh Khatir, Rasoul Hessam, Noroddin Rafie

Ph.D Student Shakhes Pajouh Research Center. Isfahan.Iran

**Corresponding author email:** Kh\_nilo78@yahoo.com

**ABSTRACT:** The purpose of this article is studying the role of people's participation in water shortage crisis. Golestan Province is chosen as the case study. The research method is descriptive survey. The sample includes Islamic councils, some higher level authorities and the experts and managers of Golestan Crisis Organization. The data is gathered using a questionnaire made on the basis of participation theories and samples and the related international studies and also the geographic location and socio-cultural and economic situation of the studying region. The results of analyzing the questionnaire put a great importance on people's participation on facing water shortage, and they state people's participation is not benefited enough in case of water shortage crisis.

**Key words:** people's participation, water shortage crisis.

## INTRODUCTION

In all human history, reaching water has been a basic and primary condition for social and economical development and stability of culture and civilization. As hydrologists say, water is no more an abundant product with no economic value; it's a product with no alternative and a high economic value in all consumption areas (Sadeghi,1). Water sources have always been an important issue for countries' internal politics, especially for dry regions.

One of the difficulties of the 21th century which threatens the future life of this world is water shortage. There is very limited fresh water resource. From the 100% water in the whole world, 97/2% is salty and useless and only 2/8% is fresh water. In case of fresh water, 77/2% of all the fresh water includes the ice in the poles, 22/4% water tables, 0.35% in fresh water lakes, 0.01% in rivers and 0.04% in the vapor of the atmosphere; so there is very little amount of available fresh water which is so diffused and not spread evenly among people. Unfortunately because of locating in the dry zone, the share of our country of all this water is too small. Average annual rainfall in the world is almost 800mm, while Iran's average rainfall during the last thirty years has been only 251mm. These bitter and shaking statistics shows the significance of saving water resources to a great deal (Sadeghi, 1385).

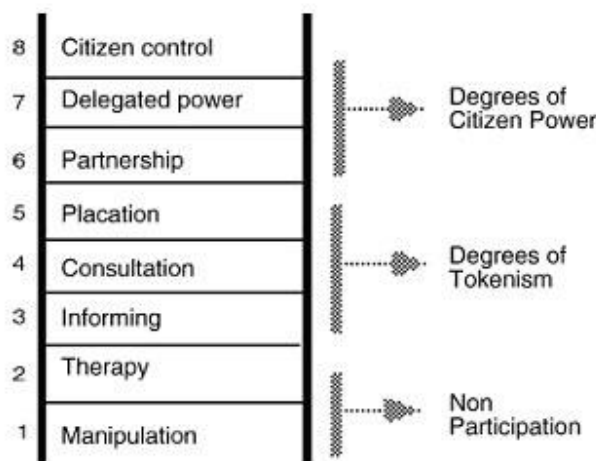


Fig. 1. Arnstein's ladder of citizen engagement ([3]).

**People’s participation**

Participation is one of the best methods for transmitting national level needs to the managers. participation has different levels which starts from pure powerlessness and continues to citizenship control. He describes citizen participation as a ladder starting from the citizen’s powerlessness to complete delegated power to them (Alaii,1387).

The two first steps have no signs of people’s participation and are only for deceiving. The middle level which has three steps transmits information and receives suggestions with no guarantee on applying them and is only one-way. But the third level which consists of citizen control includes participation, authority delegation and citizen control. In this level the citizens monitor and control civil authorities. The important point is that creating citizen participation is a hierarchy and ladder shaped process and each level shows your progress. Participation is one of the main elements of sustainable development and has positive effects on social performance. Local’s capability to participate is an important capacity of human communities and is measured as one of the desirable outcomes of social capital (Yazdan dad, 1388).

In the third world countries, the common thought on participation has been merely based on mechanical standpoints and only for exploitation. In a way that this participation will end up applying desired opinions of ‘the better ones’ or ‘the political decision makers’. But the new developmental standpoints have a new look towards the concept of participation. In this new look ‘the subordinates’ replace ‘the better ones’ and ‘we’. In a way that ‘the political decision makers’ have to be the executives of the ideas of ‘the subordinates’. This change in concept shows a fundamental paradigm for beginning, applying and continuing development movements. But the current realities shouldn’t be over looked. Our past politics which were driven from incorrect viewpoints of development’s bad effects have been so deep and severe that we need ‘determination’, ‘endeavor’ and ‘cultural principal’ to be able to go towards ‘the new paradigm’ (Mahmoodi, 1387).

Abbreviations and Acronyms People’s participation is a key factor to success in all stages of utilizing, consuming and distributing water. Hence, people’s role in developmental activities should be taken into account seriously. As a result in most of water related developmental and strategic activities, all the efforts should be done based on people’s needs and demands, keeping an eye on their characteristics in different areas. In collaborative methods,....

From another point of view, participation is as a fundamental right which results empowering and enabling people for creating entrepreneurship and eliminating their problems. So to observe people’s position in the research and development process, creating an evolution in personality, professional and organizational dimensions of the involved and related organizations is vital.

Tab1.Rainfall Average (mm) in Golestan stations

Station	Water Year 93-94	Long Term Average	Comparetive Percent
Maraveh tappeh	130.5	161.7	-19.3
Gonbad	205	189.6	8.1
Amore gorgan	209.9	272.6	-23
Gorgam Dam	137	172.3	-20.5
Tamar	195.5	212	-7.8
Arazkooseh	196	209.6	-6.5
Sarmo	270.5	332.4	-18.6
Ramyana	369	409.3	-9.8
Shastkola	286	298.6	-4.2
Siah Ab	192	262.1	-26.7
Golbedagh	307.5	316.6	-2.9

The above table shows rainfall in 1393 in Golestan Province. According to the water shortage crisis, this research aims at finding what the importance and the role of people’s participation is, when encountering water shortage crisis from the experts’ point of view. Hence, the objectives of the research are:

- Understanding the role and importance of people’s participation when encountering water shortage.
- Understanding the role and importance of people’s participation when encountering water shortage in the preventing phase.

**METHODS**

Golestan Province is 20437/74 km<sup>2</sup>, which is 1/3 percent of the whole country. It’s geographic coordinates are 36° 30’ 2” to 38° 7’ 6” North, and 53° 51’ to 6° 21’ 4” East. It has borders with Turkmanistan, on the south with Semnan Province, on the East to Khorasan Shomali and on the West to the Caspian sea and Mazandaran Province. The most important cities of Golestan,size wise, are Gonbad Kavoods (6485/8 km<sup>2</sup>),

Minoodasht(6485/8) and Gorgan (28484.4). Totally it has 14 cities and 27 regions. This province is very potential to natural disasters such as flood and forest fire.

The statistical population consists of 300 individuals of Golestan’s crisis management authorities, and crisis management council members. 80 individuals were chosen usink kokran method as the sample.

Table 2.

Sig.	t	df	Mean	N
.000	16.954	79	3.9988	80

According to the table, the calculated t (16.954) is bigger than the table t with df=56 (1.99) so this hypot hesis is not accepted therefore you can conclude the role of people’s participation when encountering water shortage crisis is vital from the experts’ point of view.

Table 3. statistical analysis of the level of using people’s participation on encountering water shortage crisis

index	N	Mean	df	t	Sig.
The level of using people’s participation	80	2.251	79	1.301	.000

Units To answer the question above, five optional Likert spectrum in which 1=very little, 2=a little, 3= average, 4= a lot, 5= very much. Since the sample consists of Golestan managers and experts, the interviewees replied according to this province.

According to the table, the calculated t is smaller than the table t with df=59 (1.99) and .05 probability. So the null hypothesis is not accepted and the level of using people’s participation on encountering water shortage crisis is a little and very little (1 & 2).

**Conclusion and suggestions**

Water shortage is one the main development restricting elements in the last decade in Iran. Unfortunately in our country using water correctly which is a very important principle for achieving a rational balance in demand and offer, hasn’t become a culture yet. To reach to this aim, creating a comprehensive system of people’s participation and water management is crucial. People’s participation is the fundamental and yet lost dimension of sustainable development in the water section (in agricultural, industry and civil sectors).

The participation process has to be in a spontaneous and reciprocal manner.

The country’s research activities for solving the problems should be based on people’s needs and demands and also different characteristics to have enough coordination between the technology receivers and the research findings. In participation methods, participation in the first approach is as an input for development which leads to an increase in developmental programs. People’s involvement in the activities accelerates the development process. From the other approach participation is as a fundamental right, empowering and enabling village have-nots. To formalize and observe the farmers’ rights in the research and development process, creating an evolution in the characteristic, professional and organizational aspects of the authorities is vital. Hence modifying the incorrect methods and concepts which eventually causes neglecting the local people and depriving them of their right to participate; and that is one of the main actions that should be taken account of by the experts, researchers and policy makers in the related organizations.

The municipality and NGOs are trying to improve the city condition so that they could increase people’s participation using different methods for reaching the desired goals of the local societies. Participation helps the participants accept the changes and the social effects easier and increases the chance to reach the aims and sustainability in civil projects’ results. People’s active participation is a key factor to attain to a good civil governing. This participation is only shaped through making a correct communication between the government and people and also clarifying the communicational channels. In the last approach, a good civil governing means benefiting people’s opinions well and their complete involvement in the desired civil acts which is gained only by going through all the participation steps, from outward participation and people’s outward entrance to the civil activities to people’s control and determination.

On one hand people’s participation is one of the important empowering tools. People’s empowerment for handling their own responsibilities using participation and people’s entrance to the cycle of local and civil affairs would be possible.

Although in some political science researches it is stated that people’s participation and collective opinions don’t necessarily result in the best decisions and some researchers don’t find people’s participation efficient, in the civil environments where participation results are unpredictable and there is the possibility of social, environmental and economical change due to a change in any other element, people’s participation

creates a suitable ground to direct future changes and accept probable undesirable outcomes of changes. Anyhow, people's participation in all official and unofficial aspects is known as one of the main elements of social capital. So the following is suggested:

Harmonizing the governmental departments to create cooperation between the related governmental departments and water departments.

Codifying and correcting the country's comprehensive law with the help of all related authorities based on water demand management, appropriate with time and place.

Encouraging the consumers and beneficiaries especially in the rural regions to establish cooperatives or local volunteer groups for more cooperation and participation.

Emphasizing on people's vital role in managing water resources, participatory executive programming of any region according to its special potential and local capacities with the cooperation of the locals and the governmental departments.

## REFERENCES

- Alaie M, Khoda Rahmi R.1387. Agricultural Sustainable Development with the participation of the beneficiaries in adaptability with water. Jahad Keshavarzi Ministry.
- Babran S, Honarbakhsh N.1386. water crisis in Iran and the world. Sustainable development and environment magazine, No.1, Tehran.
- Mahmoody B, Sarlak M.1387. Estimating the effective elements on water demand and offer and Iran's position in the region sustainable development wise, the center of strategic researches.
- Nazarzadeh M, Abrishamchi A, Tajrishi M. assessing Kashan citizens' attitude and behavioral intentions towards water, Water and Swage science magazine. No.46.
- Odeh al joyyousi . 2004.Role of Education and public awariness in Water Demand Management
- Peter H.2001. " Gleick, the World's Water 2000-2001", The Biennial Report on Freshwater Resources;United Nations, World Population Prospects: the 2000 Revision; C. Haub and D.Cornelius, 2001World Population Data Sheet; and UNICEF, "Statistical Data"
- Sabet Raftar A.1381. A report on women's role on promoting water qualitative and quantitative management, Power Ministry.
- Sadeghi sSh.1385. Hydrolic and water crisis, Economic and Political Information.
- The millenary developmental goals and sustainable development and (1384). The National Committee of sustainable development Iran environment protection, p.63.
- United Nations. 1997. Sustainable development of Water Resources in Asia and the Pacific: Anoverview.
- Yazdan dad M.1388. A study on the effective elements on water consuming pattern and optimizing it in domestic section, the third congress of water and sewage, Tehran
- Zeeba Kalam S. 1387. How We Became We, rooting the reasons of Iran's mustiness, Rozane Publications, 112.