

## Waste management in rural areas of Iran

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**Abstract:** The most important role of health is providing physical and mental well-being for people of society. Today, the waste problem is focused less than any other environmental hazards such water and air pollution. Purpose of this study is recognition review and analysis state of waste production resources in rural areas of central rural sub city areas of Shiraz and Zabol counties. Research method in this study based on field observation, interviews, obtains data, from the questionnaire, and analyze data by SPSS software. Findings show that most produced rubbish in rural of Shiraz is paper and textile with 63%, maximum street rubbish is animal stool with 42%, and most market waste is vegetable with 69%. In comparing with rural of Zabol, maximum domestic waste is paper 38% and major rubbish production research is dust with 64%, maximum market rubbish is vegetables 58% and major amount of street rubbish is paper with 54%. There is a significant relationship between waste production amount and rural distance to city and between waste component and method of dispose it and distance to city. the studies done in the waste management in studied rural level, shows great part of human and finance resources spend collecting and transport and no action don in the fields of production, storage, recycling and disposal.

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### 1. Introduction

There is close and interacting relationship between health and development. The public health importance of the resulting nuisance has not been sufficiently characterized (Aatamila and et al., 2010). Public health and cleaning the place is necessary for individual and social health and well-being as one of the main indicators of development (Darbanastaneh., 2008). In the developed (post-) industrialized word urbanity is often found to be related to health status of the population (Kroneman and et al., 2010). Nowadays, there is many health measures related to waste (production and how its disposal) (Ahler and still., 2002). Produce and how its disposal is considerable since man begin social live of a continuous one place and its hazards and its effects. Population growth is relevant to health as it is both an indicator of, and contributor to, changes to broader social and economic conditions of an area (Fraster and et al., 2005). Rapid population growth, increased consumption, changes in life style and consumption pattern of people, which is perfect features, enhance history caused increasing waste production in different regions. Principles of health and sanitation environment in any place requires that throw away waste produced in the minimum time and away from the homes and environment and human life to the principles and sanitary disposal the action as short as possible.

On of concerns of our society is the problem the amount of daily produced waste for urban

households is about 700 grams and have been reported 500 rural household (Abdoli., 1995). In rural areas a mixture of waste and recycled material are buried in that have side effects on environment, pollution of soil and ground, water and air and to the lock of recycling of valuable material and burial also have the economic mistakes (Neal., 1995). physical and chemical composition and amount of waste produced resource change with factor such as different seasons, day of the week, nation and religious accessions, food habits, income level and other factors (Omrani., 1994).

Solid waste consists of any solid material that is considered mystics in public as trash, rubbish, ashes animal bodies, urban and rural waste, human and animal waste and .... (Behnodi., 2001) Wastes from a variety of source such as domestic resources, trade, urban, industrial, agricultural, open areas and refining are produce and enter the home environment (Fataei., 2006). According to this definition that we can say produced waste resources in rural are different, varied and numerous and effective factor in production, amount properties in the rural garbage can note to year time, geography site, producer people habits, study area and location, demographic characteristics, and public attitudes and behavior, income level and many of other problems. So produced waste (food, glass, plastic, paper and ...), street waste (leaves, straws dung ...) and rubbish (paper, cloth, sand ...) and ash (Basvantapa., 2003). The waste resources in the rural waste production ;

waste-rebated health plan can not occur in satisfactory way the disposal stage and type done how causes no discomfort and disease in the village level. Not sometime all factors of situation and waste production are quite clear each community may be has special social-economic factors that affect quality, composition and amount of waste produced. Therefore, for the recognitions of a community waste production situation, the comity must be studied. Also long-term waste production situation indicates community population changes, characteristic of community and changes in energy source (Shari at panahi., 1997).

### 1.1. Importance research

Even if high efforts of governments and international organizations, basic health needs of many world-disadvantaged people has still not been full filled. In many countries, less than percentage15 of rural have access to health services (Djukanovic and Mach., 1985). Including important health services, the problem is total waste collection and transportation and disposal it. Being non-healthy environment in rural poverty existence in those areas, lock of awareness of the causes of disease through rural waste, lack of health services related to waste produced materials in the rural. Lack or absence of perfect system for collect transport or waste disposal and all these cases of make an unsuitable and unhealthy environment in country rural. In other hand, existing pollution problem on earth and many of the harsh environments is part of problem that has caused for our attention less that is imposed to our live and it is reflected to us. Introducing to how waste is produced in the country deprived areas (rural) and control this waste solid material is a kind of combat to this choose existence of million tones of waste in rural areas an ten thousands types of toxic and hazardous materials in it that is resulted of human daily activities, is caused of wild speared pollution in this environment and this waste materials are cause of 60 to 90 percent of cancers, directly or indirectly (Ahmadi., 2005).

Lack of management and explicit rules for collection, disposal and recycling for more than 38000 tones waste per day that almost 76 percent conversion of fertilizer and thousand tones of plastic, paper and carton, now is burial in unsuitable form or are scattered around cities near rural areas and regardless to the health risks and produce types of disease, also has economic lusts. According to a total account, or people spend about 10 thousand us dollar for waste collection and disposal (Eskafi., 1995).

With regard to text and knowledge of this fact that, there is no attention to country's rural areas in terms of health, importance of this research will be

doubled. In general, the importance of the collecting, healthy sanitation and waste recycling in rural areas won't be cleared for us, until risk of is will be known well. Waste is not only cause of diseases, degrading and undesirability of environment, also can contaminate soil, water and air and make lot of damage in natural and social life cycle.

### 1.2. Problem research

Population growth an scientific awareness of producers of reduce land resources, forced officials and expert to puttee waste production issue and disposal them by recycling the solid waste materials on top of their programs, more serious in part two decades, specially since 1975. Therefore, with knowledge of resources of production the waste can do considerable helps to waste recycling. Therefore, principles of economic criteria requires that paper, carton, glass and plastic and other production resources be interdicted and separated before burial in a regional operation and be re-used (Dtjoelk., 2003). populate consumption, severs integration, increasing the amount of waste produce, wrong locate for burring waste, various disease caused by non sanitary waste disposal, multiple sources of waste produced in the rural, under ground water pollution, environment destruction and .... Areas. With regard to expressed issues related to environment hazards caused by waste produce and it's dispose method and importance of it in rural areas, there is little attention to this issue and with consider to economic and spends related to it we divided that present a research named an analysis of waste production resource and method of dispose it in Iran rural regions.

### 2. Background

Activity and movement, that are life requirement, has remained symptoms for makes his life continued. So cleaning environment especially in rural areas is necessity of life continue (Saednia., 1999). Consider to waste dispose and clean the environment has old history. In 1750 requires new system of solid waste collection and disposal makes common using of waste caring lorry and waste management was considered as one of society health bases, with increasing health activities (Omrani., 1994). Furthermore, beginning of waste management regard to ancient years and reusing of human stool. In agriculture. Material management in modern methods has started in united state since 1940 decade and in England since 1930 decade (Gloss and et al., 2002). Many optimization techniques have been developed for supporting decisions of municipal solid waste (MSW) management and evaluating relevant

operation and investment policies since the 1960s (Li and et al., 2010).

In Iran, waste and cleanness management is delegated to municipalities in cities and to Dehyaries (nongovernmental organization) in villages. Undoubtedly, waste management and specially collection and exiting it from environment in cities older history compared to villages. This history in Iran is regarded to Baladiye law (municipality) in 1946 and according to this law city cleaning is duty of Baladiye (municipality) and then in 1955, this duty delegated to municipality, accordant to municipality law. In relation to villages, according to, article 69, paragraph 6 of organization duties and election Islamic councils law that is adopted in first of June 1996, Dehyar duties contains, care in doing health enforcement, maintain cleanness and create a suitable context for provide environment health. In statue of organization and parliament of Dehyaries, adopted in january 2001, improvement of village environment state and maintain of health and cleanness is described as Dehyar duties.

### 3. Material and methods

#### 3.1. Study area

Shiraz County is in latitude 36 degrees and 29 minutes north and in 33 degrees and 52 minutes east, is in 1500 meters height from the sea, and has 1688.8 square kilometres equivalent is province of Fars ([www.fars.ir](http://www.fars.ir)). County population is over 1711186 that 877849 of them are men and 833337 one woman. 1324055 of this population (336447 households) are in urban areas and 386582 people (91115 households) are in rural areas. 203727 person of this population are men, 182855 women and 549 non-residents that is equal to 112 households (Census General Population and housing., 2005). Shiraz County has 6 districts, 5 cities, 21 municipalities and 512 resident rural and 249 residents rural ([www.aftab.ir](http://www.aftab.ir)). All of rural of Shiraz are in distance longitude between 52° 30 to 54° and latitude between 29° and 30° (Gazetteer of country rural., 1983).

Zabol city with a width equal to 15,197 square kilometers (2, 1 percent of the province is located between 30° and 7 to 31° and 29 in north latitude and 59° and 58 to 61° and 50 in east. This city is in leading of north of sistan and baloochestan province in terms of geographic location and is located in neighboring of south Khorasan province in north, Kerman province in west, and Afghanistan country in east.

Population of Zabol city is 329,317, 137,947 of them are in urban areas and 237,097 of them are resident in rural areas (Census General Population and housing, 2006). This city has 6 district center, 5 country, 17 villages and 885 rural areas. Zabol is in

210 kilometers distension to Zahedan city and is located in end of connection road of Zabol-Zahedan. This road is the most important of populated regions of Zabol country and capital of province and other regions and province of country.

#### 3.2. Statistical analysis

This study is a descriptive-analyzing research that was performed in 2010 in ten rural, which are located in Shiraz and zabol cites. Scientific contend of study is based on library studding from available resources, books, internet sites and relative agencies. rural which are in this study are selected randomly and in different distance to shiraz and zabol cities in field observation in this research questionnaire is information collection tool that interview method was for making the completed.

Information gathering method based on field observation, interview with rural resident and for informs to waste production resource and how to dispose it, we need to make some questionnaires and this important topic has done and so some questionnaires were disturbed in each five selected villages. Questionnaires disturbing was based on sample volume rate 10 percent of the number of rural households and then for analyze the inform data, SPSS software has been used. In addition, households waste compounds of each rural determined in field status. For measuring rural health are, a table is used to make us inform to health condition of collected rural.

Also, for inform to studied rural conditions and situations, some information give related to research topic in rural. In according to give informed, people residence audition is permanent and drinking water source in this areas (all of the rural) is provided from high areas and by absorption wells. In addition, main connecting road type is asphalted and in rural roads are sand road and waste burial place in rural of shiraz is waste burial place for Shiraz city (the place is called Barmashoor) is in 25 kilometers distance to Shiraz city and in south east of Shiraz city. (Studied rural waste burial place is common with waste burial place of Shiraz city) (Table 1).

It is north worthy that state of Zabol resident villagers are permanent, villages often have not purified water and all of inter villages connection reads are soundly and created for animals and garbage in this villages are not collected and disposed (Table 2).

### 4. Results

#### 4.1. An analyze on source waste production in studied rural

Table 1: features of the study rural (Shiraz).

Rural name features	Bidzard	Tofihan	Dehno	Zafarabad	Aliabad
Population*	1206	4671	1617	4112	895
Number of house holds	295	1142	412	1079	224
Total literacy	880	3402	1208	3200	643
Natural village location	a valley	a valley	a valley – a mountain	a valley – a mountain	a valley
Village distance to shiraz	20 kilometers	15 kilometers	10 kilometers	17 kilometers	6 kilometers
Altitude	1500 meters	1486 meters	1480 meters	1490 meters	1469 meters
Distance to waste burial	10 kilometers	5 kilometers	23 kilometers	5-6 kilometers	Less than 2 kilometers

Table 2: features of the study rural (Zabol).

Rural name features	Jaleei	Hasanabad piri	Toti	Rostam mahmod	Gorg
Population*	1323	900	232	308	84
Number of house holds	357	150	34	54	12
Total literacy	298	678	155	128	20
Natural village location	Desert	Desert	a valley	a valley	a valley
Village distance to shiraz	5 kilometers	25 kilometers	30 kilometers	29 kilometers	33 kilometers
Altitude	473 meters	474 meters	472 meters	472 meters	472 meters
Distance to waste burial	1 kilometers	300 kilometers	*	*	*

Produced waste in rural is consist of all of waste materials which made of done Activities in rural this material is several of production resource and physical features, too. In a rural, various parts are active and each part has a role in waste production. House holds, trade, rural, animal husbandry, open areas and health centers parts, each one, have waste production with special features. Waste production resource has a direct effect in recycling act, collecting, separating and possibility of isolated materials (Nozarpor., 2000). In a general classification, waste materials are in 3 groups: 1) materials that are fuel or can make them fertilizer such as vegetable waste, paper and straw. 2) Materials that are fuel excursively such as synthetic material, horn and bone. Rubber and leather. 3) Materials that are not fuel and are not able to make them fertilizer such as crystal and glass stone and iron (Ahmadi zad., 2006). Great part of waste production in rural of Shiraz is produced in house hold sector that mainly consist of residual and remaining food waste (58 percent), plastic (22 percent), others (10 percent), paper (6 percent), glass (6 percent), according to correct process we can provide needed non-mineral manure in agriculture sector from this massive volume of waste produced in house hold sector (Kreith., 1997). Must produced waste by rural house holds of Shiraz are paper-texture (63 percent), sand (26 percent), and animal waste (7 percent), glass an pieces of wood (each on 2 percent) of amount of rubbish production. Other rubbish production recourse in studied areas in Shiraz are market or trade waste that the greatest part of that

is vegetable (69 percent) and finally street waste other kind of waste production in rural that animal stool with 42 percent is the greatest production resource in this sector. In table 4, the most important resource of waste production in studied rural is observed and also tables number 4-8, waste production in each rural separately. As in seen, in must rural, waste production resource is same, the must important house hold wastes food, rubbish: paper, texture, trade: vegetables and waste production resources of street is of all cases in street (leaf, straw, animal stool, paper). Other informed data is observed in table 3.

In table 4, waste production in villages of Zabol city is contained separately. According to contained information in table 5, it can be expressed that the most important source of waste production resource of the villages Zabol is domestic waste like villages of Shiraz with this different that the most amount of domestic waste in villages of Zabol is paper with 38 percent. But in villages of Shiraz it allocated to food.

Waste. Most of produced rubbish in Zabol is dust with 64percent, and against villages of Shiraz expressed that this area is desert and there exist local winds. According to the finding data, most of trade rubbish in villages of Zabol is vegetable (58 percent) and finally major source of street waste production (open areas) is paper with 54 percent in villages of Zabol. Other found information is available in contained tables. As is viewed in villages of both regions, is similar with a little difference caused of environmental and geographical conditions.

Table3: waste production resources in studied rural in percentage (Shiraz).

Waste production resources	Produced waste				
House hold	Food (58)	Glass (4)	Plastic (22)	Paper (6)	All of cases (10)
Rubbish	Paper-texture (63)	Pikes of wood and metal (2)	Glass (2)	Sand (26)	Animal waste (7)
Trade (market)	Vegetable (69)	Animal waste (16)	Broken glass (2)	Iron parts(-)	All of cases (13)
Open areas (street)	Leaf (6)	Straw (14)	Animal stool (42)	Paper (8)	All of cases (30)

Table4: waste production resources in rural in percentage (Zabol).

Waste production resources	Produced waste				
House hold	Food (29)	Glass (1)	Plastic (17)	Paper (38)	All of cases (15)
Rubbish	Paper-texture (26)	Pikes of wood and metal (4)	Glass (-)	Sand (64)	Animal waste (6)
Trade (market)	Vegetable (58)	Animal waste (12)	Broken glass (6)	Iron parts(4)	All of cases (20)
Open areas (street)	Leaf (6)	Straw (2)	Animal stool (2)	Paper (54)	All of cases (36)

#### 4.2. Analyses of physical compounds

Results of fraction waste material have direct effects on collecting and recycling operation (Fataei., 2005). For establish management system of solid waste material in a place in original and technical form and design and process the program related to keep, collect, transport and find disposal and also regenerate the resource projects such as compost fertilizer production, getting resurge from waste, biogas production, recycling need to determine the feature exactly and physical properties recognize the waste production resource in that area. Determining the rural waste features is too difficult because of verity of production resources of and component verity.

These activities in development countries need to 2000 to 4000 dollars, in terms of diversity and complexity (Diaz and et al., 1993). In last chapter, we painted to waste production resource in rural and in this chapter we will analyze the physical compounds in waste material. It is noted that waste produced type is different in different places and have special form. Possibility of reduction, people economic condition, season of year and many of other factors is effective on physical compounds of rural waste and pay attention to this topic in management supplies and tools and equipment is important. It is important that determine the type and intergradient is just by use it again (Eslami., 2001).

In tables 5 and 6 percentage of physical composition of rural produced waste is presented. As in viewing, the maximum composition part of produced physical waste context is related to vegetable in both regions that is (average 52 percent in Shiraz) and (average 5, 44 percent in Zabol) and the minimum amount of produced waste in Shiraz is ash produced by fire (average 2 percent) and the minimum amount of produced waste in Zabol villages is glass (average 1, 5 percent). Reasons for this difference are Shiraz is nearer to capital, seasons of year and economic situation.

By reviewing physical component of waste in rural we can express there is significant relationship between distance to Shiraz and Zabol cities and waste components and it is, by increasing distance between Shiraz and Zabol and studied rural, physical component consist the rubbish, animal stool and by decreasing distance to city, amount of glass and texture and paper increase (tables 7 and 8).

Waste remaining time in rural environment decrease, too. One of advantage of waste quick collecting is, prevent the fly growth because growth time for this inset is less than one week. So, garbage collection must be done before pupa generating and transport to a suitable place. For getting the best result for environment health and beauty, waste must

be collected in rural areas at least two times in winter and three times in summer (Mobaraki., 1996).

To pay attention to the researches done in rural, collecting is just one a week. This note is more important that we know 80 percent of rural waste in summer is equal with 80 percent of waste produced in a year. Another point is that amount of rural house hold must in most villages is 2-3 kilograms per day and it is considerable.

If rural distance to city increases, amount of waste produced increase, too. For example, maximum rural waste produced is in two Bidzard and Zafarabad rural with respectively 20 and 17 kilometers distance to city and minimum waste produced is for Aliabad rural with 6 kilometers distance to city. According to expressed text, there is a significant relationship between amount of waste produced and distance to Shiraz city.

Table 5: physical compounds and component materials of produced waste in studied rural (Shiraz).

Row	Material	Weight percent Minimum - maximum	Average
1	Glass	2-4	3
2	Food	29-58	43.5
3	Paper	6-8	7
4	Plastic	6-72	14
5	Texture and paper produced	14-63	37
6	Wood	1-5	3
7	Ash	0-4	2
8	Dust and sand	3-2	14.5
9	\Metal	2-8	5
10	Leaf	1-6	3.5
11	Stew	7-14	10.5
12	Animal stool	18-42	30
13	Vegetables	35-69	52
14	Animal waste	9-16	12.5
15	Animal waste	5-7	6

Table 6: physical compounds and component materials of produced waste in studied rural (Zabol).

Row	Material	Weight percent Minimum - maximum	Average
1	Glass	1-2	1/5
2	Food	3-6	4/5
3	Paper	36-70	53
4	Plastic	6-14	10
5	Texture and paper produced	11-26	18/5
6	Wood	1-4	2/5
7	Ash	0-6	3
8	Dust and sand	19-64	41/5
9	Metal	2-8	5
10	Leaf	1-6	3.5
11	Stew	5-12	8/5
12	Animal stool	9-12	11
13	Vegetables	31-58	44/5
14	Animal waste	7-12	9/5
15	Animal waste	5-7	6

Table 7: physical compounds and component materials of produced waste percentage (Shiraz).

rural	Distance to shiraz city	Plastic	Paper-texture	Wood-metal	Dust and sand	Animal stool	total
Tofihan	15	25	5	20	-	18	100
Bidzard	20	-	27	6	-	30	100
Zafaraba	17	-	20	15	25	5	100
Aliabad	6	10	23	2	27	27	100
Dehno	10	6	40	2	30	-	100

Table 8: physical compounds and component materials of produced waste percentage (Zabol).

rural	Distance to shiraz city	Plastic	Paper-texture	Wood-metal	Dust and sand	Animal stool	total
Zhaleei	5	3	27	6	21	-	18
Hasanabad piri	25	2	31	3	11	-	19
Toti	30	0/51	9	6	8	5/5	21
Rostam mahmod	29	0/53	3	8	13/5	1	16
Gorg	33	0/53	-	11	-	31/5	11

Tables 9: amount of produced waste per day for each household percentage (Shiraz).

rural	Distance to city	Less than one kilogram	One kilogram	2-3 kilogram	3-5 kilogram	5 kilogram and more
Tofihan	15	-	10	80	10	-
Bidzard	20	-	20	70	10	-
Zafarabad	17	-	30	50	20	-
Aliabad	6	10	30	60	-	-
Dehno	10	10	20	60	10	-

Tables 10: amount of produced waste per day for each household percentage (Zabol).

rural	Distance to city	Less than one kilogram	One kilogram	2-3 kilogram	3-5 kilogram	5 kilogram and more
Zhaleei	5	24	30	34	8	4
Hasanabad piri	25	23	27	35	9	6
Toti	30	31	15	45	4	5
Rostam mahmod	29	27	19	44	6	4
Gorg	33	20	19	13	39	9

This amount in Zabol villages is that produced waste in Zabol villages is for more than Shiraz villages and Gorg village is in 33 kilometers distance to Zabol and it's 39 percent of its residents produce 3-5 kilogram waste per day, in Zhaleei village, the nearest village to Zabol, and 39 percent of people produce 2-3 kg waste per day. According to expressed text it is cleared there is a significant relationship between amount of waste produce and destination to city. This species total waste collection (once a week) and with notification to the high amount of waste production in rural, rural residents abandon waste in rural areas or made them store in a place and stored waste been disturbed by animal and therefore resulted diseases and unhealthy

environment: waste collect by rural Dehyaries (nongovernmental organization) and under Dehyari (nongovernmental organization) controlling in studied rural areas. Waste collecting time in rural areas, in according to people saying, is in early morning hours (96 percent of waste is collected in 8 to 12 hours). In studied villages, 8 percent of is carried by engine wants and 2 percent of them by is table 9 and 10, amount of produced waste is observed for each household per day. In most of Zabol villages, 80 percent of them produced waste is not collected or if it is done, it is done manually and with using the garbage cart. If it is done, it is done manually and with using the garbage cart.

Waste transportation as one of necessary and essential element means caring material with motors and other equipment. This selection is difference that is caused of geographical conditions and existed facilities. In villages in order to waste transfer equipment such as garbage cart, cars and tractors are used.

But in villages of Zabol, there isn't any consider to geographical condition of location, either waste isn't collected in some villages. Waste collection in Zabol villages hasn't any specific time and according to talk of most of people, in some cases, waste is not collected and this topic is due to leave and accumulate by villagers and due to appear health problems and issues in village. Some of these consequences of accumulation of waste and not collect it is studied villages are:

Waste septic with going the time and realize bad and unpleased breath that pollute the natural and healthy air and annoy the village residents.

Accumulate the waste in studied villages and not burry it healthy, can contribute starry animals such as dogs, wild animals and vermin insects. This animal can be caused of transferring of disease such as typhoid, cholera, plague a Location of waste accumulate is most suitable area for growth, regeneration and development of mice's. That in addition to transferring the disease can load lot of damages to human economically.

Accumulation the waste in villages and bea using by livestock is due to transfer disease factors to villager by milk and meat and appears the disease. In other hand, livestock diseases can transfer with waste and release to other animal and also humans and cause infectious diseases among human and livestock.

Be cause of no exiting of water ways and suitable Hungarians in studied villages in other to transfer rain water in rainfall seasons, rain fall can worsen the health condition by flowing on waste and cause sepsis and publish the pollution.

Accumulation the waste in villages can cause that children and kids play in alleys because of lack of recreation center, have contact to garbage and transfer illness and pollution to their families.

Because of quantity and existence of variables such as waste production in rural, lack of attention to rural health, financial issues in services related to waste, technology effects and some restriction in the consumption of raw material and energy, problems related to management of solid waste materials in rural environment have more complexities than city environment.

In studied villages, there is many problems in management of solid material that are known (such as: waste collecting once a week, leaving the waste in village, lack of waste recycling, non-technical transport, being disposal waste place near to rural and ...). There are always various function complexities. Therefore, in most areas (rural and urban) for waste management, four primal productions, temporary store, collect and dispose in used. Rural area that are in more interaction to city and it need to being near to city such as waste recycling that done just in Aliabad rural but in waste dispose step, Aliabad rural has health problems such as insemination under ground water, soil insemination, attract, regenerate and growth the vector insects and rodents and animal and this problem monitor the non-technical locating of waste disposal place and without considering. In villages of Zabol have long destination to Zabol such as Tooti, RostamMahmud and Gorg, waste collect, transfer and bury isn't done and villagers leave produced waste in live environment.

With attention to that is expressed and done studies, now in waste management in studied rural, most part of financial and human sources spend for collect and transport and there is no action in field such as produce, keep, recycling and dispose That these cases are more excessive in villages of Zabol.

This lack of balance is the best reason for dies-management in waste material work in studied villages. Due to high volume of waste production in villages and lack of interact between joyful elements in management system that there is not from waste production sources to waste dispose, it can be resulted that there is not management for solid waste material in rural areas.

Collection carrying and disposar operation of waste is required to careful programming. This program should direct the operation healthy and appropriately, because programming is one of managment divices to achieve to reasonable way for dicishion . evidences shows, everywhere waste management has property function, society health get effiencie.

## 5. Conclusion

produced waste resources in rural are different, varied and numerous and effective factor in production, amount properties in the rural garbage can note to year time, geography site, producer people habits, study area and location, demographic characteristics, and public attitudes and behavior, income level and many of other problems. Major part of waste production in villages of shiraz are related to domestic waste that cartain remained food with 58 percent. Most of rubbish produced by rural households allocated to texture - paper with 63 percent. Other source of waste production in Shiraz rural areas is commercial or market waste that major part of it contain vegetable with 69 percent and animal stool is major production resource of this part with 42 percent .

The most important waste production resource as similar as Shiraz is domestic waste allocated to paper with 38 percent, but this subject in villagers of Shiraz is allocated to food. Major part of rubbish produced by Zabol villagers is related to dust with 64 percent that is against Shiraz, locating in desert and sandy being. Accordint to finding datas, major amount of commercial waste in villages of Zabol is vegetable (58 percent) , as similar as Shiraz And intaily, major source of street rubbish production (open areas) in villages of Zabol, is paper with 54 percent. In studied villages in both region, waste producton resource are similar to each other with little diffrence couse of geographical and environmental conditions. Major part of physical context composition is related to vegetables in both regions that is (average 52 percent in Shiraz) and (average 44,5 percent in Zabol) and lowest amount of waste produced in villages of Zabol (average 1,5 percent).

Resons for this diffrence is in this two region is shiraz less distanation to capital than Zabol and economic condition of people. In studied villages of Shiraz, waste collection done just once a week (this subject isn,t done at all according to villagers talk). This note when is more excessive that we recognize 80 percent of villagers waste in summer is equal to 80 percent of waste produced in a year. Another note is amount of waste produced by rural houtholds in most villages is 2-3 kg per day, that is considerable in this kind. What ever distance to city is more, amount of produced waste is more too. For example most waste producion is in Bidzard and Zaffarabad villages with Respectively 20 and 17 km distance to Shiraz and lowest amount of produced is allocated to aliabad village with 6km distance to Shiraz. This casses are right in Zabol, Tooti villages is in 30 km distination to Zabol, 39 percent of its residents produce 3-5 kg waste per day. And in

Zhaleei village is the nearest village to Zabol, 34 percent of villagers produce 2-3kg waste per day.

It is clear that there is a significant relationship between amount waste production and destination to city. This kind of waste collection (once a week in villages of Shiraz and no collection in villages of Zabol) and with action to high level of waste production in villages is due to villagers leave waste in village environment or accumulate waste in residence location and accumulated rubbish become published in environment by animals and so this factors are due to creating diseases and making village environment non-healthy. In most studied villages, especially villages of Zabol, there isn't a specific method to waste management and sanitation in villages and always, waste is leave around residential centers. In these villages, this material is back to live environment with factors such as children, water, wind and animals. There are many problems in solid material management in studied villages that can consider combining function. variously to solve this known problems, such as (waste collecting once a week, living waste in rural environment, non-recycling of waste, non-normative waste transferring and nearing burial location to villages and .....)

Therefore in most location (rural and urban), 4 foundation of production, temporary storage, collection and disposal are using for waste management. Existed terms in waste management are done properly, in which villages that are in a more interaction with city.

This lack of balance is the best reason for dies-management in waste material work in studied villages. Due to high volume of waste production in villages and lack of interact between joyful elements in management system that there is not from waste production sources to waste dispose, it can be resulted that there is not management for solid waste material in rural areas.

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