International Journal of Advanced Biotechnology and Research (IJBR)
ISSN 0976-2612, Online ISSN 2278–599X,
Vol-7, Issue-1, 2016, pp222-232
http://www.bipublication.com

Research Article

Zoning Acoustic of Khalkhal City in winter and Summer

Seyyedeh Narges Karimpour and Fatemeh Nasehi*

Department of Environmental science, Ardabil Branch,
Islamic Azad University, Ardabil, Iran
*Corresponding author: Fatemeh Nasehi

[Received-10/02/2016, Accepted-17/02/2016, Published-27/02/2016]

ABSTRACT

Since the first automobile emerged, pollution in urban areas has become an issue that is still largely unresolved. Many people complain about traffic noise. Noise is unwanted sound and it is one of the main concerns of the world, especially in urban areas of both developed and developing. In recent years, urbanization and industrialization around the world have exacerbated the problem of surround sound. The aim of this study is to identify the level of noise pollution in the geographical area of Khalkhal City. Use the map of sound, the 22 station at regular intervals of 500 meters in a systematic random sampling; measurements were carried out in the morning and evening periods in winter 2014 and summer 2015 through audiometer machine cell450. The results showed that the average noise level of Khalkhal City in terms of parameters Leq during the summer months and winter is 50.64 dB. This level of 49.17 dB in residential areas and in residential areas - trade reported 58.19 dB higher than the national standard noise level indicator. The highest and the lowest noise level, respectively, Station Moallem Square (58.69 dB) and Najaf neighborhood (42.89 dB) was determined.

Keywords: Noise, Khalkhal City, Spss

Problem statement

Noise pollution as one of the most important environmental pollutants that brings population growth combined with industrial development and technology. Sound, one of the physical factors that are born of the industry and expand the wide use of tools, machines and equipment. The result is a man whose own life in the face of risks and diseases caused by noise. Positive spill pollution in cities beyond the boundaries of today's environmental pollution caused by industrial development in science and technology has become one of the most important issues of the day (Abbaspoor and Nasiri 1996). Today, noise, important criteria for determining the quality of urban life and social welfare is not affected. To provide sound policy control, check the map to check sound levels audio distribution, audio standards with balance and explain the main sources of noise are essential. A source of noise pollution in cities of different ways, including by creating a favorable context for survival, reducing the factors that cause the utility to environmental conditions and also prevent the physiological effects, is considered a necessity. Classified according to WHO sources of noise are classified into different groups include industry, road traffic, rail traffic, air traffic, public works and construction, building internal resources and other resources (Ranjbaran, 1983).

Advances in technology as the most important factor is the introduction of the concept of noise pollution. This factor for a variety of sources, including increasing the amount of noise that the so-called noise reveals the adverse effects of this type of environmental pollution have been sent. Multiplicity of sources of noise that has caused production rate exceeds the normal sound effects so that it is visible in various forms (Parvizpoor and Khanzadeh 1981). Noise pollution at high levels of sound pressure (over 85 dB) direct effects on the organs of hearing, including temporary changes, the

threshold of hearing (TTS) is a long established permanent hearing loss, persecutors, harassing, disturbing the peace and unwanted seen, in other words the part of the nervous system and behavioral effects of sound on the impact on individuals (Biglar Poor, 1985). Noise pollution, especially pollution in urban areas as a form is universal and the global (Nasri, 2001).

It seems that one of the factors that a significant portion of the sound in the environment to create, traffic and commuting vehicles on the streets. Background Research has shown that the majority of studies have been done on the analog sound of vehicular traffic in Khalkhal City. The aim of this study was to evaluate the noise in the streets of Khalkhal City is carried out under the laws of Europe, by the end of 2008 requires all cities with a population of 250 thousand, road traffic with more than 6 million cars a year, more than 60 thousand trains in railway traffic and airport with more than 50 thousand flights per year have audio map and by the end of the year should have their own detailed plans to reduce noise pollution maps in use by the end of 2012 for areas with a population of over 100 thousand people have such plans be prepared (Saffarzadeh, 2003).

Al-Sheikh and colleagues in 2010, using geostatistical noise from the highway was in Tehran. Their results showed that the majority of exposures close to the highway and using Arc GIS software zoning attempted to noise pollution. Zeraei and colleagues in 2006 as the measurement of noise pollution in Meybod City at 9 stations to measure noise pollution was carried out in areas sensitive to pollution at 8 am, 12 pm, 17 pm and 21 pm which was the highest noise pollution by 76 dB at night drugstore as well as average daily volume of 71.38 dB and on the night of 72.05 dB measured. Barbosa and colleagues in 2005 in Brazil, a study entitled facing teachers and students with a sound, a voice in the school studied were caused by overcrowding in classrooms is the absence of acoustic means. In our evaluation, the scope of sound pressure level (dBA 95-60) has a maximum dBA80. Sometimes the sound pressure level sound pressure level measured in the industry. The situation in the school offices like doctor's office, school principal, reading room and office applies to teachers, usually in the areas of voice control. The aim of this study was to investigate the noise pollution from car traffic and to what extent the level of Khalkhal City how contamination is distributed in the area of Khalkhal City.

RESEARCH METHODOLOGY

Introduction of the study area

Khalkhal is the center of Khalkhal City. This city is home to a third of the 8 villages and located in the southern of Ardebil Province. East longitude coordinates 277885.7798 to 285515.7798 meters to the east and north latitude 4164402.1537 4168772.1537 meters south of Ardabil Province is located. The major development of the city along the North West to the South East. The height of 1774 meters and the highest altitude town in the North West town in the South East is about 1814 meters above sea level. The major sources of noise pollution in the city involved in three floors of the pollution of factories and workshops and motor vehicle and motor vehicle repair shops. Figure 1 shows the location of the sampling stations in of Khalkhal City.

Figure 2. Location the streets and alleys of Khalkhal City

Figure 1. Location of Khalkhal City and sampling stations at the level of Khalkhal City

In this research station first position in the GIS software after delimitation of the city was determined in such a way that the random distribution stations systematic and proper spacing of 500 m, respectively. In this regard, 22 stations were identified that are in commercial and residential and commercial - residential uses. Sampling on two occasions in both winter and summer, day and night that the possibility of changes in the number of traffic and reduce noise and increase the level of balance is considered. January and February and March in 2014 and July and August and September in 2015 was considered. Per month in 4 weeks sampling stations and in two time periods, night and day, and a total of 2112 samples were taken and the maximum and minimum values and the equivalent noise levels were recorded. Also, after a preliminary analysis, along with exact geographic location and arrival information, the Arc GIS software. Then information about sound pollution levels and by various methods such as Point-designed and geostatistical interpolation was definitive.

Table 1: Limit noise pollution in Article 2 Regulations

Type area	The average balance of the day (7 am to 10 pm) (dBA), the average sound pressure	The average balance of the night (10 pm to 7 am) (dBA), the average sound pressure
1. Residential	55	45
2. Commercial-residential	60	50
3. Commercial-office	65	55
4. Residential-industrial	70	60
5. Industries	75	65

RESULTS

Data analysis using descriptive statistics

Table 2: Results of the sound level Leq index measurements in summer and winter

Station Code	Station Name	**Average equivalent sound level in July**	**Average equivalent sound level in August**	**Average equivalent sound level in September**	**Average equivalent sound level in January**	**Average equivalent sound level in February**	**Average equivalent sound level in March**	**Average equivalent sound level in winter**	**Average equivalent sound level in January**	**Average equivalent sound level in February**
1	Najaf Alley	45.96	46.32	45.685	39.30	39.73	40.30	39.78	39.30	39.73
2	Hafez Alley	46.36	46.72	46.085	39.69	40.13	40.68	40.17	39.69	40.13
3	Tulip Alley	47.46	47.82	47.185	40.80	41.23	41.80	41.28	40.80	41.23
4	Amir Kabir Street	48.56	48.92	48.285	41.90	42.33	42.90	42.38	41.90	42.33
5	Habib Street	48.96	49.32	48.685	42.30	42.73	43.30	42.78	42.30	42.73
6	Zeinabiyeh Street	49.86	50.22	49.585	43.20	43.63	44.20	43.68	43.20	43.63
7	Azar Street	50.13	50.49	49.855	43.47	43.90	44.47	43.95	43.47	43.90
8	Imam Hossein Street	50.36	50.72	50.085	43.80	44.13	44.80	44.24	43.80	44.13
9	Safa Cui	51.76	52.12	51.485	45.10	45.53	46.10	45.58	45.10	45.53
10	Sedaghat Street	51.96	52.32	51.685	45.30	45.73	46.30	45.78	45.30	45.73
11	Asadi Street	52.56	52.92	52.285	45.90	46.33	46.90	46.38	45.90	46.33
12	Jafarzadeh Street	53.36	53.72	53.085	46.85	47.13	47.85	47.28	46.85	47.13
13	Namjoo Street	54.56	54.92	54.285	47.90	48.33	48.90	48.38	47.90	48.33
14	Ghadir Street	55.79	56.15	55.515	49.13	49.56	50.13	49.61	49.13	49.56
15	Mohiti Street	56.86	57.22	56.585	50.20	50.63	51.20	50.68	50.20	50.63
16	Nabovvat Street	57.76	58.12	57.485	51.10	51.53	52.10	51.58	51.10	51.53
17	Ghazi City	57.83	58.19	57.56	51.17	51.60	52.17	51.65	51.17	51.60
18	Shahriyar City	58.52	58.88	58.25	51.86	52.29	52.86	52.34	51.86	52.29
19	Daneshgah Street	59.96	60.32	59.69	53.30	53.73	54.30	53.78	53.30	53.73
20	Valiasr Town	60.56	60.92	60.29	53.90	54.33	54.90	54.38	53.90	54.33
21	Jomhouri Blvd	60.76	61.12	60.49	54.10	54.53	55.10	54.58	54.10	54.53
22	Moalem Square	61.76	62.12	61.49	55.10	55.53	56.10	55.58	55.10	55.53
Mean		53.71	54.07	53.43	53.74	47.06	47.48	48.06	47.53	47.06

Based on the results of measurement in the summer in the table (2) average sound level (Leq) of Khalkhal City in summer (53.74 dB). A total of 22 stations, for example, above the average noise level of 10 stations and 12 stations are also lower than average. A set of 22 stations measured the average noise level of Moalem Square station code (22) and commercial - residential car because of the traffic and noise of honking cars and brake these devices is higher than (61 dB). (51.79). Najaf Alley station code (1) and residential very quiet, because of marginalization and low volume of car traffic in the station 22 has the lowest noise level (45.99 dB). According to the results measured in the winter under the table (2) the average sound level (Leq) of Khalkhal City is in winter (53.74 dB). A total of 22 sample stations, 10 stations and 12 stations with above average noise level is also lower than average. A set of 22 stations measured the average noise level of Moalem Square station code (22) and a commercial - residential and Jomhouri Blvd code (21) is in the region Khalkhal terminal, car traffic and honking cars and the noise of the brakes of the vehicles, respectively (55.58 dB) and (54.58 dB). Najaf Alley station code (1) and a very quiet residential Hafez Station code (2) and a quiet residential use because of the margins and the narrow streets and head up the volume of car traffic has been down, and without it the mills and factories of any kind. The average noise level of Najaf Alley station code (39.78 dB) and average noise level of Hafez Station (40.17 dB).

Table 3: The results of measurements of the sound level Leq index in June

Station Code	Station Name	Equivalent sound level indicator in June (daily)	Equivalent sound level indicator in July (nightly)
1	Najaf Alley	48.31	43.61
2	Hafez Alley	48.71	44.01
3	Tulip Alley	49.81	45.11
4	Amir Kabir Street	50.91	46.21
5	Habib Street	51.31	46.61
6	Zeinabiyeh Street	52.21	47.51
7	Azar Street	52.48	47.78
8	Imam Hossein Street	52.71	48.01
9	Safa Cui	54.11	49.41
10	Sedaghat Street	54.31	49.61
11	Asadi Street	54.91	50.21
12	Jafarzadeh Street	55.71	51.01
13	Namjoo Street	56.91	52.21
14	Ghadir Street	58.14	53.44
15	Mohiti Street	59.21	54.51
16	Nabovvat Street	60.11	55.41
17	Ghazi City	60.18	55.48
18	Shahriyar City	60.87	56.17
19	Daneshgah Street	62.31	57.61
20	Valiasr Twon	62.91	58.21
21	Jomhouri Blvd	63.11	58.41
22	Moalem Square	64.11	59.41
Mean		56.06	51.36

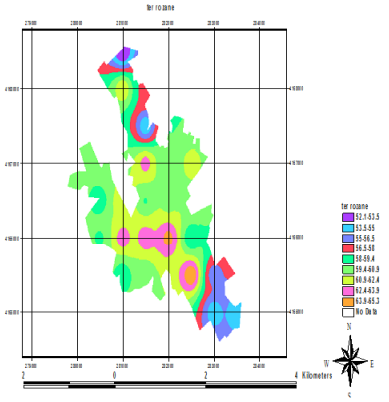

Figure 3: The equivalent sound level (Leq) per day of July in the measurement stations based on DBA

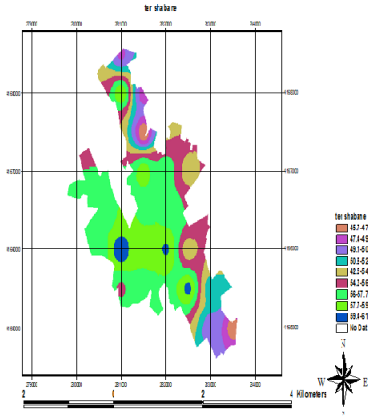

Figure 4: The equivalent sound level (Leq) in the evening of July in measurement stations based on DBA

According to Table 3 and Figure 3 is observed in the highest noise pollution on the day is related to the Moallem square station is estimated at 64.11 dB. Then Jomhoori boulevard and Valiasr town station respectively (63.11 dB) and (62.91 dB) are the next category. Najaf and Hafez station also with (48.31 dB) and (48.71 dB) have the lowest index level of sound pollution. Also according to Table 3 and Figure 4 can be seen in the Moallem square and Jomhoori boulevard of noises at night because of the three parks (amusement park, Bazneshastegan park and Eram park) and the Ramadan coincides with the July 2015 movement and crossing human and vehicle traffic in these areas was higher. The level of noise pollution respectively in the Moallem square (59.41 dB) and Jomhoori boulevard (58.41 dB) was higher than other parts of the city. It can be said: the highest index of noise pollution at night during the summer and winter months of June with the average (51.36 dB) was recorded.

Table 4: The results of measurements of the sound level Leq index in August

Station Code	Station Name	Equivalent sound level indicator in June (daily)	Equivalent sound level indicator in June (nightly)
1	Najaf Alley	49.45	43.19
2	Hafez Alley	49.85	43.59
3	Tulip Alley	50.95	44.69
4	Amir Kabir Street	52.05	45.79
5	Habib Street	52.45	46.19
6	Zeinabiyeh Street	53.35	47.09
7	Azar Street	53.62	47.36
8	Imam Hossein Street	53.85	47.59
9	Safa Cui	55.25	48.99
10	Sedaghat Street	55.45	49.19
11	Asadi Street	56.05	49.79
12	Jafarzadeh Street	56.85	50.59
13	Namjoo Street	58.05	51.79
14	Ghadir Street	59.28	53.02
15	Mohiti Street	60.35	54.09
16	Nabovvat Street	61.25	54.99
17	Ghazi City	61.32	55.06
18	Shahriyar City	62.01	55.75
19	Daneshgah Street	63.45	57.19
20	Valiasr Twon	64.05	57.79
21	Jomhouri Blvd	64.25	57.99
22	Moalem Square	65.25	58.99
Mean		56.06	57.20

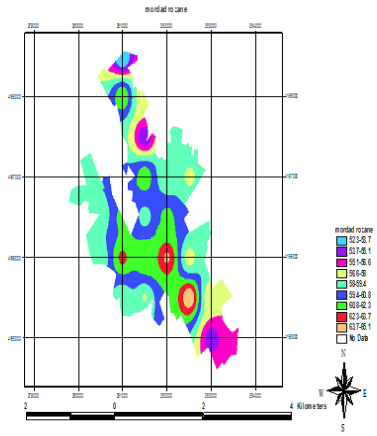

Figure 5: The equivalent sound level (Leq) per day, August the measurement stations based on DBA

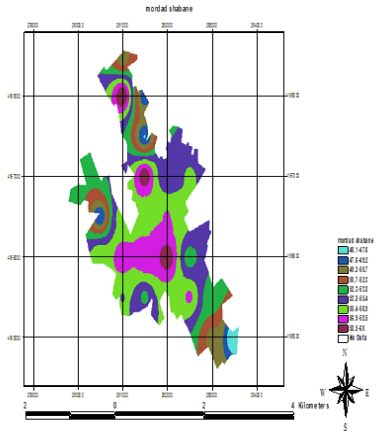

Figure 6: The equivalent sound level (Leq) at night, August the measurement stations based on DBA

According to Table 4 and Figure 5 shows can be seen in August with the introduction of passenger vehicles increased, most of noise pollution during the day in this month of the Moallem square station is estimated at 65.25 dB. Then Jomhoori boulevard and Valiasr town station respectively (64.25 dB) and (65.05 dB) are the next category. Najaf and Hafez station also with (49.45 dB) and (49.85 dB) have the lowest index level of sound pollution. In between summer and winter months, the highest level of noise pollution in Khalkhal City on August index average (57.20 dB), respectively. Also in the table (4) and figure (6) is an index to measure noise levels at night in August is (50.94 dB). The highest noise level between 22 stations in Moallem square station (58.99 dB) and the lowest index in Najaf station (43.19 dB) was recorded.

Table 5: Results of measurements of sound levels Leq index in September

Station Code	Station Name	Equivalent sound level indicator in June (daily)	Equivalent sound level indicator in June (nightly)
1	Najaf Alley	48.55	42.82
2	Hafez Alley	48.95	43.22
3	Tulip Alley	50.05	44.32
4	Amir Kabir Street	51.15	45.42
5	Habib Street	51.55	45.82
6	Zeinabiyeh Street	52.45	46.72
7	Azar Street	52.72	46.99
8	Imam Hossein Street	52.95	47.22
9	Safa Cui	54.35	48.62
10	Sedaghat Street	54.55	48.82
11	Asadi Street	55.15	49.42
12	Jafarzadeh Street	55.95	50.22
13	Namjoo Street	57.15	51.42
14	Ghadir Street	58.38	52.65
15	Mohiti Street	59.45	53.72
16	Nabovvat Street	60.35	54.62
17	Ghazi City	60.42	54.69
18	Shahriyar City	61.11	55.38
19	Daneshgah Street	62.55	56.82
20	Valiasr Twon	63.15	57.42
21	Jomhouri Blvd	63.35	57.62
22	Moalem Square	64.35	58.62
Mean		56.06	56.30

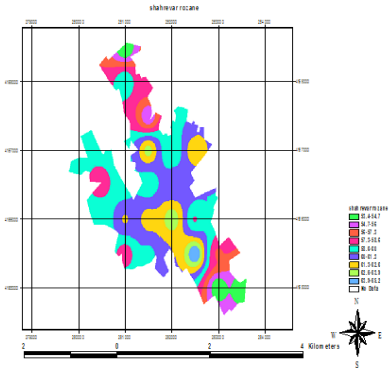

Figure 7: The equivalent sound level (Leq) per day, September the measurement stations based on DBA

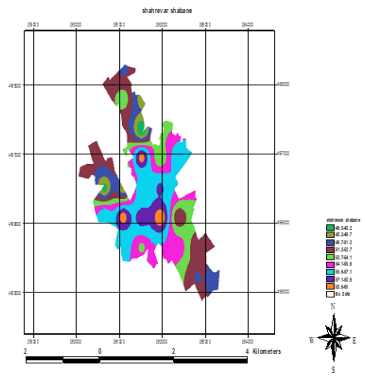

Figure 8: The equivalent sound level (Leq) at night, September the measurement stations based on DBA

According to Table 5 and Figure (7) in September due to the arrival of passengers and vehicles increase, the maximum amount of noise pollution during this month on day related to the Moallem square station is estimated at 64.35 dB. Then Jomhoori boulevard and Valiasr town station respectively (63.35 dB) and (63.15 dB) are the next category. Najaf and Hafez station also with (48.55 dB) and (48.95 dB) noise levels are the lowest index. Noise pollution index in September than during the day (56.30 dB) was recorded. Also in accordance with Table 5 and Figure 8 is observed overnight index average sound level measurement September, (50.57 dB), respectively. The highest sound level among the 22 stations in Moallem square station (58.62 dB) and the lowest index in Najaf station (42.82 dB) was recorded.

Table 6: Results of measurements of sound levels Leq index in December

Station Code	Station Name	Equivalent sound level indicator in June (daily)	Equivalent sound level indicator in June (nightly)
1	Najaf Alley	40	38.6
2	Hafez Alley	40.4	38.97
3	Tulip Alley	41.5	40.1
4	Amir Kabir Street	42.6	41.2
5	Habib Street	43	41.6
6	Zeinabiyeh Street	43.9	42.5
7	Azar Street	44.17	42.77
8	Imam Hossein Street	44.4	43.2
9	Safa Cui	45.8	44.4
10	Sedaghat Street	46	44.6
11	Asadi Street	46.6	45.2
12	Jafarzadeh Street	47.4	46.3
13	Namjoo Street	48.6	47.2
14	Ghadir Street	49.83	48.43
15	Mohiti Street	50.9	49.5
16	Nabovvat Street	51.8	50.4
17	Ghazi City	51.87	50.47
18	Shahriyar City	52.56	51.16
19	Daneshgah Street	54	52.6
20	Valiasr Twon	54.6	53.2
21	Jomhouri Blvd	54.8	53.4
22	Moalem Square	55.8	54.4
Mean		56.06	47.75

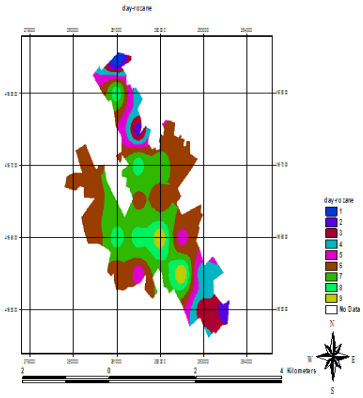

Figure 9: The equivalent sound level (Leq) per day, December the measurement stations based on DBA

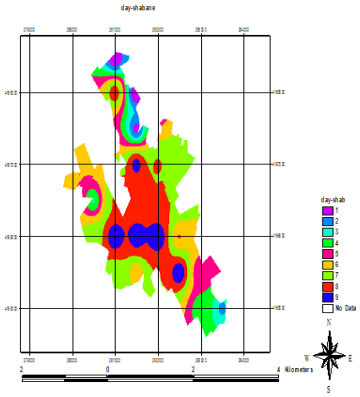

Figure 10: The equivalent sound level (Leq) at night, December the measurement stations based on DBA

According to the table (6) and figure (9) by increasing cold in January, the lowest human mobility and reduce vehicle traffic and reduce noise pollution index was recorded daily in these months. (40 dB), but with indices in 22 stations, the highest rate of noise pollution related to the Moallem square station with 55.8 dB is estimated. Then Jomhoori boulevard and Valiasr town station respectively (54.8 dB) and (54.6 dB) are the next category. Najaf and Hafez station also with (40 dB) and (40.4 dB) noise pollution their lowest level of the index. Noise pollution index in January than during the day (47.75 dB) was recorded. Also in the table (6) and figure (10) is an index to measure noise levels at night January, (46.37 dB), respectively. The highest noise level between 22 stations in Moallem square station (54.4 dB) and the lowest index in Najaf station (38.6 dB) was recorded. It can be said with comparable measure noise levels at all stations during the summer and winter is recorded the lowest level of noise pollution in Najaf station.

Table 7: Results of measurements of sound levels Leq index in February

Station Code	Station Name	Equivalent sound level indicator in June (daily)	Equivalent sound level indicator in June (nightly)
1	Najaf Alley	40.55	38.91
2	Hafez Alley	40.95	39.31
3	Tulip Alley	42.05	40.41
4	Amir Kabir Street	43.15	41.51
5	Habib Street	43.55	41.91
6	Zeinabiyeh Street	44.45	42.81
7	Azar Street	44.72	43.08
8	Imam Hossein Street	44.95	43.31
9	Safa Cui	46.35	44.71
10	Sedaghat Street	46.55	44.91
11	Asadi Street	47.15	45.51
12	Jafarzadeh Street	47.95	46.31
13	Namjoo Street	49.15	47.51
14	Ghadir Street	50.38	48.74
15	Mohiti Street	51.45	49.81
16	Nabovvat Street	52.35	50.71
17	Ghazi City	52.42	50.78
18	Shahriyar City	53.11	51.47
19	Daneshgah Street	54.55	52.91
20	Valiasr Twon	55.15	53.51
21	Jomhouri Blvd	55.35	53.71
22	Moalem Square	56.35	54.71
Mean		56.06	48.30

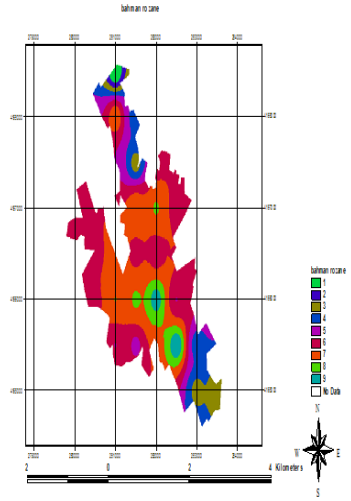

Figure 11: The equivalent sound level (Leq) per day, February the measurement stations based on DBA

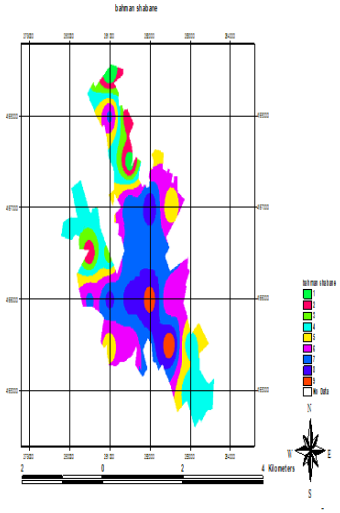

Figure 12: The equivalent sound level (Leq) at night, February the measurement stations based on DBA

According to the table (7) and figure (11) is an index measuring average daily noise levels February (48.30 dB), respectively. The highest noise level between 22 stations in Station Square teacher (56.35 dB) and the lowest index in Najaf station (40.55 dB) was recorded. Also according to the table (7) and figure (12) in February during the night, maximum Leq in station number 22 (Moallem square) and the lowest at 54.71 dB to 38.91 dB Najaf station is registered. Leq index average in February during the night is 46.66.

Table 8: Results of measurements of sound levels Leq index in March

Station Code	Station Name	Equivalent sound level indicator in June (daily)	Equivalent sound level indicator in June (nightly)
1	Najaf Alley	41.23	39.36
2	Hafez Alley	41.63	39.73
3	Tulip Alley	42.73	40.86
4	Amir Kabir Street	43.83	41.96
5	Habib Street	44.23	42.36
6	Zeinabiyeh Street	45.13	43.26
7	Azar Street	45.4	43.53
8	Imam Hossein Street	45.63	43.96
9	Safa Cui	47.03	45.16
10	Sedaghat Street	47.23	45.36
11	Asadi Street	47.83	45.96
12	Jafarzadeh Street	48.63	47.06
13	Namjoo Street	49.83	47.96
14	Ghadir Street	51.06	49.19
15	Mohiti Street	52.13	50.26
16	Nabovvat Street	53.03	51.16
17	Ghazi City	53.1	51.23
18	Shahriyar City	53.79	51.92
19	Daneshgah Street	55.23	53.36
20	Valiasr Twon	55.83	53.96
21	Jomhouri Blvd	56.03	54.16
22	Moalem Square	57.03	55.16
Mean		56.06	48.98

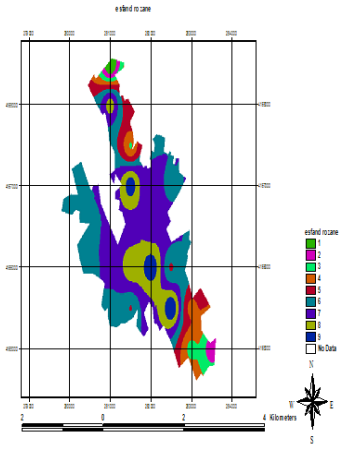

Figure 13: The equivalent sound level (Leq) per day, March the measurement stations based on DBA

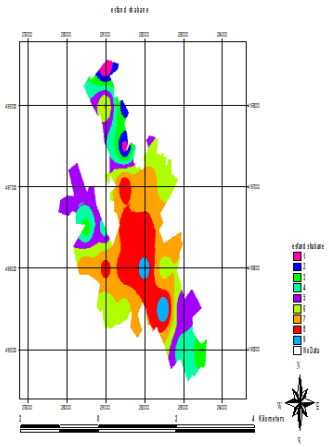

Figure 14: The equivalent sound level (Leq) at night, March the measurement stations based on DBA

According to the table (8) and figure (13) is an index to measure noise levels at night March (47.13 dB), respectively. The highest noise level between 22 stations in Moallem square station (55.16 dB) and the lowest index in Najaf station (39.36 dB) was recorded. Also in the table (8) and figure (14) the mean noise pollution of Khalkhal City during the summer and winter days equal to 52.43 dB and the level of 48.83 dB have been reported during the night. The mean difference between summer and winter months contamination during day and night is equal to 3.6 dB.

CONCLUSION

Noise pollution is one of the fundamental problems of modern life in different parts of the world. One of the key measures to prevent this phenomenon of urbanization process, study and identify the factors that cause it and the preparation of a plan to fix this problem. This study was carried out in line with this goal, to determine how much of the noise pollution of Khalkhal City and its distribution in different seasons and times of day and night as well as in how it is distributed. The results showed that in comparison with standard Leq anklet in different parts of the country at a high level. So that according to this decree No. 49127 / T 38734 K dated 2008.05.04 Cabinet limit noise pollution in Article 2 executive regulations from 7 am to 10 pm for residential areas 55 dB and for areas of commercial - residential areas 60 dB and from 10 pm to 7 am 45 dB and 50 dB respectively for these areas have set. The figure in the estimation of twenty-two city stations anklet thus it was found that during the summer and winter index is Leq 50.64 dB. This level of 49.17 dB in residential areas and in commercial - residential areas was 58.19 dB. The primary aim of the study was that during the summer months and winter months Leq index what is the syntax of Khalkhal City. The results of this study showed that the presence of more car traffic and passengers during the summer season because of the cold in winter is less traffic. So this change has a negative index changes Leq. So that in summer and in winter the average level of 47.53 dB noise is 53.74 dB.

According to the results of research descriptive level of noise pollution in the summer and the winter months are also variable. So that the average balance-August peak, between summer and winter months are all (54.07 dB). However, travelers entering anklet starts from the end of June, but it seems symmetry of Ramadan, the month of July is one of the reasons surpassed the level of August. Also in the winter months are March, the highest level of noise pollution (48.06 dB) is allocated to the lowest level in summer and winter months was recorded in January (47.06 dB). Perhaps, cold and looking for low car traffic due to the reduction of noise pollution in the city is in Khalkhal City. The results of this study, the distribution of noise pollution in the city is not the same in Khalkhal City. So that the highest level of noise pollution in Moalem Square station commercial - residential recorded (62.12

dB). The addition of the north entrance to Khalkhal City and causes movement of the vehicle, three city parks in the region increased noise pollution from vehicles has increased. The lowest level of Najaf Alley station code (1) and a very quiet residential Hafez Station code (2) and a quiet residential use because of the margins and the narrow streets and uphill from the lower volume of car traffic and is free from any kind of factories and workshops. The average noise level of Najaf Alley station (39.78 dB) and average noise level of Hafez station (40.17 dB) has been recorded. According to research findings, the level of noise pollution are not the same hours of the day.

According to the noise of stations across the city's twenty-two of Khalkhal City, the highest index in the early days of Jomhouri Blvd station with Leq (59.48 dB) and Moalem Square (60.48 dB) was recorded. However, the index is at the same stations during the night (55.88 dB) and (56.87 dB) was recorded. In general it can be said acoustic emission sources in the area of Khalkhal City, car traffic and pollution in different districts of the distribution is not the same. Distribution in summer and winter, and day and night are different.

REFERENCES

1. Abbaspoor, M. Nasiri, P (1996), check the status of Tehran, the noise level A collection of the Second Conference of Traffic Engineering
2. Alesheikh, A. and M. Omidvar (2010).Application of GIS in urban traffic noise pollution , Int.Jour. occup. Hygiene.IJOH.79 – 84
3. Barbosa.ASM,cardosa MRA (2005). hearing loss among workers exposed to voad traffic 17-12.10.
4. Biglar Poor, S (1985). Evaluation of noise-induced hearing loss weavers. Master's Thesis Occupational Health and Industrial Protection, Faculty of Health, Tehran University of Medical Sciences, page 60.
5. Parvizpoor, A Khanzadeh, F., (1981) usually argue receive permanent hearing a noise in the workplace, the medical journal, Issue 2, Page 93
6. Ranjbaran, M (1983). Check lung function changes and hearing workers in work related to environmental factors, MS thesis, Faculty of Health, Tehran University.