

in the name of God

The background features a minimalist design with a vertical dashed line on the left, a horizontal dashed line intersecting it, and a solid gray bar extending from the left edge. Another solid gray bar is positioned vertically on the right side, partially enclosed by a dashed line.

Traditional Houses

Architecture of Tabriz



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Traditional Houses Architecture of Tabriz



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Location, Historic Traditional context and Climate of Shiraz

1 Chapter



1.1 Location of Tabriz

The east Azerbaijan province is the largest and the most populated province that is located in the north west of Iran. The east Azerbaijan has common with the republic, Azerbaijan and republic of Armenia from the north; the east Azerbaijan bounds on west Azerbaijan province from the west and the North-West also it bounds on Ardebil province from the east and it bounds on Zanzan province from the southeast. The total area of this province is 46491 km² that is about 2.8 percent of the total area of Iran.

Generally, the east Azerbaijan province is considered as a mountainous area. About 40 percent of its area contains mountains. Tabriz city is the capital of the east Azerbaijan and is located in 620 km from the north west of Tehran and nearly in the geographical center of the province. It opens out into a large plain in 50 km from the east of Orumieh lake. The total area of Tabriz is about 1800 km² that is 17.6 percent of the total area of the province. Tabriz is in the west of the east Azerbaijan province and in the enf of the east and the south west of Tabriz plain.

This city is bounded by Pekkechin mountains and Oun Abn Ali mountains from the north; Ghzeny mountains and Baba Baghy from the north east; Payan ghat from the east and Sahand mountain range from the south. Tabriz city is limited by Marrand city and Ahar city from the north and Maragheh city and Hashtroud city from the south and Mianeh city and Sarab city from the east and lake Orumieh from the west.

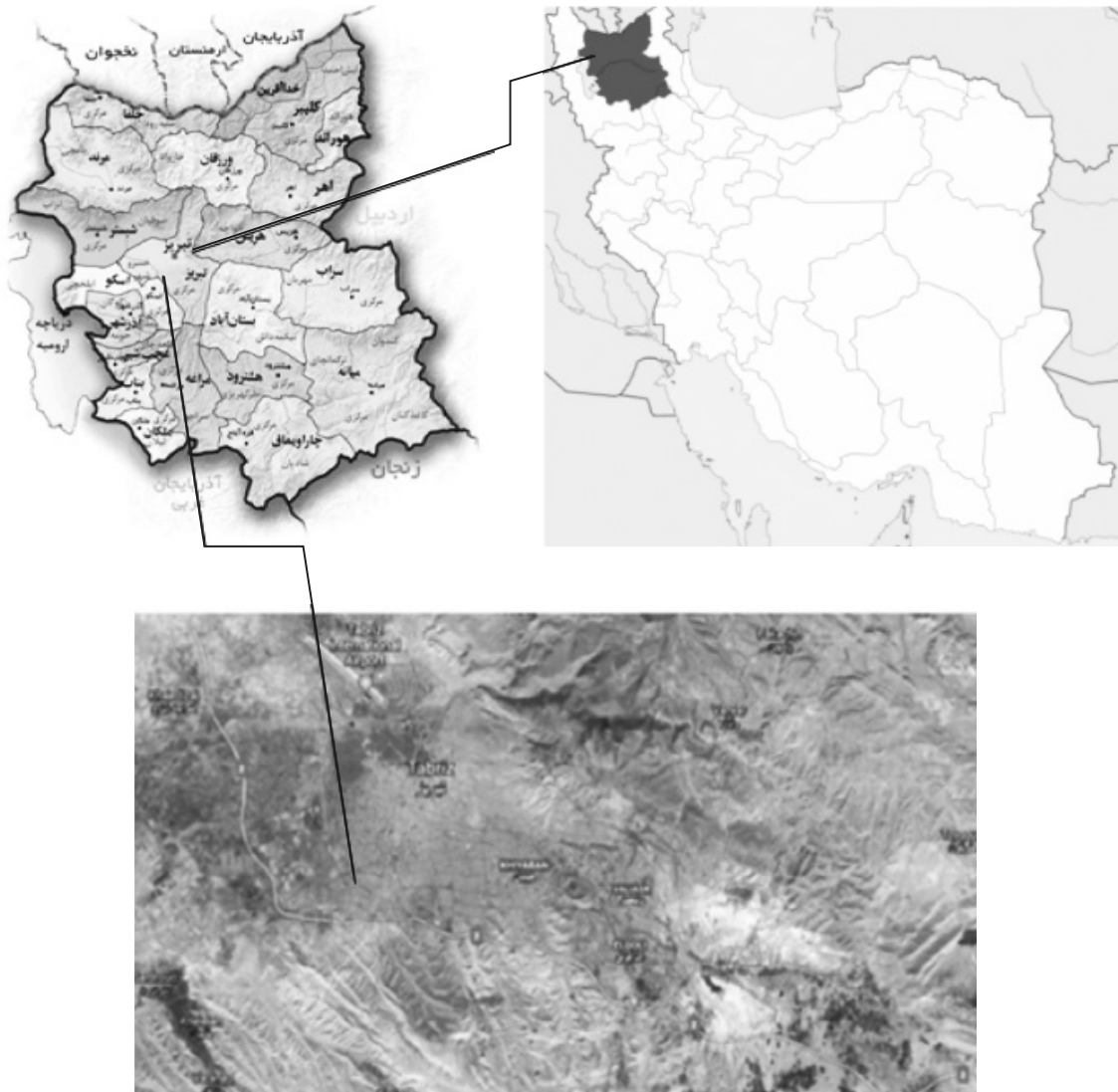


Fig. 1.1 Location of Tabriz

1.2 Appellation of Tabriz

There are different theories about root of the present name of Tabriz. The famous theory is related to the story of Zubaideh Khatoon who is the wife of Haroon-Al-Rashid the caliph of Abbasy because of decrees of her fever, she called this city Tabriz (reducer fever).

According to other theory the name of Tabriz came from the word of Davrizh which is an Armenia. Other theory belivs that the name of Tabriz relats to the Sahand volcano and hot water springs around this city in the mean of reduce of fever and hid fever and Salmeh Dokojo (the hid of hid).

In the other theory they call it Azarabadegan (the name of Tabriz's firetemple). And finally, due to the 2700 years history the name of Tabriz, the theory in with the oldest name of Tabriz such as Tarvi and Termaksio (the name of two doobled mountain top in the present location of Tabriz) is acceptable. therefore, there is not fix idea about it [1].

1.3 Tabriz before Islam

Tabriz is one of the Iran and the world that its begning history date backs to Iran and Azerbaijan territory's ancient history. Tabriz history ascibsto real garden of eden in where Adom and Eve were [1]. According to the historians Tabriz's history is related to Medes [2]. The oldest stone tablet with a refrence to Tabriz is that of sargon II, the Assyrain warrior [1]. Archaeology around Blue mosque and dindiny evidence thirteen historical period such as Iran age 1 to Iran age 3 and establishment of achaemnian until appearance of Islam and even after the Islam and even same vemnat of Bronz age was found and it says that Tabriz has 1500 years old [2]

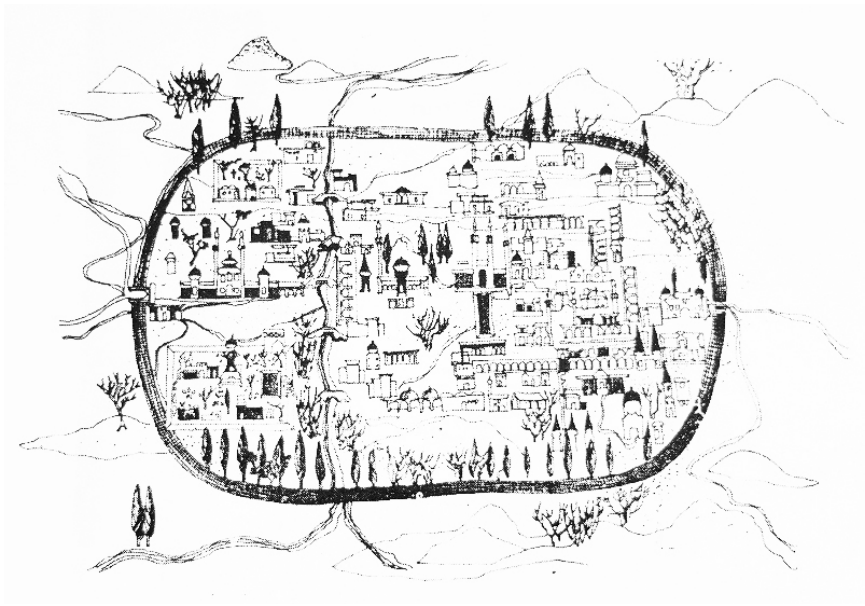


Fig. 1.2 A miniature painting was prepared from Tabriz city in 940 hijri calender and was kept in top tapo srai museum [2]

1.4 Tabriz after Islam

In the Sasanian reign, Tabriz with the imperial palaces and command posts was one of the most important cities. Reduce of the city by Arabs was implied in narratives [1].

1.5 Historical municipal strict

Tabriz old district contains the city center's core was inside Najafgholy Khan rampat also it contains Shanb-e-Ghazan that was new and modern in that tim. Rab-e-Rashidy that was a small town far from Tabriz and also district around of the Blue mosque [2].

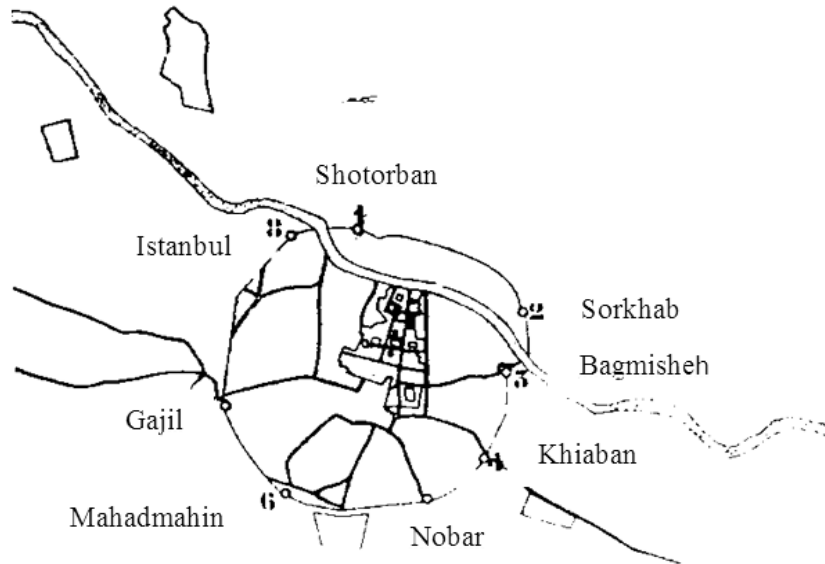


Fig. 1.3 Tabriz and its gats in Safavieh reigh [2]

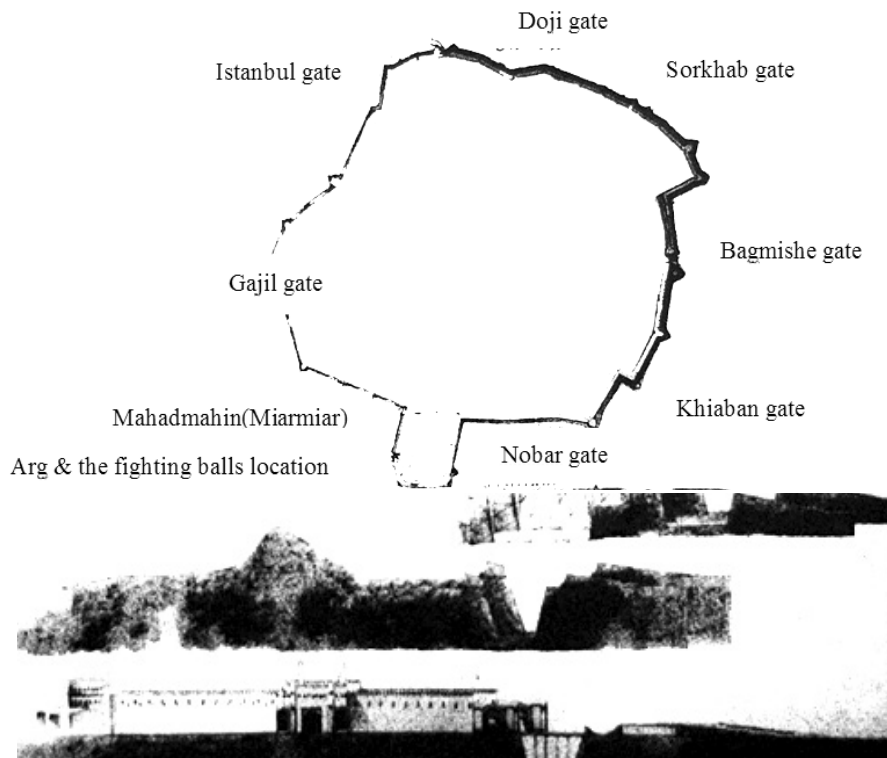


Fig. 1.4 The plane of city's solids in Qajarreign [2]

1.6 The evolution`s plan of historical district of Tabriz



Fig. 1.5 City`s space orgniz from 4 to 6 century (H.C) (1. Mehran river 2. The gardens around the city 3. Ravady rampat 4. gate 5. The city`s main way 6. Jamee mosque 7. Bazaar 8. Governmental palace (old government) 9. Amir Hasoosan tomb [3].)



Fig. 1.6 The city`s space orgniz in 7 and 8 century (H.C) (1. Mehran river (Meidan chay) 2. The gardens inside the Ghazany

rampat 3. Ghazany rampat 4. City's main way 5. Ghazan bazaar 6. Jamee mosque 7. Amir Hasoodan tomb 8. old government 9. Shanb-e-Ghazan 10. Rab-e-Rashidy 11. Alishah Jamee mosque 12. Saheb Abad garden 13. Sirkhab cemetry 14. Gajil cemetry 15. Charandab cemetry 16. Gholleh cemetry 17. Sayyid Hamzeh tomb 18. old square 19. Alaieh set 20. Oatad Shagerd mosque 21. Dameshghieh bulding 22. Sirkhab neighbourhood 23. Sanjran neighbourhood 24. Kuche Bagh neighbourhood 25. Ghazaran neighbourhood 26. Charandab neighbourhood 27. Beylankoooh neighbourhood 28. Aein Ali Zein Ali tomb 29. Shervan gateway 30. Sham gateway 31. Sardrood gateway 32. Ojan gateway 33. Saravrood gateway 34. Ahar gateway [3].)



Fig. 1.7 City's space orgniz in 9 century (H.C) (1. Meidan Chay (Mehran river) 2. The approximate area of the city 3. Probable axis 4. City's main way 5. Bazaar 6. Jamee mosque 7. Amir Hasoodan tomb 8. old government 9. Shanb-e-Ghazan 10. Rab-e-Rashidy 11. Alishah jamee mosque 12. Saheb Abad garden 13. Sirkhab cemetry 14. Gajil cemetry 15. Charandab cemetry 16. Gholleh cemetry 17. Sayyid Hamzeh tomb and cemetery 18. old square 19. Alaieh set 20. Oatad Shagerd mosque 21. Dameshghieh cemetery 22. Shah Hossein vally relaying 23. Aein Ali Zein Ali tomb 24. Mozaffarieh set 25. Saheb Abad square (king Hassan) 26. King Hassan set 27. Hasht Behesht bulding 28. Shah Magsoud mosque 29. Magsoudieh bulding 30. Gheisarieh 31. Bagh Shomal 32. The gardens around the city [3].)

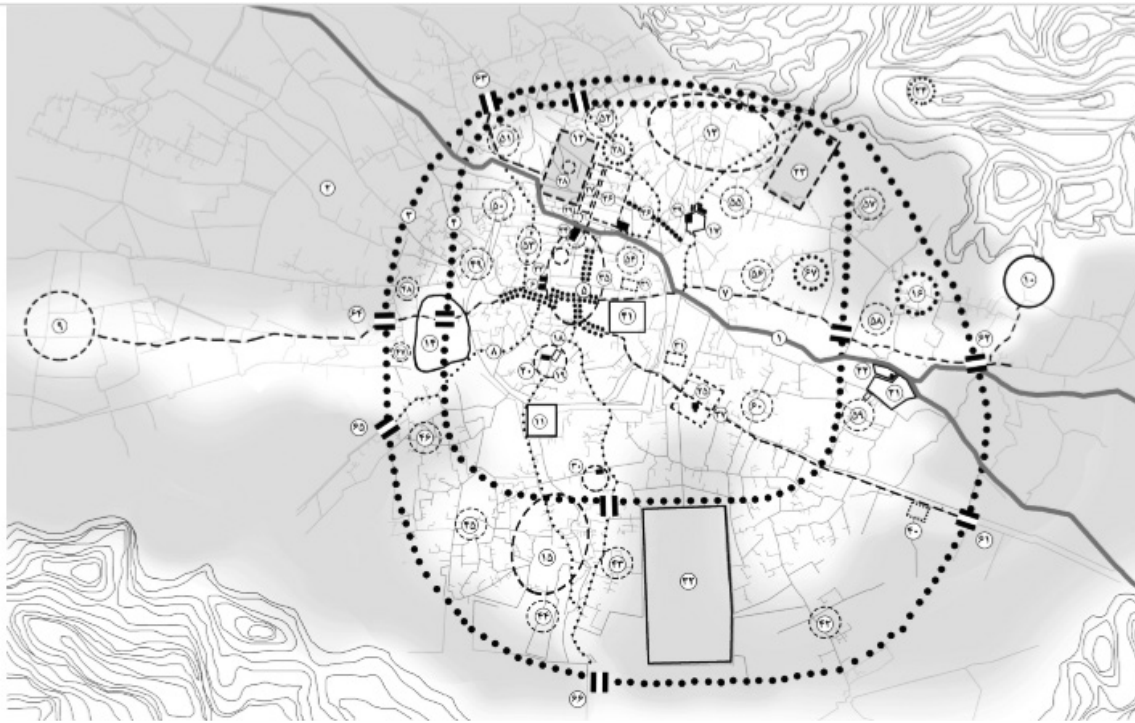


Fig. 1.8 City's space orgniz in 10 century to 12 century (H.C) (1.Meidan Chay (Mehran river) 2.The gardens around the city 3.According to Olia Chalaby rampat 4.rampat according Metraghchy miniutar 5.Bazaar 6.Jamee mosque 7.City's main way 8. Approximate axis 9.The ruins of Shanb-e-Ghazan 10. The ruins of Rab-e-Rashidy 11.Alishah jamee mosque 12. Saheb Abad garden 13.Sirkhab cemetry 14.Gajil cemetry 15.Charandab cemetry 16.Gholleh cemetry 17.Sayyid Hamzeh tomb and cemetry 18.Field horse buy 19.Alaieh set 20.Oatad Shagerd mosque 21.Dameshghieh cemetry 22.Takieh of Shah Hossein vali 23.Beighom garden 24. Aein Ali Zein Ali tomb 25.Blue mosque 26. Saheb Abad square (king Hassan) 27. King Hassan set 28.Hasht Behesht bulding 29. Shah Magsoud mosque 30.Magsoudieh bulding 31.Gheisarieh Bazaar 32.Bagh Shomal 33.Talebieh school 34.Sadeghieh school's mosque 35.Developed market range 36.Shah street 37. Abrisham passway 38.Approxmilty rang of palace (Osman Pasha) Jaffar Pasha and chughan square 39.Zahirieh mosque 40.Hospital 41.old government 42.Marallan neighbourhood 43.Magsoudieh neighbourhood 44.Charandab neighbourhood 45.Leil Abad neighbourhood 46.Ahrab neighbourhood 47.Kuche Bagh neighbourhood 48.Qaraghaj neighbourhood 49.Vidjooye neighbourhood 50.Sanjran neighbourhood 51.Amirkhiz neighbourhood 52.Shotorban neighbourhood 53.Raste kuche 54.Chahar Menar neighbourhood 55.Sirkhab neighbourhood 56.Sheshghelan neighbourhood 57.Seilab neighbourhood 58.Pol-Sangi neighbourhood 59.Dameshghieh neighbourhood 60.Khiyaban neighbourhood 61.Rey gateway 62.Sarav (Sarab) gateway 63.Shervan gateway 64.Sham Ghazan gateway 65.Sardrood gateway 66.The approxmilty location of Shah Abbas castle [3].)



Fig. 1.9 City's space orgniz in 13 century (H.C) (1. Meidan Chay (Mehran river) 2. The gardens around neighbourhoods 3. Najafgholy Khab rampat 4. The city's territory in the end of Qajar 5. City structure 6. Jemee mosque 7. Bazaar 8. Mesgharan Bazaar 9. Davachy Bazaar 10. Saheb-Al-Amr square 11. King Hassan school's mosque 12. Tomb and mosque of Saheb-Al-Amr 13. Jobbeh Khane 14. Divan khaneh and Haram Khaneh 15. The yard of Toop Khaneh 16. Mashgh square 17. Gheisarieh square 18. Alishah castle 19. Talebieh mosque 20. Amir Hasoodan tomb 21. Ostad Shagerd moque 22. Qarakolik square 23. Gajil cemetery 24. Charandab cemetery 25. old Bazaar and old street Bazaar 26. Blue mosque and the cemetery around it 27. The gardens around Blue mosque 29. Sirkhab cemetery 30. Shah Magsoud mosque 31. beighom garden 32. Tomb and cemetery of Sayyid Hamzeh and tombs of Ghaem Magham and Aziz Khan-e-Mackry 33. Gholleh cemetery 34. Dameshghieh cemetery 35. Takieh of Shah Hossein valy 36. Raste Kuche 37. Bagh Shomal 38. Magsoudieh mosque 39. The ruins of Rab-e-Rashidy 40. Aein Ali Zein Ali tomb 41. Raste Bazaar 42. Gardens around 43. Qaraghaj Neighbourhood 44. Vidjooye Neighbourhood 45. Shotorban Neighbourhood 46. Sirkhab Neighbourhood 47. Baghmisheh Neighbourhood 48. Khiaban Neighbourhood 49. Nobar Neighbourhood 50. Mehadmahin Neighbourhood 51. Amirkhiz Neighbourhood 52. Charmenar Neighbourhood 53. Vidjooye gateway 54. Istanbul gateway 55. Shotorban gateway 56. Sirkhab gateway 57. Baghmisheh gateway 58. Khiaban gateway 59. Nobar gateway 60. Mehadmahin gateway 61. Gajil gateway [3].)

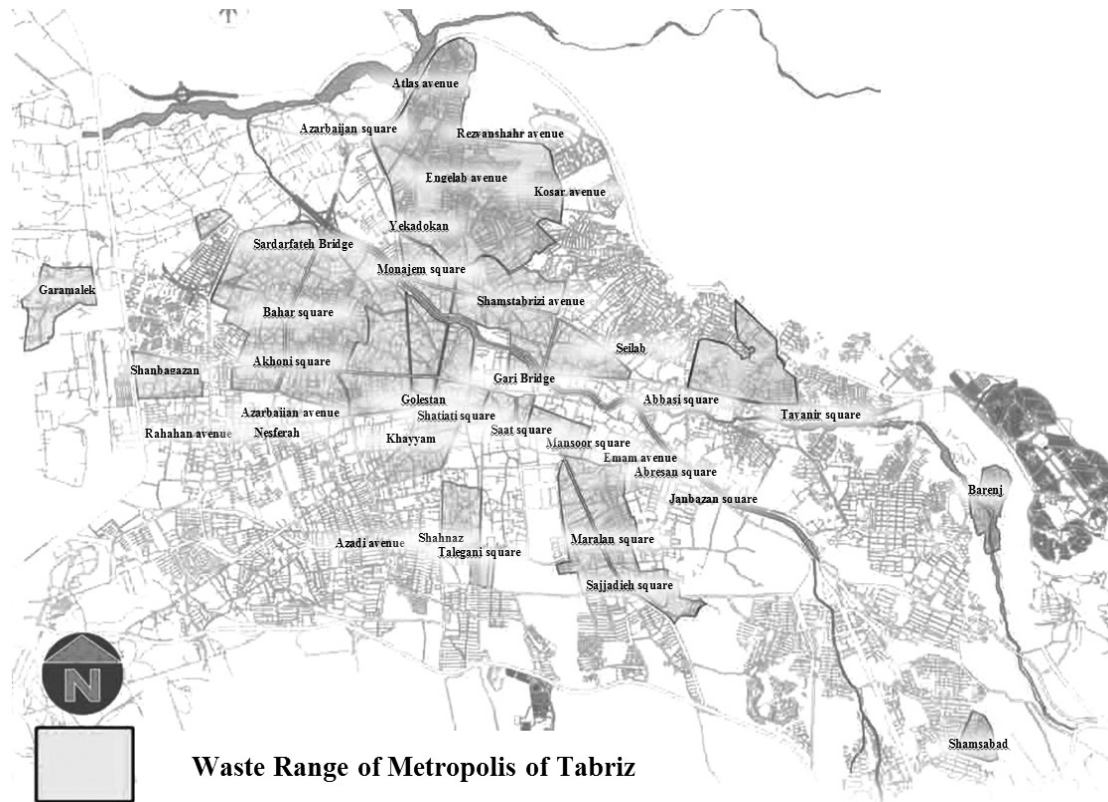


Fig. 1.10 Metropolis of Tabriz

Due to the special climate of the region and geographical location and strategy, the structure of Tabriz's neighborhoods (often other nations attacked them) were inside structure. Because of that reason the walls of homes were built higher and even they made door for neighborhood and changed them into the small bunny that they were named Darband [2].

Some of the oldest neighborhoods of Tabriz are: Amirkhiz, Mahadmahin (Miar Miar), Gajil, Vidjooye, Sanjran, Nobar, Chaharmenar, Shotorban, Sirkhab, Baghmisheh, Chostdoozan, Hokm Aabad, Akhuny, Qaraghaj, Khatib and ...

Bazaar is located in inside of old central core of city. The Bazaar total area is 1 km that contains Timche, Sara, Dalan, mosques and Bathes. The Bazaar set of Tabriz was built in four century is known one of the largest and the nicest covered Bazaar in the world that shows the authenticity of trad and architecture of the orient.

Some of the famuse Raste Bazaars in Tabriz are:

Amir Bazaar, Kaffashan Bazaar, Haram khaneh Bazaar, Raste Bazaar, Yamandooz Bazaar, Hallajan Bazaar, Ghizbasty Bazaar, Sarrajan Bazaar, Old Raste, Kholahdoozan Bazaar, Dallalehzan Bazaar,

Sadeghieh Bazaar, Mesgharan Bazaar, Haj Mohammad Hossein Bazaar, Moshir Bazaar, Safy Bazaar, Mir-Abolhassan Bazaar, Ranghly Bazaar, Davachy Bazaar (Shotorban) and Khiaban Bazaar.

One of the reasons that make the Bazaar important is Tabriz city in the transit way of Abrisham way. And it causes the increasing development of city and the Bazaar. From day to day and trades people and businessmen from eastern country and western country come to Tabriz for trade and rest for some days in this beautiful and safe city. The Tabriz Bazaar as the central core of city causes the development of city in the shape of radius around this core [2].

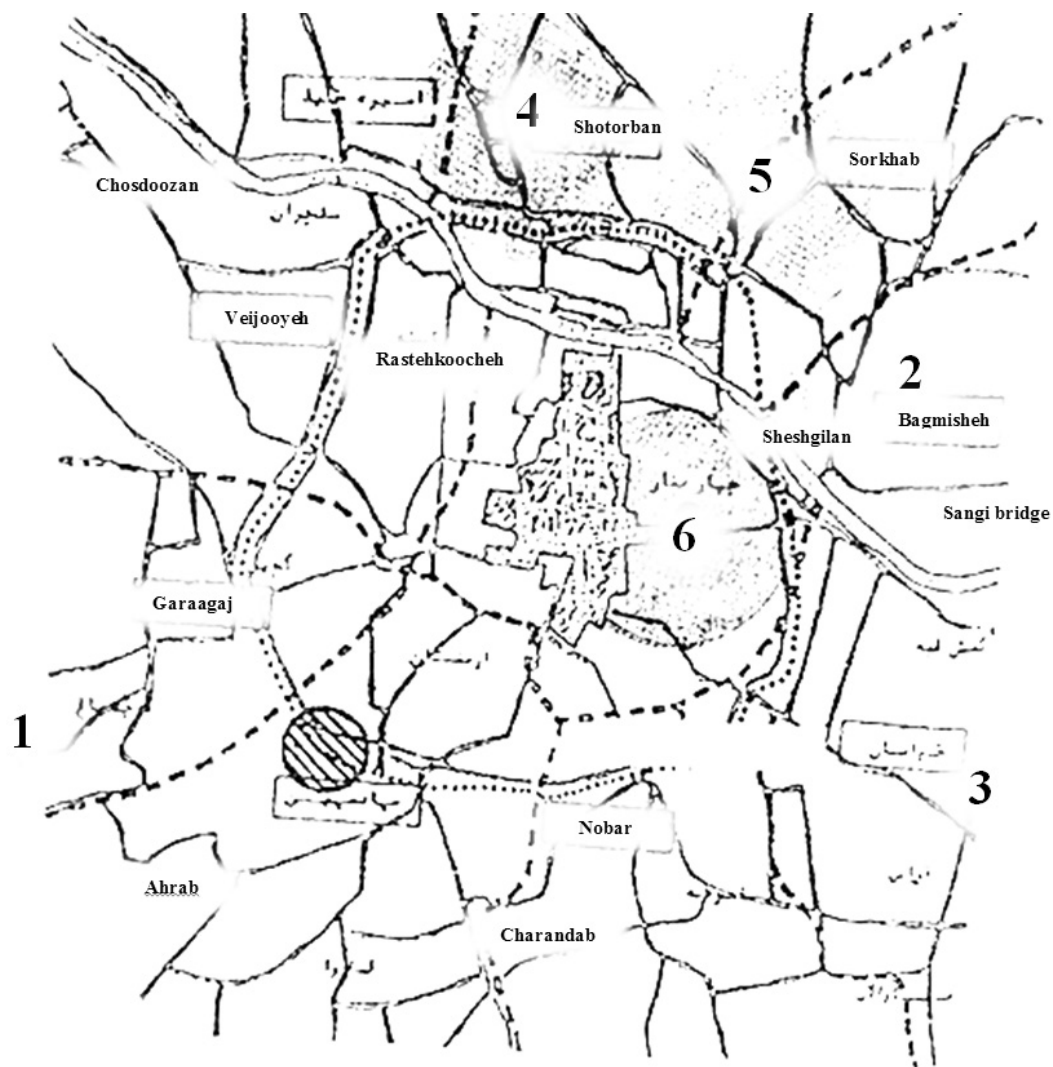


Fig. 1.11 Radius arrangement of old neighborhoods in the around of the central core [2].

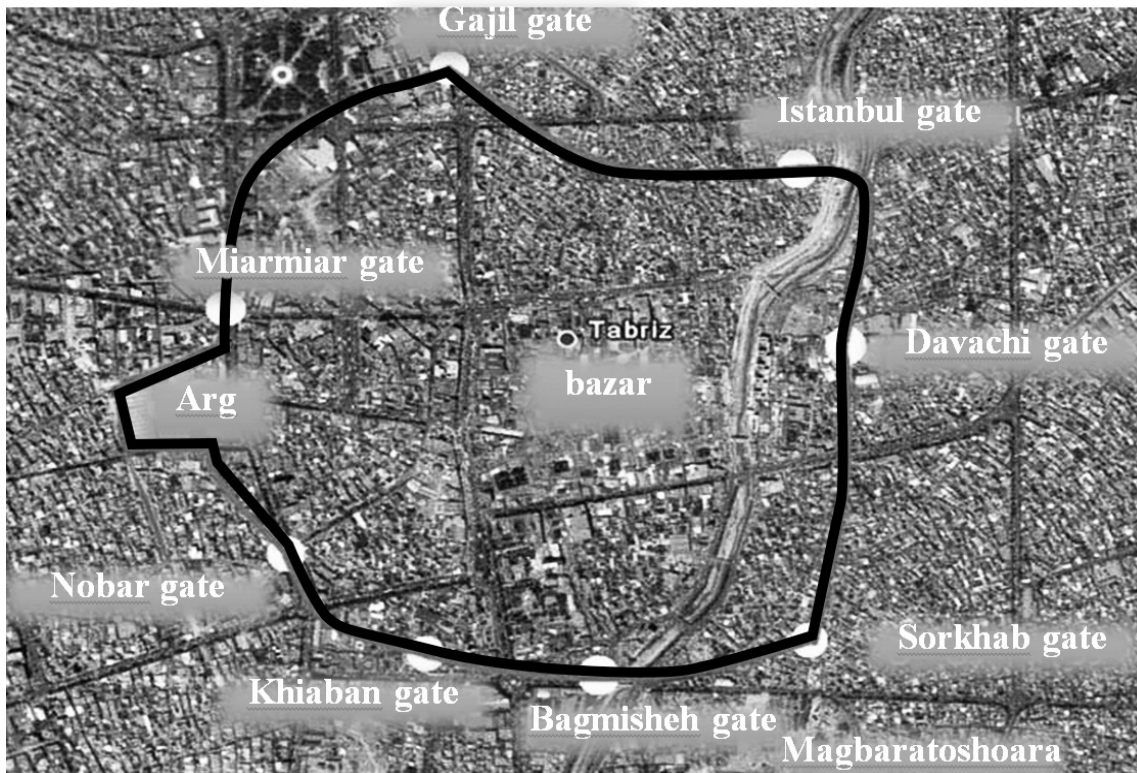
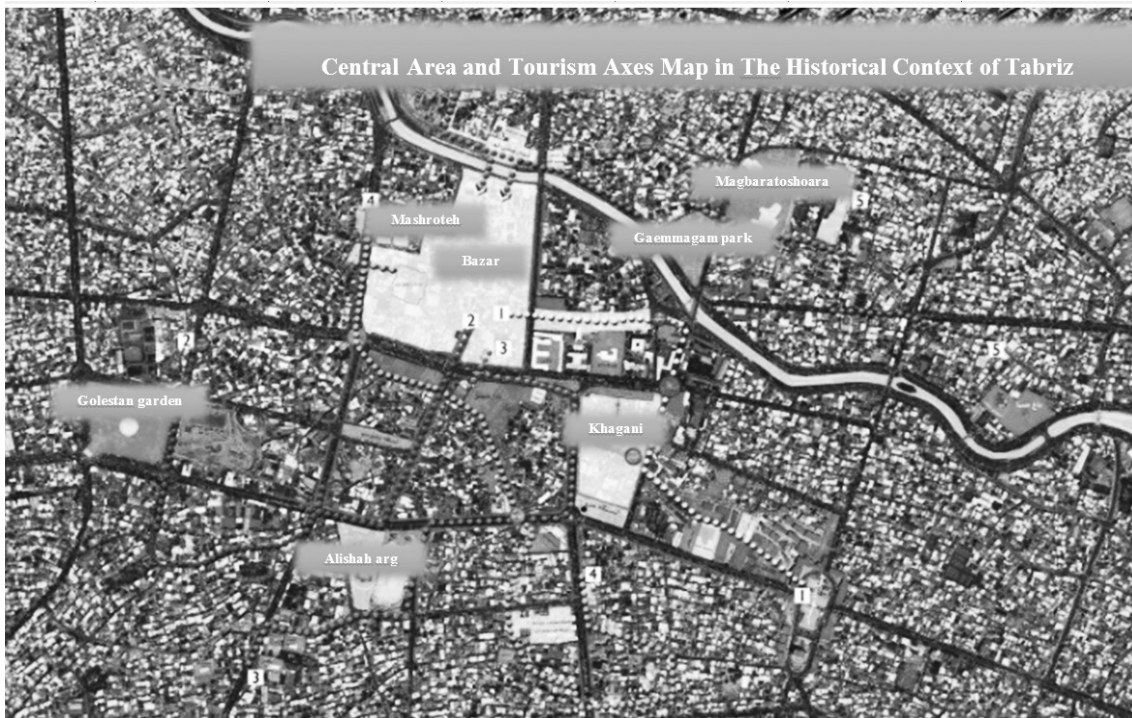


Fig. 1.12 The location of Tabriz Bazaar and its gate.



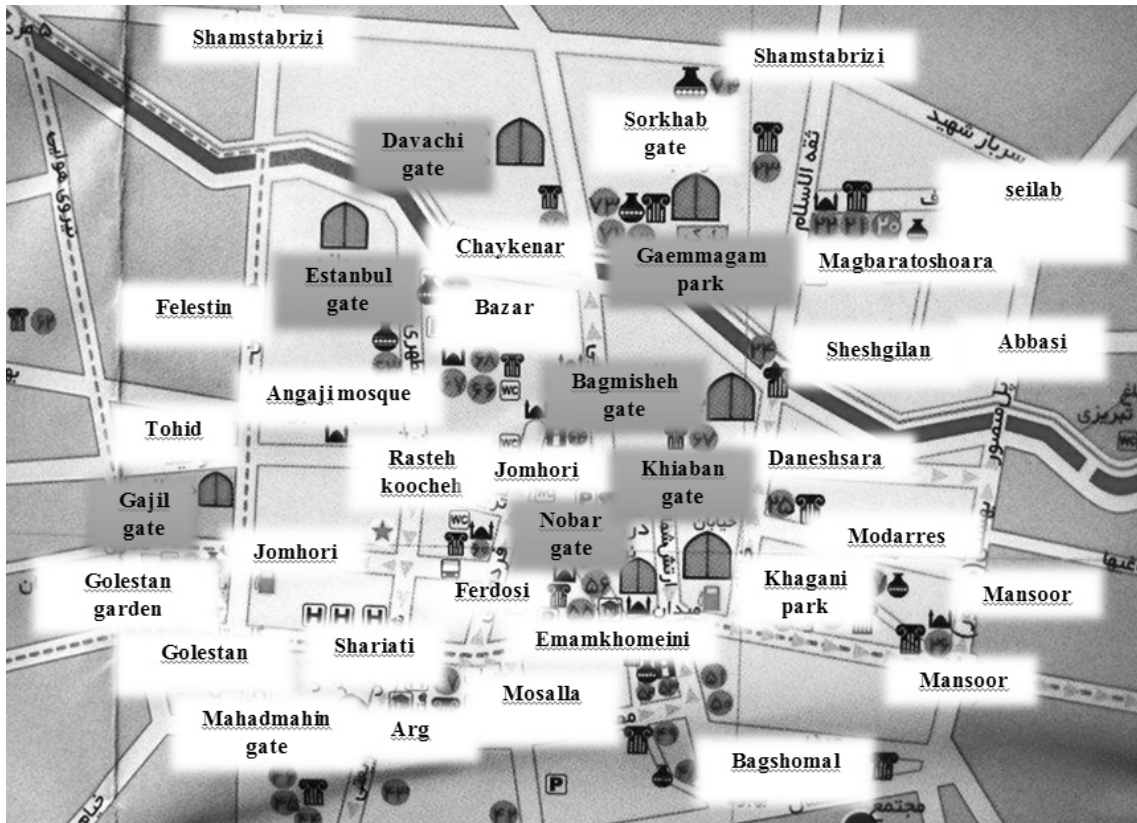


Fig. 1.13 The map of central rang and based truism in the historical structure of the Tabriz Metropolis.

1.7 Topography of Tabriz

The natural topography location of Tabriz and its establishment in a large valley that it is limited on slope mountain around it in all directions except west and north west, that cause Tabriz's climate not only depends on the natural location of Tabriz's plan but also it depends on the special quality of the location of city's floor.

Tabriz is located in the top of the triangle that was made from Tabriz plain and Azarshahr. In the end east of the city there are northern mountain are closed to each other with about angle 30 degree toward eastern-western course by passing from northern valley Aji Chay River passes from between this plain, and makes the end of the valley. Tabriz city is made of lands with steep slope in northern rang and southern rang lands with gentle slope in the center.

Northern mountains are bounds on the north rang of city. Vallyasr township, Baghmisheh and othet neighbourhoods in the north of Tabriz are bounds on hill with steep slope in different direction. Zaffaranieh, Fath Abad, the south of Shahgholy in the south of the city have the same location. City in the west division is in the flat land of Tabriz plain until Orumieh Lake.

1.8 Climate of Tabriz

The western mountains contain Iran's central mountains. As regards in this region the average Temperature in the warmest month of the year is 10 centigrade and the average minimum air temperature in the coldest month of year is -3 centigrade. It considers as a mountainous area. The western mountains block permeates of damp weather from Msediterein in the inside of the plateau of Iran and they keep the damp weather inside of their hillside in this region valleys have hot weather in summer and Temperature weather in winter. In this region the amount and intensity of sunlight is heavy in the summer and is light in the winter.

This plain because of height above sea-level has long and cold winter and Temperature summer. Cold stars from early in Azar and continues until the end of Farvardin. Raining is less in the summer and is plentiful in the winter and often in the shape of snow peas are often covered by snow. Mountains over than 3500 meter have permanent snow. Tabriz has variety climate; Tabriz experiences 50 days of year icy and snowy and in some regions, Tabriz experiences 40 centigrade Temperature in the warm months of summer (Meteorological organization of Iran).

Table 1. Characteristics of Tabriz continent (Meteorological organization of Iran)

	Average Dry Bulb Temperature (oC)	Min Dry Bulb Temperature (oC)	Max Dry Bulb Temperature (oC)	Average Relative Humidity (%)	Wind Speed (m/s)
Jan	-2 /8	-15	13	69 /3	3
Feb	-0 /9	-13 /1	11 /4	69	3 /4
Mar	5 /2	-9 /8	15 /1	63 /2	2 /4
Apr	10 /7	0 /3	21 /6	54	3 /7
May	16 /6	6 /7	29 /3	48 /7	3
Jun	21 /4	9	33 /2	42 /2	3 /9
Jul	25 /6	13 /8	37	34 /8	5
Aug	25 /4	14 /4	36 /3	33 /6	2 /4
Sep	21 /5	11 /8	32 /8	35 /2	2 /9
Oct	14 /5	3 /9	27 /8	50 /9	2 /5
Nov	6 /3	-7 /4	18 /8	66 /2	1 /6
Dec	-0 /4	-10 /8	11 /4	76	1 /9

According to above chart the average annual Temperature in Tabriz is about 12.3 centigrade. The month of Day is the coldest month and the month of Tir and Mordad are the warmest month of year in Tabriz. Daily, minimum average Temperature in month of Day is -15 centigrade and in month of Esfand the every Temperature is -13.1 centigrade. Total cold days in Tabriz is 107 days, the maximum icy day in Tabriz is 155 days and the minimum icy day in Tabriz is 52 days. Recorded the categorical maximum Temperature is 42 centigrade and categorical minimum Temperature is -25 centigrade. The recorded amount of evaporation and transpiration of region are 1733 millimeter (Meteorological site of Iran).

According to No.2 tablet, the minimum relative humidity in Mordad is 33.6 percent and the maximum grade of humidity is in Azar by 76 percent. There is the balanced relative humidity Tabriz by 55 percent and 60 percent that the viewpoint of architecture designing and used material in building should be considered (Meteorological site of Iran).

1.8.1 Blowing wind

According to statistics, Tabriz has blowing winds in 288 days of year winds blow from all directions heavily and lightly. always winds from east blows in Tabriz due to its continuation and strong it is considered as Tabriz's main wind. Winds from northeast have more stronger this winds by the main wind contain more than 50 percent of Tabriz's winds.

Winds from south and west and south west and north have average blowing and less time of blowing in the below Table, direction and the rate of different winds of Tabriz are showed.

The main wind comprises 30 percent of all winds that its average rate is about 15 km /h. The north eastern winds comprise 25 percent of winds and its average rate is 10 to 15 km /h. the north winds comprise 5 percent of winds and it's average rate is 10 to 15 km /h. the north western winds comprise less more than 15 percent of winds and it's average rate is 15 km /h. The western winds is 10 percent and it's average rate is 10 to 15 km /h. the south western winds comprise 15 percent of winds and it's rates is 20 km /h and the southern winds comprise less than 5 percent of winds but it's rates is more than 25 km /h. finally, south eastern winds comprise 5 percent of winds in Tabriz and it's rates is about 10 km /h. The main winds and the maximum rate of blowing wind in Tabriz, according statistics from Synoptic from establishment date.

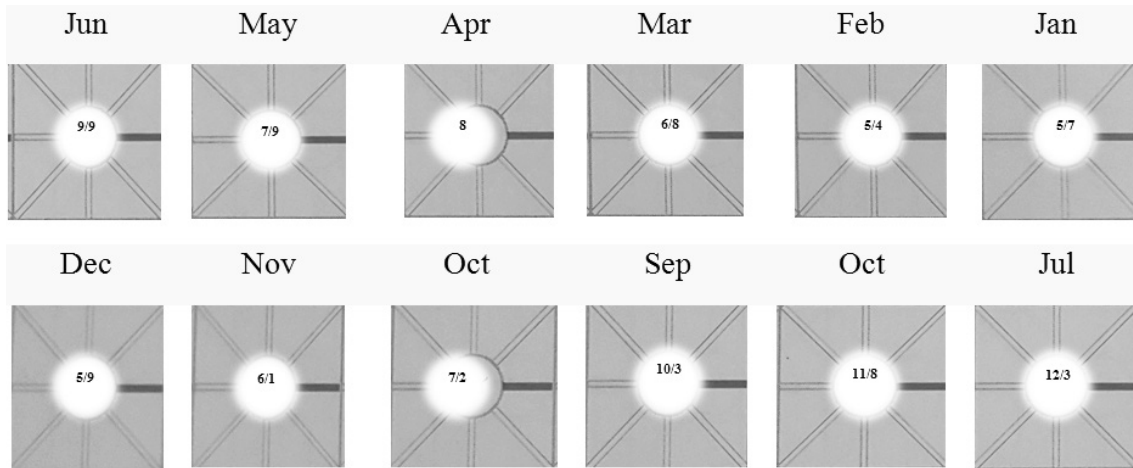


Fig 1.14 Wind direction

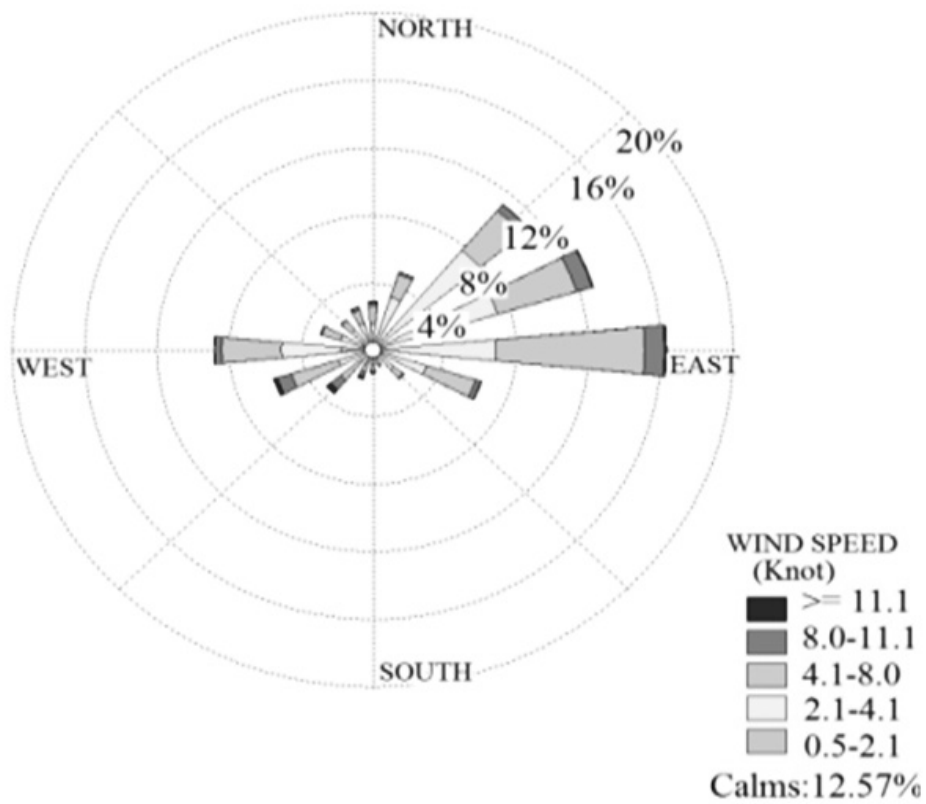


Fig. 1.15 Wind directions and wind speed (2000–2010)

According to Fig.1.15 winds from east, north-east, west, and south-west are respectively important direction of blowing wind in Tabriz.

1.8.2. Sunlight

The earth's axis toward its orbit makes angle 23 degree and angle 27 degree when it rotates around the sun and in each hour it twirls around itself by angle 15 degree. The sun is shining in Tabriz area for 9 hours which starts from angle radiation 0 (Zero) degree, then at 9:30 o'clock in the morning it becomes angle radiation 20 degree and finally, at noon it shines by angle radiation 30 degree. At the 15:30 o'clock in the afternoon it shines again by angle radiation 20 degree and in the end, at 16:30 o'clock the sun sets by angle radiation 0 (Zero) [4].

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Elements of Traditional Architecture houses of Tabriz with Cold Climate

2^{Chapter}

