# Assessing the Act of Iran's Supreme Council of Urbanization and Architecture about Land Use per Capita

<sup>1</sup>Azam Afsharnia

<sup>1</sup>M.A. in Urban Planning, University of Science and Technology, Tehran, Iran

Recieved 07.25.2014; Accepted 09.22.2014

**ABSTRACT:** Planners have regarded understanding urban use per capita since the beginning of new thinking of urban development. This was stared with its pragmatics toward primary comprehensive urban plans and became a source for urban development plans that have tried to adapt per capita and standards with country's conditions. Iran's Supreme Council for Planning and Architecture, determined standards per capita within the act of "explaining definitions, urban use and their per capita" in 2009. In the article, 50 cities chosen as sample in order to criticize the act of Iran's Supreme Council for Planning and Architecture on some urban per capita and surveying the amount of compatibility of cities' status in Iran with the mentioned act. Tables of current and suggested use are extracted using the comprehensive plan of each sample and the results are compared with the act of Iran's Supreme Council for Planning and Architecture. The method is descriptive- analytic and the research is applied in nature. Their research illustrates a great variance between cities status and the standard of ratification that had approved in Iran's Supreme Council for Planning and Architecture. Revision in some factors like population, position and economical elements helps us to correct the standard in order to improve the quality of life in our cities. The results imply that the act some issues such as different climates, role and position of functions and ethnic-cultural and economic problems are disregarded.

Keywords: Urban Use per Capita, Urban regulation, Act, Residential Use, Land-use Planning

### INTRODUCTION

Land-use planners often face the problem of having to deal with complex decision situations. This complexity is mainly because huge amounts of influential factors or variables have to be considered and that the interactions and internal dependencies between these different factors are sometimes difficult to understand. To illustrate, the relevance of a location factor might change due to the presence or absence of other factors (i.e. conditional relevance), or a change in (un)importance of a factor might be attributed to the fact that certain factors have or have not been assigned particular values (i.e. conceptual interaction). As such, the possibilities of internal relationships between factors are not limited to the inter-dependence of categorizations of factors, but the same holds for the (in) significance of complete factors. Both the quantity of the information and the interrelatedness factor, make that, human

Since late 19th and early 20th, following acute problems related to industrial development and rapid urbanization, theories, patterns and solutions have been suggested for organizing and regulating urban development in different countries. Primary patterns were affected by functionalist theory based on rational and comprehensive planning. Toward these patterns, way of using land was regarded which consequently turned plans' regard to land use and transport.

Some problems of comprehensive planning were outlined. These problem are disregarding multi-dimensional nature of the city, emphasis on physical planning through comprehensive urban planning, disregarding importance of purposing, deciding and decision making, disregarding the importance of combining physical and environmental, social and economic purposes, reduction of comprehensive approaches to comprehensive studies and collecting spread and causeless information and

beings are no longer capable of over viewing the complete land-use planning decision problem. (Witlox, 2005)

<sup>\*</sup>Corresponding Author Email: Azamafsharnia@yahoo.com

defining urban development plan in an inflexible framework (Land use map) (Alizadeh & Aslani, 2010).

In the article in hand, in order to criticize act of Supreme Council for Planning and Architecture, according to some limits ,only the most important urban per capita were chosen such as residential, educational and green space.

The main question of this article according to the role, position and function of Supreme Council for Planning and Architecture for physical development of the country, are how much the act of "explaining definitions, urban use and their per capita", has been useful and what defects does it have. Accordingly, it seems that:

There is a direct relation between climate and geographical conditions and urban per capita.

There is a direct relation between proximity of the city to metropolis and provinces and proximity to large-scale construction projects with urban per capita.

There is a direct relation between economic, ethnic and cultural issues and urban per capita.

### MATERIALS AND METHODS

The discussion includes surveying and classifying current usage suggested in development and constructional plans using analytic-descriptive method. This is an applied-suggestive study with quality approach using qualitative research methods associated with document review. In the research in hand, urban use per capita is studied based on valid and relevant sources and archive of the Urban Planning and Architecture Department of Ministry of roads and Urban Development.

#### **Definitions**

Urban use per capita: emergence main source of urban use per capita returns to the way to use limited urban lands and to allocate them to unlimited needs of citizens. Therefore, urban use per capita is a tool for organizing land use and leading it to be adapted to human needs and activities through settlements and is resulted from dividing used area to population.

Supreme Council for Planning and Architecture was founded in 1964 and its major functions are reviewing and approval of town planning regulations, determining and approving urban development plans and zoning study.

Act of Supreme Council: general policies of urban planning, standards and regulations of urban planning and architecture and development and construction plans surveyed and approved in supreme council are call act.

Residential use is used for land allocated for residence. It includes single settlement, multiple-family complexes, multiunit apartment garden- residential units and off-campus student residences.

# Reviewing Current Procedures to Determine per Capita

The goal of land-use optimization is to allocate land resources in order to balance the multiple, sometimes conflicting, objectives of ecological, economic, and social activities. Population growth and the deterioration of the natural environment result in acute shortages of per capita land. (Chen & Xiaobing, 2008) American Planning Association in 1932 has published some standards on planning and designing which was being completed until 2006. According to APA, prevalent plans in America are divided into 14. Then, toward comprehensive plans, it allocates region, urban designing and neighborhood unit of an area to determine land use standards through which land use map is considered as an important part. (Davoodpour & Majidi, 2007)

# Classification of Land Uses according to Land-**Based Classification Standard**

This standard can be called "classifying standard according to land" which indicates place information within urban use map.

# Classifying Uses according to International **Standard Industrial Classification**

This is a source classification for all economic activities the last reforms of which were approved in UN in 2003.

#### **Land Allocation Model**

Lawry extended first model of land allocation for providing land use map in 1960s. In Lawry's model, base employment is considered as main driver of growth. Putnam has combined land allocation models and transportation planning models. Put Man models are used for some parts of metro poles (Davoodpour & Majidi, 2007)

# Residential per Capita

Residence has been the oldest, primarily human need that has been reformed and evolved continually, and has always been influenced, and continues to be influenced, by thousands of factors including environmental, cultural, social, psychological, and economic ones. (Rahbarimanesh, 2013)

It is mentioned in "Urban Planning" written by Ismail Shie (Shie, 1993) that residential per capita in Iran is between 30 and 50m and the 3 kinds of suggestions offered according to dimensions, household size and toward different densities. Ismail Shie (Shie, 1993) has avoided dividing based on population in order to offer suggested residential per capita: least residential per capita in low densities 50m, least residential per capita through average densities 40m, least residential per capita in high densities 30m.

In the book "urban use per capita" (Habibi & Masaeli, 1999) published by national organization of land and residency, despite detailed discussions on uses about residential per capita, it is only mentioned that its average is 50m.

A foreign instance is Carolina in the USA. Development land in North West Carolina was limited and population kept growing. These pressures of population growth can use land inefficiently, in 1976, 6 acres of west lands were considered for residential units of north Carolina which was increased

Table 1: list of case studies and population (Source: Ministry of Road and Urban Development, 2011)

NO	Name Of cities	Source	Existent population (person) (2008-2009)	Proposal population (2021-2022)	province
1.	Afoose	Mad shahr Consulting Engineers	3805	4531	
2.	Boeen and Miandasht	Mad shahr Consulting Engineers	10479	12414	_
3.	Laybeed	Tarh & Tahavol Consulting Engineers	1650	2506	_
4.	Sejzi	Averc Consulting Engineers	4780	7348	
5.	Manzarieh	Garden City campus Consulting Engineers	6080	9979	Isfahan
6.	Hana	Bana & Abadi Consulting Engineers	6631	7820	_
7.	Rozve	Bana & Abadi Consulting Engineers	4916	6793	_
8.	Dorche	Atec Consulting Engineers	44500	56000	_
9.	Meshkat	Khod-Avand Consultant engineers	5176	6244	_
10.	Gerash	Pardaraz Consulting Engineers	27767	39978	
11.	Masiri	Arayeh Pars Consulting Engineers	7863	13448	_
12.	Zahaedshahr	Naghsh Pars Consulting Engineers	10293	12919	_
13.	Eshkanan	Arznegar system Consulting Engineers	7614	11719	_
14.	Khonj	Pars Naghsh Consulting Engineers.	20012	28983	Fars
15.	Ghir	City and Pars Consulting Engineers	17429	24333	_
16.	Baladeh	Mehraz Consulting Engineers	4860	7289	_
17.	Saadatshahr	Naghshpardazan shahreParseh Consulting Engineers	16273	21253	_
18.	Banarooyeh	Mehrazfars consulting engineers	9326	12550	
19.	Esfarvarin	Mehrazfars consulting engineers	12113	16291	_
20.	Shal	Aria Seven Cities Consulting Engineers	15430	21600	_
21.	Khakali	City Planning Consulting Engineers	3385	4401	Ghazvin
22.	Khoramdasht	Aria Seven Cities Consulting Engineers	6308	8535	_
23.	Nil shahr	Maab Consulting Engineers	6682	8400	
24.	Khaf	KhodAvand Consulting Engineers	26912	37740	Razavi Khorasa
25.	Ghooshchi	Shahr & Mohitbastan Consulting Engineers	3020	3834	_
26.	Siahcheshme	Mad City Consulting Engineers	15387	20213	_
27.	Takab	Naghshe-Mohit Consulting Engineers	46056	58162	West Azerbaija
28.	Sojas	Consulting Engineers Tarh & manzar	5846	9666	

# Continue of Table 1: list of case studies and population (Source: Ministry of Road and Urban Development, 2011)

NO	Name Of cities	Source	Existent population (person) (2008-2009)	Proposal population (2021-2022)	province
29.	Zarin-Abad	Consulting Engineers Tarh & manzar	2227	4156	Zanjan
30.	Fin	Shahr & Andishepars Consulting Engineers	3976	4395	
31.	Bandar Khamir	Pooya Naghshahr & Bana Consulting Engineers	11566	24488	_
32.	Goharan	Naghsh Pardazane Shahreparse Consulting Engineers	985	3104	_
33.	ZiaratAli	Shakhes Sazan Consulting Engineers	2506	3781	Hormozgan
34.	Hormoz	Tarh & Sakhte Hormozgan Consulting Engineers	5714	10242	_
35.	Azandarian	Tarh & Rahbordepooya Consulting Engineers	10297	11815	
36.	Ghorvedarjazin	Tarh & Rahbordepooya Consulting Engineers	9638	11947	Hamadan
37.	Shirinsoo	Averc Consulting Engineers	2753	5035	
38.	Omidieh	Maab Consulting Engineers	58616	72832	
39.	Zohre	Tarh Gostarebandar Consulting Engineers	1290	1512	Khuzestan
40.	Saland	Naghshepars Consulting Engineers	2079	2599	
41.	Hamidieh	Haft Share Rey Consulting Engineers	23485	33484	
42.	Asalooyeh	Tarhe Mohite Paydar Consulting Engineers	4779	10641	
43.	Nakhletaghi	Tarhe Mohite Paydar Consulting Engineers	7821	14842	Booshehr
44.	Ravansar	Shahrsazane Azarandish Consulting Engineers	16546	21010	
45.	Gilangharb	Shahrsazane Azarandish Consulting Engineers	21928	26207	Kermanshah
46.	Baghestan	Sharmand Consulting Engineers	71633	96270	
47.	Koohsar	Tarh & Memari Consulting Engineers	7769	10000	Tehran
48.	Mahdasht	Bavand Consulting Engineers	43108	54000	Alborz
49.	MohamadShahr	Tarh & Memari Consulting Engineers	83272	102000	
50.	Tankaman	Tarh & Memari Consulting Engineers	4742	6730	

Table 2: standard of Residential per capita (Source: Iran's Supreme Council for Urbanization and Architecture, 2010, 805).

population	Less than 50000 person	50000≥population≥ 250000	250000≥population≥ 1000000	More than 1 million
Residential per capita	Less than 50 m2	Less than 40 m2	Less than 35 m2	Less than 25 m2

to 37 acres by destroying domain of west mountain in 2006 (Vogler et al., 2010). In this plan per capita was not mentioned. In some cities especially in East Asia such as Bandung in Indonesia per capita is 45 and in Penang in Malaysia it is 18m (Davoodpour & Majidi, 2007).

Housing is a key issue to consider in delivering healthy and attractive communities. (Moeini, 2012) Sustainable housing should be well available, high-quality, economical, ecological, aesthetical design, comfortable and cozy one, which would better suit the needs of a person. Furthermore, dwelling houses, apartments or, in other words, housing premises, must be set out according to the conditions of that locality and must meet the established technical and hygienic requirements. (Maliene & Malys, 2009)

According to national standards in China for classifying and standardizing land use (1991) per capita is suggested 18-28m regarding China's conditions (Davoodpour & Majidi, 2007).

Suggested per capita in Habibi's opinion (Habibi & Masaeli, 1999), changes according to average separated parts, climates, household economic level etc. In the table below offered residential per capita by supreme council is available:

According to the results of surveying 50 cities fewer than 50000 persons, from 13 provinces the suggested residential per capita for Fars province had the most difference with act of supreme council followed by Hormozgan province. The average per capita for Fars is 142.56m and for Hormozgan is 136.63m. In cities of Fars province, Ashkenan gained the highest per capita which is 343.62 caused by high residential per capita in current conditions (235.57m).

Kermanshah province with 46.95m and Hamadan with 53.76m were closest to the act.

# **Educational per Capita**

Through suggested educational per capita by Shie, (Shie, 1993) per capita kindergarten, elementary school and high school are separately surveyed according to district, region and city, the whole amount of which is 4.4m and is close to per capita of supreme council. However, Habibi (Habibi & Masaeli, 1999, 2) has suggested least area for each pupil 40m2 according to standards of Ministry of education and least needed area for building educational units, number of classes, needed open

space, etc.

Out of 13 surveyed provinces, Kermanshah has the least per capita, which is 3.64., after that Tehran with 3.9m.

Dorcheh city in Isfahan province (2.48m), so just Isfahan and Mohammad-Shahr in Alborz (2.5m) have the least educational per capita.

## Green Space per Capita

Green and natural spaces in the cities are factors of ensuring psychological health of its residences (Tavakkoli & Majedi, 2013). Determining level and per capita of green space In Iran has been based on standards used in other countries.

Determining green space depends vastly on bioclimatic features of the region and city. Accordingly, green space in a desert town or a big city like Tehran cannot have same conditions of a seaport in Mazandaran province. However, knowing green spaces can be guidance for activities and policies. In most regions of the world, there are ones with similar climates and yet the specific conditions of the regions imply significant differences. Therefore, in order to design within any region or city these differences should be extracted so that the designer offers a sustainable design based on this necessary information compatible with same climate. Likewise, climate factors such as temperature, humidity, intensity and amount of annual rainfall, intensity and angle of sun light are counted as main factors (Moshiri, 2009).

According to studies of Department of Housing and Urban Development, common and acceptable per capita for urban green spaces in Iran cities is between 7 and 12m for each person which is a lower digit rather that index suggested by UN environment (20-25m for each person). However, in different cities on the country this number differs according to various climate and geographical features that the amounts are determined within proved plans for each city by abovementioned ministry.

Also through mentioned provinces, Khuzestan and Hormozgan have the most per capita, which are respectively 52.44 and 46.12.

Out of 13 surveyed provinces, Qazvin has the least per capita (7.39 m2), followed by Hamadan (9.03).

Table 3: residential per capita in case studies (Source: Ministry of road and urban development, 2011)

NO	Name Of cities	Source	Existent	Proposal	province
1.	Afoose	Mad shahr Consulting Engineers	95.7	104.5	
2.	Boeen and MianDasht	Mad shahr Consulting Engineers	64.2	121.5	
3.	Laybeed	Tarh & Tahavol Consulting Engineers	332.5	365.3	
4.	Sejzi	Averc Consulting Engineers	103.6	60	Isfahan
5.	Manzarieh	Garden City campus Consulting Engineers	109.68	106.21	
6.	Hana	Bana & Abadi Consulting Engineers	74.7	90.5	
7.	Rozve	Bana & Abadi Consulting Engineers	71.5	57.1	
8.	Dorche	Atec Consulting Engineers	56.42	48.37	
9.	Meshkat	Khod Avand Consultant engineers	79.18	94.9	
10.	Gerash	Pardaraz Consulting Engineers	79.1	96.4	
11.	Masiri	Arayeh Pars Consulting Engineers	126.6	146.2	
12.	Zahaedshahr	Naghsh Pars Consulting Engineers	75.1	70.4	
13.	Eshkanan	Arznegar system Consulting Engineers	235.57	343.62	Fars
14.	Khonj	Pars Naghsh Consulting Engineers.	91.24	163.3	
15.	Ghir	City and Pars Consulting Engineers	72.1	86.1	
16.	Baladeh	Mehraz Consulting Engineers	117.4	138	
17.	Saadatshahr	Naghshpardazan shahreParseh Consulting Engineers	63.2	93.9	
18.	Banarooyeh	Mehrazfars consulting engineers	84.1	145.1	
19.	Esfarvarin	Mehrazfars consulting engineers	84.65	92.64	
20.	Shal	Seven Cities Aria Consulting Engineers	58.64	59.08	— Ghazvin
21.	Khakali	City Planning Consulting Engineers	64.9	65	Ghazvin
22.	Khoramdasht	Seven Cities Aria Consulting Engineers	78.25	91.1	
23.	Nil shahr	Maab Consulting Engineers	85.7	100.14	
24.	Khaf	KhodAvand Consulting Engineers	61.43	60	Razavi Khorasan
25.	Ghooshchi	Consulting engineers of Shahrvamohitbastan	137.9	128.5	
26.	Siahcheshme	Mad City Consulting engineers	72.4	68.8	West Azerbaijan
27.	Takab	Naghshemohit Consulting engineers	38.85	68.79	
28.	Sojas	Consulting engineers Tarh & manzar	89.8	90.7	Zanjan
29.	Zarinabad	Consulting engineers Tarh & manzar	77.9	94.2	

Continue of Table 3: residential per capita in case studies (Source: Ministry of road and urban development, 2011)

NO	Name Of cities	Source	Existent	Proposal	province
30.	Fin	Shahr & Andishepars Consulting engineers	125.56	163.7	
31.	Bandar khamir	Pooya Nagheshahr & Bana Consulting engineers	99.43	79.76	_
32.	Goharan	Naghsh Pardazan-e- shahreparse Consulting engineers	78.6	54	Hormozgan
33.	Ziaratali	Shakhes Sazan Consulting engineers	89.20	306.32	
34.	Hormoz	Tarh & Sakhtehormozgan Consulting engineers	72.6	80	
35.	Azandarian	Tarh & Rahbordepooya Consulting engineers	62.37	57.21	
36.	Ghorvedarjazin	Tarh & Rahbordepooya Consulting engineers	55.36	36.52	Hamadan
37.	Shirinsoo	Averc Consulting Engineers	79.9	67.54	<del></del>
38.	Omidieh	Maab Consulting Engineers	55.90	68.35	
39.	Zohre	Tarh Gostarebandar Consulting Engineers	108	169.8	— Khuzestan
40.	Saland	Naghshepars Consulting Engineers	85.26	105.85	— Knuzestan
41.	Hamidieh	Haft Share Rey Consulting Engineers	35.9	29.2	
42.	Asalooyeh	Tarhe Mohite Paydar Consulting Engineers	82.64	71.6	Booshehr
43.	Nakhletaghi	Tarhe Mohite Paydar Consulting Engineers	79.64	70	
44.	Ravansar	Shahrsazane Azarandish Consulting Engineers	34.3	45	Kermanshah
45.	Gilangharb	Shahrsazane Azarandish Consulting Engineers	47.73	48.9	
46.	Baghestan	Sharmand Consulting Engineers	24.3	36.8	Tehran
47.	Koohsar	Tarh & Memari Consulting Engineers	95	70	
48.	Mahdasht	Bavand Consulting Engineers	59.5	45	— Alborz
49.	Mohamadshhr	Tarh & Memari Consulting Engineers	35	31	— AIDOIZ
50.	Tankaman	Tarh & Memari Consulting Engineers	79	65	

Table 4: educational per capita in case studies (Source: Ministry of road and urban development, 2011)

NO	Name Of cities	Source	Existent	Proposal	province
1.		Mad shahr Consulting Engineers	4.5	10.8	
2.		Mad shahr Consulting Engineers	12.9	9.8	
3.		Tarh &Tahvavol Consulting Engineers	11.16	8.8	
4.		Averc Consulting Engineers	7.5	8.2	
5.		Garden City campus Consulting Engineers	5.44	12.6	Isfahan
6.		Bana & Abadi Consulting Engineers	2.9	6.62	
7.		Bana & Abadi Consulting Engineers	5.1	7.6	
8.		Atec Consulting Engineers	1.18	2.48	
9.		Khod Avand Consultant engineers	3.77	4.66	
10.		Pardaraz Consulting Engineers	5.6	6.2	
11.		Arayeh Pars Consulting Engineers	8.74	11.5	
12.		Naghsh Pars Consulting Engineers	4.8	3.7	
13.		Arznegar system Consulting Engineers	6.71	10.53	Fars
14.		Pars Naghsh Consulting Engineers.	1.6	6.5	
15.		City and Pars Consulting Engineers	7.3	6.1	
16.		Mehraz Consulting Engineers	7.91	11.23	
17.		Naghshpardazan shahreParseh Consulting Engineers	6.4	6.51	
18.		Mehrazfars consulting engineers	2.7	5.5	
19.		Mehrazfars consulting engineers	2.82	3.62	
20.		Seven Cities Aria Consulting Engineers	2.56	4.45	Ghazvin
21.		City Planning Consulting Engineers	2.5	5.5	
22.		Seven Cities Aria Consulting Engineers	2.86	4.1	
23.		Maab Consulting Engineers	4.22	5.42	Razavi Khorasan
24.		KhodAvand Consulting Engineers	4.05	5.20	
25.		Shahr & Mohitbastan Consulting engineers	13.7	11.6	
26.		Mad City Consulting engineers	3.4	8.5	West Azerbaijan
27.		Naghshemohit Consulting engineers	2.51	3.72	
28.		Consulting engineers Tarh & manzar	5.1	2.5	Zanjan
29.		Consulting engineers Tarh & manzar	12.54	10.0	

Continue of Table 4: educational per capita in case studies (Source: Ministry of road and urban development, 2011)

		Source	Existent	Proposal	province
30.	Sha	hr &Andishepars Consulting engineers	15.05	16.8	
31.	]	Pooya Nagheshahr & Bana Consulting engineers	5.15	8.87	— Hormozgan
32.	Na	nghsh Pardazane shahreparse Consulting engineers	13.4	4.3	
33.		Shakhes Sazan Consulting engineers	13.26	20.91	
34.	,	Tarh & Sakhte Hormozgan Consulting engineers	11.4	12	
35.		Tarh & Rahbordepooya Consulting engineers	3.16	3.39	_
36.		Tarh & Rahbordepooya Consulting engineers	3.44	2.71	Hamadan
37.	F	werc Consulting Engineers	5.68	6.08	
38.	N	Maab Consulting Engineers	6.96	4.4	
39.	Ta	rh Gostarebandar Consulting Engineers	14.2	19.6	— Khuzestan
40.		Naghshepars Consulting Engineers	28.6	23.27	— Knuzestan
41.	]	Haft Share Rey Consulting Engineers	2.4	2.8	
42.	Tar	he Mohite Paydar Consulting Engineers	2.73	5.30	Booshehr
43.	Tar	he Mohite Paydar Consulting Engineers	3.78	5.3	
44.		Shahrsazane Azarandish Consulting Engineers	2.2	4.4	Kermanshah
45.		Shahrsazane Azarandish Consulting Engineers	3.95	2.88	
46.	Sha	armand Consulting Engineers	الم علم علم الألمال.	3.9	Tehran
47.	-	Farh & Memari Consulting Engineers	3.9	7	
48.	В	avand Consulting Engineers	"را _ [1.7] ما .	4	Alborz
49.		Farh & Memari Consulting Engineers	ر مال من المحاود	2.5	_
50.	Tankaman	Farh & Memari Consulting Engineers	8.6	7	

Table 5: Green space per capita in case studies (Source: Ministry of road and urban development, 2011)

NO	Name Of cities	Source	Existent	Proposal	province
1.	Afoose	Mad-Shahr Consulting Engineers	0	37.8	Isfahan
2.	Booeen and Miandasht	Mad-Shahr Consulting Engineers	3	58.6	
3.	Laybeed	Tarh &Tahavol Consulting Engineers	0	21.7	
4.	Sejzi	Averc Consulting Engineers	8	15.3	
5.	Manzarieh	Garden City campus Consulting Engineers	18.0	16.19	
6.	Hana	Bana & Abadi Consulting Engineers	3.6	21.7	
7.	Rozve	Bana & Abadi Consulting Engineers	0.7	49.6	
8.	Dorche	Atec Consulting Engineers	1.06	4.41	
9.	Meshkat	Khod Avand Consultant engineers	0	10.17	<del></del>
10.	Gerash	Pardaraz Consulting Engineers	4.8	20	Fars
11.	Masiri	Arayeh Pars Consulting Engineers	1.23	23.56	
12.	Zahaedshahr	Naghsh Pars Consulting Engineers	0.4	3.2	
13.	Ashkanan	Arznegar system Consulting Engineers	101.88	32.05	
14.	Khonj	Pars Naghsh Consulting Engineers.	5.68	32.5	
15.	Ghir	City and Pars Consulting Engineers	8.9	20.9	
16.	Baladeh	Mehraz Consulting Engineers	0	30.2	
17.	Saadatshahr	Naghshpardazan shahreParseh Consulting Engineers	4	9.67	
18.	Banarooyeh	Mehrazfars consulting engineers	2.2	15.6	
19.	Esfarvarin	Mehrazfars consulting engineers	0.31	9.82	Ghazvin
20.	Shal	Seven Cities Aria Consulting Engineers	1.45	7.02	
21.	Khakali	City Planning Consulting Engineers		3	
22.	Khoramdasht	Seven Cities Aria Consulting Engineers	1.63	9.7	_
23.	Nil shahr	Maab Consulting Engineers	5.02	17.56	Razavi Khorasan
24.	Khaf	KhodAvand Consulting Engineers	6.68	8.5	
25.	Ghooshchi	Shahr & Mohite bastan Consulting engineers	0.5	8.7	West Azerbaijan
26.	Siahcheshme	Mad City Consulting engineers	3.1	23.1	
27.	Takab	Naghshemohit Consulting engineers	2.42	10.98	
28.	Sojas	Consulting engineers Tarh & manzar	1.2	19.5	Zanjan
29.	Zarinabad	Consulting engineers Tarh & manzar	7.68	15.5	

Continue of Table 5: Green space per capita in case studies (Source: Ministry of road and urban development, 2011)

NO	Name Of cities	Source	Existent	Proposal	province
30.	Fin	Shahr & Andishepars Consulting engineers	1.93	41.9	Hormozgan
31.	Bandar khamir	Pooya Nagheshahr & Bana Consulting engineers	7.10	21.62	
32.	Goharan	Naghsh Pardazane shahreparse Consulting engineers	0	9.9	
33.	Ziaratali	Shakhes Sazan Consulting engineers	-	147.19	
34.	Hormoz	Tarh & Sakhtehormozgan Consulting engineers	7	10	
35.	Azandarian	Tarh & Rahbordepooya Consulting engineers	1.22	5.76	Hamadan
36.	Ghorve darjazin	Tarh & Rahbordepooya Consulting engineers	6.40	8.23	
37.	Shirinsoo	Averc Consulting Engineers	9.06	13.1	
38.	Omidieh	Maab Consulting Engineers	22.40	20.51	Khuzestan
39.	Zohre	Tarh Gostarebandar Consulting Engineers	2.7	119.1	
40.	Saland	Naghshepars Consulting Engineers	65.72	60.06	
41.	Hamidieh	Haft Share Rey Consulting Engineers	1.5	10.1	
42.	Asalooyeh	Tarhe Mohite Paydar Consulting Engineers	2.89	15.0	Booshehr
43.	Nakhletaghi	Tarhe Mohite Paydar Consulting Engineers	4.22	12	
44.	Ravansar	Shahrsazane Azarandish Consulting Engineers	7.2	12	Kermanshah
45.	Gilangharb	Shahrsazane Azarandish Consulting Engineers	7.3	22.5	
46.	Baghestan	Sharmand Consulting Engineers	1.9	13.3	Tehran
47.	Koohsar	Tarh & Memari Consulting Engineers	8.1	45	Alborz
48.	Mahdasht	Bavand Consulting Engineers	"ا به افعرها، م	8	
49.	Mohamadshhr	Tarh & Memari Consulting Engineers	3 (3)	8	_
50.	Tankaman	Tarh & Memari Consulting Engineers	19	5.6	

### RESULTS AND DISCUSSION

Following rapid urbanization, theories, patterns and solutions have been suggested for organizing and regulating urban development in different countries. Primary patterns were affected by functionalist theory based on rational and comprehensive planning.

In this paper, it has been attempted to describe and evaluate the Residential per capita, the educational per capita and the Green space. The problems in non-benefit land use (like educational land use) are more than other land uses.

The article in hand has tried to use all cities within different climates so that the results can be generalized;

There are two groups of per capita, one includes all citizens such as parks and the other only includes some groups of citizens, such as education and due to the changes of these groups population rather city population, the efficiency standard must be determined first and then according to its ratio to whole population, it is calculated for whole city. It is not correct to consider a certain standard of this group for the whole city (Mashhoodi, 2010).

Functions mostly include infrastructure and open space and the only groups like green spaces just contain open space so their per capita is equal to land per capita. For use infrastructure includes all or part of them, determining land per capita is not correct, because it changes with density. Therefore, the per capita of infrastructure and land should be founded separately based on density in each city (or different parts of a city) to reach different land per capita.

For instance, if toward a per capita use there are 6 meters infrastructure and 1 meter open space and the building has single floor, land per capita is 7 meter and it has two floors land per capita is 4 meters (6/2 +1=4) and has 6 floors, land per capita would be 2 meters (Mashhoodi, 2010).

Due to some limitations to choose 50 cities, population under 50000 samples were chosen out of 13 sample provinces. 8 cities from Isfahan, 9 from Fars, 4 from Qazvin, 2 from Khorasan, 3 from west Azerbaijan, 2 from Zanjan, 5 from Hormozgan, 3 from Hamadan, 4 from Khuzestan, 2 from Booshehr and 2 from Kermanshah and 5 from Tehran and Alborz, which are separately mentioned in the table below.

Random sampling is used in this study. Out of 1012 cities in 2006, 85.8% have had less than 50000 populations. Therefore, out of 866 cities fewer than 50000 populated, 5.77 of cities (50) were chosen approved between 2009 and 2011.

The residents' needs and aspirations usually make basis for their judgments about the conditions of residential environment. In addition, residents' satisfaction of residential environment conditions implies a high degree of congruence between actual conditions and residents' desired situations.

Residential per capita index is a key index for understanding housing. Contrary to many housing indexes that are related to one of economic, social, cultural, physical or environmental factors and aspects, residential per capita index relates to all mentioned aspects closely. Economic factors of society from microeconomics to macroeconomics and household's financial power can be effective through determining them. Social and cultural features of society and household also have important role toward infrastructure of housing per capita and households' needs. Furthermore, physical and environmental features, conditions and facilities play a significant role within amount of this index or planning for it.

What is important from point of view of social environment is amount of public green space, i.e. the green space through which people commutes freely, it is called also social green space. Thus, concept of green space per capita can only be used for that kind of green space which is prepared for leisure and playing.

It is to be mentioned that in some cities suggested amount of green space is less in city scale due to forest park or public or private green space in country.

Generally increase in some benefit per capita (like commercial) lead to decrease in non-benefit per capita (like educational per capita or green per capita)

#### CONCLUSION

Sometimes, land use per capita is not a proper standard for explaining balance of city use and current facts especially by mere reliance on population. These differences were surveyed through cities samples in several climates, because many cities are necessarily developed horizontally on surface due to their climates.

Most south cities have their certain specifics according to geographical issues. For instance in Ziarat-Ali and Fin in Hormozgan province, houses are built separately because of climate and natural need for air Curran. This has caused high per capita of housing in these cities so that city span is increased. In Fin city in Hormozgan, according to city conditions a special approach called Eco-city is used for planning development basis. Therefore, current per capita suggested by consultant are different way from the Act.

In desert towns in central parts of Iran, allocating per capita to use is quite different from the other parts due to environmental conditions. In these regions according to hot air, cities are so formed that influence of airflow through the city is necessary and has caused cities' development horizontally. Therefore, current and suggested use per capita of development and constructional plans are higher.

Furthermore, there are some instances of different conditions, the per capita of which is less than Act. Cities in cold areas and those with topographic limits are some examples. Cities like Siah Cheshmeh in West Azerbaijan are in same conditions. In these cities, textures are mostly compressed due to climate. Similarly, most uses have low amounts.

The other effective factors on determining urban per capita such as proximity to big cities and the province or being close to some large-scale constructional projects cause increase of economic value of the land. This also causes changes in some

suggested urban per capita which is not comparable with similar cities. Koohsar and Tankaman cities on Alborz province and Baghestan in Tehran and other hostel cities around big cities are samples of Noncompliance of most suggested per capita with mere population standard.

Ethnic-cultural issues also effect on determining urban per capita. Currently there are several cities with different ethnics or religions in them. This issue has caused more per capita for some special uses like Mosques, cemetery, cultural centers and etc. for instance in Lengeh city due to Shiite and Sunni people there several religious and cultural centers in the city so that regarding cultural and ethnic differences in many cities challenges determining fixed per capita for all cities in some uses. Therefore, there are some issues to be regarded in order to review the act:

Regarding current state of the cities and per capita;

Regarding use transmittal;

Regarding some large-scale constructional projects or big cities and the provinces near some cities;

Regarding cultural and ethnic issues;

Regarding climate, natural and geographical status and topographic and environmental limits.

#### REFERENCES

Alizadeh, F., Aslani, R. (2010). *Critique of urbanism and architecture on per capita land use*. Tehran: urban planning and architecture vice.

Arayeh Pars Consulting Engineers. (2010). *Comprehensive Plan of Masiry City*. Housing and Urban Development organization, Fars province.

Arznegar system Consulting Engineers. (2010). Comprehensive Plan of Ashknan City. Housing and Urban Development organization, Fars province.

Atec Consulting Engineers. (2010). *Comprehensive Plan of Dorcheh City*. Housing and Urban development organization,Isfahan province.

Averc Consulting Engineers. (2011). *Comprehensive Plan of Sejzi City*. Housing and Urban development organization Isfahan province.

Averc Consulting Engineers. (2011). *Comprehensive Plan of Shirinsoo City*. Housing and Urban development organization Hamedan province.

Bana & Abadi Consulting Engineers. (2011). *Comprehensive Plan of Rezveh City*. Housing and Urban Development organization, Isfahan province.

Bana & Abadi Consulting Engineers. (2011). *Comprehensive Plan of Hanna City*. Housing and Urban development organization, Isfahan province.

Bavand Consulting Engineers. (2010). *Comprehensive Plan of Mahdasht City*. Housing and Urban development organization alborz province

Chen, Y., L, & Xiaobing., S, W. (2008). Simulating the optimal land-use pattern in the farming-pastoral transitional

zone of Northern China, Computers. *Environment and Urban Systems*, 32 (3), 407–414.

City and thought Pars Consulting Engineers. (2010). Comprehensive plan of Ghir city. (2010). Housing and Urban Development organization, Fars province.

City Planning Consulting Engineers. (2011). *Comprehensive Plan of Khakaly City*. Housing and Urban Development organization, Qazvin province.

Davoodpour, Z., & Majidi, A. (2007). *Scrutinizing the definitions, concepts of urban land per capita*. the Center for the Study and Research of Urban Planning and Architecture.

Garden City campus Consulting Engineers. (2010). *Comprehensive Plan of Manzarieh City*. Housing and Urban development organization, Isfahan province.

Habibi, M., & Masaeli, S. (1999). *Per capita urban land, Tehran.* the National Land and Housing, urban development ministry publication.

Haft Share Rey Consulting Engineers. (2010). *Comprehensive Plan of Hamidieh City.* Housing and Urban development organization Khoozestan province.

Iran's supreme council of urbanization and architecture. (2010). Collection of ratification of Iran's supreme council of urbanization and architecture. Tehran. Ministry of Housing and Urban Development, Urban Planning and Architecture: AzadPeima publication.

Jahan Pars Consulting Engineers. (2011). *Comprehensive* plan of Shal city. Housing and Urban Development organization, Qazvin province.

KhodAvand Consultant engineers. (2010). *Comprehensive Plan of Meshkat City*. Housing and Urban Development organization, Isfahan province.

KhodAvand Consulting Engineers. (2011). *Comprehensive* plan of Khaf city. Housing and Urban Development organization , Khorasan Razavi province.

Maab Consulting Engineers. (2010). *Comprehensive* plan of Nylshahr city. Housing and Urban Development organization, Khorasan Razavi province.

Maab Consulting Engineers. (2010). *Comprehensive plan of Omidieh city*. Housing and Urban Development organization , Khoozestan province.

Mad City Consulting Engineers. (2010). *Comprehensive* plan of Booeen and Miandasht city. Housing and Urban Development organization, Qazvin province.

Mad City Consulting Engineers. (2010). *Comprehensive Plan of Afous City*. Housing and Urban development organization, Isfahan province.

Mad City Consulting engineers.(2010). *Comprehensive Plan of Siahcheshmeh city*. Housing and Urban Development organization, West Azerbaijan Province.

Maliene, V., & Malys, N. (2009). High-quality housing—A key issue in delivering sustainable communities. *Building and Environment*, 44, 426–430.

Mashhoodi, S. (2010). Per capita of urban users, Consulting engineers Parsoomash. Secretary of the Supreme Council of

the Town Planning and Architecture.

Mehraz Consulting Engineers. (2010). Comprehensive plan of Baladeh city. Housing and Urban Development organization, Fars province.

Mehrazfars consulting engineers. (2010). Comprehensive plan of the Banarouyeh city. Housing and Urban Development, Fars province.

Ministry of road and urban development. (2011). Archive of ministry of road and urban development. Ministry of road and urban development.

Moeini, M. (2012). Impact of In-between Spaces on Residential Environment Quality (A Case Study on Public Housing in Kerman). International Journal of Architecture and Urban Development, 1(3), 29-35.

Moshiri, S.H. (2009). Sustainable design based on a hot and humid climate. Hoviat-e-shahr, 4(3), 39-46.

Naghsh-e-Mohit Consulting engineers. (2010). Comprehensive plan of Takab city. Housing and Urban Development organization, Isfahan province.

Naghshepars Consulting Engineers. (2010). Comprehensive Plan of Saland City. Housing and Urban Development organization Khoozestan province.

NaghshePars Consulting Engineers. (2011). Comprehensive Plan of Zahedshahr City. Housing and Urban Development organization, Fars province.

Naghshpardazan shahreParseh Consulting Engineers. (2011). Comprehensive plan of Saadatshahr city. Housing and Urban Development organization, Fars province.

Pardaraz Consulting Engineers. (2011). Comprehensive Plan of Gerash city. Housing and Urban Development organization, Fars province.

Pars Naghsh Consulting Engineers. (2010).comprehensive plan of the Khonj city, Housing and Urban Development Organization, Fars province.

Pooya Nagh-e-shahr & Bana Consulting Engineers. (2010). Comprehensive Plan of Bandar Khamir City. Housing and Urban Development Organization, Hormozgan province.

Rahbarimanesh, K. (2013). Residential Model and the Role It Plays on Human Relations in Residential Complexes. International Journal of Architecture and Urban Development, 3(3), 39-48.

Seven Cities Aria Consulting Engineers. (2010). Comprehensive plan of Khoramdasht city. Housing and Urban Development organization, Qazvin province.

Aria Cities Consulting Engineers.(2010). Comprehensive plan of the Esfarvaryn city. Housing and Urban Development organization, Qazvin province.

Shahr & Mohitebastan Consulting engineers. (2011). Comprehensive Plan of Ghooshchi City. Housing and Urban Development Organization, Western Azerbaijan.

Shahrsazane Azarandish Consulting Engineers. (2010). Comprehensive Plan of Ravansar City. Housing and Urban development organization Kermanshah province.

Shahrsazane Azarandish Consulting Engineers. (2010). Comprehensive Plan of Gilangharb City. Housing and urban development organization Kermanshah province.

Shakhes Sazan Consulting Engineers. (2010).Comprehensive Plan of ZiaratAli City. Housing and Urban development organization Hormozgan province.

Sharmand Consulting Engineers. (2010). Comprehensive Plan of Baghestan City. Housing and Urban development organization Tehran province

Shie, I. (1993). An introduction to Urban Planning. Tehran: publication of University of Science and Technology.

manzar Consulting engineers. (2010).& Comprehensive Plan of Sojas City. Housing and Urban development organization Zanjan province.

& manzar Consulting engineers. Comprehensive Plan of Zarinabad City. Housing and Urban development organization Zanjan province.

Tarh & Rahbordepooya Consulting engineers. (2010). Comprehensive Plan of Ghorve-darjazin City. Housing and Urban development organization Hamedan province.

Tarh & Rahbordepooya Consulting engineers. (2011). Comprehensive Plan of Azandarian City. Housing and Urban development organization Hamadan province.

Tarh & Sakhtehormozgan Consulting engineers. (2010). Comprehensive Plan of Hormoz City. Housing and Urban development organization Hormozgan province.

Tarh & Tahavol Consulting Engineers. Comprehensive Plan of Laybeed City. Housing and Urban development organization Isfahan province.

Tarh Gostarebandar Consulting Engineers. (2010). Comprehensive Plan of Zohre City. Housing and Urban development organization Khoozestan province.

Tarhe Mohite Paydar Consulting Engineers. (2010). Comprehensive Plan of Asalooyeh City. Housing and Urban development organization Booshehr province.

Tarhe Mohite Paydar Consulting Engineers. (2010). Comprehensive Plan of Nakhletaghi City. Housing and Urban development organization Booshehr province.

Tavakkoli, N., & Majedi, H. (2013). Performance of green and natural environment on mental health-mental. Hoviat-eshahr. 3(1),21-22

Vogler, J., Shoemaker, D., Dorning, M., & Ross, Mr. (2010). Mapping Historical Development Patterns And Forecasting Urban Growth in Western North Carolina" 1976-2030. Charlotte: The center for applied GIS science at UNC Charlotte.

Wiley, A. (2006). American Planning Association, planning and urban design standard. New Jersey: publication of Architectural Graphic Standards.

Witlox, F. (2005). Expert systems in land-use planning, Department of Geography, Ghent University Krijgslaan 281 (S8), B-9000 Gent. Belgium, Expert Systems with Applications, 29(1), 437-445.