

## Regional Landuse in Iran Based on SWOT Index (a Case Study: Iran-Iraq Frontier)

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### Abstract

In today's world, land is considered as one of the scarce gifts, so there is a competition between different human activities including farming and gardening, forest and pasture, industry and mine, city and village and the like. Wise allocation of land to these activities is one of the land-use discussions. On the other hand, land-use comprises adjusting the relationship between human, space and human activities in the space aiming at logical exploitation of all facilities to improve material and spiritual status of the society in the long run.

Since regional land-use and planning is in fact a process forming from the interaction between natural and human made functions in geographical space, now viewing regional land-use in Islamic Republic of Iran and Turkamanestan frontline, present article is formulated.

### 1. Introduction

It is just five decades, since Iranian researchers and planners have got familiar with the concept of land use. Geographers consider this as exploiting land and its resources in applied geography or planning view, some of the definitions will be addressed in the forthcoming: Study of land use provides a new organization of natural resources and human activities and addresses logical organization and adjustment of the present life space for any kind of human communities.

Land-use is meant to determine potential power and competence of the lands and on the other hand determine their exploitation type; or it is a process indicating suitability of any usage of the land regarding its activities (Majnounian, 1997).

Today, some geographers describe seven roles for life and human living on the earth as- reproduction and survival, residence, job, education, supplying needs, transportation and leisure time.

All of which requires space and locale or land and its geographic environment. Studying and comparing the above perspectives, many common features are demonstrated based on geographical classifications and perhaps it is possible to define land-use as: exploiting land and its resources in applied geography or planning to balance part of the relationship between human and environment in different geographic spaces regarding any

land status. Since researchers deal with two factors of human and nature in their studies, these studies essentially include action-reaction diagrams between the two in terms of living spaces, locales, and zones and since any exploitation of the environment is just made in a framework of a kind of socio-economic order, inclusion of the land-use studies of different socio-economic order factors actions is also plotted.

### 2. Applied Dimensions of Land-use

Because the main and final goal of any land-use is to determine and recognize human life issues and environment management and designing and suggesting appropriate solutions, land-use studies cannot be useful away from this duty. So, any land-use study will result in presenting a document in which a new order of natural resources and human activities organization on the land are demonstrated. So, in the stage of planning and suggesting desirable policies, land-use considers logical organization and adjustment of present living space for any human communities, in this stage, studies make use of spatial planning techniques and achieve following goals by employing evolutionary forms of "economic activities local distribution", "growth pole", and "lack of focus":

- Envisions development poles, axis, and centers and points and presents regional development structure.
- Addresses designing and determining underlying and

central services networks.

- c. Proposes and designs logical residential and population gathering.
- d. Provides rural and urban order proportionate to designed social and economic image.
- e. Plans local planning for economic activities of each zone and provides required advices.
- f. Plans even socio-economic activities classification to provide required advices for each sector.

Since in the past economic planning was just focused on national production and consumption and environmental and structural effects were missed in evaluation of the activities; now it must be noted that spatial and geographic distribution of economic activities and environmental measures are of the major land-use basics that have to be regarded in local-spatial planning. Inter alia, land-use comprises even urban and rural zones development in terms of consistent and organized order, social and economic services and facilities appropriate for requirements, natural and human environment.

### 3. Necessity of Land-use

Land-use studies in a long run monitors cultural, economic, social, political and army issues of the country and envisions the prospect of development and also it is a tool for informed equipment and organization of the space to achieve development goals. In fact it can be said that pilot plan of land-use is a design establishing national space organization in the framework of total policies and goals of development.

Land-use planning and structural design both national and regional do not have a fixed meaning; that is a country both evolutions through the time and is different in different countries. So we are better off asking that which planning, land-use, structural design do we mean? Since in some way structural design is not either construction planning or land-use and in some other way it is both, land-use or structural design is wise space management. In today's world, land is considered as one of the scarce gifts, so there is a competition between different human activities including farming and gardening, forest and pasture, industry and mine, city and village and the like. Wise allocation of land to these activities is one of the land-use discussions. Land-use planning and structural design are usually done in three national, local and regional levels, high level decision making is an advice for the lower level one which in turn administers total policies of national planning and even regional through local plans.

Time-wise, structural plans are classified into three long-term plans with more than 20 years, midterm between 10 and 20 years, short-term between 4 and 6 years, in this regard they are different from socio-economic plans. In recent plans, midterm and short-term plans are considered 5 and 1 year,

respectively.

Generally, the past neglected land-use, so the first question posed is that why do we have to give ourselves hard time with determining economic activities establishment locale? In response, it must be said that providing employment, lowering the expenses, protecting the environment, sustainable development and .... have made land-use an absolute must.

### 4. Land-use in Iran

Land-use has a long history in Iran. The idea of land-use first appeared in the mid 1960-70s in Social Research and Study Ins., Tehran University, under the titles of country construction and sustainable economic spatial scheme and then moved to Budget and Planning Organization.

Pilot land-use plan of Islamic Republic of Iran was published in the first half of 1980s in two books and 6 volumes by Regional Planning Office of Budget and Planning Organization. The first book describes country space organization principles and general and in sum land-use studies. In three volumes of the second book, population and societies, activities, climate and land were addressed, respectively. In the fifth called "Recognizing Current Status of the Sectors"; capabilities and facilities, problems and predicaments, trends and attitudes are discussed and the sixth volume includes plots. In the introduction of the first volume, we read: "land-use is organizing the relationship between human and space and human activities to logically exploit all possibilities to improve material and spiritual status of the society based on ideological values, cultural history and using experience and knowledge through time", in this regard land-use plan is a design constructing national space organization in the framework of development total policies and goals.

In 2003, it was decided that Iran lanuse plan was redesigned and re-planned; with this difference that this time beside national plan, land-use plans were provided at province and regional levels, however, despite beginning of land-use studies, in practice they were suspended because Management and Planning Organization was closed. But during 2011 in fifth economic, social and cultural development plan in parliament and government, in regime prudence recognition conference, it was also addressed for being exploited but not passed through formal formulation, yet.

### 5. Iran and Turkamanestan Land-use Plan

Frontiers are the interface of nations and governments in social, cultural, economic, communicative and the like fields both formally and informally. Despite technological advances, not only conventional (classic) borderlines are nit removed but also new frontiers like spatial, indent and electronic have emerged. Presence of conflict and or compromise of nations, races, cultures, transportation facilities and economic and

geo-economic advantages and also common environment and climate can result in both countries development and or war between two neighbors. So United Nation Organization defines borderline as:

“Borderline is not a line, but a vertical surface distinguishing space, soil, underground, territory and dominance of one country from another”. Based on the definition, it can be acknowledged that:

“Borderlines describe spatial, physical, economic, social and political development level of two countries; the less the difference, the more the development possibility and the more the difference, the less the development possibility”.

## 6. Iran and Turkmanestan Frontier

Two countries of Iran and Turkmanestan have common 1190 km borderline from Caspian sea to Zolfagar estuary out of which 786 km land and 404 km water (river) borderline. Because the existence of long borderlines requires a comprehensive borderline land-use plan, we address the issue in next pages based on SWOT index and in a land-use view.

## 7. Analytical Model of SWOT and how to employ it in Environmental Planning

SWOT technique or matrix is the short form of Strengths, Weaknesses, Opportunities and Threats and sometimes it is also called tows analytic model, a tool for detecting threats and opportunities existing in outer environment of a system and recognizing internal weaknesses and strengths. On the other hand, the model is an organizational one contributing the internal resources to analyze themselves weak and strong periods and coordinate them whole through the external environment in opportunity and threat periods. In fact, the method is the best strategic one for organizing and landusing the spaces. In principle, SWOT is a strategic planning tool. SWOT method is the method of detecting Strengths, Weaknesses, Opportunities and Threats and in environmental planning, it is used as evaluative tool of internal region weaknesses and strengths and external region opportunities and threats.

In regional land-use, in fact, following points are considered with using SWOT method:

- External analysis: determining major threats and presented opportunities in external environment.
- Internal analysis: in fact auditing of the resources and or providing a list of weaknesses and strengths regarding each one of these strategic subjects.

In general, it must be said that the technique is a tool for analyzing current status and compiling spatial-local development policies in environmental planning (Table 1).

Table 1: SWOT matrix quartet policies and the way to determine it

Weaknesses (W)	Strengths (S)	SWOT matrix	
Description	Description		
WO policies (min-max) using opportunities lost by weaknesses	WO policies (min-max) using opportunities gained by strengths	Opportunities(O)	Subject
WT policies (min-max) reduce weaknesses and prevent from threats	ST policies (min-max) employ strengths to avoid threats	Threats(T)	Subject

To find Strengths, Weaknesses, Opportunities and Threats in the model, 8 steps have to be considered:

- Providing a list of major threats existing in external environment of the area under study
- Providing a list of major threats existing in external environment of the area under study
- Providing a list of major internal strengths existing in of the area under study
- Providing a list of major internal weaknesses existing in of the area under study
- Comparing internal strengths and external opportunities and the result is included in so strategy group.
- Comparing internal weaknesses and external threats and the result is included in wt strategy group.
- Comparing internal strengths and external threats and the result is included in ST strategy group.
- Comparing internal weaknesses and external threats and the result is included in WT strategy group.

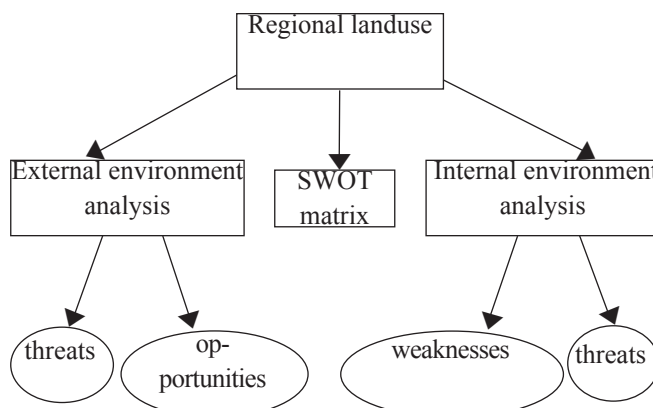


Figure 1: Strengths, Weaknesses, Opportunities and Threats in the model

Regarding the debates addressed, in SWOT framework, environmental land-use is in fact: monitoring, evaluating and publishing the information gained regarding external and internal environment of a spatial organization, among the country's key persons, it is at the same time a tool for preventing from strategic companies and estimation of long term health. The technique is used for environmental planning.

SWOT matrix provides the opportunity for formulating four overlapping policies or choices based on the system status as follow (Table 2):

Table 2: Environmental development policies and initiatives matrix

SWOT ANALYSIS (ex/internal factors)	Opportunities	Threats
Strengths	competitive/aggressive policies (SO)	Diversity policies (st)
Weaknesses	Review policies (WO)	Defensive policies (wt)

Defensive policies (wt)

Review policies (WO)

Diversity policies (st)

Competitive/aggressive policies (SO)

Reviewing capabilities, predicaments and providing policies of regional land-use in Iran and Turkamanestan borderline based on findings from human and natural functions analysis in the area, we observe wide and extensive potential in the zone.

From the developmental limitations and predicaments, geographic isolation of natural features and factors having developmental characteristics and presence of long cold season and too much cold in south and too much cool in north areas and though topography of the borderline as well as disorganized poor socio-economic indices near the borderline including unemployment rate, severe economic poverty, native, religious activities and obvious deprivations of the population of basic needs and also dissociations of socio-economic bounds with national socio-economic components and in some cases even opposition and alliance can be mentioned.

However, suitable weather in cold seasons in most part of the Iran and Turkamanestan borderline area and appropriate climate for farming export-profitable products and ripe fertile plains have set the chance for exploiting much in the area. And, suitable climate and touristic attractions create opportunities to develop tourism in forests and different Iranian and Tourani civilization centers that can be considered as developmental potentials of the line.

Premium status of Iran and Turkamanestan borderline to tenure commercial role between two countries and foreign transit between Mediterranean Europe and Arab peninsula and the possibility of legal transactions regarding power and gas have also endowed the line a prior position.

So, in the rest, weaknesses, predicaments, talents and capabilities and also strategies and policies for exploiting local-spatial functions of the zone under study are addressed based on SWOT matrix analysis (Table 3).

Table 3: Weaknesses (threats) and strengths (opportunities) [SWOT] analysis of resulting from local-spatial applications of Iran and Turkamanestan frontier

Weaknesses and threats (WT)	Strengths and opportunities (SO)
1. Frontier areas being isolated from the country's population foci and major national development pivots	1. Transit capability of the frontline because of being in the neighborhood of the central of Asia
2. Low population density of the frontline and dispersion of ecological zones	2. environmental diversity and ingenuity of natural extensive prospects
3. Being next to drug dealing pivot	3. particular geographical status of the frontline and appropriate climate conditions provided wide part of the area with industrial arable possibilities from fall to summer
4. Hard climate conditions in cool seasons	4- intense sun radiation in the area created the possibility of exploiting solar energy
5. Poor plantation and far depression of floral varieties and lack of dense forest areas	5. presence of fossil energy and gas on the frontline
6. Disorganized condition of the frontline social indices	6. Suitable arable climate for export profitable products, flat plains and ripe lands in north-south areas of the province
7. Intense economical poverty and overt deprivations of the area's population basic needs	7. suitable climate for developing tourism on the frontline

8. Interruption and in some cases even alliance and opposition of the area's residents socio-economic bounds with national socio-economic components
9. Very low proportion of frontline in National Gross Production
10. Lack of exchange possibility and in particular non-dollar exchanges and neighbor exchanges in formal centers all along the week
11. Lack of foreign investment in different parts of the frontline in specific in the areas under construction
12. Lack of appropriate banking, financial and monetary relationship between two countries
13. High level of unemployment and reduction of income from different economic activities on frontline
14. Large number of security inspections in tariff and export/import bans
15. Lack of appropriate private sector employer, investment, contractor and consulting organizations
16. Rapid growth and high young index of the population
17. Low sanitary level in the frontline
18. Social structure of the area is based on nomad, rural and urban societies with underdeveloped economies and production sources limitation which resulted in illegal ways of money making
19. Illegal transportation in the frontline and between frontier tribes and neighbor countries resulting in intensity of domination on the frontline
20. Wide dispersion of frontline rural population and migration to domestic urban areas
21. Lack of technical-professional and job and knowledge education development in the frontline because of low applicant number
22. Presence of social disqualifications for uneven distribution of economic opportunities and access to social welfare services
23. Destroying livelihood and local jobs indicating natural and cultural sources of frontier residents
8. Presence of 30 perpetual frontier rivers for arable and civil exploitation
9. Wetlands with high ecologic value
10. Plantation diversity (elements from India and Pakistan, Arab, Iranian-Turani, Urasia)
11. Specific fauna species in the frontline
12. Combination of natural and cultural attraction in protected zones
13. Taking required actions to further bounding free zones activities and commercial structure of the area in a long-term plan
14. Giving tax-, profit- and bank-commission- exempts and increasing repayment length of loan-giving facilities by the government and banks
15. Forecasting provision of required security in different dimensions (physical, economic, social) to facilitate investment and employment development process on the frontline
16. Regarding the renovation and development of business sector with an emphasis on e-commerce
17. Expectation of oil income and non-oil export incomes increase and as a result per capita income increase in current and future years
18. Transit role with value added creation and local employment regarding relative advantages in the industry in frontline
19. Improvement of social, cultural and economic environment of the province aiming at attracting participation between native and non-native forces and capitals in the process of development and strengthening of social, cultural and economic bounds between the frontline and national level
20. Regarding security provision in different dimensions to facilitate frontline development process
21. Creating required chance for attracting population from other areas of the country and increasing the frontline proportion share of total country population
22. National and international insurance services expansion for supporting commercial activities
23. Presence of specific and super-specific healthcare specially in, Sarakhs and Ghoochan for providing healthcare services to Central Asia



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| <p>24. Destroying or stereotyping conventions and native-local cultures</p> <p>25. Possibility of presence of religious and conventional groups and agencies with trouble making developmental plans on the way to frontier plans development and administration</p> <p>26. Drug transit using frontline status to Central Asia, Russia and Europe as underlying the insecurity and illegal transportation and prevention from formal economic activities development</p> | <p>24. Establishing development foci in deprived areas and creating production and underlying capacities for fertilizing capabilities and preventing from marginalization and depletion of the areas in regional balance making in frontline development plan</p> <p>25. Forecasting surface waters comprehensive plan</p> <p>26. Reinforcing existing roads network in particular transit</p> <p>27. South-north international corridor plan from Indian Sub-continent and Hormoz channel to Central Asia countries</p> <p>28. Reinforcing entry/exit fields of the frontier with a priority to developing tariff services quality</p> <p>29. Construction and equipping suitable and non-expensive residences for domestic tourism through private sector participation and cooperation</p> <p>30. Airport development of frontier cities in particular Bojnord and Sarakhs.</p> |
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## 8. Conclusion

Wise allocation of land to different activities is one of the land-use discussions and the aim of formulating the relationship is logical exploitation of all resources for material and spiritual status of the society in the long run. Besides, there are different human and environmental factors in any social and economic system that their way of affecting including natural environment, social and human made environment has an influence on sustainability or non-sustainability of the environment. SWOT

logic strategic planning on Iran and Turkamanestan frontline in land-use view indicates that Iran and Turkamanestan frontline can be one of the country's development gate and relation between East-West corridor.

## 9. References

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