

Economics and Administration, Tourism and Tourism Management, History, Culture, Religion, Psychology, Sociology, Fine Arts, Engineering, Architecture, Language, Literature, Educational Sciences, Pedagogy & Other Disciplines in Social Sciences

Vol:3, Issue:7
sssjournal.com

pp.300-306
ISSN:2587-1587

2017
sssjournal.info@gmail.com

Article Arrival Date (Makale Geliş Tarihi) 16/08/2017 | The Published Rel. Date (Makale Yayın Kabul Tarihi) 15/09/2017
Published Date (Makale Yayın Tarihi) 18.09.2017

**SOCIO-ECONOMIC EFFECTS OF IRREGULAR SETTLEMENT AND
INDUSTRIALIZATION ON LAND USE: THE RESEARCH OF KAHRAMANMARAŞ
URBAN AREA ***

*PLANSIZ YERLEŞME VE SANAYİLEŞMENİN ARAZİ KULLANIMI ÜZERİNDEKİ SOSYO-
EKONOMİK ETKİLERİ: KAHRAMANMARAŞ KENTSEL ALANI İNCELEMESİ*

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ABSTRACT

As of 1980's, the demand for industrialisation from the private sector, accompanied by incentives, has led to settlement on farmlands in many cities. Kahramanmaraş city is one of these cities. In 1970's, considering the means of transportation facilities, Sümerbank, a state-owned enterprise, was established on a farmland, and beginning from the year 1980, the private sector has followed the fashion and today, the Kahramanmaraş Plain is covered by factories and settlement areas in substantial numbers. This study deals with land use patterns in the urban area of Kahramanmaraş after immigration from rural areas into urban areas along with the industrialisation process as of 1980's. Also, the socio-economical impacts and soil losses, the two outcomes of unplanned industrialisation and building, are discussed in the context of the urban area of Kahramanmaraş.

In various studies, it was calculated to have been at a rate ranging from 11% to 14% in Kahramanmaraş city by the year 2000. This study reveals that the increased occupation of farmlands year by year has brought forth material losses, irregular and unplanned urbanisation, environmental pollution, and the deprivation of utility services by settlers. The concept of the deprivation of utility services also covers the deprivation of education and qualifications-building services; being under-qualified individuals, those living in the mentioned areas often work in the informal sector.

Key Words: Land use patterns; unplanned urbanisation; unplanned industrialisation; loss of agricultural areas; socio-economical impacts

ÖZ

1980'li yıllardan itibaren özel kesimin teşvikler eşliğinde sanayileşme talebi, birçok kentte tarım alanları üzerine yerleşmesine neden olmuştur. Kahramanmaraş kent merkezi de bunlardan biridir. 1970'li yıllarda ulaşım imkanları göz önünde tutularak tarım alanı üzerine kurulan kamu işletmesi Sümerbank'ı 1980'den itibaren özel sektör izlemiş ve Kahramanmaraş Ovası bugün büyük ölçüde fabrika ve yerleşim alanları ile kaplanmıştır. Bu çalışmada 1980'li yıllardan itibaren sanayileşmeye bağlı kırdan kente göçlerle birlikte Kahramanmaraş kentsel alanındaki arazi kullanım örüntüleri ele alınmıştır. Ayrıca, plansız sanayileşme ve yapılaşmanın doğurduğu sosyo-ekonomik etkiler ve toprak kayıpları, Kahramanmaraş kentsel alanı bağlamında tartışılmıştır.

Çeşitli araştırmalarda Kahramanmaraş'ta 2000 yılı itibarıyla %11 ile %14 arasında hesaplanmıştır. Bu çalışmada, her geçen yıl artan tarımsal alan işgalinin, maddi kayıplara, düzensiz ve çarpık kentleşmeye, çevre kirliliğine, yerleşimcilerin kentsel hizmetlerden yoksun kalmasına neden olduğu sonucuna ulaşılmıştır. Kentsel hizmetlerden yoksunluk, eğitim ve vasıf geliştirme hizmetlerini de kapsamakta; bu bölgelerde oturanlar düşük vasıfları nedeniyle çoğunlukla kayıtdışı çalışmaktadırlar.

Anahtar Kelimeler: Arazi kullanım örüntüleri, çarpık kentleşme, plansız sanayileşme, tarımsal arazi kaybı, sosyo ekonomik etkiler

* This study had been presented on International Workshop on Urbanisation, Land Use, Land Degradation, and Environment (ule2009) 28 September-01 October 2009, Denizli,Türkiye by oral presentation and not published in any item.

1. INTRODUCTION

In Turkey, as of 1950's, in the implementation process, whereby the development and industrialisation policies have been put to work at the urban level, the priority has been on the access facilities and on the quantitative efficiency; no policy has been formulated regarding human and plant settlements. With the start of the direction of the private sector towards an export-oriented industrialisation process as of 1980's, the fact that there has been no planning toward any organised industrial zones in many cities and that, even in the cities having such a plan, the organised industrial zones have been built on farmlands on grounds of the ease of transportation and building, a case similar to that experienced in the previous periods, have brought along the problems of unplanned urban development and industrialisation. The years after 1980 saw the appearance of macro policies towards the choices of sites for settlement and industrial plants with the advent of urbanisation problems like squatting, etc., however, this was a delayed attempt in the sense of implementation at the urban level, or laid aside as a less-demanding issue compared to the choices of the private sector and immigrants for building.

Are the socio-economical problems an outcome of the wrong use of land, or is the former responsible for the problem of wrong land use? Without entrapping ourselves in the common chicken-egg argument, we can simply answer this question saying that these two processes support each other. However, here, it should be noted that both problems are a result of unplanned industrialisation and urbanisation.

The out-of-purpose use of farmlands is one of the main issues in Turkey. This issue, which is often discussed as part of unplanned urban development, is the cause of many socio-economical losses. In the earlier studies, the dimensions of the out-of-purpose use of farmlands in the provinces of Adana [1], Eskişehir [2], Erzurum [3], Balıkesir [4], and Afyon [5] were discussed and the losses induced by this were assessed. More examples can be given on this.

What we will try to do with this study is to identify the impacts of unplanned industrialisation and urbanisation on land use at the local level and solve the resulting socio-economical problems. Thus, we will find a chance to examine these problems in a sequential way in terms of a cause-effect relationship. In the following paragraphs, firstly, the choices of site of the state-owned enterprises in the municipal area of Kahramanmaraş city and the distribution of human settlements at the district level during the "planned" industrialisation period prior to the year 1980 will be dealt with. The locations of the state-owned enterprises affected subsequently in the later periods the choice of sites for the private enterprises. Secondly, the choices of site of the enterprises of the "incentive-backed private entrepreneurship" after 1980 and the settlement areas, linked to these, of the immigrants from rural areas will be discussed. In the study, lastly, the socio-economical problems caused by unplanned industrialisation and uncontrolled settlement will be discussed acting on the urban area of Kahramanmaraş.

2. MATERIALS AND METHODS

The study covers the municipal area of Kahramanmaraş city and in particular the settlement areas extending to the Kahramanmaraş Plain in the south of the city. This study used the data from the site survey on "domestic immigration and urban labour market" in the municipal area of Kahramanmaraş city, which was conducted in the period 2004-2006 with respect to the settlement and the development progress of the immigration patterns. The data for the abovementioned site survey was collected using the techniques such as document and case analyses, observation, meetings, and literature review, which are part of qualitative survey methods.

Gürün and Doygun's [6] map entitled "Loss of Agricultural Areas due to Urban Development between the years 1985 and 2000 in Kahramanmaraş" was used to indicate the losses of soil caused by unplanned settlement and industrialisation. Further to this, Karabulut et al's [7] map showing urban development areas by periods was referred to in order to give a clearer picture of the urban development areas by periods in the city. The Seismic Map of Kahramanmaraş Province was used in order to locate the urban development areas in terms of seismicity. Finally, the present situation of the losses of agricultural areas were documented by Gürbüz (2002) [8] and Şahin's (2004) [9] map showing the urban functional areas and the distribution of industrial enterprises. The socio-economical impacts of the wrong land use caused by unplanned settlement and industrialisation were discussed under the last sub-heading in the section entitled "Results and Discussion".

3. RESULTS AND DISCUSSION

3.1. Industrialisation and Urbanisation Patterns Prior to 1980 in the Urban Area of Kahramanmaraş

In Kahramanmaraş city, the industry depends on the two major branches: textile and the yarn sector, which is related to the former one. In this regard, the city first saw the establishment of Maraş Pamuklu Dokuma Sanayi Türk A.Ş. (Kahramanmaraş Sümerbank İplik ve Dokuma A.Ş) on January 9th, 1956 with 208 partners. (Maraş Pamuklu Sanayi Dokuma Türk A.Ş. was put into operation in 1963, but it was transferred to Sümerbank company in 1968.) Subsequently in 1972, Maraş Tekstil Sanayi A.Ş. (Marteks) was established by 27 entrepreneurs and started its operations in the period 1974-1975. In the same period, another yarn company would be established by Pişkinler on the Adana highway, but later it would be transferred to Bossa company in 1979.

Along with the industrialisation plans built on the concept of import substitution, the city saw the opening of cotton textile and dairy industries, and the foundations of heavy industry were first laid. However, it should be noted at this point that there is an issue that is neglected or overlooked: the industry has emerged on the farmlands. Sümerbank was opened on a 1st degree farmland near the Train Station considering the then access facilities in spite of the report of the Regional Directorate of State Hydraulic Affairs, which showed that would be unfeasible†. The area, where Sümerbank was established, it was followed by Süt Endüstrisi Kurumu (Dairy Industry), is a farmland and being close to the Erkenez Creek, it is under the risk of flooding. It also bears the risk of being prone to earthquakes since it is on the Mediterranean-East Anatolia fault line.

As summarised above, private entrepreneurs followed Sümerbank and two textile factories were established in the area. However, these enterprises' first devastating impact on farmlands would be felt with the choices of site for the textile industry owned by the private sector which became a case in the city led by the investment incentives policies after 1980.

With regard to the expansion of the settlement areas, the Bahçelievler district, which is on a fault line, seemed to have been the area causing the main problem prior to 1980. The district had been used as a farmland until 1970's. The choices of site for industry and the expansion of settlement areas prior to 1980 are shown on figure 1 by the year 1985. Figure 2 shows the seismic map of Kahramanmaraş Province.

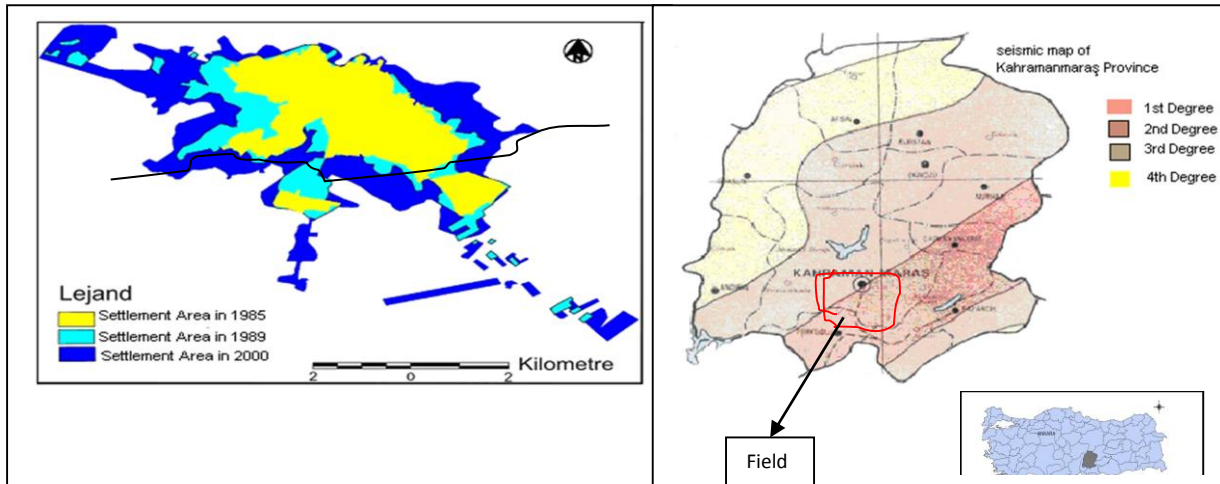


Figure 1: Changes of Urban Areas in 1985, 1989 and 2000 [7]

Figure 2: Seismic Map of Kahramanmaraş Province [10]

In Figure 1, the urban and industry area under the black line shows settled agricultural area since 1970's. There are seven or more districts in this area. The settlements in this area are unauthorized and unhealthy in general. This area is also on the 1st degree seismic zone as shown on the Figure 2.

† Notes from the meeting with İsmet Yaşarer, Civil Engineer, of the Regional Directorate of State Hydraulic Works on December 15th, 2007

3.2. Factories, Settlement and Land Use Patterns in the Urban Area of Kahramanmaraş in the Post-1980 Era

An Organised Industrial Zone (OIZ), one of the basic industrial incentives in many regions and provinces, has not been established in Kahramanmaraş city. Although the Council of Ministers adopted a Decision concerning the establishment of an OIZ in 1986, it was after the year 1989 that the process could start when factories appeared in greater numbers. This was due to the lack of interest among the local actors in the issue. Despite its definition meaning “global factory space” in the literature [11], since no OIZ was planned and came to existence in Kahramanmaraş city beforehand, the industrial sites were established on the first class farmlands, resulting in settling on farmlands and in earthquake zones. The OIZ could first start operation in 2000's.

Since no Organised Industrial Zones were established, and formerly, both the state-owned and private enterprises were opened near the Train Station and along the Gaziantep and Adana highways on grounds of the ease of transportation, all the manufacturing industry enterprises, which were opened after the investment incentives of 1980's, were established on the farmlands in the same area (Figure 3). While these businesses include paper and food industry enterprises, most of them are textile and ready-made clothes industry enterprises. Also, the owners of most of these enterprises are agricultural employers, who previously were engaged in farming practices on the lands they established their factories. In Figure 3 it is shown that the functional areas in the city. The industrial area in the far west over the Sır Dam Lake is OIZ. The long dark blue area at the south of the city is airport. And nearby the airport and industry areas there are settlement areas built by rural immigrants came from the mountain villages of the Kahramanmaraş.

Kasap and Irmak (1998) [12] also verify our observation. In their study on the issues of farmlands and erosion, Kasap and Irmak state that in Kahramanmaraş farmlands are 338,111 ha and uncultivable meadows and forest lands are 979,920 ha in size and these constitute 24.02% and 69.63% of all the existing lands, respectively, according to the Survey Reports of Rural Affairs Administration for the year 1974. However, based on the land use reports from the Provincial Directorate of Rural Affairs in Kahramanmaraş for the year 1993, they observed a transition towards farmlands from meadows and forest lands. Kasap and Irmak think that the main factors of this transition are the development of agricultural mechanisation technology, the use of farmlands for non-agricultural purposes (settlement, industrial area, etc.) and the tendency among farmers to gain new lands for farming, which are highly risky in terms of erosion, instead of increasing yield per unit land to meet the demand for agricultural products among growing population in parallel to the above two factors.

Along with industrialisation, domestic immigration brings people from the rural areas nearby to cheap lands in unplanned areas around the industrial sites and the city has been expanding towards farmlands in an uncontrolled way since 1980's (Figure 1, Figure 3 and Figure 4).

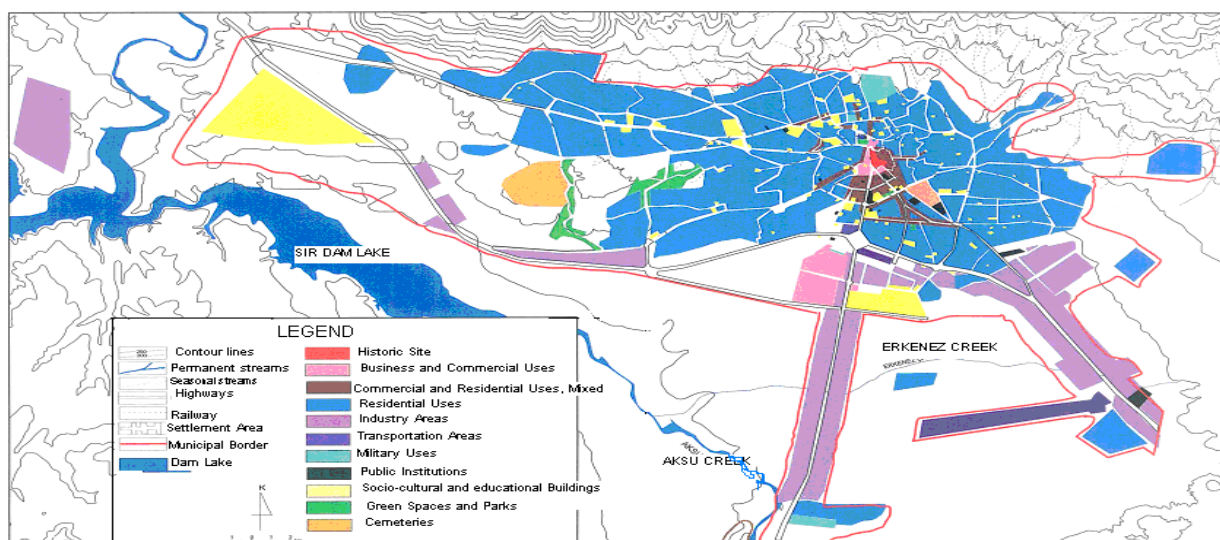


Figure 3: Functional Areas and Industrial Enterprises Distribution in Kahramanmaraş City, [8], [9]

Gürün and Doygün [6] calculated 313.6 ha for the loss of agricultural areas due to settlement and industrialisation process between the years 1985 and 2000. The farmlands have been reduced by 13.8% until the year 2000 due to settlement. They were 2276.2 ha in size in 1985. In a study conducted by Karabulut et al. [7], they calculated 11.5% of change rate for municipal area between the years 1985 and 2000.

In a study conducted by Gündoğan et al. [13] concerning the land use in Kahramanmaraş and in its vicinity, they state that a considerable part of the area surrounding the city consists of high-yielding farmlands (29.8%) and these must be used as absolute farmlands. Gündoğan et al. records 4600 ha as farmland size used for settlement and industry; this should show the development area of the city and also neighbouring town and villages since 1950's. According to their potential land use plan of the city, currently the industrial areas remain in seven neighbourhoods/districts' absolute farmlands in the south, south-east and south-west of the city, and these areas also fall in the 1st degree seismic zone. There are also towns and villages on this area. (Figure 2 and Figure 5) [13].

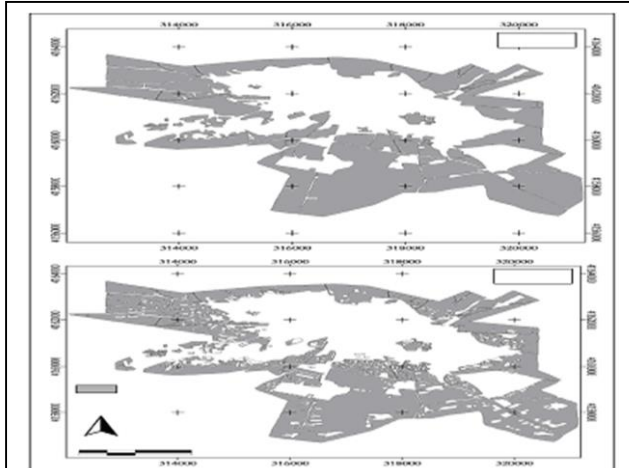


Figure 4: Loss of Agricultural Areas Occurred due to Urban Development in Kahramanmaraş between the Years 1985-2000 [6]

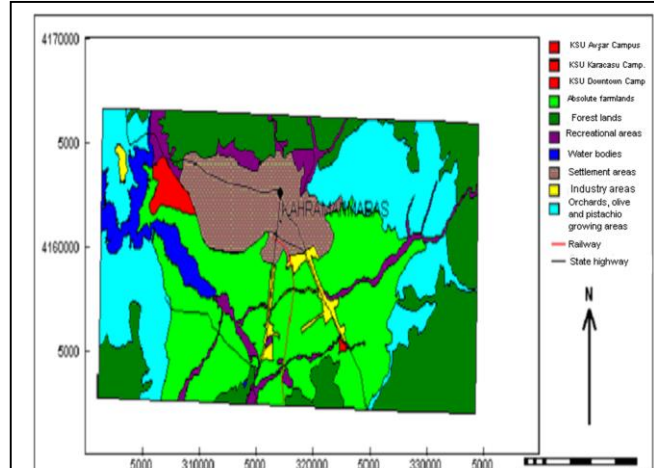


Figure 5: Potential Land Use Plan around the Urban Area of Kahramanmaraş [13]

3.3. Socio-Economical Problems Caused by the Land Occupation Due to Unplanned Settlement and Industrialisation

Soil, like air, water and other ground resources, is one of our natural resources. The out-of-purpose use of the soil, covering the arable and forest lands with buildings, even the rise of factories where chemical processes spoiling the natural use of these areas lead to the loss of natural balance. Quest for sustainable development to strike the ecological balance again in today's world is a clear sign of this loss of natural balance. In addition, the prevailing poverty in certain parts of the world is associated with the overuse/misuse of farm and forest lands.

In Kahramanmaraş, particularly, it can be traced from maps and satellite views that the Kahramanmaraş Plain is covered by factories and settlement areas. Over this plain, where previously cotton flowers coloured lands white, black smokes are hovering now, and the Aksu Creek and other creeks, which are known to be home to fish and frogs, now are filled with floating chemicals. Under devastation, some creeks have surrendered and they have dried due to aridness. Lastly, the Sir Dam Lake, which has survived until now as a fresh water source, is under the potential threat of pollution from the Organised Industrial Zone nearby, where no sufficient waste recovery plant is established.

Some possible problems and losses already caused and likely to be caused in the future by the opening of farm and forest lands into settlement and industry can be listed as follows:

1. The occupied farmland of 313.6 ha in size between the years 1985 and 2000 as calculated by Gürün and Doygun means the deprivation of the agricultural output to be produced in this area. For instance, if we calculate in terms of cotton production, assuming that cotton production per hectare is 1165 kg [14] in average, 365344 kg of cotton production cannot be achieved in one single season in the area. If we calculate it in terms of average cotton prices, around \$ 622 thousand will be lost for one single season. Assuming that two different crops are cultivated in one single yield season, the loss increases two fold. The comparison of the volume of production from the factories of optimal size in the said area in the same season with the production of agricultural products in terms of cost and income can be a subject of another study, however, such a calculation cannot be an answer to the use of the land out of its natural structure.

2. Farmlands do not only see industrial plants on them. In Kahramanmaraş city, around seven neighbourhoods are settled on farmlands. These farmlands have also 1st degree seismicity as shown in Figure 2 above. Around 100 thousand people living in these neighbourhoods, including those working in industrial plants, are at risk. The volume of material losses in a serious earthquake is beyond dispute.
3. Beside the environmental impacts and materials losses, the inhabitants of these neighbourhoods often build their houses in unplanned districts, either not licensed or having no infrastructure. This type of settlement, which is also responsible for irregular and uncontrolled urbanisation, brings forth the issue of squatting. The squatting not only causes material losses, but also is a factor that reduces the quality of life among inhabitants. The immigrants settling in these neighbourhoods deprive partially or fully of some utility services like infrastructure, health, education, etc.[15]. The cost of the deprivation of utility services and of low standard living conditions to individuals and community is much higher than the advantage gained by being a landowner when one's duration of life is considered.
4. Irregular settlement also brings along irregular working life. The great majority of the unregistered employees in Kahramanmaraş urban labour market live in these unplanned districts. Nearly 27% of total employees is unregistered labour force and almost 80% of them are residing in the irregular settlement areas [15] [16]. The squatting or unplanned urban development means informal or unregistered sector in the working life. The informal or unregistered/shadow sector is defined by indicators such as the degradation of working conditions of individuals, the lack of social security, and working in low-wage works.

4. CONCLUSION

Unplanned industrialisation leads to the non-functional use of farmlands and environmental pollution at the local level. The fast-growing numbers of factories, along with the immigrants from villages, sub-provinces and neighbouring provinces settle on cheap lands, either with no licence or in an unplanned way. Since such areas are often close to industrial areas, settlers lack of some utility services, on one hand, and they are prone to health problems due to industrial wastes, on the other. The farmlands opened to settlement and industrial uses in Kahramanmaraş city studied in this study are at the same time seismic zones, and in an earthquake there is a risk to human life.

What can be recommended for Kahramanmaraş is to devise long-term urban development plans and implement these in the shortest time possible and stop the occupation of farmlands. Similar suggestions can be made for the other cities where farmlands are also occupied. The old city area (can be seen on Figure 3 in historic site, commercial and residential uses mixed areas) in Kahramanmaraş can be dealt with as a long-term project, whereby the area is turned into mass housing district remaining adhered to the traditional architecture. Thus, this can be an innovative home design specific to our community. Those who have settled on farmlands and seismic zones can be urged to move to these houses. At least, the would-be newcomers can be prevented from occupying new farmlands.

In addition, necessary actions must be taken to avoid possible damage to the environment and agriculture by the lately-opened OIZ by polluting the dam lake nearby.

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