

# Effective Framework Exploration of Urban Mahalla Planning is the Way towards a Sustainable Neighborhood in Uzbekistan

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## Abstract:

Globalization, trends towards decentralization, the revision of sector-based subsidies and urbanization of regions in major dynamic processes driving rural restructuring across countries. Provision of rural improvement documents and normative improvement of rural population centers in the Republic remains one of the most urgent tasks of today. Current paper work deals with the rural mahalla planning for best improvement achievements for sustainable living standards. On the initiative of our compatriot, state programs such as 'Prosperous Village', 'Prosperous Mahalla' and 'Prosperous Center' have been adopted, and creative work is carried out on the basis of the program planning are main outcomes of the article.

The article analyzes the modern conditions of rural population settlements of Uzbekistan regions, classification of population settlements, provision of urbanism documents, proposals and recommendations were presented. As for the conclusion author suggested few designing plan for Sustainable City, Clean City and Obod Mahalla programs. Finally, it is explained implementing innovations improving infrastructure, living style and economic attractiveness in mahalla regions in Uzbekistan.

## Article History

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## Introduction

Integrated rural development is broader based, it is different from the concept of growth and development and it has a broader connotation than the community development. It is viewed as "systematic, scientific and integrated use of all our natural resources and as part of this process enabling every person to engage himself in a productive and socially useful occupation and earn an income that would meet at least the basic needs [1].

Main development covers a wide range of activities, pertaining to all aspects of rural economy and covers all categories, rural artisans. It implies simultaneous undertaking of several tasks which are complementary to one another. Further development of rural places, community (Mahalla) rural planning

is a dynamic improvement of population far from the city and the centers.

## Methods and Materials

We started by investigating by community planning in rural places theoretical backgrounds and conceptual structure of its improvement for raising human development settlement. In most recent studies, by various scholars has been measured in many different ways. In this paper work it has been used ground theory method with comparative analyses. However, there are certain drawbacks associated with the use of secondary source data and few decrees of the Uzbekistan. Secondary source data collected from National Statistic Committee and used for describing current mahalla programs.

### Literature review

Tarlok Singh former member of the planning commission views Rural Development in a much broader context. According to him, "It may mean inter-relationships among various agencies which work in different sectors of the village economy. Lalit K. Sen discusses the planning of rural development in a much greater detail. According to him its twin aspects, namely functional and spatial integration mean appropriate location of social and economic activities over a physical space for the balanced development of a region. In an attempt different aspects of rural development the study undertaken by the United Nations, Asian Development offers a much broader description of the concept [2].

Thus, a rural development aims at total development of the area and the people by bringing the necessary institutional and attitudinal changes and by delivering a package of services through extension methods to encompass not only the economic field, for example development of agricultural and rural industry etc., but also the establishment of required social infrastructure and services in the areas of education, health, communication, transportation and other basic civic amenities with an ultimate objectives of improving the quality of life in the rural areas.

Rural area has a wide range of unique potential and different problems compared to the urban [3].

The World Summit for Social Development held in Copenhagen in 1995 declared the goal to reduce absolute poverty in the world by half through people-centered social development. The rural landscape contains three aspects: rural life, production and ecology [4], and its formation is the result of a combination of specific historical and cultural backgrounds, aesthetics, living habits, geographical environment and climatic conditions [5]. The landscape of the settlements is the style and appearance of the villages, including not only landscape patterns and architectural forms, but also the local temperament of lifestyles and folk culture

[6]. Compared with the landscape, the built-up landscape features more emphasis on the buildings and landscapes of the village settlement [7], in order to shape the rural landscape with unique aesthetic characteristics and cultural connotations [8]. Shaping regional characteristics and protecting the natural environment are the key points of rural landscape design in the future.

Dehkordi developed landscape degradation modeling and assessment in the context of rural areas in Japan [9]. Rogge et al. invited farmers, landscape experts, and country-dwellers to describe the key factors of Belgian rural landscapes and tell the differences for the further study and landscape planning [10].

Due to delayed construction, ecological degradation, and backward in management, rural settlements have many problems in the delayed construction, ecological degradation, and backward in management, rural settlements have many problems in the planning and construction process [11].

The 20th century was characterized by rapid and often uncontrolled urban growth leading to the emergence of huge dispersed or decompacted cities unlike the more compact cities of the 19<sup>th</sup> century. Fast industrialization, new technological inventions such as automobiles, and the availability of cheap land and inexpensive fossil fuels were some of the driving forces of this model of urban development [12].

The theory of sustainability in the 1990s reconciled social equity, economic growth and environmental preservation with city development [13] and opened the way for the development of other concepts such as sustainable city [14], green urbanism, loveable city [15–16], and compact city [17] among others, that are still current and are at the center of the debate on the influence of urban forms, city designs, use of natural resources, energy and other issues linked to urban sustainability.

Visibility analysis determines those portions of the landscape which can be seen. Portions of landscape are including landscape content and

composition of available views. As such, visibility studies play a central role in most scenic analyses [18]. Visibility analysis in the application are often utilized to identify valuable visual resource and a potential threat to visual resources. Information visibility is utilized in the preparation of spatial planning guidelines in order to improve positive visual features or otherwise reduce the negative impact of landscape features [19].

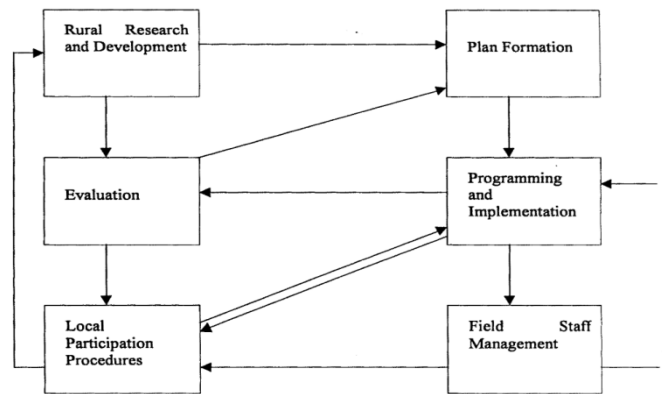
Sustainable development has to be beyond the objective that is not only thinking about physical development, but also optimizing distribution, allocation and land use. In rural spatial planning, the need of 3 (three) integrated sustainability aspects is more urgent to be applied. It is particularly important in rural areas spatial planning to explore information on sustainability aspects as its spatial functions [20].

In the beginning, this analysis is designed not only to support humans in landscape planning, but also, as in this case study, is expected to connect the visibility evaluation on the aspects of vision and perception [21].

### Results

Sustainable Rural Area Development Program, the program is aimed at villages with the criteria of the major issues that are assumed to carry a negative change to the development of rural areas. These issues are (1). Urbanization, (2).Land use, (3).Environmental degradation and the threat of water and energy crisis, (4). Low economic level, and (5). Areas include in Indonesian economic corridors in. Planning for rural development is a long-term ongoing process with goals, long-run plans and time bound specific plans with targets dovetailing one another. Local grassroots participation in this process is essential [22].

Picture 1. The Process of Rural Development Planning.



In the Picture of all the six links, local participation seems central to rural development planning. It is central because the local people are the main actors and the other five links are necessary enabling conditions. Growth potential for the area leading to increase in income and generation of employment, ensuring benefits according to weaker sections such as small farmers, marginal farmers, agricultural laborer's, share cropper, rural artisans etc., fulfillment of minimum needs in the area of health, education, water supply, housing essential commodities, etc. [23].

Thus, the concept of the district planning is akin to the concept of integrated area planning. The objectives relevant to local level planning are;

- Equitable distribution of the benefits of development;
- Effective participation in decision - making, especially by the poor;
- Increase in productivity and growth output;
- Provision of the basic human needs to the largest population;
- Provision of gainful employment;
- Self-reliance, so that development could be self-sustaining; and
- Maintenance of an ecological balance, without this, development, of the present will be at a cost of development in the future.

Development cooperation focusing on rural development is a very important component for poverty reduction for the following reasons:

- Approximately three-quarters of the world's impoverished live in rural areas .

- Many poor people in cities are migrant workers and farmers who have left rural areas. Therefore, if living standards and income generations in rural areas are enhanced and rural immigrants to cities return to rural areas, excessive population influxes to cities should be reduced, causing poverty in the cities to decrease[3].
- Improvement of rural areas can be a safety net when there is a lack of job opportunities in cities due to depressed economic conditions.

The definition of “rural” differs by country, though it is usually used in contrast to “urban”. For instance, this word is defined based on population density in Japan, indicating an area other than “an area with over 5,000 people, which consists of each district with a population density of over 4,000 per square kilometer”. However, we cannot simply apply this definition to other countries. Moreover, due to the fact that the concept of “rural” varies from Asia to Africa, it is difficult to define it uniformly. Therefore, the use of “rural” (including fishing and mountain villages) as a relative concept to “urban”, based on social, economic, and natural conditions in each country may be most adequate.

Aim of rural development can be defined as the improvement of sustainable livelihoods (especially impoverished groups), with careful attention paid to local characteristics. According to the World Bank (1975), rural development is defined as “a strategy aiming at the improvement of economic and social living conditions, focusing on a specific group of poor people in a rural area. It assists the poorest group among the people living in rural areas to benefit from development”.

Table 1. The difference between rural development and other similar concepts

Agricultural Development:	Regional Development:
“Agricultural Development” mainly aims at increasing agricultural products such as crops, livestock, fish and etc.	“Regional” has a wide meaning to describe “area” (i.e. a certain area in country) or “region” (i.e. continent of Human being, land and countries). The Rural

capital are simply regarded as production goods and means. On the other hand, “Rural Development” mainly targets on people and institutions. Rural development includes agricultural development activities, however it is one of the means of economic revitalization for active farmers and targeted rural villages

Source: Niki (2002)

### Examples of vertical contractual arrangements in support of rural development

The European Structural Funds (European Regional Development Fund, European Social Fund and European Agricultural Guidance and Guarantee Fund) have been recently reformed by Council Regulation (EC) 1260/1999 which establishes the general provisions on the Structural Funds and introduces goals and elements to multi-level policy-making. The regulation stipulates that Community actions shall be drawn up in close consultation (referred to as the ‘partnership’) between the Commission and the Member State, together with the regional and local authorities, economic and social partners; and other relevant bodies.

Mexico has introduced a set of co coordinative agreements among ministries to introduce a place-based approach to rural development. The chief of the executive, using his poder de convocatoria, influences the co-ordination and cooperation at the Federal level in the implementation of the Microregions Strategy for rural development.

In Italy Institutional Agreements (AccordiIstituzionali) are set up by ationaladministrations (several Ministries), Regions and Autonomous Provinces to implement multi-annual plans for common and interrelated

interventions. Such Agreements are formally approved and signed by all administrations involved in the planning process.

In France, reforms in the 1990s, seeking to regroup small towns and areas (Communautés de Communes, Communautés de Villes) with new mechanisms based on the principle of transferring competencies to a supra-municipal body disposing of own fiscal powers, have led to the creation of more than 2000 such entities known as EPCIs (Etablissements Publics de Coopération Intercommunale). With an average membership of 12 municipalities, these bodies carry out spatial planning, economic development and infrastructure investment.

In the UK, the National Strategy for Neighbourhood Renewal Action Plan (January 2001) and the more detailed LSP Guidance (March 2001) set out the Government's initial model of what LSPs should be and what they should do. This guidance reflected a cross-government commitment to LSPs by all departments and agencies. The guidance made it clear that a LSP is a non-statutory, multi-agency body, which matches local authority boundaries, and aims to bring together at a local level the different parts of the public, private, community and voluntary sectors.

In Germany, the LOCALE scheme was set up to implement the Structural Funds in Saxony-Anhalt for the period 2000-2006. This consists of two strategic elements: support for integrated, territorial development approaches below the federal State level.

In the US, several examples of innovative local governance in rural areas have emerged in recent years. In the state of Minnesota, the creation of the Northeast Minnesota Higher Education District (NHED) in 1999 was the catalyst that spurred innovations in other key institutions in the region. After seeing the benefits of one “super-regional” umbrella for community colleges, governments and private actors across the region

have begun to cooperate more often and more extensively.

#### Uzbekistan Framework

The results thus obtained are compatible with local programs will examine some of the aspects that directly relate to the development of promising master plans for rural areas and settlements. We focused on aspects that directly affect the development of urban planning documents, such as the dynamics of demographic growth or decline in rural populations, the impact of rural development and rural development, and the factors that influence it. The following trends were identified when studying demographic trends in rural areas of Uzbekistan in recent years.

According to the national statistics, in 1959 17,300 rural settlements were registered, and by 1991 this figure was 12900, which is 25.4% less than in rural areas. By 2009, this figure was 1,700, a decrease of 1,200 over the past eighteen years [24]. By 2018, the number of rural settlements was around 11,006. This indicates that over the last decade, in 2009-2018, the number of rural settlements decreased by 700 [25].

The process of declining rural areas is due to urbanization and urbanization as a result of the rural population growth as a result of increased urbanization and demographic growth in rural areas. This tendency is persistent, with the emergence of historic cities and towns over the centuries, which, in turn, will result in the emergence of medium, large and large cities.

Table 2. Dynamics of Mahalla (community) in Uzbekistan

No	Years	Units of Mahalla (Community)
1	2001	9,627
2	2003	9,615
3	2006	8,843
4	2008	10,124
5	2011	9,973
6	2013	9756

7	2015	9756
8	2016	9764
9	2017	8982
10	2018	9019
11	2019	9121

We will explore one of the factors that influences the creation of urban planning documents. Statistics show that in the current globalization, the demographic growth rate of the rural population is higher than the urban population growth rate. For example, in 2009 the population of the Republic of Uzbekistan was 28 million 14 thousand, of which the rural population was 13 million 575 thousand 500, or 48.5 percent of the total population of the republic. By 2018, the country's population will be 32 million 656,700 people, of which the rural population will be 16 million 532,700, or 49.4% of the total population, with an increase in the rural population. These figures show that the demographic growth rate of the rural population is still high compared to the city.

Analysis of these processes in the Bukhara and Navoi regions shows that in 2014-2018 the rural population in Bukhara region increased from 61.7% to 62.6% and in Navoi region from 50.2% to 51.1% [26].

Over the past two decades of population demographic analysis, it has been revealed that the rural population declines sharply between 2000 and 2010. In 2000 the rural population was 62.6% of the population, and by 2010 this figure was 48.5% [27]. By this time, the decline in the rural population was due to the increased migration of the population to the cities. However, the analysis for the next 3-5 years shows that this process is changing. The analysis from 2014-2018 shows that the rural population is growing. For example, in 2014, rural population represented 49.0 percent of the population, and by 2018 this figure was 49.4 percent. The main reason for this is the demographic growth of the rural population, but also the result of the reforms carried out by the state. Development of

rural agricultural system, rural improvement, development of tourism, growth of rural urbanization, increase of jobs in rural areas contribute to the improvement of rural life, reduction of the migration of the working population.

Another noteworthy aspect is the reform of the community system. Analysis of changes in the system of civil self-governance in rural areas in Navoi region in recent years, according to the Navoi Regional Council for the Coordination of Civil Self-Government, 236 in 2013, 240 in 2014, 243 in 2016. and rural citizens' gatherings are registered [28].

By the Decree of the President of the Republic of Uzbekistan dated February 3, 2017, PF-4944 "On measures to further improve the institution of Mahalla" gatherings of mahalla citizens have been reorganized and optimized. As a result, in 2017-2018 the number of citizens' self-government bodies in rural areas will be 220 in Navoi region. Another point to consider is that these villages are classified as urban, as a result of their urbanization, rural areas are referred to as neighborhood gatherings, which are specific criteria for designing rural areas, such as the status of rural or urban settlements. Appropriate, separate rule means that norms are required.

The cabinet of ministers of the republic of Uzbekistan Decision About approval of the Situation on the procedure for use of rural settlements October 30, 2014 PQ. 301. According to the Decree it is clear stated definition of rural areas related terminology indicated as followings.

Lands of rural settlements - lands used for establishment, improvement and development of settlements in rural areas, the main activities of which are farming and forestry, agricultural processing and other agricultural activities;

Lands of settlements - lands within the boundaries of cities and urban settlements, as well as rural settlements;

Boundary (line) of a rural settlement - the external border of a rural settlement, which is approved in the established order in accordance with

the town-planning and land management documentation, separating these lands from other categories of land fund;

General plan of settlement - town-planning document defining conditions of complex formation of living environment, main directions of territorial development of settlements;

Architectural and Planning of the Village, and Village Citizenship Project - the main urban planning tasks - improvement of living conditions, further development of agricultural production, environmental protection, efficient use of natural, labor and material resources. Comprehensive urban planning document providing for the planning of the settlement, settlement and settlement of the village, rural and aul areas, and the creation of a complete architectural form.

•All lands within the boundaries (lines) of rural settlements are the lands of rural settlements.

•The territorial and land resources of rural settlements are the territories within the designated boundary (line) of rural settlements, as well as all the wealth on and under the lands of these territories.

- Rural settlements are divided by population:
  - a) Large settlements - population of more than five thousand people;
  - b) Large settlements - from three thousand to five thousand people;
  - c) Middle settlements - from thousand to three thousand people;
  - d) Small settlements - up to one thousand people.

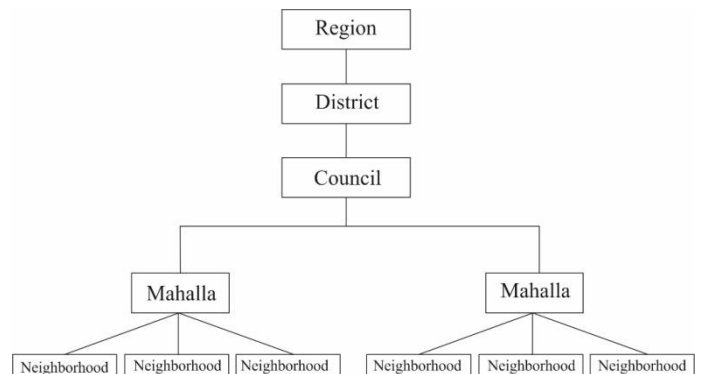
•The Rural Border Project shall be developed as a separate independent document after the design of the architectural and planning organization of the settlement, village and aul.

•The boundary (line) of rural settlements shall be established and altered by the district authorities in accordance with their planning, construction and on-farm land management projects.

•The general plan of the village shall preserve the environment of life for the benefit of the population and the state, the border of development of settlements, zoning, engineering, transport and social infrastructure, historical and cultural heritage, and specially protected natural areas; is a key urban planning document that sets out environmental and sanitation requirements.

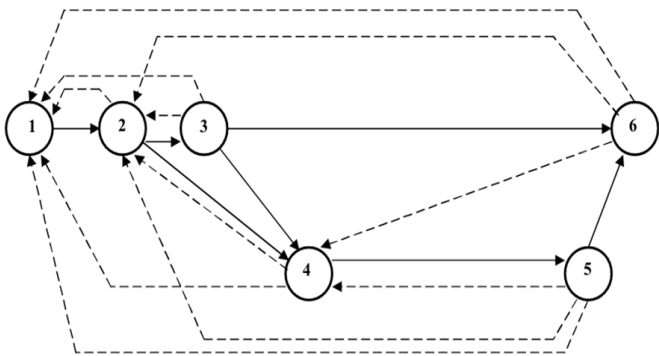
- Lands of rural settlements include:
  - a) land in villages and aul areas;
  - b) lands located on the territory of agricultural, forestry enterprises, institutions and organizations.
- Lands of rural settlements are divided into the following types:
  - a) settlement areas;
  - b) public land;
  - c) agricultural and other types of land;
  - d) forest plantations;
  - e) lands of industry, transport, communication, defense, and other purposes provided to legal entities for such purposes.

Picture 2. Structural background of Rural Mahalla area



The overall measurement results are summarized in Picture 2 which states problems of approval of the main parameters of the “Obod Mahalla Program”. Implementation of the Decree of the President of the Republic of Uzbekistan dated June 27, 2018 NF-5467 For the purpose of construction of transport infrastructure, engineering and communication networks and social facilities, thus improving the living standards of the population:

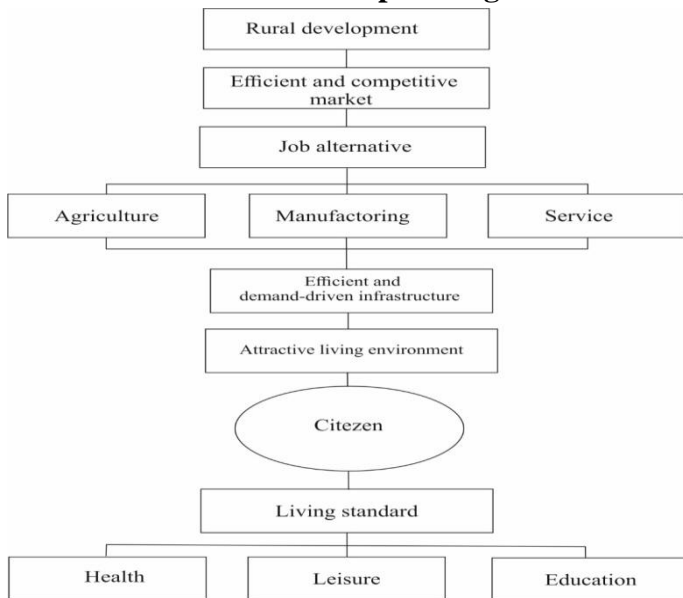
Picture 3. Urban Mahalla Planning Construct



We have introduced a new approach to improve rural mahalla areas new planning conceptual structure which describes:

1. Mahalla (Aul)
2. Councilor
3. District architecture
4. Regional architecture
5. State Planning Union
6. Cabinet of Ministry

**Picture 4. Social and Economic benefits of rural mahallaplanning**



To illustrate the result, a simulation of benefits for local population can be performed as various structural and life balance directions improve living standards in mahalla areas (Pic.4). Increasing the responsibility of local governments and architects for strict adherence to the master plan when allocating vacant land areas in the mahalla to business entities as followings:

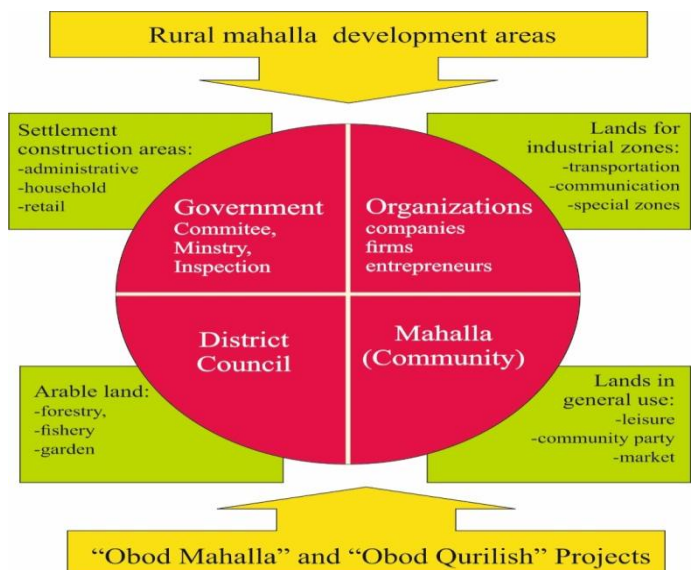
- to study the technical condition of existing dwellings, buildings and structures, objects of infrastructure, road transport and engineering communications and, on this basis, to perform construction, reconstruction and repair works;

- to provide the demolition of buildings and structures, which do not meet technical requirements or are illegally constructed;

- within a month update cadastral data with full coverage of multi-storey buildings and structures, adjacent areas, landscaping, and public facilities

In the framework of the program “Obod Mahalla” at the expense of the Republican Road Fund it is planned to complete repair of roads and pedestrians, complete landscaping and gardening. and ensure quality implementation. JSC "Uzbuildmaterials", JSC "Uzmetkombinat", JSC "Uzbekneftegaz", JSC "Uzmaterialmontazhstroy", JSC "Uzeltekhsanoat" associations to arrange regular supply of local construction materials, products and equipment to carry out construction, repair and improvement activities within the framework of the program "The prosperous mahalla".

**Picture 5. Development rural mahalla for sustainable economic development**



The results thus obtained are compatible with special areas will be allocated for the city's expansion. The rural places estimates of the expansion of the basis of the base, per person

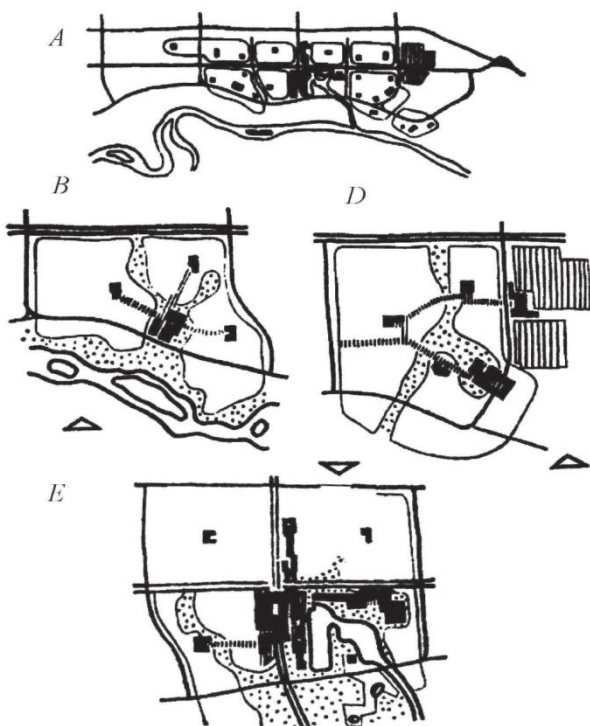


Increase in area, influence of natural and climatic factors, city economic-geographical location, its administrative-cultural and scientific depending on the size of these areas and the role of the city in the overall planning process. There is future improvement rural mahalla places both manufacturing and service based new opportunities at key areas (Pic.5).

**Discussion**

In this paper we propose current analyses of rural mahalla planning for future development as a new life expectation development economy and provide high level of living standards in far areas like auls too. Now we suggest few models for improving mahalla urbanism and increasing working potentials implementing innovation, science and technology, electronic business and integrating active world globalization like other advantage cites.

Picture 6. Rural areas with number of populations for choosing best architecture planning development.[29]



A is a remote industrial area with a population of 180,000 the new city; B - Central Recreation 25 zone of residence; D - connected to local industry district; E - district connected to the

city center; For 50,000 people. The intended district center will not be designed.

For the development rural mahalla planning we have a following outcomes and suggestions:

1. In developing small villages location of enterprises:

a – available status;

b - project proposal for the future (industrial enterprise network of three enterprises).

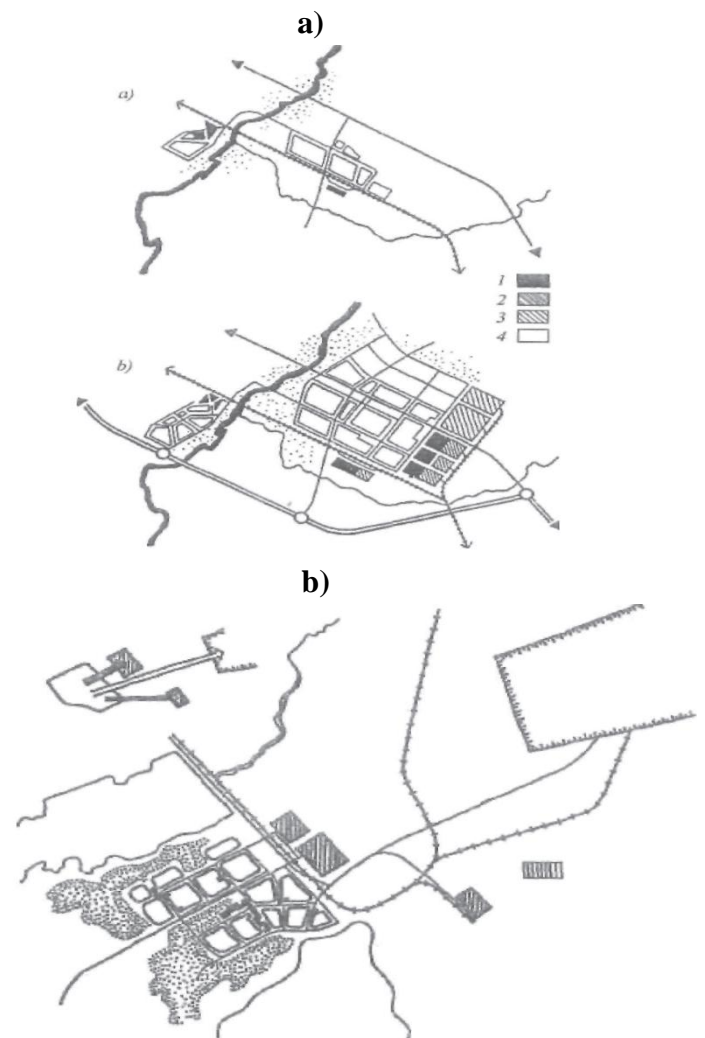
1st stage - construction sites of the enterprises;

2 - next construction phase;

3 - Post-project industry reserves of territories;

4 - small residential areas.

Picture 7. Mahalla development location

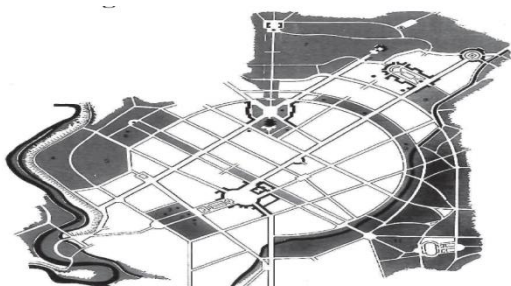


Mahalla development and location can be best zone for industrial production enchase a large district and city organizational significance. To a large extent, rural areas, industries and social networks determine the rate of infrastructure development by the few years in Uzbekistan Pic. 7. Picture b proposes free industrial zones for railway network. 1- Industry; 2 - Coal mines; 3 - Living areas; 4 - Recreation areas; 5 - Watersheds; 6 - External ways; 7 -Shops; Railway 8.

One of the main tasks of rural mahalla development is the population providing good sanitary and hygienic conditions. This task is in many ways, including risky sanitation beautification and cleanliness of soil, water, air basins, as well as ways to keep the city clean. Urban areas in urban sanitation plumbing and cleaning are important. Sanitation cleaning as a result of solid waste and other activities of the population collecting and disposing of existing waste. Only in cities with a population of over 50,000.

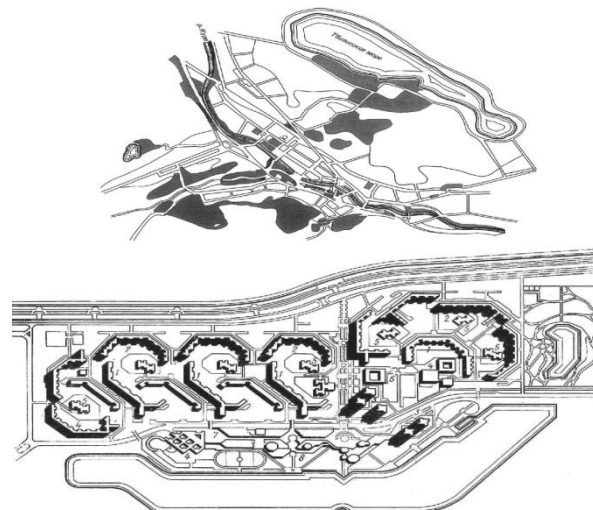
For this issue we have the next planning for relevant rural areas as following.

**Picture 8. Clean mahalla program development plan**

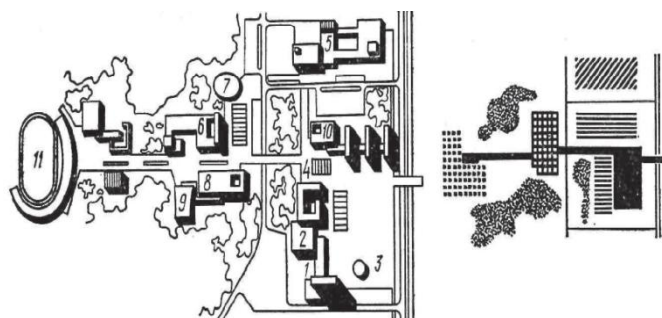


Residential mahalla - planned territory of rural population is the basic element in the structure of its function is to the population high comfort, adherence to sanitary and hygienic standards the expressive architectural appearance of the building creation. High comfort is only residential areas It is not just about providing people, but also cultural and cultural people household service organizations (schools, kindergartens, nursery, shops, movie theaters, clubs, sports facilities and transportation service organization).

**Picture 9. “ObodQurilish” Project In Uzbekistan regions**



Current indicatives basically designated for whom lives in rural mahalla or suburb (aul) areas for multi store cheap housing settlement. It actively showed good results for improving mahala living standards almost all regions of the country.



Final rural mahalla planning for the sustainable neighborhood can be considered as Sustainable cities, rural sustainability, or eco-city (also "ecocity") is a city designed with consideration for social, economic, environmental impact (commonly referred to as the triple bottom line), and resilient habitat for existing populations, without compromising the ability of future generations to experience the same. Transportation services to key city jobs and community centers and landscaping systems are located center of the mahalla. Design of residential areas is based on the general layout of the mahalla is performed. In turn, the aul is functional in the main line of decomposition has been solved, and the population location of the area, boundaries

of the planned districts, system location should be specified.

### Conclusion

Summing up the results, it can be concluded that planning and building of a residential district depends on many conditions, some of them may be included in the terms of rural mahalla planning. To the general architectural-space composition of aul district also common thing for Uzbekistan suburbs. This paper has clearly shown that climatic and landscape factors influencing rural mahalla planning and others explained with theoretical backgrounds both international and local point of views. Cultural and public service in our mahallas building infrastructure can involve schools, nurseries and kindergartens, shops, trade organizations, public catering organizations, sports and recreation facilities and areas with servicing radius is 300-500m. This state projects are only directed for best economic development in rural areas as mahalla improving is only solution for sustainable economic growth in Uzbekistan for many reasons.

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