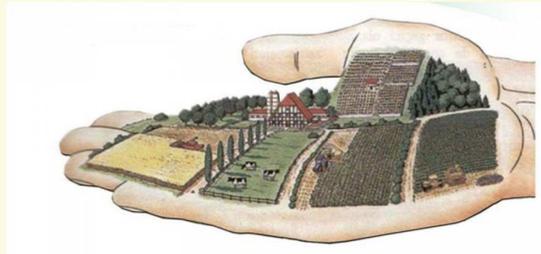


The Effect of the Land Consolidation on Urban Development



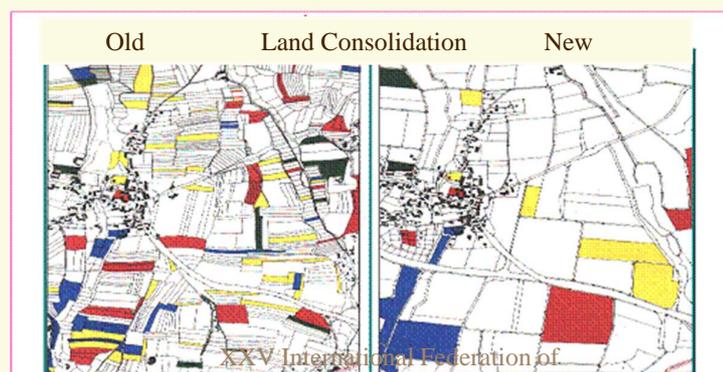
Prof. Dr. Gaye ONURSAL DENLİ
Assoc. Prof. Dr. H. Hakan DENLİ
Istanbul Technical University - Turkey 



What is Land Consolidation?



Land Consolidation is a necessity for rural areas and is regarded as a useful instrument for improving farmer's incomes and life standards. Land consolidation can be described as to unite and reregister the lands which were fragmented because of inheritance, roads, sales or irrigation/drainage canals. Farm structure and the infrastructure are also affected by fragmentation.





Fragmentation



In Turkey, farmers have generally a large family. After the death of the householder, inheritance leads to the further fragmentation of agriculture lands. After a long fragmentation period, each family has approximately five, six or more different types of land parcels located in different areas. The rural people are aware of the problem but are hopeless and helpless to change this situation.



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014



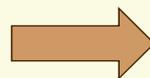
Actually Turkey has rich natural resources. The great diversity of landscapes and climate, as well as the fertile soils has always allowed a huge variety of agriculture products. Because of small and untidy parcels, farmers cannot take productive harvest.



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014



Finally



They have to immigrate to big cities to find a job and earn money.

Until now, emigration caused to irregular construction in the cities.

If the problem of rural areas/farmers could be solved and life standards upgraded, migration can be prevented.

The basic aims of land consolidation into rural development:



- ✓ To improve the preconditions for efficiency in agriculture and possibly forestry.
- ✓ To protect and improve natural / cultural sites, to keep under control of protection regions and to create recreation areas, etc.
- ✓ To improve the production and working conditions in agriculture and possibly forestry and to promote other legally planned land-use in rural living and working space.
- ✓ To improve the layout and structure of a rural area in accordance with the functions (agriculture and forestry, nature and landscape, infrastructure, open-air recreation and cultural history) of the area concerned, as these are specified within the framework of (regional) land-use planning.



Rural Perspective in Turkey



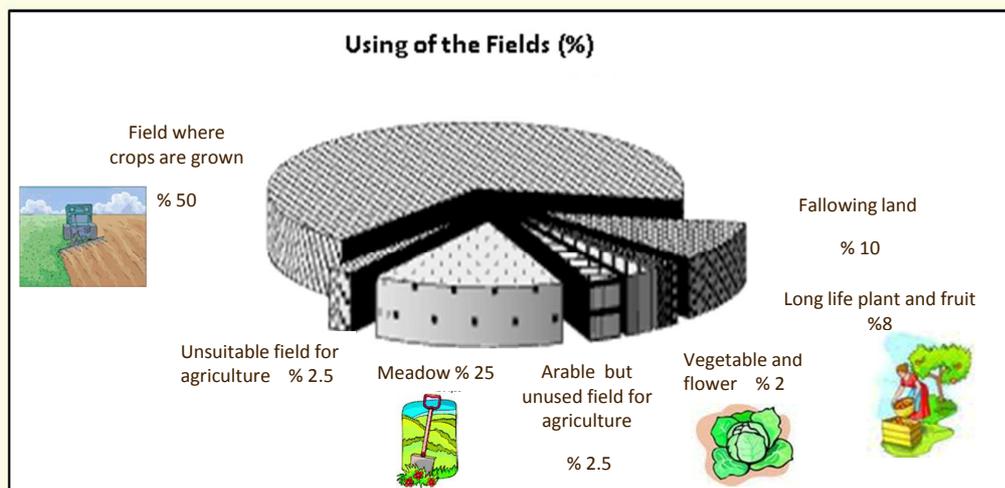
Agricultural Perspective

Agricultural Land in Turkey (Thousand Hectares)

Years	Total Utilized Agricultural Land	Sown Area	Fallow Land	Vegetable	Ornamental Plants	Fruits, Beverage and Spice	Meadows and Pastures
2001	40.967	17.917	4.914	909	-	2.610	14.617
2002	41.196	17.935	5.040	930	-	2.674	14.617
2003	40.644	17.408	4.991	911	-	2.717	14.617
2004	41.210	17.962	4.956	895	-	2.780	14.617
2005	41.223	18.005	4.876	894	-	2.831	14.617
2006	40.493	17.440	4.691	850	-	2.895	14.617
2007	39.505	16.945	4.219	815	-	2.909	14.617
2008	39.122	16.460	4.259	836	-	2.950	14.617
2009	38.911	16.217	4.323	811	-	2.943	14.617
2010	39.012	16.333	4.249	802	-	3.011	14.617
2011	38.231	15.692	4.017	810	4	3.091	14.617
2012	38.99	15.463	4.286	827	5	3.201	14.617
2013	38.428	15.618	4.148	808	5	3.232	14.617

XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

Using of the Fields in Rural Region



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

GAP (Southeastern Anatolia Project) in

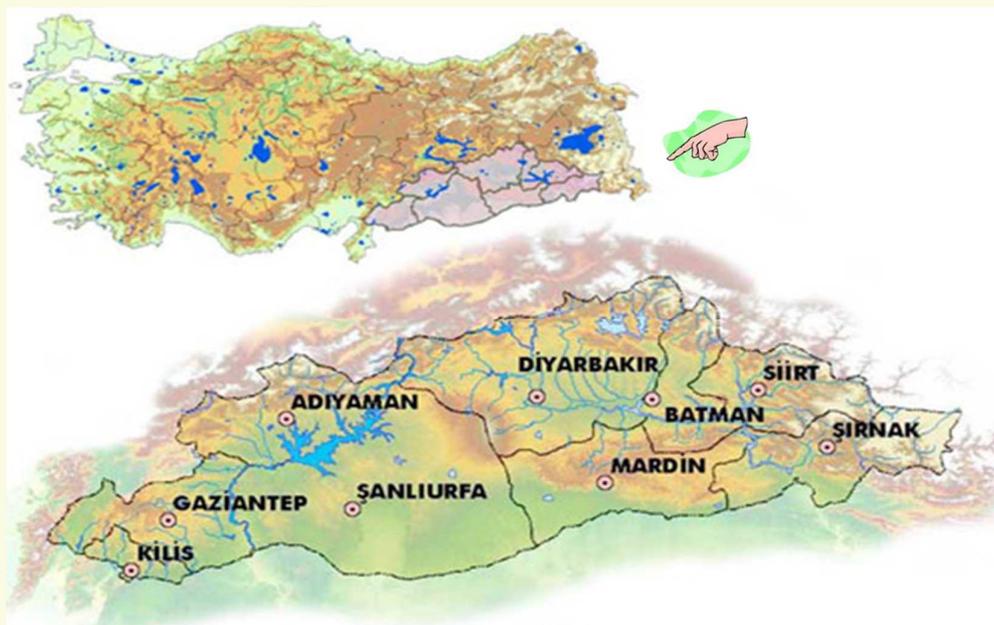
Today, land consolidation is generally applied to the southeast region in the Southeastern Anatolia Project (GAP) project in Turkey. The GAP is the biggest project of the Turkish republic era and the eighth biggest project of the world. It is an ambition project in terms of the geographical area it covers its physical magnitudes and objectives when compared with the similar other projects throughout the world.

The project area covers 9 administrative provinces (**Adiyaman, Batman, Diyarbakir, Gaziantep, Kilis, Mardin, Siirt, Sanliurfa and Sirkak**) in the basins of the Euphrates and Tigris and in Upper Mesopotamia



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

GAP Region in Turkey Geography



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

GAP

The surface area of the region is 75358 square kilometers constituting 9.7 % of the total surface area of the country.

Turkey has 8.5 million hectares of irrigable land and about 20% of this land is in Southeastern Anatolia.



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014



Population and Increasing Rate

(The provinces has a population of more than 1.300.000)

Province	2008	2009	2010	2011	2012	2013	Increasing Rate (2008-2013)
TOTAL	71.517.100	72.561.312	73.722.988	74.724.269	75.627.384	76.667.864	%7,2
ISTANBUL	12.697.164	12.915.158	13.255.685	13.624.240	13.854.740	14.160.467	%11,5
ANKARA	4.548.939	4.650.802	4.771.716	4.890.893	4.965.542	5.045.083	%10,9
İZMİR	3.795.978	3.868.308	3.948.848	3.965.232	4.005.459	4.061.074	%7,0
BURSA	2.507.963	2.550.645	2.605.495	2.652.126	2.688.171	2.740.970	%9,3
ADANA	2.026.319	2.062.226	2.085.225	2.108.805	2.125.635	2.149.260	%6,1
ANTALYA	1.859.275	1.919.729	1.978.333	2.043.482	2.092.537	2.158.265	%16
KONYA	1.969.868	1.992.675	2.013.845	2.038.555	2.052.281	2.079.225	%5,6
*GAZİANTEP	1.612.223	1.653.670	1.700.763	1.753.596	1.799.558	1.844.438	%14,4
İCEL	1.602.908	1.640.888	1.647.899	1.667.939	1.682.848	1.705.774	%6,4
*ŞANLIURFA	1.574.224	1.613.737	1.663.371	1.716.254	1.762.075	1.801.980	%14,5
*DİYARBAKIR	1.492.828	1.515.011	1.528.958	1.570.943	1.592.167	1.607.437	%7,7
KOCAELİ	1.490.358	1.522.408	1.560.138	1.601.720	1.634.691	1.676.202	%12,5

XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

The number of slums and population in Turkey



Years	Number of Slums	Number of Population	Percentage of Slums in Urban Population
1955	50	250	4,7
1960	240	1.200	16,4
1965	430	2.250	22,9
1970	600	3.000	23,6
1980	1.150	5.750	26,1
1990	1.750	8.750	33,9
1995	2.000	10.000	35
2011	4.000	21.000	28
2014	5.000	23.000	30

(Thousand)

XXV International Federation of Surveyors Congress, Kuala Lumpur, Malaysia, 16 – 21 June 2014

Provincial Migration (2012-2013)



Province	In-Migration	Out-Migration	Net Migration	Rate of Net Migration (%0)
ISTANBUL	437.922	371.601	66.321	4,7
ANKARA	186.642	153.791	32.851	6,5
İZMİR	113.673	99.681	13.992	3,5
BURSA	75.518	61.744	13.774	5,0
ANTALYA	88.605	64.075	24.530	11,4
KONYA	51.080	55.006	-3.926	-1,9
GAZİANTEP	41.978	42.291	-313	-0,2
ŞANLIURFA	33.383	47.429	-14.046	-7,8
DIYARBAKIR	35.466	47.949	-12.483	-7,7
KOCAELİ	71.159	54.742	16.417	9,8



XXV International Federation of Surveyors Congress, Kuala Lumpur, Malaysia, 16 – 21 June 2014

Proportion of Migrated Population by Reason for Migration in Turkey

Reason for Migration	Migrated Population	Proportion of Migrated Population
Total	2.207.844	100,0
To Find a Job	268.400	12,2
Change of Job	295.906	13,4
Education	498.137	22,6
Marriage/Divorce	166.284	7,5
Health	22.649	1,0
Migration related to any member of the household	916.761	41,5
Other	39.115	1,8
Unknown	593	0,03



(One year migration among provinces are covered-October 2011)

Considering whole Turkey, 30 % of the population has been living in buildings built illegally. From the illegal buildings in Turkey are; 33 % in Istanbul, 30 % in Ankara, 12 % in Izmir, 5 % in Adana, 4 % in Bursa, 3 % in Samsun. Today in Istanbul, there is about 2.5 million buildings.

XXV International Federation of Surveyors Congress, Kuala Lumpur,

Malaysia, 16 – 21 June 2014

Non-Institutional population by labour force status



(Thousand)

Years	Labour Force	Employed	Unemployed	Unemployment Rate (%)	Non-Agricultural Unemployment Rate (%)	Employment Rate (%)
2004	22.016	19.632	2.385	10,8	14,2	41,3
2005	22.455	20.067	2.388	10,6	13,5	41,5
2006	22.751	20.423	2.328	10,2	12,7	41,5
2007	23.114	20.738	2.376	10,3	12,6	41,5
2008	23.805	21.194	2.611	11,0	13,6	41,7
2009	24.748	21.277	3.471	14,0	17,4	41,2
2010	25.641	22.594	3.046	11,9	14,8	43,0
2011	26.725	21.110	2.615	9,8	12,4	45,0
2012	27.339	24.821	2.518	9,2	11,5	45,4
2013	28.271	25.524	2.747	9,7	12,0	45,9



XXV International Federation of Surveyors Congress, Kuala Lumpur,

Malaysia, 16 – 21 June 2014

Urban Perspective in Turkey

The main objectives of urban renewal are restructuring and re-planning of concerned urban areas; designing more effective and environmentally-friendly local transport and road networks within the concerned urban areas; rationalizing land uses within the concerned urban areas; redeveloping dilapidated buildings into new buildings of modern standard and environmentally-friendly design; promoting sustainable development in the urban areas; promoting the timely maintenance and rehabilitation of buildings in need of repair; preserving buildings, sites and structures of historical, cultural or architectural value; preserving as far as practicable local characteristics; preserving as far as practicable the social networks of the local community; providing purpose-built housing for groups with special needs, such as the elderly and the disabled; providing more open space and community/welfare facilities; and enhancing the townscape with attractive landscape and urban design



XXV International Federation of
Surveyors Congress, Kuala Lumpur,

Malaysia, 16 – 21 June 2014

Urban Perspective in Turkey

Industrialization, globalization and economic changes in the world since 60's caused a rapid urbanization process that has determined the form of big cities. Increase of population in metropolises has been very high and consequently urbanization process has been experienced in a short time span, thus, demand for urban land and housing raised to a very high level. In order to meet that urgent need for shelter, immigrated population have built slums which is shack that put up quickly without proper permissions on seized lands.

Therefore, those immigrants changed the structure of the big cities and they created slum settlements. It is known that the unplanned and uncontrolled area development has created negative life and sheltering conditions with many infrastructure and social problems that could not be solved yet.

XXV International Federation of
Surveyors Congress, Kuala Lumpur,

Malaysia, 16 – 21 June 2014



SLUM !

A slum, as defined by the United Nations Agency (2002), is a run-down area of a city characterized by substandard housing and squalor and lacking in tenure security. In other words slums are poor-income, informal settlements with inadequate living conditions and basic services.

The traditional meaning of slum is housing areas that were once respectable or even desirable, but which have since deteriorated, as the original dwellers have moved to new and better areas of cities.



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014



Urbanization



Turkish metropolises suffer poor infrastructure systems and weak structures due to unplanned urbanization as a result of migration waves from rural to urban. Slum clearance was a necessity to provide safe and quality life in the metropolises.

Through the enactment of related laws and establishment of Housing Development Administration of Turkey (TOKİ) a new era started on urban regeneration. Since 90's Turkey has been implementing several Urban Regeneration Projects due to fortify and change the urban structure.

TOKİ's practices constitutes a model for local governments and other actors of the housing sector. TOKİ not only transforms slum and shanty settlement areas, but also tries to prevent formation of new slum areas with the houses it produced for narrow-income groups.

XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

Urbanization

The other activities are mainly the “agricultural village projects”, “migrant dwellings”, “restoration of buildings of historical-cultural importance”, cooperative credits, housing credits. TOKİ’s affordable housing includes producing all the social facilities within the projects. TOKİ also invests a great of effort in infrastructure (roads, water lines, etc.) Landscaping is provided for the projects. TOKİ is also working with the Ministry of Education to build schools and outlying buildings in required areas (especially in rural areas).



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

CONCLUSION AND SUGGESTIONS



Turkey is a country, which has very productive fields. Using of these fields efficiently, farmers are made conscious of land consolidation, regulations are renovated and rearranged, and the most important of these actions; the government must be consider the agriculture, road and irrigation net, farm-life, natural and cultural heritage.

The main reasons of sqatter’s housing are uncontrolled migration, population increase, fast urbanization, lack of planning and infrastructure, lack of resources and wrong approches of politicians and administrators. To avoid the squatter’s housing, migration must be stopped by eliminating the causes of migration source.

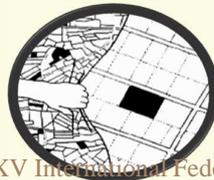
XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

CONCLUSION AND SUGGESTIONS



It is obvious that the solution of the rural problems as; migration, decreasing of population, unemployment, lack of agriculture land and harvest is land consolidation. The researches and projects are focused on land consolidation policies and public investments that affect the growth of, efficiency of resource allocation in, rural economies, as well as the well being and poverty of rural populations.

The rural development project must be rests upon the philosophy sustainable human development, which aims to create an environment in which future generations can benefit and develop. The basic strategies of the project must include fairness in development, participation, environmental protection, employment generation, spatial planning and infrastructure development.



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014

THANK YOU

FOR YOUR INTEREST AND PATIENCE



XXV International Federation of
Surveyors Congress, Kuala Lumpur,
Malaysia, 16 – 21 June 2014