

# Negative & Positive vision for Egyptian village “Tanah, an Egyptian village”

## • Introduction

At the end of year 2007 and the beginning of year 2008 all the world suffered from a wave of continuous high rise of prices due to the continues high rise of prices of all petroleum products prices. Therefore the future of development plans will be affected in negative orientation especially for nations of third world.

This problem has its direct effect on Egyptian villages development and plans , which has negative aspects towards the urban vision of development plans for these villages . This paper will focus on these expecting problems and also shows the main these urban characteristics which not affected by this wave . This is will done through a case study of one Egyptian village by analysis the existing urban conditions and its changes.

## • Paper aims

This paper will discuss the existing situation of urban structure of the selected village in different axes (urban structure / building conditions and heights , housing types / service structures / infrastructures / environmental / economic / ..... ) . Hereby can be discuss the main urban characteristics which have changed and other which not be effected. Therefore negative effects and positives can be concluded.

## • Case study location

The selection of the case study village depends on selection an example which represents the most important characters of Egyptian village. Therefore the selected case study is Tanah village which located in the north of Egypt in Dakahlia government At Mansora zone.



## 1- Tanah village urban studies:-

### • The basic data:-

The area of the urban agglomeration of Tanah village is about 222.49 acres , but the total area of roads, passages, urban spaces, and canals is 28.3 acres, and the space lands (private owner ship) 16.6 acres.

### 1.1 The urban elements of the existing agglomeration:-

The basic urban agglomeration of Tanah village includes basic agglomeration, retainer frame and the basic agglomeration involves the old agglomeration of the village which adjoins the maximum urban agglomeration and services.



**Above Tanah village.**

### 1.2 Urban development of the village:-

The urban development of the village is considered one of the traditional typical shapes of Egyptian villages developments and we can summarize the stages of Tanah village urban development in 3 basic stages as followed:-

From the beginning of the urban creating of the village till fifteenth beginning its area accomplished 45 acres and by that it is considered as the center of the village or the old area now.

But by the looking at the urban extending which followed this stage and during the sixteenth and the seventeenth and even the beginnings of the eighteenth the biggest proportion from the urban extending to the trends of both east and west of the village next to the main road although with some extending to both east and west. The area of the village is accomplished at this stage go acres with corrode rate 1.01 acres for every year.



**The urban development of Tanah village**

**Table: Rates and volumes of the urban development for the different development stages:-**

Stages	Total village area		Total Agglomeration area	Correct rate Acres a year
	Increase of The area	% of total area		
Before 1953	54	24.27	54	-
From 1953 to 1985	36	16.18	90	1.01
From 1985 to 2006	132.49	59.5	222.49	3.74
The urban agglomeration	222.49	100	-	-

**Source:** maps of Egyptian survey aspect (assembly 1953, 1985 survey 2006)

During the last few years the urban extension to over than the north frontier of the village and that urban extension in towards trends of east and west is harmonious with the building condition which is grading from bad to good till the village area became 222.49 acres with corrode rate 3.74 acres for every year.

**The urban surveys involve the following aspects:-**

- Landuse for all the buildings , streets, canals , drains, vacant lands
- Building conditions.
- Construction system & its materials.
- Buildings heights.

A group of maps have been prepared to show the urban surveys and as the following steps some data and results of these works.

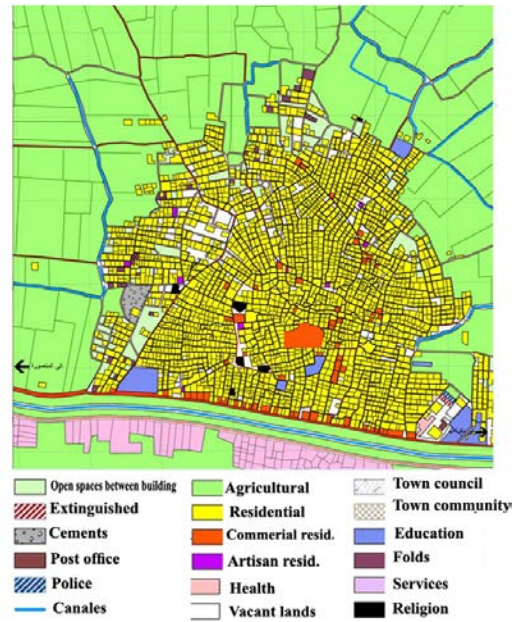
**1.3 Land use and building:-**

According of what has accomplished in urban surveys and collecting data of landuse in Tanah village. Analytical studies have shown that structure of landuse in the village is formed by the next using

▪ **Residential areas :-**

Its area is 156.7 acres (about 70% from total urban agglomeration of the village) which includes residential, commercial, artisan residential, residential courts and under construction building.

- **Economical activities:-**  
(Commercial, barns and stores) lack at the village.
- **Basic Services:-**  
Basic services centers in the old area of the village and the surrounded area of it on main roads, while as other services fallout in the village. Total service areas are about 8.2 acres as 3.68% of the village.
- **Roads, open spaces, and canals :-**  
It is area is 41 acres with rate 18.4% from total urban agglomeration area.
- **Vacant land (private ownership)**  
It is area is 16.6 acres with rate 7.5% total urban agglomeration area
- **The land use map:** shows places in which different services center in Tanah village as the areas of these services are shown from landuse budget table as follow :-



**Land use of Tanah village**

**1.4 Main urban features of Tanah village:-**

Through the following shapes the most important features of Tanah village are cleared in mosque, school, and the most important old residential houses in the village, market, and basic squares,

**Fig: Different building on Tanah village**



**Old building**

**Residential building**

**Table: Using of actual lands and basic buildings of Tanah village**

Landuse	Area / acres	Per cent
Residential	151.69	68.2
Commercial residential	4.5	2.02
Artisan residential	0.5	0.2
Total of residential	156.69	70.4
Religion services	1.1	0.5
Educational services	6.2	2.8
Sanitary	0.4	0.2
General services	0.6	0.3
Total of services and utilities	8.2	3.68
Constructed agglomeration	164.89	74.1
Roads and canals	41	18.4
Space lands into the agglomeration	16.6	7.5
Total	222.49	100.0

Source : survey of the village

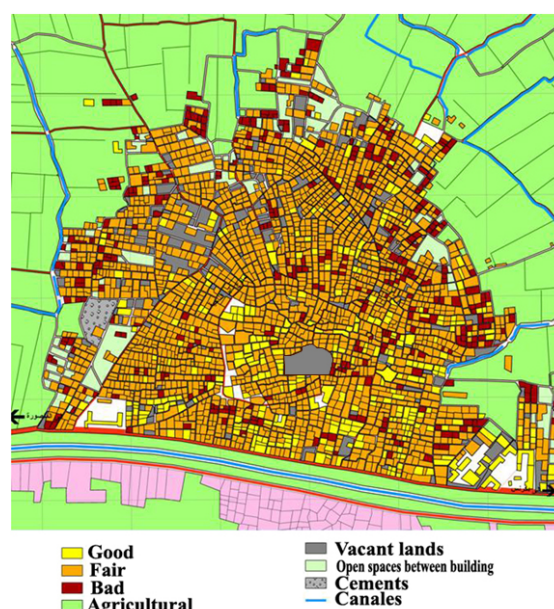
### 1.5 Buildings conditions :-

Analytical studies of land survey for the village urban agglomeration has shown the following results:- It was noticed that the area of good buildings& fair is about 136.3 acres with rate 87% of total of the village buildings area, while as the bad buildings area is 20.4 acres with rate 13% of total of the village area, which means that the village still has parts in need to replacement and renovation operations. Also many of bad buildings focus in the old area of the village, while as the good buildings focus in area of the new extension and on the main road of village which is related it to the regional road.

**Table : Conditions of existing buildings**

Statement	Totality of the village	
	Area (acres)	%
Good buildings	12.2	7.8
Fair buildings	124.1	79.2
Bad buildings	20.4	13.0
Constructed agglomeration	156.7	100.0

Source : survey of the village



**Buildings conditions of Tanah village**

## 1.6 Construction system & materials

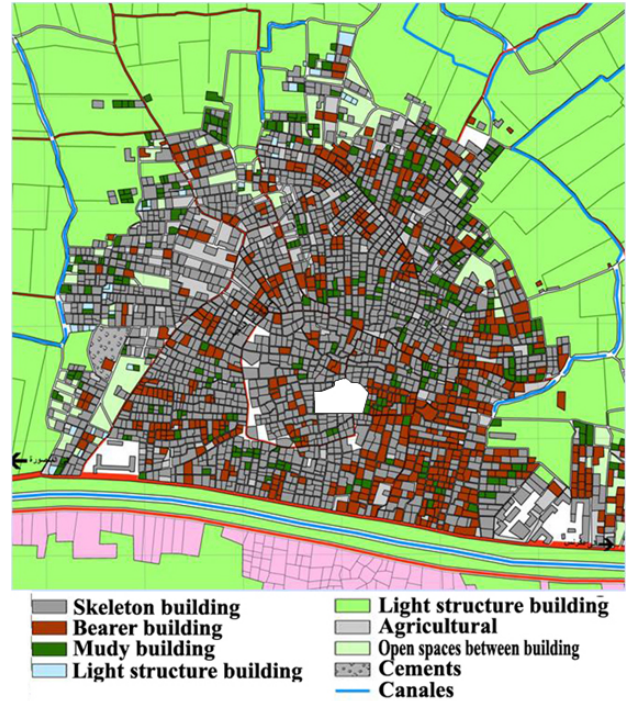
Analytical study of urban surveys which is related to the buildings construction system show the following:-

The mud constructed building area is about 19.1 acres with rate 12.2% from total buildings of the village which is less than the area of skeleton buildings is accomplished 1117 acres by 74.7% from totally of the village buildings area, while as bearer walls of the village building is accomplished about only 18.49%.

**Table : Construction of existing building**

Statement	Totality of the village	
	Area (acres)	%
Skeleton buildings	117	74.7
Bearer walls buildings mud	18.49	11.8
Light structure building	2	1.3
Constructed agglomeration	156.1	100.0

**Source:** survey of the village.



**Building construction of Tanah village**

## 1.7 Building heights:-

An analytical study of urban surveys which is related to buildings heights in Tanah village has shown the following results:-

- ◆ Most building high in the village is fading highs between one and two stories with rate 91.2% from totality of village urban area and it spreads in center of the village and some other party area.
- ◆ On the other hand medium & high buildings spreads in most village extension areas and on main roads which its area is 13.78 acres with rate 8.8% from total of village building area.

**Table : Actual building highs in Tanah village.**

Statement	Area	
	(acres)	%
One floor	52.96	33.8
2 floors	89.9	57.4
3 floors	11.59	7.4
4 and more	2.19	1.4
Constructed agglomeration	156.7	100.0

**Source :** Village survey

## 2- Study of the village housing:-

The housing study aims to recognize the main features of the village housing and possibilities of developing the housing sector in the framing of the village development as all.

### 2-1 : Actual village housing (data base):-

This step aims to recognize details of village housing features through watching qualitative and quantity features of village housing area which is considered as the most important pivots of housing sector as follows:

**2-2 : Quantitative policy of housing:-**

- ◆ Totality of constructed building area in Tanah village is about 164.9 acres.
- ◆ The rate of the good residential buildings area is about 15.42% from total residential number while as the rate of bad buildings is about 39.66% from total of residential buildings, and average residential buildings is 44.9%.

**Fig: Examples of good residential buildings**



**Table : Existing of actual residential buildings condition:**

Statement	Totality of the village			
	Area (acres)	Residential buildings numbers	Area %	Building numbers %
Good buildings	12.2	640	7.8	15.4
Fair buildings	124.1	1862	79.2	44.9
Bad buildings	20.4	1645	13.0	39.7
Constructed agglomeration	156.7	4147	100.	100.0

The rate of muddy buildings is 24% from totality of residential buildings which is less than the rate of bearer walls buildings 53.56% and structure buildings 21.5%.

**Fig: Models of fair residential buildings.**



Statement	Totality of the village			
	Area (acres)	Residential buildings number	Area %	Building numbers %
Skeleton buildings	117	891.9	74.7	21.5
Bearer walls buildings	18.49	2221.5	11.8	53.56
Muddy buildings	19.1	995.3	12.2	24
Light structure buildings	2	38.2	1.3	0.92
Constructed agglomeration	156.1	4147.0	100.0	100

The rate of the residential buildings which includes one and two levels is 91.2% from total of residential buildings , on the other hand the rate of the residential buildings which include 3 floors and more is decline from the rest buildings of the village with singularity to reach 7,12% from total of residential buildings.

**Fig: Models for bad residential buildings.**



### 2-3 : Qualitative policy of housing:-

- Qualitative policy of housing assimilates in studying kinds of residential buildings which is assimilated in (residential homes/ chateau) is accounted as (4147 buildings includes, about 139 chateau, 2807 apartment buildings , 915 villa, and 286 independent rooms or more arranged it can be clarified that increasing of rate of apartments which is accomplished (67.7) from the total of residential buildings.
- Number of residential units into the urban range is 4147 residential units include about 1654 unit's needs replacement operation (is 39.66% from totality of units).
- The population number in Tanah village is accounted as 15708 person in 2006, and average of family volume there in 1966 is 3.45 person / family. According to data of living circumstances in 1966 we found that 68.5% from population housing apartments, 22.6% housing villas, 3.4% housing chateaus, and 5.5% housing independent rooms in residential units or in separate rooms. This appoints to a bad housing situation of average rate of population in comparing with other villages in the national unit as Alsafa, Abd Al Mansor small village, and Kom Alashraf according to housing circumstances data in 1966.
- The following table shows some main data for housing sector which through it is clear that increasing of person's chair of housing lands (1.3.5 square meter) and of housing area (36.8 square meter). Also we can find that average of housing land area is 158, 7 meter. In addition to the residential density is average and allowed more population to be into exiting residential agglomeration (100.2 person / acres).

**Table : guidelines for existing housing characteristics:**

Statement	Total urban agglomeration
urban agglomeration area (acres)	222.49
population number (person) 2006	15708
Residential area (acres) under construction inclusive.	156.7 16.6
gross density (person/acres) 2006	70.6
residential density (person/acres) 2006	100.2
Residential buildings situation (good buildings %) (Bad buildings %)	15.42 39.66
hights average	2-1
general construction system (structure buildings) (bearer walls and (concrete ceiling) (brick) (light structure)	21.5 53.56 24 0.9
Construction density of housing lands (%)	95.25
average area of housing lands plots (m2)	158.7
person's share from residential lands (m2)	103.5
residential unit average area (m2)	126.96
person's share from residential area (m2)	36.8

**Models of different residential buildings.**



**3- Services Study:-**

**3.1 The existing conditions:-**

Tanah village is considered one of the local villages .it is considered as the capital of the mother city which provides villages and its farms with services where all kinds of social services effect the social population situations, and their productive qualification and capability, Tanah village provides population with main social services to make them useful producer for the selves and for surrounded societies which aims to improve village situation.

By studying services lasting situation of the village, and there will be an observation of numbers and kinds of services of all sectors in the village (teach ability – healthy – sociability – sport – secure cultural – religious - ..... ) and that to be sure how enough these services for citizens and appreciate their current and future needs according to aimed criteria and rates, as the following:-utilities average.



### 3.2 Educational services :-

#### ■ Primary education :-

Number of primary schools in Tanah village is now 4 primary schools. According to statistics , the village has 7 classes and serve 1470 students on two stages with density 40 students/class but we think school still in need to other 10 classes in the future.

#### ■ Preparatory education :-

according to information map : there are 2 preparatory schools in Tanah village (male, female) which includes 25 classes and serve 1211 students with density 48 student / class , but we think the school is in need to extra 14 classes at the future.

#### ■ Primary religious education :

The village has primary religious institute with 20 classes to serve 193 students with density 32 students / class, but still need to add one class at in the future.

#### ■ Male Prep. Religious education :

Prep. Religious institute has 6 classes that services 193 students with density 32 student/class, but it still needs another class in the future.

#### ■ High schools education :

A secondary school has 24 classes serve 757 students with density 32 student/class but it still need to add another class in the future.

#### ■ Technical commercial secondary education :

Technical commercial secondary school has 57 class for 1495 student with density 40 students / class, but it still needs to all 11 classes in the future.

#### ■ Female secondary-preparatory religious education :

Primary religious institute with 19 classes to serve 682 students with density 36 student/class, but it needs to add another 3 classes in the future.

#### ■ Male secondary-preparatory religious education :-

Primary religious institute with 22 classes to serve 277 students with density 40 student/class, but it still needs to add another 6 classes in the future.

### 3.3 Healthy services:

There is a health center and a bad hospital in the village, 12 private pharmacy, 50 private clinics, family planning center, maternity & childhood center, and Malaria unit.

### 3.4 Social services :

Social services in Tanah village are represented in the social unit, national society development association, produced families, and 2 kindergartens. All these services are accomplished through the national society development association and the social activities.

### 3.5 Secure services :

There is no civil archive office in the village, and fire fighting, also there is no ambulance or police station.

**Fig: Services distribution in Tanah village.**



## 4 -Social and Residential Studies:-

### 4.1 Population growth:-

Social study of Tanah village aims to watch actual residential and social situation and main variables which effect strategic design framing of Tanah national unit and it also effects the village model in particular and statistics analysis of residential and social data as the developing of the population number and rates of population growth in addition to some main residential characteristics for the village society and that for deriving some guidelines by which we can recognize substitutes of village population growth and its followers in the future, and to choose the selected substitute which aims to full fill the demands of village urban model for now and to the future in the framing of national unit population of Tanah village and by specifying developmental issues which has of place for the village residential and social side. Also to determine weakness and strength points , points of dangerous, and good chances that effect the strategic planning of Tanah village (El Mansoura).

### 4.2 Population of Tanah village:-

Next table points at village urban elements and by which we can brief the following:-

The village consists of the main urban agglomeration in addition two compounds where the population of the main urban agglomeration is about 94.6% from total of the village population.

**Table: Comparative digital distribution of urban elements population in Tanah:-**

Unit – statement	1996	2006	Comparative distribution of 1996	Comparative distribution of 2006
Population of the village	13534	15708	94.6	94.6
Population of small villages (compounds) which the urban agglomeration includes				
A. Alshenawy's hire	377	438	2.7	2.7
A. Mahmoud Al shenawy's at the north	392	455	2.7	2.7
<b>Total compounds population</b>	<b>768</b>	<b>907</b>	<b>5.4</b>	<b>5.4</b>
<b>Total village's population</b>	<b>14303</b>	<b>16601</b>	<b>100</b>	<b>100</b>

### 4.3 Demographic features of Tanah village population

#### Categories of age and kind:-

Categories of age and kind in Tanah village are distributed according to census of 1996 as the following:-

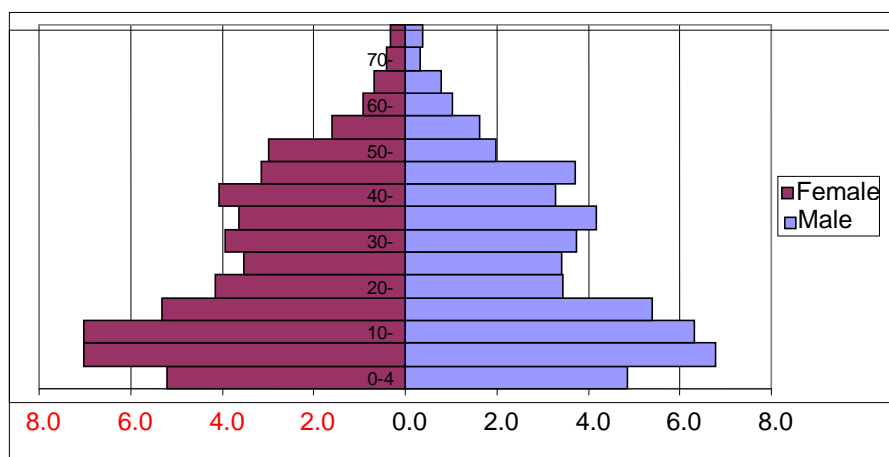
- The rate of kids less than 5 years old is 10.1 % from total population, and the rate of population in age of primary school is 25.4%, while as the rate of population from 15-60 years old is about 59.7% and that rate refers to the balance of the society, while as the rate of population older than 60 years old is about 4.8% from total population. Fig (4-1) shows the residential pyramid of Tanah village. As it is general in rural area we notice the increasing of population rate in age category (0-15) to 35.5% from total village population which refers to extending the pyramid base.
- The category age (15 – 65 years old) which represents theoretical working power of population shows, its people as about 61.6% from total village population. It is raised simply and that because of its inclusion of the first beginnings of birthrate which we mentioned before. That may because of increasing the rate of population in the previous category (0-15). We expect that rate of category to increase in the future and that by restricting of the pyramid base and moving from the age section (5-14) years old to that category. On the other hand, the age category (older than 60 years ago) is about 4.8% from total village population but it is relatively depressed although we expect it to raise in the future as result of the healthy services improvement, which follows of the raising in rate of keeping on life and average of the person age. The programming of social caring and development has to use that in its developmental program to benefit from this age slide.
- From all the previous we expect the residential pyramid to move to residential maturity stage which is a residential development stage with average rates after a relatively long time period.

**Table: comparative and numerical distribution of age and kind category of Tanah village population in 1996.**

kind category	Numerical distribution			Comparative distribution		
	Male %	Female%	Total %	Male %	Female%	Total %
1-5	663	704	1367	4.9	5.2	10.0
5-10	920	555	1868	6.8	4.1	13.8
11-15	853	853	1570	6.3	6.3	11.6
15-20	731	717	1299	5.4	5.3	9.6
20-25	474	555	947	3.5	4.1	7
25-30	460	474	988	3.4	3.5	7.3
30-35	514	392	1002	3.8	2.9	7.4
35-40	568	420	1110	4.2	3.1	8.2
40-45	447	555	880	3.3	4.1	6.5
45-50	501	435	907	3.7	3.2	6.7
50-55	271	406	415	2	3	3.8
55-60	217	217	433	1.6	1.6	3.2
60-65	135	122	257	1	0.9	1.9
65-70	95	95	203	0.7	0.7	1.5
70-75	41	45	95	0.3	0.4	0.7
175	54	41	95	0.4	0.3	0.7
<b>Total</b>	<b>6943</b>	<b>6591</b>	<b>13534</b>	<b>51.3</b>	<b>48.7</b>	<b>100</b>

Source : center agency for public mobilization and statistics , census 1996

**Fig: residential pyramid of Tanah village in 1996**



#### 4.4 Family average rate:-

- Families number of the village reached about 4147 families in 1996, and it is noticed that the decreasing of family average rate (3.45) person / family comparing with country of Al Mansoura locality (4.29) person / family. Also Al Mansoura locality urbanism average reached (4.07) person / family.
- That rapprochement of the family average rate with hastening of family morphology rate can lead to increase of families' numbers and more demanded for residential units. This increase may lead to limit the appearance of informal zones and exceed rationalizing on agricultural lands especially with the decreasing of the crowding rate 0.94 person / village by equal vent of locality urbanism population where the locality total (1.044-1.948) person/room by sequence in 1996.

**Table: Figure of population number and family volume average, and crowding rate of Tanah village and Al Mansosura locality in 1996.**

Managerial unit	1996		Number of rooms in 1996	Volume average person / family	
	Population	Families		1996	Rate 1996
statement					
Village	143.3	4147	15260	3.45	0.94
Local unit	62851	16000	59122	3.93	0.27
Urban center	369409	90734	353848	4.07	1.044
Village center	423669	11800	53207	4.29	7.963
<b>Total center</b>	<b>793078</b>	<b>102534</b>	<b>407055</b>	<b>7.73</b>	<b>1.948</b>

**Source :** central agency for public mobilization and statistics , census 1996

## 5- Environmental Studies:-

- ◆ Environmental, natural and infrastructure elements are considered the most important strong particularizes when studying urban village which relates with each other as it is a relationship of affecting element in urban village according to density and the village urban growth development and progressing of the village urban environment.
- ◆ According to that the natural and environmental studies with infrastructure studies is considered as one of the most affecting studies on general strategic planning of Tanah locality unit – Tanah village.

### 5.1 Land topography:-

By studying topography on the locality zone of Tanah village, it shows lands topography average means that levels are ranging from 1m to 8m above sea level, which means no topographic obstacle to mention in front of development.

### 5.2 Geology of the area:-

Soil morphology of Dakahlya government can be divided to old sludge which reverts to plasestosis age and recent sludge that reverts to hoboism age. Old sludge is consisted of rough morphology of sand and scare which is overlies by recent sludge and morphology which is consisted of particles morphology from day and soft sand.

There are many soil types in locality (Dakahlya government) and that according to the often type in morphology which we can divide to:-

- **Heavy mud Soil :-**

It's a consistence incorporated soil which morphology, it is molar as a result of increasing mud rate which is ranging from 60% to 70% and it is slow validity to water.

- **Light mud Soil :-**

It's a sedimentary and deep sector soil which has heavy statue or light mud. Its mud rate is ranging from 40% to 60% and it's slow validity to water.

### 5.3 Sources of Ground Water:-

Feeding of septic-tank beneath Al Dakahlya government depends on water which sneaks from conduits, canals, and drains on east of delta, also it depends on sneak irrigation water of the agricultural lands.

### 5.4 Irrigation and drains in Tanah village:-

- **Irrigation:-**

The irrigation network in Tanah village depends on Tanah's canal, which is considered as the main canal that the village depends on water some agricultural lands. The most of other agricultural lands are watering by ground water which leads to decreasing of agricultural lands product.

- **Drain :-**

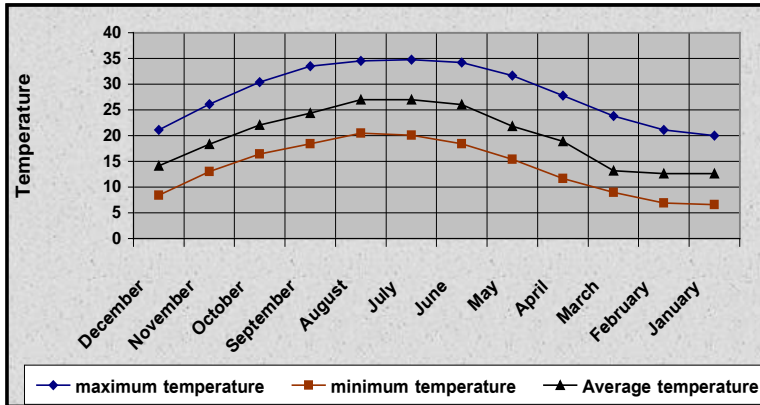
Tanah village depends on drain ways by open drainage.

- **Climatic Studies :-**

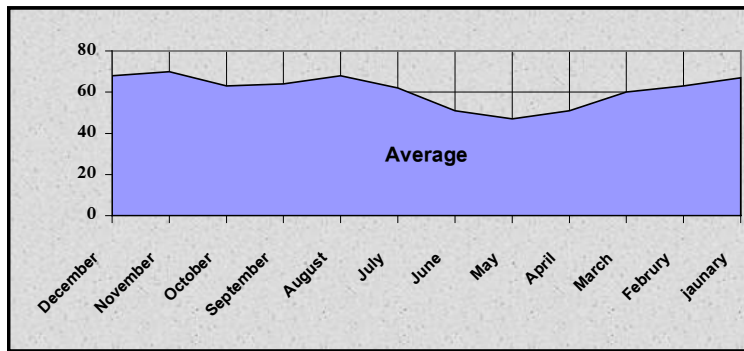
In the following, a statement of the basic climatic elements study of Dakhalia meteorology station:-

- The maximum rate of wind speed all over the year in April is 4.2 knot/hour.
- The west north direction is considered the dominant direction of wind in most months of year.
- The maximum rates of temperature in summer (July – June – August) when the maximum heat temperature in August reached 27.3 centigrade.
- The relativity of moisture rate equilibrates all over the year, but it increased in some months, as in summer and winter months. The maximum rate of relativity moisture reaches 71% in January.
- The maximum rate of rain quantity is in winter months, especially in December when it reaches 25.5mm.

**Fig: Temperature of Dakhalia government**



**Fig: Relativity moisture averages of Dakahlya government**



### 5.5 The Climatic effect on village urban:-

#### • Climate and Agricultural:-

The climate effect in the agricultural exploitative of the village is about reduce to the soil and surface temperature, moisture rate, and sun shine time.

#### • Climate and Human being :-

The climate of Dakahlya government is suitable to human being life during the year.

#### • Climate and Country residence :-

Most of it is homes which are being built by bricks and mud as walls, and thick ceilings, although the recent way to use baked bricks and concrete ceiling in building. On the other hand houses which are built by bricks are suitable for human beings by feeling heat, but with increasing city temperature especially in summer and with the presence of straw and wood on roofs sometime it leads to make fire especially when inflaming

#### • Climate , Transporting & communication :-

Because most of egyptian countries roads are dusty roads, not paved, all of them after it rains are turning to mud roads which act as obstacles in the way of mean transportation and by that the connection between country& stores is cut.

## 5.6 pollution sources:-

The most important pollution sources assimilate in:-

- **Air pollution:-**

It happens as a result of different factors such as cars pollution, workshops, smoking resulting burn garbage and waste burning in the streets, rice straw fields burning. As well fermenting of organic elements in the air. Dusts which wind carries in streets and while cars passing on the village.
- **Noise pollution :-**

The resulted discord from using T.V. and Radio devices, voices of pitchmen, car's trumpety, and workshops are nose sources in the village. Noise more than 60 dp is considered from the affecting levels on health of human-being which cause worry, deafness, and blood pressure increasing if dealing with it for long hours.
- **Ray pollution (electromagnetic) :-**

It is resulting from magnetic and electric fields affect living-beings. These fields following from the electric generating operations, and the power transportation by air lines to distributed among consumers where high pressure lines next to the residential agglomeration of the country. The ray pollution is resulted from electromagnetic fields resulted from electronic devices, radio devices, and transporting photographic and phonetic waves (mobile stations), which affect on skin surface leads to blood and skin cancer and nervous system problems.
- **Drainages and watercourse pollution :-**

That pollution is resulted from drainage of the village and solid waste on the watercourse as in Tanah village.
- **Solid wastes (garbage) :-**
  - Garbage from many areas are not been collected because there is no regular system and possibilities to move that garbage away.
  - The garbage quantity average of one person is about 0.5 kg. Population number of Tanah village is about 166.1 thousand persons in 2006, while as the garbage quantity of the village daily of this year is about 8.3 ton/day. Because of that the garbage quantity of the village in 2006 is about 3029.7 ton.
  - The village population number till 2022 will be about 21068 thousand person, and garbage quantity it that year will be about 3845 ton.
- **Ways of benefited from agricultural wastes :-**

We can brief resulted damage from agricultural wastes burning to causes the following:

  - Killing insects, diseases which are harmful with agricultural vintage in the soil.
  - Causing health diseases to farmers and population of locality from increasing smoke resulted from burning of agricultural wastes.
  - Downfall of the actual vegetables vintage and as well trees of fruits.
  - Air pollution by harmful gazes of environment such as carbon dioxide.
  - Die of all useful living creatures of agricultural soil.
  - Burning the organic material of surface layer from agricultural soil.
  - Decreasing the agricultural soil fertility.
  - Turning the agricultural soil mud into pure mineral material.

## 6- Economical studies (local economic):-

### 6-1 Agricultural production of Tanah village:-

Total zone of the village is about 1448 acres; planted area into the zone is 1088 acres which equals 75.1381% from the village total zone area. This area is divided into owner's number as the following:-

- 50.55% holdings less than one acre.
- 6.89 % holdings from 1 acre to less than 3 acres.
- 11.03 % from 3 acres to less than 5 acres.
- 6.89 % from 5 acres to less than 10 acres.
- 3.95 % more than 10 acres.
-

## 7- Infra structure works :-

### 7.1 Transportation, roads, and traffic.

#### ◆ Roads network all over Tanah village.

##### ■ **Regional road :-**

There are no regional roads in the village.

##### ■ **Roads between villages :-**

The village connects with other villages and their attachments by:-

- Alhysha – Almahlausy road which is paved in its most parts. Its width is 4m, length 12 km and has average movement. Most traffic volume consists of trucks which are used to transport persons and cultivated production. This is a lightened road.
- Hamama compound road with width 5m, length 2 km. it's not lightened and dusty road.
- Al-Mahlawy road with length 4 km, width 5m. It's paved but not lightened and has the main village entrance.

##### ■ **Regional contacts :-**

There are some joints which connected Tanah village with other neighboring villages. Regional joints advantaging with the following specialties:-

- Its traffic volume is medium.
- Most transporting vehicles with different kinds (covered fare transportation – slow transportation).
- There is no traffic secure and controlling such as signboards, bollards, and lighting at entrances and cross roads

##### ■ **Local roads network :-**

There is a group of dusty roads with width ranging between 4-5m. Other local roads in the village are dusty and not paved according to village soil nature that mostly is muddy and because of these roads the village becomes separated when it rains. So that roads become not good for vehicles moving. also a problem

of narrow roads with width less than 6m and ranging between 4-5 m, no pavements for pedestrian. Most dusty roads have unequal width. The roads networks in side the village is poor in roads hierarchy, hasn't good lights and have road's width less than 4m. Also there isn't direct responsible authority to make operations of settlement, maintenance, and restoration of local roads in the village.

Total length of paved roads is about 3 km and dusty roads are 5km.

##### ■ **Village entrances :-**

The main entry: - it lies on Al Mahalawy road with width 5m. it is paved , lightened and has some traffic crowds. Many accidents happen there because of random transportation of collective vehicles.

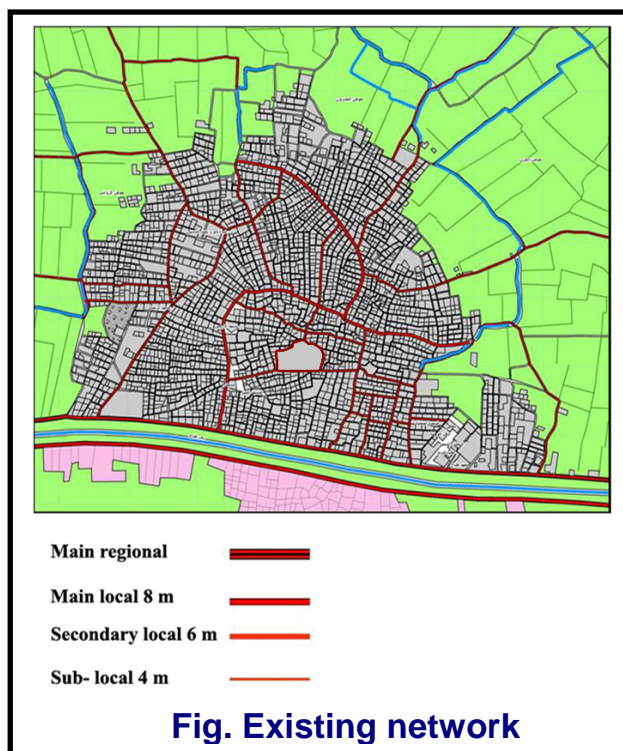
### 7.2 Supply works:-

#### ◆ Water supply source :-

The village is supplied of water through a supply line with diameter 8 inch from Al-Gamalya water station (Albasrat). The capacity of the station reached 600 liter/sec.

#### ◆ Existing water supply network condition :-

- Water supply net exists all over the villages and farms.



- Number of conjuncts of the network is 800 conjunct.
- Consumption average of Al Mahlawy village reaches about 635 m<sup>3</sup>/ day.
- Personal consumption average is 116 l./person/ day and it is average rating according to Egyptian code

◆ **Upper and land tanks :-**

No upper or land tanks in the village.

◆ **Evaluating of the actual requirements of drinking water :-**

■ **Water supply rates.**

**A. Rates of water supply differ according to seasons, day and night, social status, and economical status of population. We can divide water supply into main five parts :-**

- Housing consumption.
- Commercial consumption, stores, café shops, and markets.
- Artificial consumption, workshops public consumption,
- Using water in cult centers, schools, managing buildings, and others.
- According to basics and criteria of the Egyptian code to design and implement lines of pipes actual water consumption rate of the village are 150 liter / person / day.

**B. Requirements of water demand average**

- Designed population number of the villages and its follower = 5464 person.
- Water consumption rate (according to code) = 150 liter / person / day, where demanded water quantity of the village = (150 X 5464) – 1000 = 820 m<sup>3</sup> / day.

**C. Storage power :-**

- We can account the high consumption on maximum consumption for 1-2 hour adding 20% from fire consumption.
- Maximum hour consumption = 2.25x daily consumption average = 2.25 X 820 = 1844 m<sup>3</sup>/ a day.
- Desired water of fire = 120 m<sup>3</sup> for 10000 person 13g all of that, the village is in need to high storage = 1844x 1-24 + 20 – 100 x 5664 x 120 – 10000 = 90 m<sup>3</sup>.

**D. Sanitary drainage :**

- Existing condition of sanitary works
- Nowadays there is no accepted system of drainage (declivity network, nominative stations, or treatment stations) of the village. Citizens usually establish land tank for drainage. These tanks sometimes are not built in a good ways or not insulated of its sides sufficiently which leads to sneak drain water from it to reach ground water which is near to the land surface. All that causes that water pollution and by timing ground water level rising and the possibilities of ground water sources pollution increased. Also environmental laws disobeyed by getting ride of accumulative wastes inside these tanks where they scavenge it regularly by families and on there owner cost by using accumulative of the local government office

◆ **Existing System:-**

It depends on:-

- Local network has small diameter and draining to neighboring drainage in the village
- tanks and analysis tank

◆ **Drainage Through tanks properties**

Samples indicated that the general capacity of tanks in the buildings served by using tanks (2m× 2m× 2m) the average service of tanks reaches to 8: 10 persons

Average costing of building a tank reaches to 1500 -2000 pound

## 8- General analysis

### 8.1 Urban studies

The existing studies of Tanah village urban aims to determine the main estimators of development through which we can make a strategic planning of the village. That planning determines politics and goals to be guided in construction and controlling. It conform all the sectors with its missions, job, and roles.

### 8.2 Results and analysis the urban information

- Urban agglomeration survey area of Tanah village is about 222.49 acres, buildings area is about 125.1 acres. Roads and urban vacant area is 41 acres, private space lands reaches 16.6 acres.



- Residential zones area is 156.7 acres with rate 70.4% from total urban agglomeration area of the village which includes residential, commercial residential, artisan residential, and courtyards and under construction buildings.
- Bad buildings area is 20.4 acres with rate 13 % from total village building area (39.66 % from total buildings number)
- Mud buildings area is 19.1 acres with rate 12.2 from total village buildings area and 24% from total buildings number.
- Village buildings heights are mostly low height which is ranging between one and two floors with rate 19.2% from total village buildings area. The high buildings speed on the main axis and side parts.
- By studying and evaluating the attitudes of the actual urban development of Tanah village, we can find factories that affect the existing village urban structure, and how it affects on village future and its urban structure. This has been affected by three main planning elements which are. Main road of Metay – Abu Deabas , main drainage Abu Deabas in the west side . Because surrounding agriculture lands the urban agglomeration of village in the north east, and west side. We find that the modern urban extended over the road and the canal.

### 8.3 Urban survey of the existing situation:-

The aim from field study is to make a concept of the general strategic planning which suites Tanah village according to the available resources. In the field visiting of Tanah, the urban survey of lands and actual buildings in the village has been done. Building area is about 164.9 acres, area of roads, canals and urban vaunts is 41 acres, and the space lands area is 166 acres.

### 8.4 Housing studies

#### ◆ Important indicators of housing study :-

- ⌘ total residential building area in the Tanah village inside urban agglomeration is 164.9 acres with rate 74% from total urban agglomeration
- ⌘ 1645 buildings represents 39.66% from total village buildings which is 4147 buildings, 995 buildings in a bad condition.
- ⌘ Residential density about 100.2 person / acres, the urban density is 70.6 person / acres in the urban agglomeration with area 222.49 acres.
- ⌘ The village is suffering from high prices of residential units, and there isn't renting in the village.
- ⌘ There isn't low-cost housing projects

#### ◆ Future needs Evaluations

The village needs to offer about 1391 more residential unit because of population increasing till 2022 which is appreciated with 5565 person if the family average reaches 4-5 person / family in 2022. The village needs 52.6 acres for the expected population increasing in the urban agglomeration till 2022 which reaches 5565 person. That will housed in vacant lands inside the residential agglomeration in 166 acres, replacement buildings inside residential agglomeration about 15.5 acres. The cumulate buildings are about 20.5 acres. Added agglomeration area actual agglomeration limited is 15.1 acres.

### 8.5 Service studies

#### ◆ Services estimated and the actual shortage in services evaluation :-

##### ■ educational services

We can measure how sufficiency of educational services from the class density.

- **Primary education:** From pervious it is clear that primary class density reaches 40 student/class this density equilibrium with education ministry .amid rates (40student / person)

- **Preparatory Education:** There are 2 prep. Schools inside the village including 25 classes and serve 1211 student, class density reaches 48 student / class and this is a high density according to aimed rates.
- **Secondary Education:** There are no secondary schools and technical secondary schools in Tanah village.
- **Healthy services**  
There are a healthy office and small hospital in bad condition. Also 12 private pharmacies subsist, one family economy center, maternity & childhood center, and malaria unit.
- **Social services**  
The social services in Tanah village represent in social unit, development local society, productive families, and 2 kindergartens. These services are accomplished through development local society and social activities by local unit.
- **Secure services**  
There isn't civil archive, fire fighting, ambulance or police station

## 9- Conclusions

### 9-1: Tanah village negative characteristics

#### - urban problems:

- Main village service structure is weakness and there are clear shortage in education, healthy and recreation services.
- Residential building visual view is poor resulting from bad finishing.
- Bad condition buildings spread on the center of village.
- Informal houses extensions which increase on agriculture lands.
- Environmental pollution subsistence from canals and drainages on urban agglomeration limits , also there isn't clear system to get rid of wastes

#### - Traffic problems:

- There isn't clear road network hierarchy.
- Most of roads in a bad condition and not paved.
- Road network width is so narrow and not suitable with traffic capacity.
- Probability of high traffic movement cause of increasing cars ownership inside village centre.

#### - Infrastructure problems:

- Infrastructure decadent especially at sanitary drainage.
- Electricity capacity needs to increase with feature urban village extension.
- Communication capacity needs to increase by making central building inside the village.
- Covering main canal which surrounded by residential buildings.

#### - Economical problems:

- The need to economical base inside the village depending on small industrial village products.
- The need to continuous financing for services building by making commercial projects to get income which can be used in maintenance operations of services, roads and infrastructure.

### 9-2: Tanah village positive characteristics

#### - Urban characteristics

- The main urban scape ( plaza ) still remain in the middle of the urban agglomeration , even the high price of its land value.
- The grand mosque still the main landmark of the urban vision of the village .
- The majority of building heights ranges between 2,3 floors which reduce residential density .

#### - Social characteristics

- Strong relations between families.

- The best of Egyptian traditions still be found, specially in happy or sad actions .
- The civil and religious societies still have its power and help in solving community problems.

#### **- Environmental characteristics**

- The agriculture lands around village agglomeration help to reduce any type of air pollution.
- The urban context of building around courts and streets help to get good climate zone.

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