“Protecting” agricultural land from urbanization or “Managing” the conflict between informal urban growth while meeting the demands of the communities (Lessons learnt from the Egyptian policy reforms)

By

Dr. Ayman Ibrahim Kamel El-Hefnawi

Urban Training and studies Institute, Egypt.
Housing and Building Research centre
Ministry of housing Utilities and Urban Communities
Egypt

Abstract

Land is one of the resources in any city that need to be effectively managed for better urban management outcomes. The Egyptian government have always been supporting for the calls against informal settlements and all kinds of informalities taking place over agricultural land especially in the outskirts of cities (PU areas). However, these calls and interventions didn’t distinguish these areas with specific oriented policies, it followed the same laws all over Egypt that is completely banning development over agricultural land.

The impacts of this conflict have disastrous effects on losing agricultural land and on the poor people living in these areas. Egypt witnessed the problem of loosing agricultural land due to urbanisation since 1952 (the revolution and the modern Egyptian era) with different rates. Some experts and institutions accounted a total loss of 1.35 million Feddan of prime agricultural land during the period 1952-2002. The Egyptian government have been passing on an ongoing process of political and administrative reform in the past 10 years. Among these reforms are those carried in the national democratic political - NDP (the governing party). One of the features of this reform was building a new policy wing inside the party to formulate an innovative and integrated focus on some of the problem that was highly challenging. Among these problems and challenges are those problems associated with agricultural land protection and the dichotomy between two teams. The first composed mainly of the Egyptian technocrats and supported by the rigid role of the ministry of agricultural. While the second team composed of the majority of politicians, ministries, governors and the majority of the Egyptian population including farmers especially the poor people leaving in rural and PU areas looking for a more lenient role. The two teams views differs in relation to the approach that could be applied to preserve agricultural land.

This paper will present, review and analyse the above dichotomy, its costs and benefits. It will reflect and demonstrate the irrelevancy of the existing national regulatory framework in Egypt, which is governing this conflict. The ideology of decision makers excerpted from the command and control policies which are calling for full protection of agricultural land. Rather, what is needed is to deviate this ideology towards managing this conflict of interest towards the balance between preservation of agricultural land while meeting the demands of the communities especially the needy. Decentralisation of the powers to governors' local authorities, local leaders, etc. is seen as the main trend towards solving this conflict which can never be achieved from the central government. Moreover, new

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1 The researcher is an urban development specialist working in the research wing of the ministry of housing, utilities and urban communities. The researcher has a number of published papers on the subject of the symposium and has earned his master and PhD on land management subjects. He earned his master degree from the DPU, UCL has his PhD from Cairo University. He has a solid 14 years experience in urban development. He worked in several international projects and with a number of international and national organisations, universities and research centres. He is a member of the highest national committee for agricultural land management and urban development.
approaches and reforms based on inclusiveness and community participation is highly needed during this stage of agricultural land management reforms.

1. Introduction about urbanisation in Egypt.

Within the last four decades, Egypt faced an unprecedented urbanization process, despite all governmental efforts to slow down it. Being only less than 10% of total population at the beginning of the 20th century, the urban population has turned to be 45% by the end of this century. Currently covering only 5% of the total territory of the country, the Egyptian government has set several policies and strategies to extend the inhibited areas to 25% of its total area within the coming two decades, table (1). This ambitious policy reflects the recognition of the government that this urban growth can not be stopped and it should rather channeled to occupy and develop desert lands, this could be the possible and rational channel towards protecting the arable land, which is facing continuous threat of being transferred to urban land, mostly, in form of informal development.

The reality that will be described through this paper will show that a major urban development solutions, especially from the communities living in the peripheries of cities and villages, has been in the shape of informal invasion which swallowed more than 80% of this agricultural land that are mostly located on the peripheral areas surrounding the Egyptian major cities.

This research will critically answer the questions "whether, it is possible to protect agricultural land against urbanization drivers, or would it, rather, logical to manage the conflict between that informal growth while meeting the demands of the communities". Yet the Egyptian government took, finally, a position regarding this question, although this position didn't materialize yet in a fully picture that could be evaluated, the research will show the new policy reforms which represent the Egyptian government new position towards this dilemma.

2. Research structure and Methodology

The methodology applied in this research is a mixture of desk work research and analysis of primary data collected mainly through key informant's interviews held with 100 local officials and experts. The analysis and the researcher views is based partly on his PhD which was carried out during the period 1998-2001. In addition the researcher will summarize and present the views of the high committee for agricultural land preservation and urban management in Egypt which is affiliated to the National Democratic Party (NDP), those views which showed the dichotomy of agricultural land protection approaches where two different teams have opposing views regarding the tools that could be used to

<table>
<thead>
<tr>
<th>Year</th>
<th>National population (million)</th>
<th>Urban population</th>
<th>% of national population</th>
<th>Annual urban population growth rate</th>
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<tr>
<td>1960</td>
<td>25.98</td>
<td>9.87</td>
<td>38 %</td>
<td>n/a</td>
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<tr>
<td>1976</td>
<td>43.73</td>
<td>19.15</td>
<td>43.8 %</td>
<td>3 %</td>
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<tr>
<td>1986</td>
<td>48.25</td>
<td>21.23</td>
<td>44 %</td>
<td>2.8 %</td>
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<td>1996</td>
<td>59.31</td>
<td>25.27</td>
<td>42.6 %</td>
<td>1.8 %</td>
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Table (1): Population increase trend in Egypt
Source: CAPMAS, Consensus of Egypt, various years
protect agricultural land. This research was conducted over a long time period beginning from 1998 and ending on September 2004.

This research paper is composed of different sections. After a short introduction to the basic land tenure in Egypt, the first section will describe the magnitude of the problem discussed above. Following to that, the researcher will present the different impacts arising from the loss of agricultural land, followed by investigating full overview about agricultural land management in Egypt with its pitfalls from the legal and institutional point of view. The research will then summarise the different outcomes of the high committee for agricultural land preservation and urban management in Egypt which the research will draw the final views and conclusions of the research from.

3. Basic land tenure systems in Egypt

Egypt’s contemporary administrative system is the product of the country’s long and complex history. Accordingly legislation regarding the ownership and control over land reflected a diversity of influences, including ancient customs, Islamic laws as well as French and British legal systems. In Egypt five main types of land tenure can be identified;

- Leased land; is owned by the state and leased on a long term to its occupants.
- Trust or Waqf land: consists of property aside for charitable or religious purpose and usually administered by the ministry of Waqf.
- Encroachment (Wad Al Ayad): The civil code makes it possible for the possessor or user of a plot of land to gain ownership of that land if it is occupied continuously for 15 years and if the owners don't assert his/ her rights.
- Private ownership: This land is registered with the local district office of the land registration division and owned by private persons or companies
- Public ownership: This land is registered as state property, which serves a public purpose. It includes Governorate Amlak lands, land reform, antiquity and military properties (Arandal C. etal 1997).

To this diverse land tenure systems made the issue of land a very complicated issue, which forced the Egyptian government not to touch the old and outdated policies which govern this important resource.

4. The magnitude of the “agricultural land loss” at the national level and its impacts

This section of the paper will highlight the magnitude of the problem in a retro respective way; it will show as well its overall impacts on the economy, the living environment and finally on changing the livelihood of farmers (socio-economic perspective).

4.1 The magnitude of the problem

The latest national studies in addition to the international sounding studies illustrated that the estimated value of all agricultural property classified to informal areas is US $ 46.2 Billion, adding to this informal villages which is evaluated as equivalent US $ 16.9 Billion. Hence the total informally/legally built units over agricultural land is estimated to be US $ 63.1 billion. The Egyptian government estimated the total number of informally built units classified, as informal agricultural or informal village to 7.9 million units in Egypt. Hence, agricultural land loss became a major problem in Egypt (De soto H. 1999)

This problem was the core of discussion among many scholars, national and international institutions in the past 50 years. In the coming section, the history of the conflict between urbanisation and its encroachment of agricultural land will be discussed; this will be supported by data gathered from

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2 This was a highest committee formulated on September 2003 out of the national Democratic Party. The main objective of the committee was to study this sever problem in a one year period and to present practical solutions to the government which should be discussed and agreed upon with the different line ministries involved. The Committee is formulated out of 54 experts representing the different ministries, research centres, private sector, environmentalists, parliamentarians, agri-economists, urban planners, etc.

3 The end of the study period was linked to the annual NDP conference where their policy papers regarding the major problems that the different committees studied were presented.
There is a huge disparity in between national and international institutions an even amongst the different experts in estimating the total amount of land that was lost in the previous 50 years. Agricultural land loss, in the period 1965-1972, at the national level was estimated to be 50 thousand acres yearly due to urbanisation (El bakri B. et al 1992) , other authors were more optimistic about these figures, where they illustrated that the yearly loss of agricultural land was about 20-25 thousand Acres/yearly (PADCO 1982). Others were moderate in between these two figures; they estimated the amount of land lost to be 44 thousand acres/yearly (Zanaty M. et al 1995). While, during the period 1973-1983, agricultural land loss increased to 60-70 Thousand Acres/ Year. Finally, national ministry of agriculture estimated the agricultural land loss during the period 1984-2000, of not exceeding 25000 Acres/Year. Adding these different views together will sum up the Egyptian loss of agricultural land to be equivalent to 1.3 million Feddan during the period 1965-2000 in Egypt. Also it is important to note that almost 50-60 % of this amount of land was lost due to urbanisation, where the rest of the land was swallowed due to several other reasons including; the increase of under ground water level or salinity of the agricultural land or the loss of agricultural land due to scraping of land for brick-making. These figures mean that urbanisation pressures, alone, consumed 600-700 thousand acres during the period 1966-2000. These views were supported later by the Shoura High Council report launched in 2003 which studied thoroughly the main causes behind agricultural land loss in the period 1952-2002. It calculated the total loss to a total of 1.35 million Feddans during the period 1952-2002 (Shoura High Council 2003).

The final study that the research will refer to show the magnitude of the problem represents the most threatening views for decision makers and those concerned with this problem. It was performed by the well known committee titled “Egyptian National Specialised Committee in 2003”, this report mentioned that Egypt lost more than 1.6 million feddan during the period 1952-2002. This report didn’t stop at quantifying the problem, moreover, it simulated the future scenarios for agricultural land loss; in total, this report came up with two main scenarios; the first scenario was named “optimistic scenario – white scenario”, this scenario expected that the sum of the total reclaimed and old (delta land) will not decline and that the Egyptian government if succeeded in reforming its agricultural protection policies will not suffer the problem with the same current intensity. The second scenario was titled “pessimistic scenario-black scenario”, this scenario expected that, given the same rate of losing agricultural land, by year 2080, Egypt will loose all its old land and will be mainly depending on the total reclaimed land (ENSC 2003).

Moreover, the national efforts to trace the drastic decline of the agricultural land ownership per person was materialised, lately, in the shocking figures illustrated by another national report titled “Mubarak and Urbanisation”, This report illustrated clearly that the amount of the share of person has decreased drastically. Although agricultural land area, at the national level, has increased from 5.4 million in 1907 to 8.5 millions in 1996, land ownership per person decreased from 0.48 to 0.14. Although land reclamation became one of the Egyptian policies for food self sufficiency and horizontal expansion, however, it doesn’t represent more than 25 % of the total current land cultivated outside the valley and the delta, table (2), and hence losing agricultural land became a great danger.

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<tbody>
<tr>
<td>Agricultural land in acres/million</td>
<td>5.4</td>
<td>5.2</td>
<td>5.28</td>
<td>5.76</td>
<td>5.6</td>
<td>5.75</td>
<td>5.88</td>
<td>5.9</td>
<td>6.02</td>
<td>8.5</td>
</tr>
<tr>
<td>Per person</td>
<td>0.48</td>
<td>0.4</td>
<td>0.33</td>
<td>0.2</td>
<td>0.22</td>
<td>0.17</td>
<td>0.14</td>
<td>0.12</td>
<td>0.12</td>
<td>0.14</td>
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</table>

Table (2) the amount of agriculture land owned per person in the period 1907-1996
Source: Mubarak and urbanisation, 1999

The researcher will analyse the process of agricultural land loss, discuss the different causes behind agricultural land loss and finally list and analyse the different actors involved in the protection of agricultural land in Egypt.
4.2 The different impacts arising from the problem
In the next paragraphs the different impacts arising from the inappropriate regulation exerted in agricultural land, which will be discussed in next sections, will be illustrated. The researcher subdivided the different impacts into four main classification; economic impacts, physical impacts, environmental impacts and finally livelihood impacts and those impacts interrelated to poverty.

4.2.1 Economic impacts of loosing agricultural lands
The loss of agricultural lands leads, directly, to loosing of job opportunities as the loss of each feddan resulting in loosing directly one job opportunity and about 0.7 indirect job opportunities. This means that the loss of 60,000 Feddans yearly leads to unemployment in the old lands of the agricultural sector estimated to be 100,000 job opportunity yearly. In directly, losing agricultural land lead to closing down the old canals and drainage system, hence requiring additional funds to close those drains and canals otherwise, they became dumping areas of all types of wastes. Egyptian government lacks these funds in its annual budget and hence the indirect costs associated to environmental degradation and human health hazards are getting higher. It is very hardly to estimate the economic costs associated to environmental and health hazards (ENSC 2003).

4.2.2 Physical impacts related to the emergence of informal settlements
Emergence of informal settlements is perceived as a disaster, this informal urbanization is becoming the common pattern in the Egyptian development. It is estimated that more than 80% of the buildings in Cairo are informal. The Information and Decision Support Center (IDSC) affiliated to the Prime Minister (PM) Cabinet conducted a survey in 1993 which estimated the percentage of informal areas (to formal areas) in 10 different governorates. Figure (1) shows the main results of the survey which indicates that the informal areas have became one of the main characteristics of Egypt. This phenomenon makes it difficult to distinguish between residential urban and rural areas; for example in Giza city there are 32 informal extensions, part of these extensions has population of more than an average city (more than 1 million inhabitants), (IDSC 1993).

These urbanization aspects lead to the existence of other problems like the deficiency in provision of services and public facilities, in addition to the mixture of unsuitable utilizations like polluting handicraft areas and informal expansions of Egyptian cities with its various sizes. The result was the deterioration of living conditions and consequently, poverty and environmental problems. This deterioration happens geographically in these informal areas, which lacks infrastructure, basic urban services and living space, together with its negative impact on the surrounding agricultural areas; the following land-related problems illustrated the different physical problems related to irrational building over agricultural land in Egypt:
• **Incompatible mixture of land uses, lack of green areas and peripheral public conveniences**

  The incompatibility of mixed uses has created a bad situation in the PU areas in the City. Shops, small offices and certain types of workshops co-exist in the areas, which are mainly residential. Although they may ensure that services are very convenient, when excessive noise, air pollution or obstruction of streets occur, the need arises to be able to mobilise control over these incompatible land uses.

• **Unplanned use of land and lack of local services and open spaces**

  Lack of planning in these peripheral areas has led to situations of poor circulation and lack of social facilities. Uncontrolled use of agricultural land creates loss of a valuable resource. Some development of agricultural land in a planned manner may be necessary in order to make the City work, but this should be minimized to maintain the valuable arable land.

• **Unhealthy, deprived high-density informal areas**

  The dense areas of informal development mean that there is a severe lack of land for services and open space for recreation. Moreover, the rural areas that are becoming part of GCR agglomeration lack proper infrastructure and services to support the increasing density of development and its incorporation in the City.

• **Intensifying formal and informal areas which exert strain on services**

  The ban on development of agricultural land coupled with the difficulty in accessing desert land means that density is likely to continue to increase. The relatively high percentage of empty property will be occupied over time, thus further stressing the very limited services (Davidson, F., and Youssef, K., 1998).
• Air pollution in rural areas: the rates of air pollution increased inside Egyptian cities and villages as a result of the intervention of polluting industrial areas in the agricultural areas in addition to the dependence on motor vehicles as the common mode of transportation in both urban and rural areas. The air pollution exists in rural areas as well as a result of the activity of automated vehicles causing contamination with lead, carbon monoxide, sulfur dioxide and nitrogen monoxide which was recorded in several villages, and accumulations of some heavy metals in the tissues of agricultural products near to pollution sources like smelters in Greater Cairo Region (GCR).

• The pollution resulting from solid waste management has greatly affected the agricultural land where the internal roads, in those villages, has became open dumping areas, behavior of the farmers have changed and huge amount of non-degradable materials are recorded in villages especially plastics, in addition to the overflows of drains and canals with all types of construction waste (EQI 1998).

• The unplanned urbanization has applied high pressure on the Egyptian monuments, figures 2, 3, 4 and 5 illustrates these types of problems

4.2.4 Socio-Economic impacts of loosing agricultural lands

• Ruralization of urban areas
The increased migration from villages to cities leads to the existence of new and weird social problems within the city structure. One of these problems is the transfer of behavior, traditions and the way of living of the rural areas to the cities which gave the urban areas rural look and with its expansion it is more common than the tradition urban pattern.

• Urbanization of rural areas
Lately, drastic changes appeared in the Egyptian rural areas as increased number of vehicles for daily trips from the village to the city, increased consumption of water and the decreased number of workers in the agricultural sector compared to other sectors. The land use changes in the cities caused by the urban expansion lead to deficiency in services, utilities, rise in under ground water table, deterioration of the road conditions, deficiency of transportation utilities, soil contamination. These changes were reflected on the livelihood patterns of men and women in rural settlements. Socio economic characteristics have changed in some villages from being fully dependent on agricultural activities towards another set of activities including SMEs, which were perceived by the traditional team in the NDP as a great danger to the agriculture activities.
5. Full overview about agricultural land management in Egypt.

Agricultural land protection versus urbanisation is managed by means of sectoral strategies policies, laws and different actors. These different actors and tools are mainly controlled by the Ministry of Agriculture (MOA) or by other ministries including; Ministry of Housing (MOHUUC), and Ministry of local development (MOLD) in addition to the embedded role of the governors (26 governs in Egypt); while the role of other ministries such as Ministry of the State for the Environment (MSEA) in neglicable. Through this section, the research will show the process of land invasion, the different actors involved in protecting agricultural land against urbanisation, the set of main laws and policy instruments used to curb any illegal development over agricultural land. This section will show the different conflicting interests amongst the different actors, it will show as well the loopholes in the regulatory framework which control this important resource.

5.1 The process of agricultural land invasion. The process of encroachment on agricultural land is formed when several farmers start selling their plot after subdividing them. The resulting final layout is formed by many individuals decisions taken at low levels confined to agricultural plot scale (El-Batran M 1998). The detailed steps undertaken by farmers during this process can be summed in the following steps;

- The real estate agents or land brokers in the peripheries of cities, and villages accelerated by the "infitah" policy in 1973, bought agricultural land in these peripheral areas, they subdivided land illegally leaving no space of for services or infrastructure connections and with very minimal street width (2-3m in width).
- These lands are changing in shape depending on the original irrigation and other natural systems with the agricultural land and even the street width could be changing due to the same reason (GOPP and IAURIF, 1994)
- Those people began selling their lands to middle income people who are mostly working in the gulf area and who are mostly suffering non-affordability of housing units.

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4 Opening up of the economy, synonym to open market economy

Figure (6) illustration of the process of agricultural land invasion
Source: Davidson et al. 1998
• Pieces of land ranged between 150-300 m².
• Similarly, there are small land lords which has subdivide their plots into huge number of land parcels ranging between 60-100 m², and mostly sold to rural immigrants who have been newly migrating to Cairo looking for better living conditions (Allam A. 1992).
• In some cases the contractor could buy more than one piece in order to construct bigger projects5, but still preserving the old shape discussed above.
• Once the building is a fact, there is pressure for legal building permission. Hence, there is a right to demand infrastructure connections. As this process takes time, many connections are illegal, thus causing problems in the formal infrastructure systems (Davidson F. et al 1998).

The above process shows primarily the reasons, which has accelerated the process of agricultural land invasion especially during the 70s and in the 80s (this was the period of the high loss agricultural land mentioned by the researcher in previous sections of the research paper). This was the early process, in which the different reasons, which accelerated the process, were identified; currently, these reasons became more complicated. Hence understanding the motives behind the violators will require a more deep analysis, which caused this phenomenon. In the next section, the paper will show and critically describe those causes, through identifying those causes, commentators and readers of this research paper will share some critical views regarding the Egyptian policy reforms and hence could properly evaluate those reforms.

5.2 Causes for informal encroachment on agricultural land.
The savings accumulated by Egyptians who worked in the gulf countries after the 1973 war has been invested in land and housing both for self use and in the search for high investment returns. Culturally based motives, which valued the possession of piece of land and of a house as an important form of social security and prestige largely contributed to this trend. The moral factors could not be the main reasons behind the problem.

Land loss was described, by several authors, to be associated to a large number of causes, which are all related directly to the rapid urban growth associated to the huge population increase. Studying the different causes, behind the loss of agricultural land, will clarify the necessity for integrated reforms.

**Shortage and un-affordability of housing stock.**
The lack of viable housing alternatives by the government for the urban poor together with inadequate enforcement of planning and building codes has resulted in rapid informal development. The above facts indicate that there is housing crisis in Egypt. Bearing in mind the limited public budget allocated to housing investment, this has consecutively led to more dependence on the private sector as the main provider for housing opportunities. On the other hand, the increase in construction costs, the price of building materials associated with the influence of rent control, scarcity and rising of land price, created concrete obstacles for the private developers in contributing to formal housing production (Soliman A 1995). In both cases, non-affordability of the poor for convenient shelter was a central dilemma; neither the formal private sector, nor the public housing is affordable to lower income groups (El Hefnawi 2001)

**High price of agricultural land**
Skyrocketing prices of land and housing have pushed the urban poor to marginal heavily polluted, and illegally occupied lands, cemeteries or agricultural land in the peri-urban interface (Bakri B et al 1992). As land prices increase in the peripheries, selling small parcels of this land is becoming more attractive compared with agricultural returns (Arandal C et al 1997, El Hefnawi et al 2001).

**Weakness and inappropriate control tools.**
Hernando De Soto, in his research titled "dead capital and the poor in Egypt" stated that acquiring formally a piece of land to build a dwelling unit and then register the property following legally established procedures, will require the individuals to carry out 77 bureaucratic

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5 Among those projects private universities and some entertainment projects
procedures in 31 different public and private offices, all of which could take 6-14 years (De soto 1998).

The inappropriate planning controls have accelerated the formulation of informal housing areas especially in the peri-urban areas. Despite the government role in introducing these urban laws, which control any kind of undesired development, there are many defects, which are encouraging or helping the establishment of uncontrolled housing areas built over illegal subdivided plots. Law no 3, 1982 is illustrating this fact. This law didn’t clearly identify the urban areas, and even the regulation for establishing a new housing area outside the city boundary is left vague. This has encouraged the private developers to escape inner cities and crowded areas, and accumulate agricultural land in the peripheries for the purpose of speculation, to avoid the continuous increase in the land prices within the city and escaping any kind of planning laws in order to maximise the best use of their land plots (Soliman A 1995).

Pressure from public infrastructure on agricultural land.

New infrastructure, especially roads, increases development pressures. It is important to use these increased values positively as they can help to fund needed upgrading. However, planning and management of acceptable sites is necessary coupled with control, where necessary, so as to avoid damaging pressure on sensitive sites. The construction of the ring road has put extensive pressure on the land prices, which became un-economical from the farmers point of view to continue farming due to the enormous increase in the land value.

A study conducted in 2000 by the urban training institute (UTI) in certain sectors of the ring road in GCR, has measured the impact of the ring road on its surroundings including it impact on the agricultural land value in the areas surrounding the path of the rings road. It was found out the land price in certain areas increased 10 times in the past 20 years, where it was doubled during the process of constructing the ring road (El-Hefnawi A. et al 2001)

Inefficient form of development of desert land.

To reduce pressure on agricultural land there need to be more radical alternatives of development on desert land that can attract the same groups of developers and renters who are developing or have been developing, the agricultural land. In theory, there is plenty of desert land (96 % of the Egyptian total area is desert land), but much of the more accessible areas are already allocated to a range of users such as military, co-operatives and to private developers. Agricultural land has been relatively easy to purchase and though forbidden, development on it has not been effectively controlled. However, if the control is maintained, there will have to be realistic alternative possibilities for similar development - this does not appear to be the case at present time (Davidson F. et al 1998). Although, policy makers views illustrated that New cities could represent a practical solution for the poor households and the needy, some authors

Figure (7): The pressure from the ring road on agricultural land in GCR
Source: The researcher
showed their scepticism regarding those views, the new cities is only accessible by the middle income households due to the high transportation costs, extremely high infrastructure costs and the decline in the number of subsidised housing lots for the low income groups in those cities.

Lack of coordinating mechanism to guide development.
There is no clear mechanism to link between urban planning laws and practices from one side and the agricultural protection laws on the other side. It was illustrated by several officials in different Governorates, that informal settlements built on agricultural land represents the weak mechanism of coordination, not only within Governorates, but also between line ministries involved in the planning for urban development. Although there is a huge institutional setting for different actors involved in the protection of agricultural land (this will be shown later). There is almost, any kind of institutional mechanism to coordinate between actions undertaken by these actors and its direct and indirect impact on the agricultural land loss in Egypt.

Limited human capacities
Observations, of experts, suggested that Governorates in Egypt, are seriously under staffed and equipped in the area of urban management, if it is to take a proactive role in urban management in general and agricultural land management in specific. Currently, in order to enforce the existing laws, this will require huge resources and number of skilled staff to carry out monitoring activities and in order to be willing to take severe penalties against violators. However, it was mentioned and observed by the researcher that, it is nearly impossible, to monitor and take severe actions against an average of 9000 violation each year (Elhefnawi A. 2001), especially if we knew that the total number of those working in the agricultural land protection department is not exceeding 50 officials in each governorate including those working at the governorate, city and village levels (Elhefnawi A. 2001).

Also it was observed that the employment conditions for those working in the field of agricultural land protection are getting worse. Their salaries are very low; this low salary doesn't allow to keep highly experienced local officials in their position or to recruit new staff, especially under the harsh working conditions, they are working under or the negative perception they have from the point of view of local farmers.

In essence, the number of meetings held in the different governorates conveyed that due to the lack of capacities and resources amongst other things for those involved in agricultural land protection, an achievable decline in agricultural land loss can not be reached. In this context, not only would additional staff be required, but also a wider range of disciplines and skills would be needed.

In addition, Macro-Economic factors and the impact of the other sectoral policies have a negative impact on this problem.

5.3 Inventory for actors involved in agricultural land protection.
This section looks at the actors involved in managing the conflict between urbanisation on one side, and agricultural land protection on the other side, especially amongst the public sector. There are a variety of actors, in the public sector, that has a stake in managing or protecting any kind of agricultural land invasion. The researcher commenced a number of meetings over a period of three months with local officials and experts (March- April 2000), in order to identify those actors and their respective roles and responsibilities, which have direct/indirect impact on the process of protecting agricultural land, among these actors;

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6 According the meeting held in the Governorates of Cairo and Giza with several officials from the department of urban planning, environmental management unit and the directorate of agriculture and housing.
7 The main department in the agricultural directorate which is responsible for managing, on daily basis, the conflict between urbanisation and other protection considerations. This department is entitled to demolish any building violation over agricultural land.
5.3.1 Actors at the central level

At the central level, there are three ministries, which are playing an important role in managing the conflict between urban development and agricultural land protection;

Ministry of Agriculture (MOA).
This ministry is responsible for protection of agricultural land at the central level. It is responsible for exempting some of these lands to be used for public good projects. The decrees of the minister of agriculture are one of the most important policy instruments which control the conflict between urbanisation and agricultural land protection. The most important department within this ministry is the central organisation for agricultural land protection. This organisation has branches at the Governorate level, in theory, its acts as the main coordinating department between central government and the local government. In reality, the overcentralisation of powers in the main branch of the organization in Cairo, to manage this national dilemma, weakened the need for some flexibility and the importance of decentralization, in certain occasions, where balancing the needs of the inhabitants with the agricultural land protection efforts was highly necessary.

Ministry of Housing, Utilities and New Communities (MOHUUC)
This ministry is responsible for the physical planning in Egypt. The master planning is the traditional tool used by the ministry and its different bodies to protect agricultural land, it is given high priority in the planning of the existing agglomeration, however these master plans are rarely implemented. General Organisation for Physical Planning (GOPP), is the ministry's arm that approves those plans. A key role of this organisation is central in the definition of the boundaries of cities and villages in coordination with the local authorities at the governorate, district and village levels.

The latest intervention of GOPP in that dilemma was materialised through the national program for establishing development plans for the mother villages in Delta region (a total of 500 village). This huge program basically, aimed at planning the development scenarios of each village till year 2020 through participatory approach and incorporating the main strategic objectives of the government while meeting the priorities agreed upon with those farmers. Hence meeting the socio-economic demands of farmers became a crucial and necessary step towards setting those plans. This program materialised a number of political blocking exercised by MOA, because those plans should be approved by the ministry. Due to the fact that those plans, for the first time, reflected the huge decline in agricultural land in those governorates, through a national sounding process, that came from other national sources, outside those of MOA. This program signalled, a new serious government, integrated and critical look at this dilemma, where more than 60 % of those mother villages expanded between 2-8 times their original areas over prime agricultural lands. The use of participatory approaches and backed by applying GIS helped to figure out a scientific proof of the magnitude of the problem. It is envisaged that the next months will signal the approval of those plans which will allow good utilisation of the dead capital lands in those villages for the sake of providing the villagers with their needs; the needs which were one of the main drivers behind the overflow of migration from rural to urban areas.

While, government officials have perceived their roles as the facilitators of urban development and the main gate keeper of agricultural land, other authors and researchers have seen them as the catalysts of the agricultural land violation process discussed before. MOA, allowed, frequently, formal invasion to peripheral lands by erecting governmental buildings such as public housing complexes, administrative buildings over this land. Although, there are some articles in the law which allow building over agricultural land for public good purposes, however, the process of selecting which piece of land, was always based on kinship, loyalty and several other reasons. Selecting piece of land, even for public good building, but in the wrong position, will accelerate other violators and land brokers to buy adjacent land and hence accelerate speculation and huge increase in the land value.
MOHUUC, too have accelerated development on agricultural land adjacent to the construction of big infrastructure projects. GOPP and IAURIF have studied thoroughly the negative impacts that the ring road could have on the areas adjacent to the path of the ring road. They recommended certain planning instruments in order to protect agricultural land; among these instruments,

- Building a green belt along the ring road and using a special planning policy because these new roads will attract building violators.
- Strict control over agricultural land for a 2 Km strip along the ring road, especially its path in peri-urban areas.
- Inside the ring road, a pre-emptive right was recommended, in order to allow the Governorates to buy the right of building on agricultural lands from farmers, or even buying the lands from them, especially those put to sale. These lands could be preserved or could be used for building services or recreational areas, which are often lacking in these areas (GOPP, 1994).

However, none of these instruments were applied due to the lack of political will and the inability to take the right decisions on the right time, lack of coordination with the respective governorates and lack of capacities to implement any instrument apart from the command and control instruments, which the Egyptian government have been always implementing. Hence, this indirect public development has accelerated the change in the land use pattern from agricultural land into urban land and integrated them into the city fabric (Soliman A. 1999)

Other central level ministries.
The Egyptian Environmental Affairs Agency (EEAA), has one department which is responsible for land protection and soil quality, in which agricultural land is perceived as a natural resource that must be preserved for the coming generations. That’s why, this dilemma became a central issue in the NEAP’s issued in 2002 (EEAA and UNDP 2002).

In addition, the Ministry of Interior (MOI) must submit a "public safety report"8 to the governor before demolishing any violation, it is important to note that huge number of violators were not penalised because of this report. This department has been one of the main actors in the previous 7 years, especially after issuance of the Prime Minister Military Decree no 1/1996. Together with two other actors, they formulated a committee titled "three partite committee"9. This committee took the full responsibility for demolishing any violation built over agricultural land. This committee is improperly equipped, i.e. it doesn't have financial resources to carry out its job and doesn't have full legal authority unless it is directly backed from the governor. The last main actor that this research will highlight represents the ministry of justice. The local officials expressed that courts (district and felony) are rarely issuing a sentence of prison against the farmers (according to the law, they are entitled to endorse this penalty). These courts are overburdened by a huge number of sentences10 recorded for the encroachment on agricultural land. This was signalled, by local officials, that the ministry of justice doesn't not support fully the implementation of agricultural protection laws and they are objecting full endorsement of these laws.

5.3.2 Actors at the local level (governorate, city/district, and village).
The administrative system of Egypt is very complicated, for the sake of shortening this part in the research, the researcher decided to merge the three tiers together. At the governorate level, the governor is considered the main driver towards implementing decisive urban management actions;

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8 The safety here is synonym to the feel of anger and mistrust in the Egyptian government. Hence, if there is great anxiety measured by the local police officers about the demolishing of any building violation, the police officer must convey this message to the governor before implementing the penalty of demolishing this illegal building
9 This is a small committee formed by a governor decree in each governorate. It is formed of three main actors; one representative of the agricultural directorate at the local level, representative of the executive local authority and finally representative of local police office. By means of local resources, its is mandated to demolish any building constructed over agricultural land without building licence
10 According to official reports from MOA, more than 500,000 were recorded during the period 1996-2002.
governors could provide the leadership and ensure that co-ordination mechanisms that are necessary to cope with this dilemma is available. Governor’s local decrees are complementing the laws and ministerial decrees. The government support for any agricultural land protection initiative is crucial; in many cases, their full support to the three partite committee, is the only means to implement the laws. Furthermore, several officials have declared openly that many cases succeeded to build on agricultural land because there was no continuous and direct support from the governor to follow-up and support this committee. Some officials declared openly that mobilising the political will and direct support of the governor, is the only means to put the agricultural protection laws into action. The governors perceptions and hence their interventions towards this dilemma was the reason behind splitting the 26 governors into two teams; one team believe that implementation of the laws, regardless of its rude contents, is the only way to preserve agricultural land, while the second team believe that there should be some balance between the preservation of agricultural land while meeting the demands of the community and hence there is a crucial need for policy reforms.

Apart from the governor role, there are other important stakeholders, at the governorate level, including:

**Directorate of Agriculture and its branches at the local level**
This directorate is responsible for daily management of this problem and monitoring encroachment on agricultural land. However, in reality, they are completely incompetent to fulfill their required responsibilities, due to a number of reasons;

- Division of powers and responsibilities are centralized in the central office in Cairo. The powers delegated to the executive local units and the policy officers are weighing the real necessity to empower the agricultural protection units at the governorate level and the other lower tiers.
- This directorate is lacking all the financial means and equipments and updated maps that are important to carry out their responsibilities.
- They are working according to the old and outdated norms, which they are not satisfied with, but they have to obey the orders of their superiors and to respect, even untruthfully, the laws and regulations.
- Finally, they have the feeling, they are the only party, which cares about preserving the agricultural land, but due to bad circumstances they are facing, their spirit is getting weaker, to the extent that they became accustomed to the fact that agricultural land loss is a fact that they can't resist.

*On the other side, there are a number of other departments with less impact/ indirect impact on agricultural land protection or management at the local level, among them;*

**Executive local councils**
These councils are the main arm of implementation at the local level; they are mostly ill equipped, suffering lack of knowledge and expertise to achieve the spectrum of activities, they are entitled to.

**Physical Planning Department**
This department is a key player in developing a strong land management capacity in the Governorate. They are involved indirectly in the process of agricultural land protection, since they are included in the process of issuing building licence.

**Amlak Department**
This department registers land at the governorate level. The department is not computerised, and information access is improper to achieve their responsibilities. Registering, using the computer, all agricultural land titles is important to exert control and to prevent any informal subdivision of land.

**The Local Popular Council.**
This is another important stakeholder in the process of protecting agricultural land. The role of local popular e councils is getting weaker and their impact is getting minimised especially if compared to the Executive local councils (ElHefnawi A. et al 2000)
Agricultural cooperatives
Agricultural land cooperatives at the village level are another important stakeholder. The researcher met several agricultural cooperatives officials in Gharbiya, Giza and Cairo governorates, in which they declared the lack of computerised information for all the villages under their jurisdiction, they are facing serious financial problems, where there is not enough financial resources to carry out the allocated responsibilities. Moreover, kinship and their strong loyalty to the communities, they are living with, is another important impediment, which hinder from taking severe actions against the violators.

The list of these actors is shown in Figure (8) below

5.3.3 Stakeholders benefiting from encroachment on agricultural land.
In the section below, another set of stakeholders will be added, their respective role in above dilemma will be assessed. These actors are not involved in the protection of agricultural land, but they are the widely recognised stakeholders, as the main motivators behind the invasion of agricultural land, among them;

Land brokers and real-estate agents.
They are looking for profit making and speculation. These are well equipped with the know-how about the loopholes in the existing regulations; also they have strong relationship with local councils, local implementation units and the parliament representatives who are backing them at the Governorate level.

Small farmers and prospective customers.
The first owns small parcels on the periphery of the city boundaries or in the core of villages. The public invasion of agricultural land has encouraged them to sell their plots to newcomers and accelerated the process of informal urbanisation. While the second are generally low-income households mostly in need of housing sites, and represent around 60 % of the total population.\textsuperscript{11}

It is important to note that that these two stakeholders can’t benefit without the support of the public officials. This support could be gained directly through the administrative bottlenecks, which hinder demolishing the violations committed by land brokers or real estate agents; or indirectly through the double role played by some officials, who are aiming to share the financial benefits of agricultural land subdivision, with these stakeholders.

Figure (4) actors involved in agricultural land protection
Source: The researcher
5.4 Policy instruments practised in Egypt for agricultural land protection.

Egypt has a plethora of command and control policy instruments that is part of its laws, planning documents and its ministerial and governor’s decrees. In the coming section, the researcher will analyse these policy instruments in order to evaluate their efficiency in achieving the protection of agricultural land. In general, most of these laws were issued to ban any type of development on agricultural land. Some of them were used as an illustration to the strong and stringent government position about this problem; among them the Prime Minister Military Decree no 1/1996 issued to prohibit development on agricultural land. This decree was completely banning development over agricultural land or agricultural land subdivision. The fine stipulated in this decree was both a fine ranging between 10,000-50,000 L.E and the jail for the violator for a period of 2-5 years. This recent military decree banning development on agricultural land is felt to have a negative impact on that issue where various governorates recorded a sudden increase in the violation which was described by decisions makers as a direct impact of the harsh impose of military decrees (Davidson and Morkous 1998). In September 2004, this decree was abolished by the president, based on recommendation from the PM cabinet and the NDP.

5.4.1 Agricultural "command and control " Policy Instruments

Since 1966, Egyptian government invested to protect agricultural land, mainly, through applying regulatory instruments, "command and control policy instruments". Several laws were issued including law no 53/1966 and law no 116/1983. In addition, MOA has also issued several ministerial decrees, most importantly, the military decree mentioned above. However, most of these laws, ministerial decree were focused on regulatory instruments that were used for one single objective, which is protecting the agricultural land regardless of the reasons behind that development.

After abolishing the military decree in 2004, law No 116/1983, became the main arm which protect agricultural land. According to this law, any building constructed over agricultural land or any community initiative taken to divide such land for the purpose of building was totally prohibited. In addition, fallow, cultivable lands within agricultural lands shall be deemed agricultural lands as well. In certain cases, certain exclusions took place including the following cases:

- a. Land falling within city boarders approved until 1/12/1981 (in reality most of these lands were legally or illegally occupied).
- b. Land areas demarcated according to the aerial photo of 1985 and approved by both MOA and MOHUUC joint decree and,
- c. Land on which the government builds public utilities conditioned by the MOA approval.

According to experts and officials interviews, those conditions opened illegal gates to arrive to what is called "Motkallilat".

5.4.2 Urban Planning Instruments

Several urban planning instruments were practised to protect agricultural land. These instruments were used to indicate the concern of the Egyptian government towards this problem. It formed sections of the existing urban planning laws, which were concerned about agricultural land protection. Law no 3/1982 regulated any transgressions on agricultural lands and stipulates that all economic, social and environmental criteria should be taken into consideration into the process of urban planning and designates certain areas for specific types of use.

According to this law, local unit shall develop cities and villages detailed plans. Those plans should be comprehensive; in order to meet the long-term community needs, while taking in consideration the environmental, social, economic and urban studies undertaken. Moreover, it should be prepared in consultation with the local popular council, i.e. it should apply participatory approach. Those plans should be reviewed every five years at most to ensure its compatibility with urban, economic and social

\[\text{Motkallilat} \] 12 This terminology is synonym to agricultural pockets shown in figure (6). It refers to those agriculture lands which are left idle and where this type of conditioned development have blocked the water source required to these lands in order to keep these lands in its farming use. In these cases, this type of idle lands (dead capital) is conditioned later to exemptions by MOA.
development as well as local conditions. For considerations of directing cities and villages urban expansion, or to preserve agricultural land, a local unit may identify expansions stages. A decree from the MOHUUC shall be issued in that regard and approved by MOA. These important aspects and articles in the urban planning law were blocked by the views and conflicting interests of the powerful MOA. The next part of the research paper will show the different steps undertaken by the National Democratic Party (NDP) and the Egyptian government to cope with these obstacles and challenges.

Concurrently, the actual responsibility of physical planning for rural areas, was transferred from local units, which are suffering the dual subordination to Ministry of Local Development (MOLD) and MOHUUC, to the Ministry of Agriculture. In addition, those plans were not prepared following professional values, i.e., the Ministry of Agriculture is neither a ministry for physical planning, nor is the housing concept - and its associated acceptance of altering land uses for a better quality of life - among the ministry’s responsibilities that should be accountable for by the society.

Several ministerial and governor decrees were issued to empower urban planning departments at the governorate level to prepare detailed plans in cooperation with stakeholders at the city and village levels. These plans should be mainly guiding and dynamic plans which could direct development in these cities and villages based on the decisions undertaken by the local urban boundaries committee, set to preserve agricultural land. However, it is important to note that this process is a highly political decision; obstacles are still impeding putting this policy into implementation (Attia A. et al 1999). This committee should guide development in the light of the urban boundary set and approved by MOA. The administrative and spatial boundaries for the Egyptian village was set in accordance to the satellite image taken in 1985, while the urban areas, the satellite map of 1981 was the authorised map for any approval of building permit over agricultural land. These two dates are extremely old and, can't, by any means, represent the actual situation in both urban and rural areas.

5.4.3 Other instruments

It is important to declare that other laws were of less importance and with less impact on the issue of agricultural land protection and preservation; among these laws, Law no 4/1994 which stipules that Egyptian Environmental Agency Affairs (EEAA) should prepare environmental maps for Egypt abided by certain regulations and criteria, among these criteria that development shouldn’t take place over prime agricultural land (Fathy A. 2000). Other important laws were concerned about soil quality, handling of pesticides and its impact of soil quality, other laws regulates both maintaining irrigation and drainage systems and digging of canals and drains in agricultural lands.

It is important to note that most of these policy instruments discussed before are regulatory instruments with one main objective, which is banning development on agricultural land. This is mainly contradicting with the other developing and developed countries which succeeded till certain extents in managing this problem through applying a mixture of policy instruments including balancing the use of regulatory instruments with other types in order to make a balance between one objective of land policy which is preserving agricultural land and making national food sufficiency with other social and economic and environmental objectives, even in the European countries such as France, UK and the Netherlands. Hence, it is important to use other instruments besides regulatory instruments in order to protect these lands for the most possible future generations. Market-based instruments and other land acquisition instruments were mostly used in Western and Asian countries to achieve this goal.

This was the main goal of the high committee formed by NDP. In other words, its main objective, in this regard was to convince the policy makers and the different ministers involved that command and control instruments can’t cope with the problem. There should be parallel thinking and knowledge about other possible tools and negotiations and flexibility should be one of the basic aspects that characterise these tools.
6. The way forward

In the next section of the paper, the researcher will put the different perspectives of the Egyptian government and experts thinking about the dilemma discussed in this paper. The section will highlight the main activities carried out by the Egyptian government and the NDP in their latest official report titled "conservation of agricultural land and management of urban development in Egypt" which was issued in September 2004. The research will highlight certain activities and small reports that paved the way for NDP to agree with the government about the expected reforms and finally this section will show and discuss the different reforms that are currently implemented.

At the beginning, there was a complete split in between the decision makers, policy makers, parliamentarians, NGO's representatives, academia and experts about the needed interventions; the following positions below summarise the diverse positions that those groups took:

"Not Facing Reality":
From the first moment this reaction seems irrational, but, unfortunately, is the dominating opinion, as its advocates refuse in principle to admit the realities or question data correctness. Laws for protecting agricultural land and their regulations are not acknowledged as the causes of the dilemma and they totally agree and believe that they are fully effective. They insist on their maintenance. In their views, informal areas and unplanned housing expansions are the result of the inability to enforce laws, informal behaviour, lack of capabilities and the general economic status, and not a result of non provision of an alternative for housing development or a deficiency in the existing policy.

"For want of a better world":
The group adopting this opinion is one step ahead of the former group with respect to their awareness of the dangerous housing crisis and encroachment over agricultural land and its major dimensions. However, they are behind the traditional views and positions that the current new cites and mega national projects policies suffices to solve the problem; "Egyptian population must live the delta and go to the desert areas, they said". Yet, patience is required for new cities to achieve their objectives; this only requires performance efficiency improvement, which is the best strategic option.

"Wishful thinking":
This opinion shares its former in adopting similar dimensions, however its advocates are optimists and have confidence in the future, and they either have: they are fully "Optimistic" based on that potential technological development would enable low-cost seawater desalination, the production of artificial rain or using seawater in irrigation. Ambiguous optimism of the future based on Egypt's history and that Egypt always overcomes difficulties.

6.1 The local views regarding solving this dilemma? Can local authorities come up with logical solutions?

To come out with realistic proposals for dealing with the issue of encroachment on agriculture lands in Egyptian villages, which represents the major part of the problem of perpetual loss of this important national wealth, The researcher, in cooperation with a number of organizations held several workshops for soliciting the opinions of local leaderships at village level on how to face up and address this phenomenon. A series of four workshops were implemented with participation from about 100 of the local leaders including local unit heads of most delta governorate villages (Giza –Dakahleya – Menoufeya – Behera – Gharbeya – Damietta and Sharkeya). These workshops focused on answering the following questions:

1) **What are the most important problems currently facing urban development in Egyptian villages?**
2) **What are the best alternatives to deal with agricultural land encroachment issue (This was undertaken through soliciting the feedback from participants on the two**
What are the implementation mechanisms that can be developed for activating the agreed-upon alternative?

From participants’ feedback the following points were identified:

- The real problem generally facing Egyptian villages, and Delta Governorates villages in particular, is the problem of prohibiting the extension of planned urbanization in villages outside the urban boarders of 1985. With the absence of any realistic alternative for residents of these villages, this resulted in their expansion outside such boarders at different rates through unplanned informal development which resulted in the emergence of many environmental and urban problems that were summarized in previous section.
- The urban expansion that took place was unavoidable as it is initially related to increased housing needs as a result of natural population growth in these villages associated with the lack of official or legal status for such expansion outside the 1985 boarders.
- The process of building on agricultural land in Egyptian villages is different than in cities. Agricultural lands still maintain their high value for Egyptian farmers being their main source of wealth and family income and cannot be relinquished except in dire circumstances represented in the need to provide shelter for them and their families or their newly married sons who need to reside in their mother villages next to their original families and their agricultural workplace.
- Even if young family members take up new professions (other than farming) in other nearby cities or urban areas residing in their mother villages would still represent their optimum alternative due to the nonexistence of another appropriately affordable housing in such cities and to preserve social and family ties represented in living nearby the parents, brothers and kin.
- The second most important current problem facing villages after urban boundaries is sanitation, which poses a significant health and environmental issue preventing vertical expansion of Egyptian villages as desired, which would lessen informal expansion on agricultural lands.

On soliciting the participant’s feedback on both alternatives a consensus was unanimously reached in favor of the second alternative, which is in line with the current situation of Egyptian villages, and would significantly contribute to the improvement of living conditions in Egyptian villages, building the confidence between government agencies and the local community and avoid passive results and tragedies caused by demolition decisions.

Following, the workshops' attendants discussed the implementation mechanisms that can be developed for activating the agreed-upon alternative?

- Vertical expansion may be feasible and solve the problem partially, and would contribute to decreasing encroachment on lands outside such boarder, but not in all cases as this would require the development of new detailed plans and organizational lines and permitting demolition and rebuilding inside villages. In addition, a sanitation network developed in each village would be a necessity to accommodate the high population growth to avoid severe environmental problems as result of such growth.
- Identifying buffer areas to be included within the new boarders must be based on clear-cut criteria to decrease fraud and manipulation in this respect. Such buffer areas may be defined as the empty

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13) The two alternatives presented by the party discussion paper in the first annual conference were:

1) **Maintaining the current situation i.e. complete prohibition of building over agricultural lands with the strict enforcement of laws.**

2) **Looking realistically at the issues at hand and understanding the inevitability of building as a result of population growth, thus the identification of a new urban borders is necessary to accommodate such increase through legalizing the current status while allowing the building on the existing buffer areas and agricultural pockets and the strict prohibition of building on any other lands.**
spaces surrounded by building from three sides at least, with the open side being the shortest in length, also pockets are defined as the enclosed areas between buildings and one of the natural boundaries such as a drainage canal or a main road or a railway line.

- Legalizing buildings currently outside 1985 boundaries and imposing legalization charges on their owners would not be feasible because such buildings have already been legalized through obtaining acquittal judgments by the owners according to which services and utilities were provided to such buildings against paying a reconciliation fee to the Ministry of Agriculture. Accordingly owners of such buildings would not benefit from any further legalization of the status of such buildings or registration of their ownerships because most lands, inside or outside such boarders are unregistered contrary to cities.

- Speculation on lands and the fear of increasing their prices as soon as the new boarders idea in villages is launched leading to the inability of limited income village people to buy such lands would not be appropriate in villages because those who build in villages do that out of need not for trade as in cities. Economic conditions and the purchase power of villagers and the presence of sufficient supply of land would also result in stabilizing land prices within the economic capacities of those who desire to reside within such villages, i.e. their indigenous populations.

- According to how to deal with empty lands, which would fall within the new urban border, it is proposed to draft a new legislation, which would allow the government to take possession of a part of such lands against including them within such border, which would consequently allow utilities to be connected to them and would increase their prices manifolds providing their owners with much money even after the government would taking possession of a part thereof. The state would then take over that part and would either sell it at reasonable prices for those who want a land or to build on them schools or put them to other uses as deemed appropriate, similar to land readjustment technique.

- The majority of participants thought that such matters should be left to market supply and demand mechanisms, while legalizing the zoning of utilities and streets, and in return owners would pay relatively higher fees. Noteworthy, participants did not agree on the idea of fees or charges except after presenting the idea of taking possession of a part of the land as an alternative. Some participants said that the state intervention would cause prices to go up because any charges paid by owners pays are going to be included by them in the selling price.

In fact these conceptual ideas were very important for decision makers in the Committee formulated by the NDP, to take serious actions and decisions. The process of including the local authorities in the decision making process and the formulation of policies was extremely innovative especially in a country which was very much characterized of being very centralized. In fact, these ideas led to the formulation of sub committee’s to study these different alternatives which will be shown in the next section.

6.2 The current achievements and the expected challenges: could we escape the future?

The NDP asked the committee the question; what do we have for the community, could we escape from invading agricultural land, in other words are we giving the communities what do they want in terms of shelter “one of the basic needs that we can’t escape and there is no argument about it”. For one year some of the committee's experts with the support of the faculty of urban and regional planning in Cairo University answered this question. Based on the foreseen consensus of the Egyptian demographic institute, Egyptian population by year 2020 will be 93 million. In the next paragraphs, the researcher will highlight their basic arguments:

- Desert urbanization focused on establishing new cities is one of the main strategies that Egypt should highly invest upon and activate. Based on the argument that "most of the inhabitants of the villages are not working any more in farming activities and hence it is so easy to attract them to the new opportunities in desert lands". Constructing the new urban communities would spur the industrial and service economic activities and could attract the population from villages. Most of this argument was based on what do agriculture do with those communities, especially those who are not working in farming activities, rather than what do these communities need in terms of services, shelter, etc and how could we suffice those needs
without relocating them?. This was one of the great challenges that the groups of experts and researchers studied in one year and they came with a theoretical answer that new cities in the next 16 years can absorb 6.5 million inhabitants.

- Recently, the desert backlog\(^{14}\) was thought of as an extension for new rural communities and in the few past years it represented an equivalent to cities as new urban communities. However, no previous attempts were recorded to analyze the possibility of capitalizing on the desert backlog, its feasibility and availability, and if it is really valid for rural extension. There is still no clear vision on whether such backlog would fulfill the environmental, natural and economic prerequisites or not, whether there is such a free space or if it is already in use for reclaiming agriculture land among other activities and what is the legislative framework that allows it usage. The group of experts found out that only 20 % of the total number of Egyptian villages has desert lands and they came with a theoretical assumption that 70 % of the youth between 18-20 years old could be absorbed in these areas and hence these areas could absorb a total of 3 million.

- The third alternative for absorbing the population increase will be in land reclamation projects. They came with a theoretical assumption that this option will absorb more than 1 million by 2020.

- Intensifying the old fabric villages, allowing vertical expansion over old agricultural land, and village regeneration regardless of its limitations due to the lack of infrastructure and services, was studied as an alternative. This option was a central one due to the existence of huge of agricultural pockets where certain alignment through land readjustment or land sharing techniques could be an approach to revive this dead capital. They came with a theoretical assumption that this alternative will absorb more than 1 million by 2020,

- Utilising the desert governorates (south valley, Sinai, etc.) and absorbing the communities to these remote governorates will absorb a total of by 2020,

- Accommodating the population in the villages and cities. They came with a theoretical assumption that this option will absorb more than 1 million by 2020.

- Adding all these theoretical and optimistic options will be a total 83 million. Hence, there will be an additional 10 million who will have no escape from obtaining their shelter. According to experts views, the majority of those 10 million will have to secure their shelter through building over agricultural lands. Figure (10) shows the accumulation of the different alternatives discussed above with projection till 2020.

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\(^{14}\) This is defined in Egypt as the 2km attached directly to the existing agricultural land and extending to the desert lands under the jurisdiction of the local unit and their development could be transferred to these areas rather then being allowed over agricultural land.
6.3 What are the international experience to solve this problem?

NDP succeeded through mobilising the research institutes to prepare a concept paper about the international experiences that succeeded in managing this dilemma or in the process of solving it. The research done about the international experience showed the following lessons:

- Developing countries applied innovative instruments in managing the conflict between urbanization and agricultural land protection initiatives; among these instruments incremental land development, relaxed permits, some of these countries applied transfer of development rights as in Johannesburg (Larbi, W Odame 1996, Gough K 1998, National development and planning commission 1999)

- Asian countries were more developed; they have showed institutionalized efforts to overcome and control the encroachment on agricultural lands. They used innovative instruments such as land-readjustment schemes, land sharing, innovative taxation, mortgage community programs, land gain charges and relaxed permits, innovative coordination mechanisms, use of participatory planning, with different success and failures stories due to legal and institutional problems. Japan led these countries with its land re-adjustment policies that began in Nagoya, Kyoto, Kobe, Tokyo and the other Japanese cities (UNCRD 1991, Tae, L 1998, Archer R 1999, Mekvichai, B 1998).

- While in developed countries; the actual approaches used by these countries varied. The Netherlands and Sweden used a planning system that combines; comprehensive planning by local governments, public purchase of agricultural land which is threatened with conversion, where the landowner is required to sell to the government, a purchase price for agricultural and that reflects its value as food production land, not as if it were put to use for housing or non-agricultural businesses in addition to a system of strict land use regulation (zoning). Both the United Kingdom and the U.S. have required comprehensive planning by local governments, combined with a strict system of planning permission (regulation) and the use of different policy instruments such as transfer of development rights (TDR) which is widely applied in USA and Canada. In France, the central approach is a system of regional-government land purchase organizations, similar to the Netherlands and Sweden these organizations can require landowners to sell their land, and the price paid to landowners is the agricultural use price (Jacobs, H., 1997).

- An overview of the information in these different case studies illustrated that these case studies have been successful in preserving agricultural land primarily not because they used a particular policy approach. Instead, they choose to use a particular approach to policy because they had a strong social consensus about the need to protect agricultural land, and the political will to act upon this consensus. The common factor of a successful system does not appear to be the actual approaches used, but instead how those approaches are used in a
political-policy environment, which wants them to succeed. It seems that Egypt will follow a similar LR approach, however, the availability of human capacities, information and enough financial resources will be amongst the biggest challenges.

6.4 The Egyptian reforms: Towards a flexible and integrated approach

NDP in full consultation with the Egyptian government and based on the number of focus groups discussions held in the governorates have made decisive actions regarding the regulatory framework and the division of roles and responsibilities amongst the different actors involved in agricultural land protection. The main principles, upon which these reforms were based could be summarised in the following:

- The citizen’s right to all his basic needs – among which is the right of having a house in an acceptable location – which is an undisputed right;
- Protecting the agricultural land is a challenge facing the Egyptian society and requires a comprehensive, balanced, and logical thinking.
- Preserving agricultural lands is the responsibility of the whole society, and it is not fair that one institution should undertake the full responsibility.
- Full decentralisation in managing the problem where governors should be fully supported to manage these problems locally and in cooperation with the local authorities and the local citizens

Based on the above principles, the following practical and applied concepts were agreed upon:

- Reviving a dynamic urban boundary concept;
- Full refusal of any action that may contradict this concept, which entails the effectuation of the Urban Boundary concept, necessitating accordance with economic, social, and environmental standards; and
- Complete prohibition of building on agricultural lands outside this approved boundary.

The NDP agreed with the government to adopt the above concepts through a practical short term program of actions. This program began with reforming the institutional failures and getting rid of the issue of centralisation. The institutional reforms took place in three main levels;

First Tier: A ministerial committee headed by the Prime Minister, the Ministers of Agriculture, Housing, Local Development, and Interior, are members of this committee, in addition to a number of other ministers. This committee will be mainly responsible for the following:

- Establishing the general policies that ensure the increase of agricultural lands and the efficiency of utilizing them;
- Monitoring the accordance of the strategies presented from the involved ministries (within the framework of planning urban management and land utilization) with such policies;
- Accrediting the plan of urban management and changing the utilization of lands suggested by the follow up committee;
- Assigning MOHUUC to provide aerial photographing whenever necessary;

Second Tier: A Follow-up committee under the responsibility of the Ministers of Housing, Agriculture and Local Development; GOPP shall constitute its technical secretariat and shall carry out the following:

- Follow-up the implementation of the general policies of urban growth management and land usages.
- Suggest flexible standards which allow change in the land use from agricultural uses to other uses and monitor the local government implementation of these standards.
- Monitor all the challenges and problems which face urban development in Egypt generally and in rural areas in specific.
- Discuss the governor’s monthly reports about the stage of implementing the urban development plans at the city and village levels.
**Third Tier:** Coordinated by the Minister of Local Development, local authorities should perform the following responsibilities;

- Set down physical plans, in light of general policies and relevant strategies formulated and agreed upon with the higher two tiers of committees.

- Physical plans should be prepared in cooperation with the local popular councils and should present the local visions. It should be fully participatory plans and will be updated each five years.

- According to the standards agreed upon with GOPP, these plans will be approved technically and implemented.

In addition, NDP in cooperation with the ministry of Housing passed an updated version of the full regulatory framework which governs agricultural land protection at the national level which included changes in the three main laws that govern this hot issue. These actions give a good representation, not only about the reforms itself, but about how these reforms were achieved.
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Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>LR</td>
<td>Land Readjustment</td>
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<tr>
<td>TDR</td>
<td>Transfer of Development right</td>
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<tr>
<td>MOHUUC</td>
<td>Ministry of Housing Utilities and Urban Communities</td>
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<td>MOA</td>
<td>Ministry of Agriculture</td>
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<td>MOI</td>
<td>Ministry of Interiors</td>
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<td>MOLD</td>
<td>Ministry of Local Development</td>
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<td>LGU</td>
<td>Local Government Unit</td>
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<td>GOPP</td>
<td>General Organisation for Physical Planning</td>
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<tr>
<td>GCR</td>
<td>Greater Cairo Region</td>
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<td>NDP</td>
<td>National Democratic Party</td>
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<td>ENSC</td>
<td>Egyptian National Specialised Committee</td>
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<td>IDSC</td>
<td>Information and Decision Support Centre</td>
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<td>EEAA</td>
<td>Egyptian Environmental Agency Affairs</td>
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