

# **Eighth lecture**

## **Land Tenure System**

# Land tenure System



# Land tenure

land refers to **farmland, wetlands, pastures and forests.**

- **Land tenure refers to rules and norms and institutions that govern how, when and where people access land or are excluded from such access.**
- It refers to people's ability to control and manage land or using it and disposing of its products as well as transferring or leasing of land.

# Types of land tenure rights

## (Property right)

In **General**, **Land Property** is formally classified as either:

**1 Public:** generally understood to mean ‘**state land**’ may, in turn, be **owned by the central government**, state or provincial governments in federal systems or local governments.

**2 Private:** refers to land titled **to an individual or company**.

**3 Open access** tenure where there is no control on access to resources: **specific rights are not assigned to anyone and no-one can be excluded**.

It may include rangelands, forests,

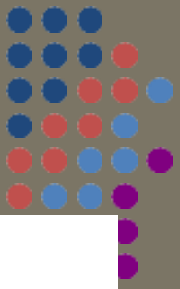
## 4- Common or communal property

Is often mentioned as a separate category of land tenure. **Rights held by members of a**

**community to land and other natural resources e.g., pastures**

that members can use independently of one another. The community controls the use of the Common property resources and can exclude non-members from using it. Other people have certain traditional rights, such as to allow their livestock to graze upon it, to collect firewood or to cut turf for fuel. e.g., water, public parks, -----

# Land holding



Land holding in agriculture is defined as:

**Any area of land (parcel), regardless of its size, used totally or partially for plant, animal or fish Production.**

land holding plays a significant economic and social role in determining the form of land use and the holder's decision-making in the field of production and the distribution of the agricultural income

# Land tenure System

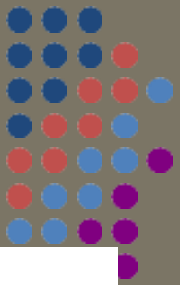


**The agricultural land tenure system is:**

- A form of land use for producing crops**
- It bears various types of relationships among farmers and different actors as determined by the laws that regulate transfer of ownership titles(entitlement) and tenancy rights ( Tenancy).**

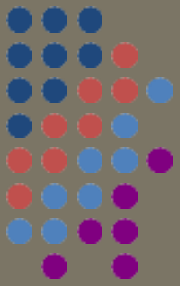
# Land Holder

- **Agricultural land holder is defined as:**  
A legal person who uses a farming land, whether by means of ownership, rent or both; and is administratively, financially and technically responsible for the farm.
- However, the person who possesses livestock, poultry or beehives is considered a holder even if he /she does not hold agricultural land  
(*The Agricultural Census 1981–82*).





# Types of land tenure in Egypt



**Private  
ownership**

**Public  
ownership**

**Trust or  
*Waqf* land**

**Encroachment  
(*Wad Al Ayad*)**



- **Main types of formal land tenure in Egypt:**

- First;- Private ownership :.**

- is land registered with the local district of the Land Registration Division and owned by private persons or companies.

The great majority of agricultural land in Egypt is privately owned, especially in the older settled rural areas.

- The law prohibits construction of any buildings on farmland without a license from the Ministry of Agriculture and Land Reclamation.

## **Second; - Public ownership.**

Land registered as state property and not leased to a private entity is publicly owned.

1) **state domain**, which includes desert or un-reclaimed lands and is administered by the governorate.

2) **public domain**, which serves a public utility such as rivers, roads, military installations, land for antiquity sites, and land set aside for development




### **3- Publicly leased land.**

Land owned by the state can be leased on a long-term basis to its occupants.

These leases apply in a number of circumstances, most importantly for land in reclaimed areas and for squatters (through a request to the governorate).

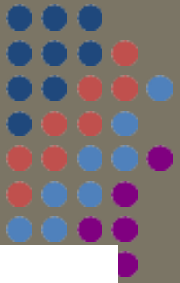
In reclaimed areas, lease rates are capped and rights may convert to ownership rights after a specified period of time.



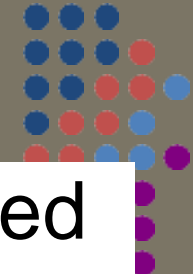
**Third;- Trust or *Waqf* land.** Trust land is land set aside by the state for charitable or religious purpose and usually administered by the Ministry of *Waqf*. The purpose for categorizing land as *Waqf* is to prevent subdivision and to eliminate conflict among descendants. The revenues from the land belong to the beneficiary *Waqf* land cannot be sold or mortgaged.

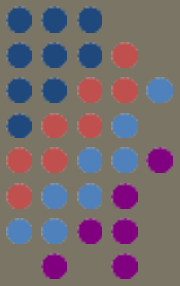
**Fourth; Encroachment (*Wad Al Ayad*).** The Civil Code makes it possible for the user of a plot of land to gain ownership of that land if it is occupied continuously for 15 years without the owner asserting rights. ( squatters)

# Changes in the Egyptian Agricultural Land holding Structure



- Egypt's land holding pattern underwent a remarkable change :
  - The period before 1952 was characterized by an unequal distribution of holdings. Whereas small holders, who constituted 94% of the total number of holders, were in possession of 35% of the agricultural land, only 6% of holders were in possession of the remaining 65% (El-Tobgy 1976).
  - **The Agrarian Reform laws** were enacted and enforced to achieve **equity** through **redistribution** of holdings in order to increase the income of small holders and improve their economic and social standards.
- The first Law (no. 178) was issued in 1952. It stated that an area of 200 feddans was stipulated to be the maximum holding for the individual ownership of agricultural land.

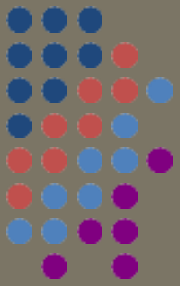
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- In 1961, another Law (no. 127) was enforced limiting individual ownership to 100 feddans.
  - In 1969, Law (no. 50) was issued as an amendment to the Second Agrarian Reform law. It limited individual ownership of land holdings up to 50 feddans and family ownership to 100 feddans in all (including the husband's, the wife's and the young children's ownership).



# **Agriculture Land Tenure System In Egypt**



# Agriculture land tenure structure in Egypt



**Ownership**

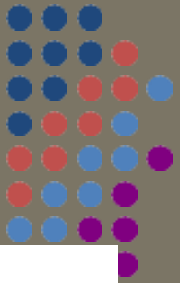
**Rent ( TENANCY)**

**Mixed holding**

# Land tenure in Egypt takes three forms:

- ❑ **Ownership:** wherein the holder and the owner are the same person (landlord).
- ❑ **Rent:** wherein the holder **is not the same person** as the owner. Therefore, the **right of possession** lies with a person (the landlord) and **the right of utilization** lies with another person (the tenant).
- ❑ **Mixed holding :** wherein the holder is the owner of one part of the land holding and the tenant the other part, both of them has the ownership as well as the utilization rights for one part of it but only the utilization right for its other part.

# Types of Rented Lands



- The Egyptian agricultural lands can be rented according to different modes:
  - A- Cash rental:** It is the most commonest mode of land rent. The landlord and the tenant, being the two parties of a contract, agree that the second party pays the first party at a fixed time a certain amount of money as a rental for the area of land for which the contract has been issued.
  - B- In-kind rent:** The landlord agrees with the tenant to pay a fixed portion or a percentage of the crop (or crops) after it reaches maturity.


## C- Crop Sharing:

This pattern has been regulated by the Agrarian Reform laws.

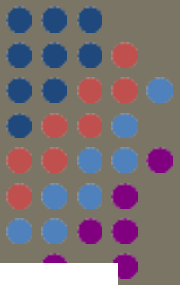
The landlord provides the land and the buildings.

He also pays half of the costs of seeds, fertilizers, irrigation, pest management, harvesting and land tax.

- The tenant bears the cost of Labors, maintenance of irrigation and drainage canals and half of the other expenses.
- After the harvest, the yield is equally divided between the landlord and the tenant.
- The Agrarian Reform Law stipulates that the landlord's share should not, in any case, exceed one half of the yield, after deduction of the expenses.

- 
- Since 1984, with a slight **reduction** in the area owned by farmers with fifty or more *feddans*.
  - However, the number of small owners, those with fewer than five *feddans*, **increased** to nearly 3.29 million, while the area they owned **dropped** from 3.17 million *fed* to 2.9 million *feddans*.
  - This suggested that
  - **Land fragmentation** and
  - **land dispersal** are increased.

## Fragmentation and Dispersal of land holding



- **Fragmentation** of the agricultural land is a major characteristic of Egyptian agriculture **It indicates a small size of the unit of production.**
- **Dispersal** means the distribution of a holding into scattered plots within the same village or in other villages within the same district.

## Factors of Fragmentation and dispersal of land holdings :

- **1- Overpopulation** with a relatively constant area of the agricultural land, denotes an increasing demand for land given a relatively constant land supply.
- **2- The system of inheritance** which leads to a sequential partition of land legacy among heirs.
- **3- The consecutive Agrarian Reform laws** which led to a remarkable drop in large holdings and a subsequent increase in small holdings.

# The negative impact on Fragmentation and dispersal of agricultural land

## **1 The difficulty in implementing modern agricultural techniques**

: For instance, mechanization experiments showed that the mechanical ploughing of one fed takes 165 minutes for small areas and 112 minutes for large areas which means that an average of 38 mn/feddan is wasted

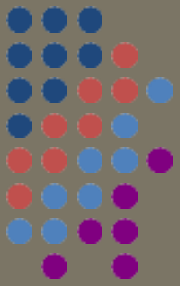
**2 Loss in the cultivable land** due to the fact that a part of it is used for building, irrigation, and drainage purposes, and for passages around and inside small holdings.

**3 Waste of time and effort** caused by moving the machinery and animals from one area to another on the farm.

**4- Inefficient use of irrigation water** due to disintegration and dispersal, resulting in a loss of 20%

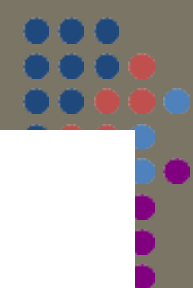
**5- High cost of agronomic practices**



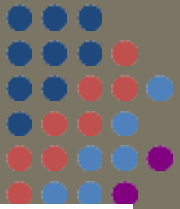


# Chapter Nine

## Major Changes in Rural Areas

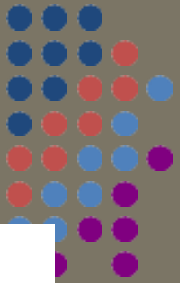
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- **Farming was synonymous with rural life** in many of the developing countries.
  - But in the developed and in some developing countries, farm occupation is no longer be equated with rural values and rural life.
  - **Farming is now a business.** The job of farming has changed considerably in recent decades, the trend has been to more **technology and formal education.**

# Major changes in rural areas



- 1 Emerging and increasing technologies.**  
The development and use of **self-controlled machines** for reducing farm labor (tractors, cultivators, harvesters, and new irrigation systems).
- 2 Biotechnology** for increased production.
- 3 Commercialization:** Farm commercialization is the production of agriculture products for exclusive marketing off the farm. Commercialization implies farming for the purpose of profit.
- 4 Specialization:** Farms have become specialized, instead of producing a little of everything for the family needs. This is due to farm mechanization

# Major changes (Cont.)



## **5- Intensification:**

Intensification is increasing the amount of food or fiber produced on a given parcel of land by increasing the density of plants or animals on that land, or by increasing the number of production cycles for that land in a given period of time.

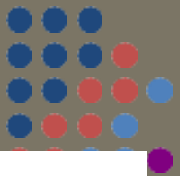
### **The most common practices of intensification are :**

**A- Multiple cropping;** is the production of two or more crops in sequence on a piece of land during 1 year.

**B- Inter cropping;** is a system of where two crops are grown on the same land simultaneously.

**C- Planting field crops in rows with narrower spacing and closer spacing of individual plants.**

# Major changes (Cont.)

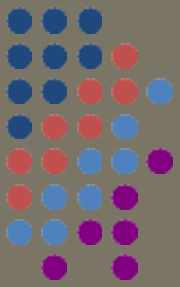


## 6- *Part-time farming:*

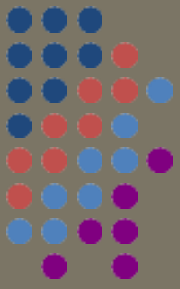
- A part-time farmer is a farmer who spends part of his time in farming and spends part of it in off-farm work. Important motivations for off-farm employment are a desire for economic security and additional income through a side-line business.

## 7- *Change in the cropping pattern:*

- One of the most significant shifts in land use was the expansion of the horticultural area. Egyptian farmers cultivated a wide array of fruits and vegetables, including tomatoes, cucumbers, potatoes, lettuce, onions, citrus, and mangoes



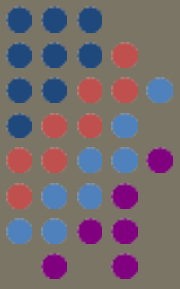
***Chapter Ten***  
***Environmental changes***  
***In the Rural Area***



# Introduction

- The climate change phenomena became a tangible reality and it is expected that its effects would include all the development sectors in the world especially in the developing and the poorest countries.
- Agriculture is expected to be especially vulnerable because of hot climate. Further warming is consequently expected to reduce crop productivity.

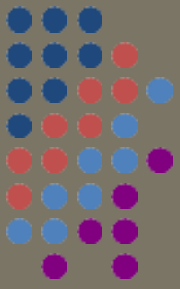
# 1. Climate Change



- Is the change in average temperature that gradually warms the Earth's atmosphere.
- It is a phenomenon, which has been on the rise but in the last century, the increase in the levels have been alarming.

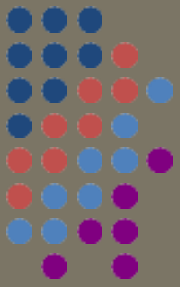


## 2. Mitigation

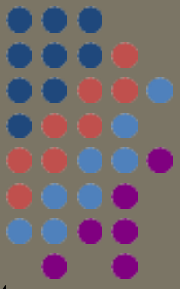


- Mitigation is the term used in the climate change world **for actions** that will either reduce the production of greenhouse gas emissions or remove the emissions from the atmosphere (i.e., the reduction)
- The International Panel on Climate Change (IPCC) defines mitigation as: “An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases.”

### 3. Adaptation (Adjustment)



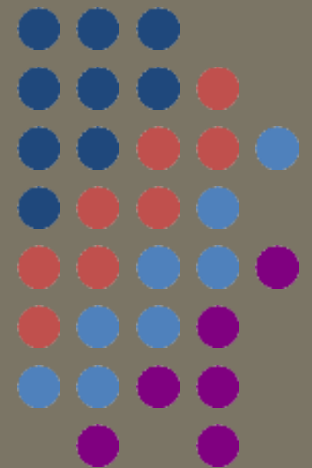
- Refers to changes that occur in order to maintain various aspects of a social system's culture or structure or, in extreme cases, to aid survival in any form at all. (i.e., coping with)
- Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities

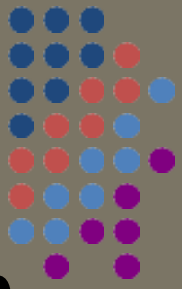


- So, **mitigation** tackles the causes of climate change (i.e., reducing),
- **adaptation** tackles the effects of the phenomenon (i.e., coping with).
- The potential to adjust in order to minimize negative impact and maximize any benefits from changes in climate is known **as adaptive capacity.**

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# Causes





# Earth's Atmospheric Gases

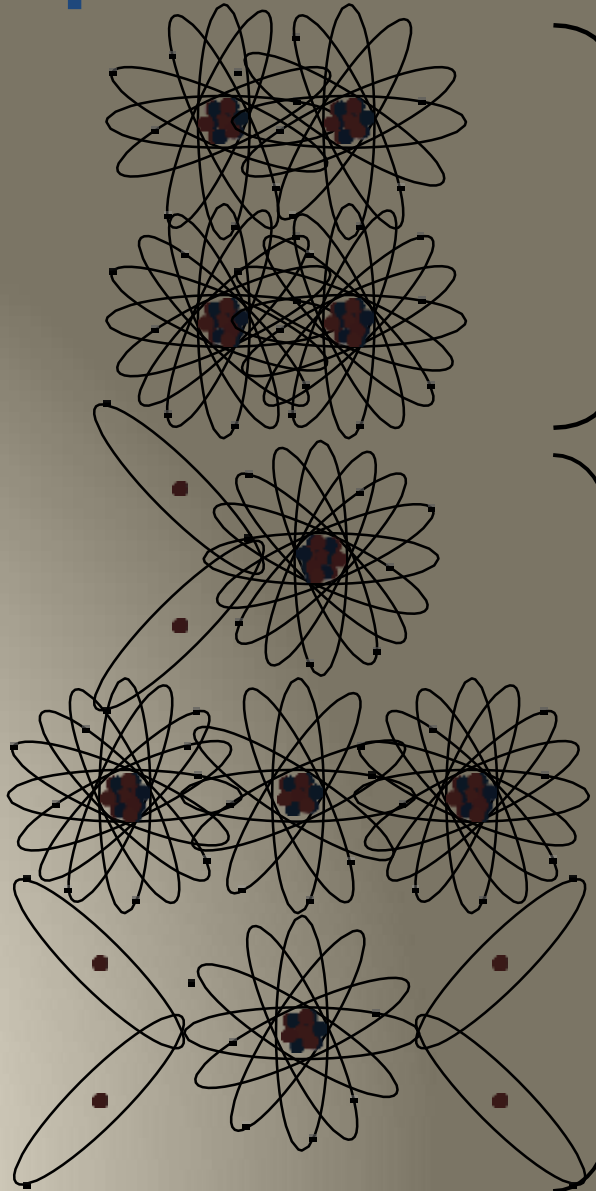
Nitrogen ( $N_2$ )

Oxygen ( $O_2$ )

Water ( $H_2O$ )

Carbon Dioxide ( $CO_2$ )

Methane ( $CH_4$ )



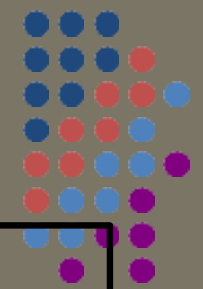
Non-Greenhouse  
99% Gases

Greenhouse  
1% Gases

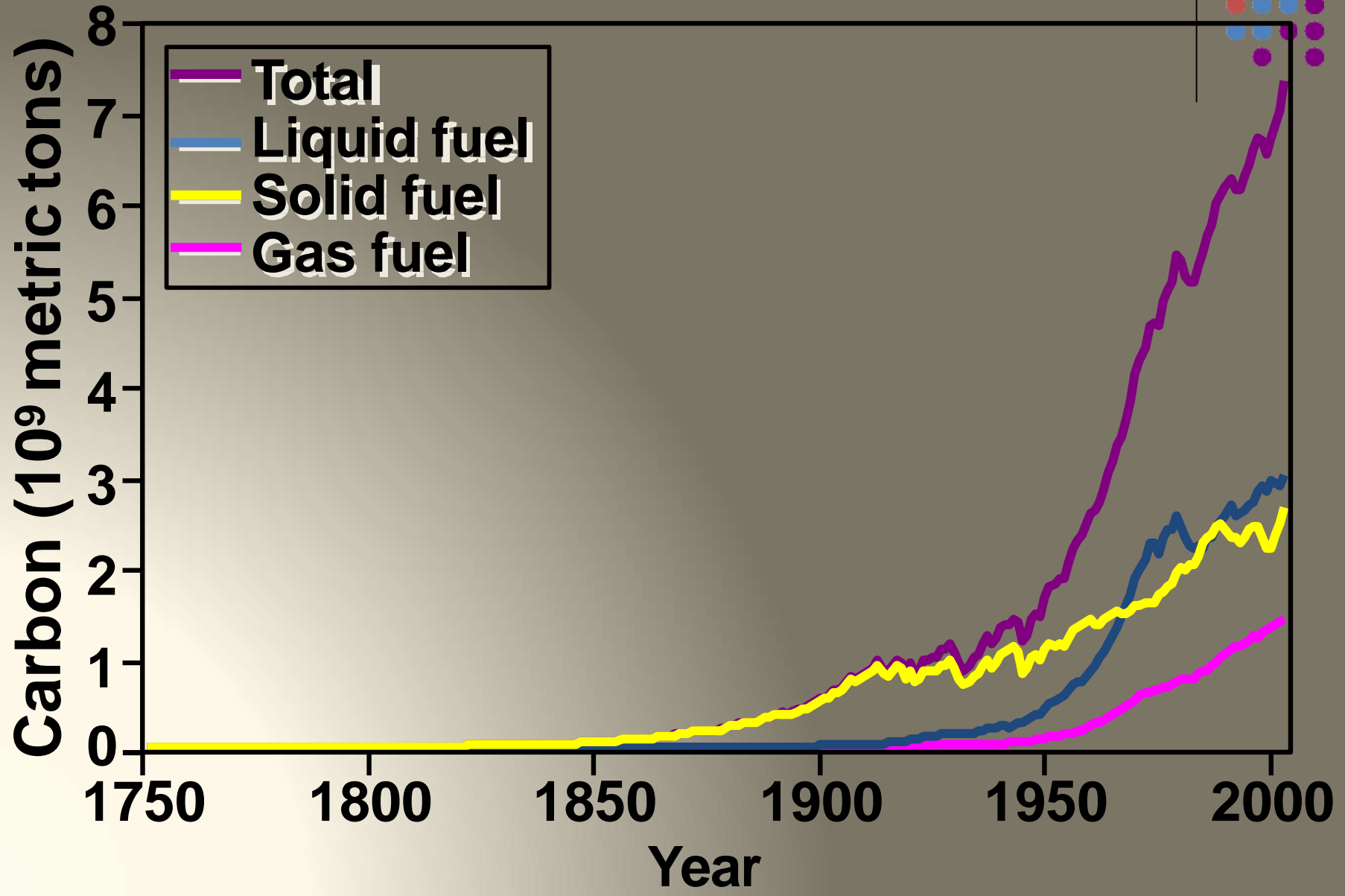
Global climate change is caused by the accumulation of greenhouse gases in the lower atmosphere.

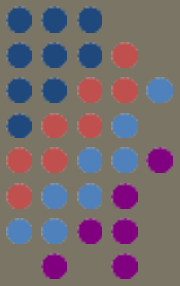


The global concentration of these gases is increasing, mainly due **to human activities**, such as the combustion of fossil fuels (which release carbon dioxide) and **deforestation** (because forests remove carbon from the atmosphere). The atmospheric concentration of carbon dioxide, the main greenhouse gas, has increased by 30 % since preindustrial times.



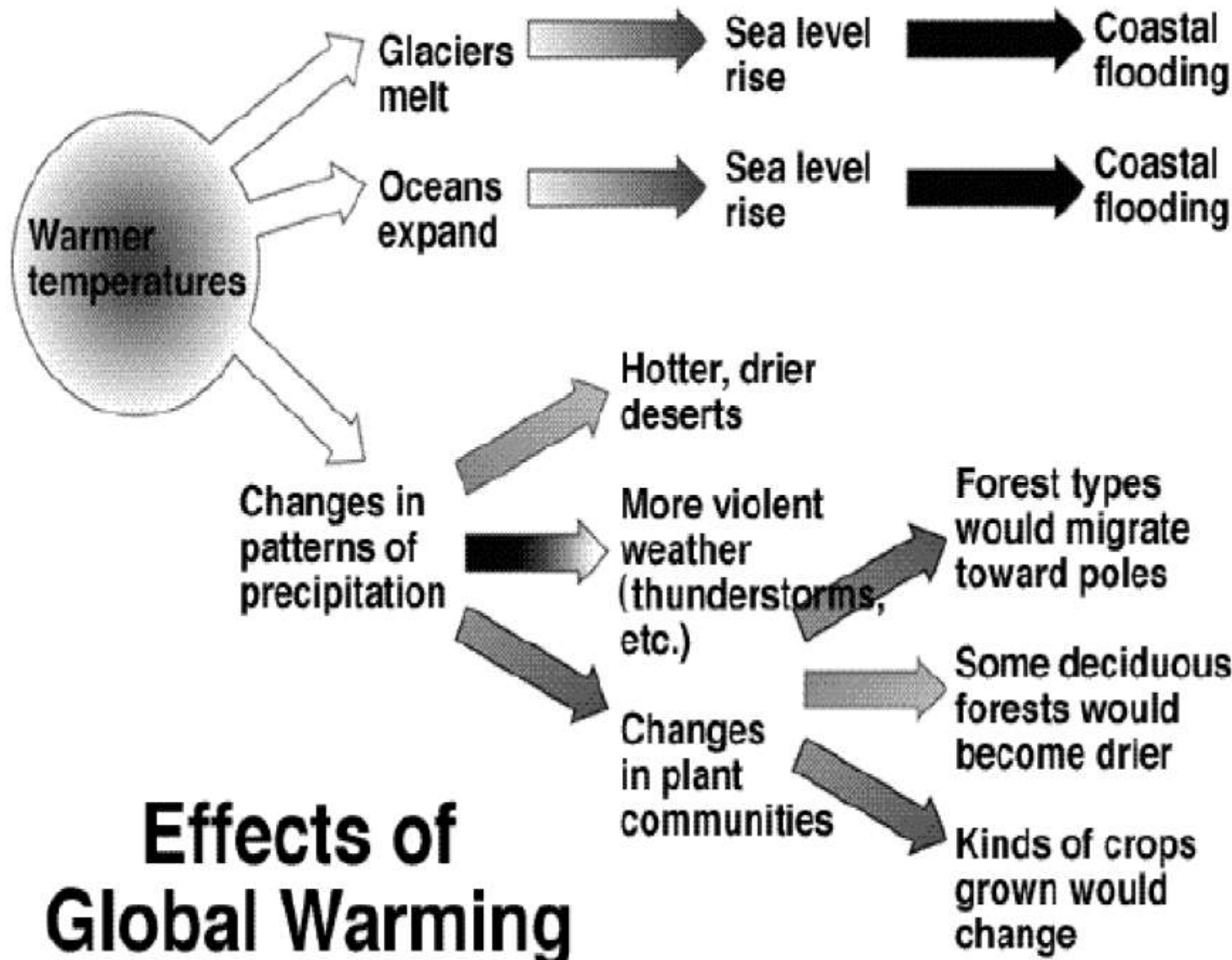
# Worldwide Carbon Emissions



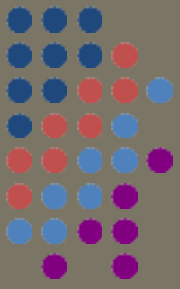


# Effects of Global warming





# Global warming leads to other environmental impacts



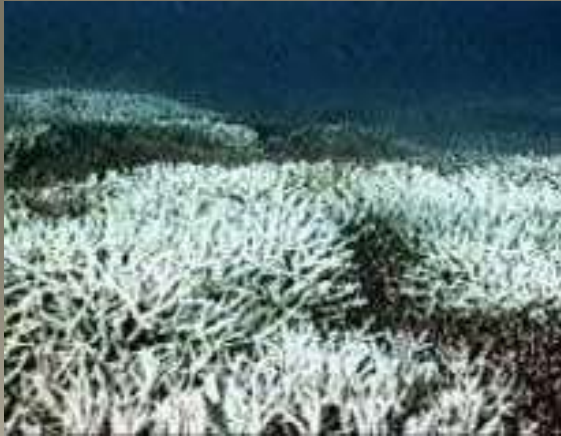
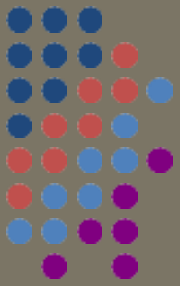
**- Ice cap melting**



**Changes in  
growing season**

**-Shifts in species**





**-Coral reef bleaching**

**- Heavy Snowfalls  
and flooding**



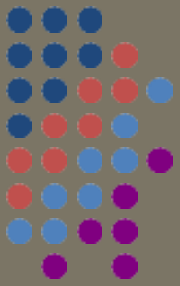
**-Droughts and fires**



# Potential Effects on Egypt

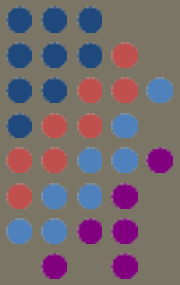


# Facts about Egypt



Total area (km2)	1,001,449
Population, total	82,999,393.0
Rural population	57,508,852.6
Number of rural poor (million, approximate)	11,069,562.6
Arable land (% of land area)	2.8

World Bank 2009



## Importance of Agriculture:

**17% of GDP.**

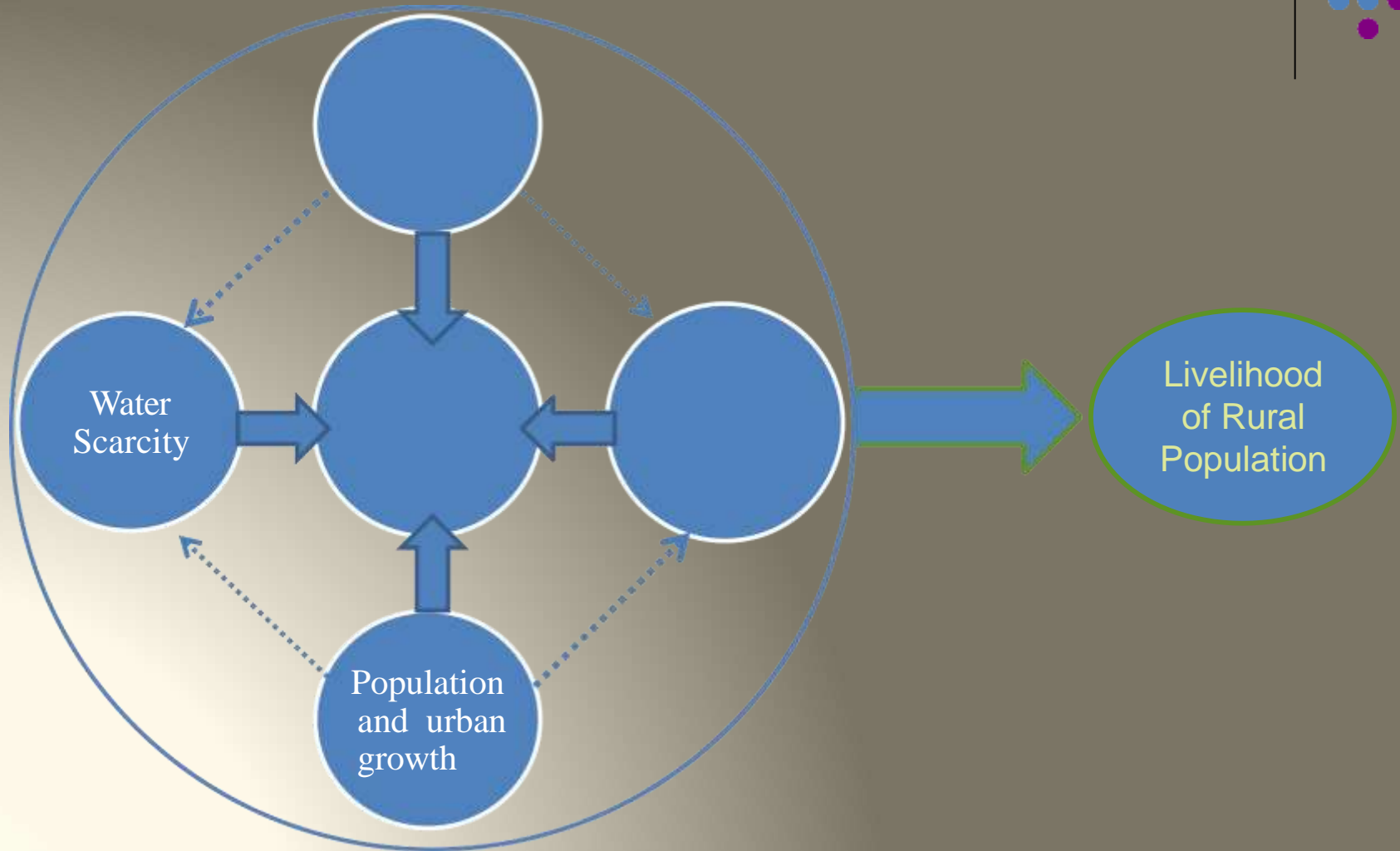
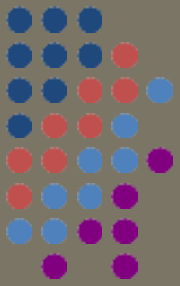
**30% of labor force.**

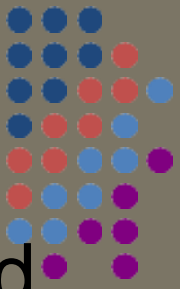
**20% of the country's exports.**

**57% of the Egyptian population live in rural areas.**

**Uses 86% of the total annual water budget.**

# Major causes of concern in Egyptian agriculture



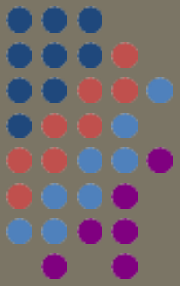


- Despite its low contribution to GHG's emissions, Egypt is highly vulnerable and will highly suffer from the impacts of global climate change and considers it as a real threat to its future development in different economic sectors.
- The most vulnerable sectors affected are coastal zones, water resources and agriculture.



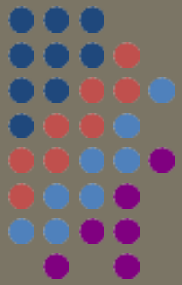


# 4. Egyptian Agro-eco zones

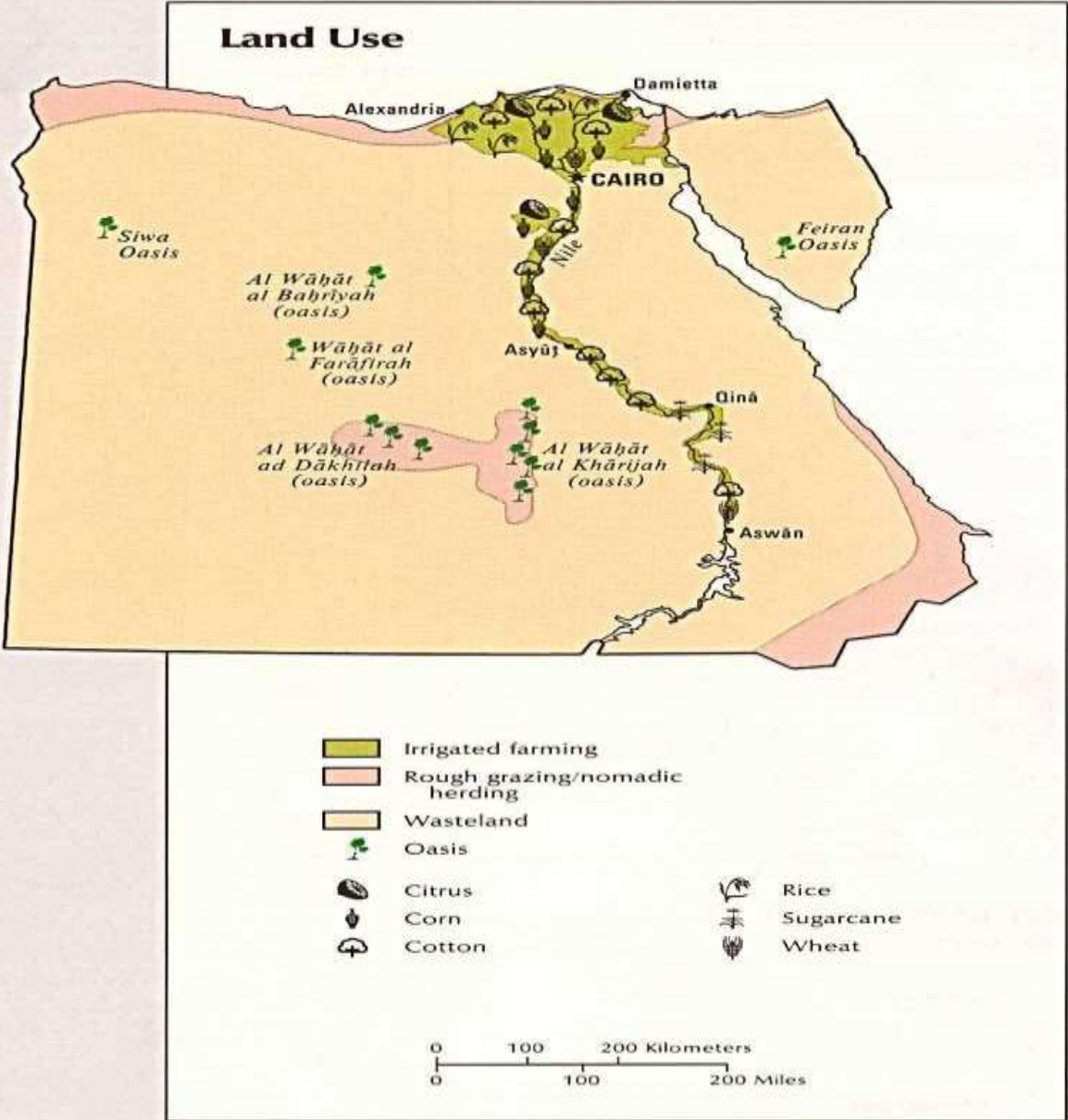


- Based on soil characteristics and water resources, four agro-ecological zones can be identified as follows:

- 1 Old land**
- 2 New land**
- 3 Oases**
- 4 Rain-fed areas**



# Egyptian Agro-eco zones



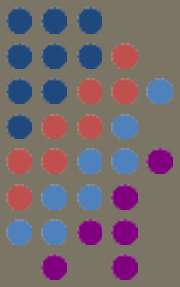
	Old Land	New Land	Oases	Rain-fed areas
<b>Location</b>	Nile Valley and Delta Regions	mainly on both the east and west sides of the Delta and scattered over various areas in the country.		land located in the north coastal areas,
<b>Area</b>	Covers 2.25 million ha	1.05 million ha	40 000 ha	0.17 million ha
<b>Soil</b>	Alluvial soils (clay to loamy).	Reclaimed lands	alluvial, sandy and calcareous soils.	
<b>Irrigation</b>	Nile water	Nile water is the main source of irrigation but in some desert areas underground water is the only source	Underground water	Rainfall between 100 and 200 mm annually



# Potential Effects on Egypt

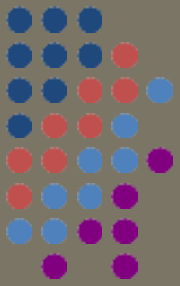
1. Impacts on **water resources** due to changes of precipitation rates, transfer through River Nile and increasing consumption rates
2. Impacts on **agriculture production** due to changes of agricultural zones and impacts of increasing heat waves.
3. Loss in **coastal resources (due to sea level rise)**
4. Hard weather conditions (**heat waves, dust and sand storms**)
5. **Social impacts** due to all above factors

# 1- Impact on water resources



- Egypt is an arid country facing water scarcity.
- The total water budget 55.5billion m<sup>3</sup>
- 95% from the River Nile
- 1.5% from water aquifers
- 3.5% from rainfall
- By 2017 fall to 670 m<sup>3</sup> per person
- By 2040 would reach 350m<sup>3</sup>

## 2- Climate change may affect agriculture through:



- Changes in temperature and precipitation
- Changes in soil moisture and soil fertility
- Changes in the length of growing season
- An increased probability of extreme climatic conditions
- Increase pests and diseases in warmer weather  
( Tuta Absoluta)

# Higher temperature effects on agriculture (major crops)

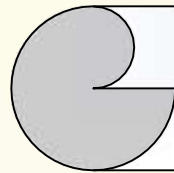


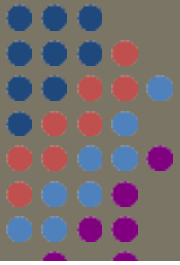
Crop	% Crop productivity	% Water consumption
Wheat	- 9	+ 6.2
Maize	- 19	+ 8
Cotton	+ 17	+ 4.1
Rice	- 11	+ 16
Tomato	- 14	+ 4.2





### **3- Specific Impacts of Sea Level Rise on the Coastal Zone of Egypt**

- 1. Impact due to direct flooding sea level rise**
  - 2. Impact due to salt water intrusion**
  - 3. Increasing soil salinity and potential Degradation of productivity**
  - 4. Impacts on the coastal ecosystem and resources**
  - 5. Direct and indirect impacts on socioeconomic sectors leading to migration of population**
- 



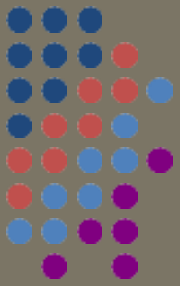
# Sea level rise:

Leading to drowning of coastal areas and Loss of agricultural lands:

- Egypt, is estimated to lose 12-15% of their fertile Delta lands;
- Potential increase in the **occurrence of natural disasters, “floods and Hurricanes.**
  - **Seawater intrusion to coastal groundwater resources might pose a threat to Egypt.**



## 4- Impact of higher temperature



- Increased **evaporation**, increased water demand & soil salinity
- Sea level rise **destroy agricultural land** and migration
- Increased severities of **pest and disease** of major crops,
- Decrease Livestock productivity and increase disease (Bluetongue disease & Rift valley fever)

## 5- Social Impacts on Livelihood :

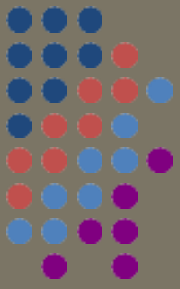


Increased **political conflicts** due to competition over resources ;

- Population mass **immigration** from flooded or drought affected regions
- Increase in **unemployment and decrease in wages** due to agricultural lands loss, and to halting of tourism and fishing activities...etc;
- Increase in **poverty and health problem** Victims and poor groups.
- Spread of **health problems**



# 5- Social impacts on rural households



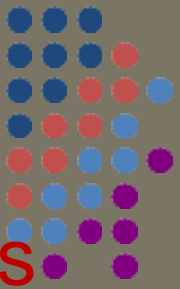
The consequences of climate change on households will be translated into potentially:

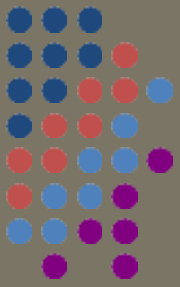
- Decrease in crop yields  $\longrightarrow$  reflected on **their income**
- Decline in conditions for keeping **live stock**
- Increase in demand for man power, e.g. preparing fields, fetching water  $\longrightarrow$  **decrease in leisure time, decline in educational attainment for children**
- Lower mean returns to assets and livelihoods and lower expected levels **of well-being**;
- Negative impacts on household well-being in terms of increased perception of **insecurity and concerns about the future.**

# Actions and Policy setting efforts

The Ministry of State for Environmental Affairs (MSEA) with its executive agency the EEAA has established :

- Egypt's Climate Change Action Plan,
- National Communication on Climate Change,
- The National Energy Efficiency Strategy,
- The National Strategy for Solid Waste management, and
- Implementation through various donor-supported agencies and INGOs.





Thank You