



# **STATE OF PALESTINE MINISTRY OF AGRICULTURE**

**THE 1<sup>st</sup> MEETING OF THE COMCEC  
AGRICULTURE WORKING GROUP  
(June 6<sup>th</sup>, 2013, Ankara)**

# **Increasing Agricultural Production in the COMCEC Region**

## **“Improving Irrigation Capacity”**

**Country Presentation**

**Ankara**

**June 2013**

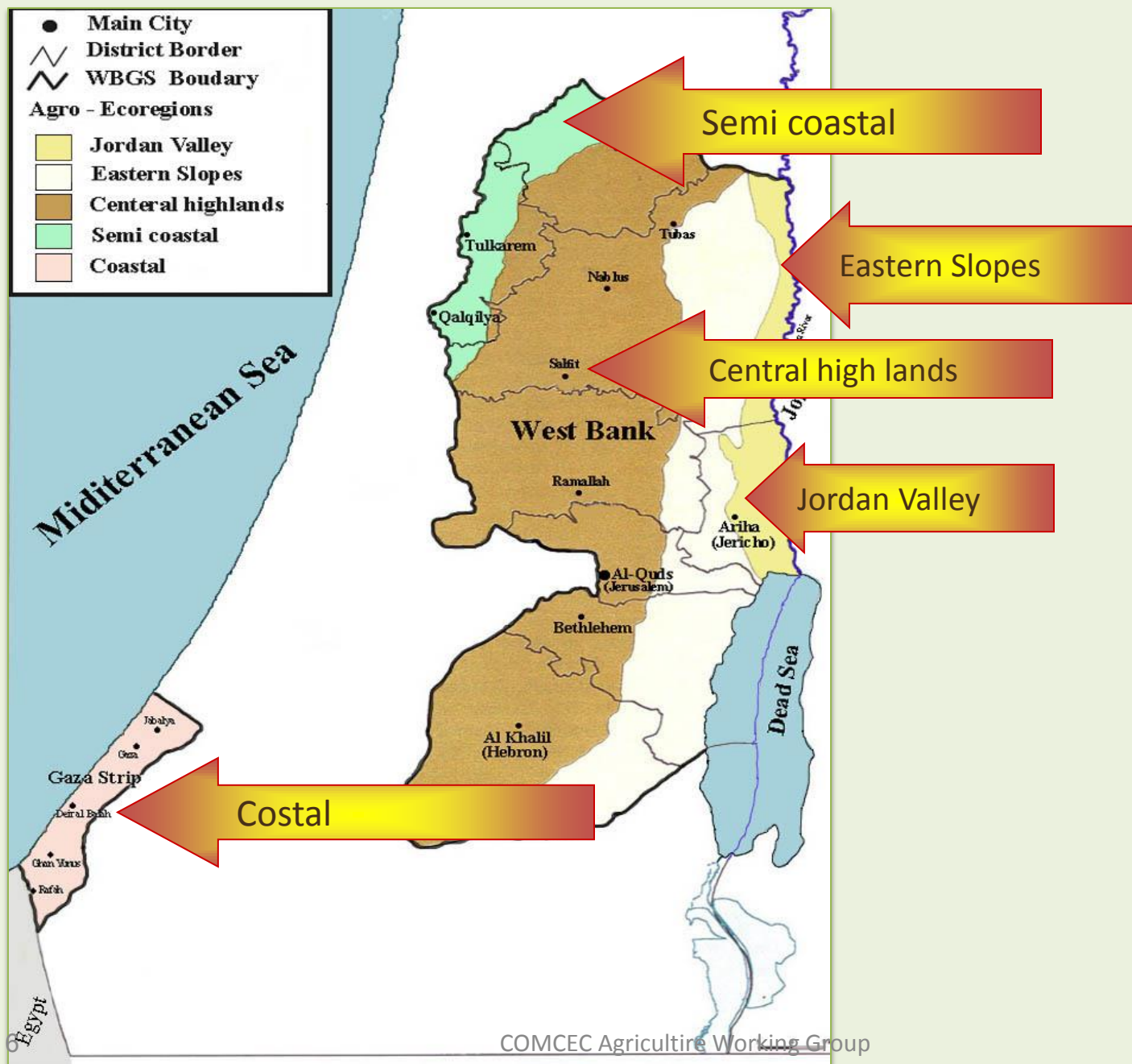
# Agro-Ecological zones in Palestine

Zone	Area (km <sup>2</sup> )	Description
Jordan valley	413	Low lying (-375 to -200m below sea level) region along the western bank of the Jordan river. A semi-tropical region with hot summers and warm winters. It is an arid region with an average annual rainfall of approximately 160 mm. The main agricultural activity in this area is irrigated vegetable production.
Eastern slopes	1594	Extend the length of the eastern edge of the West Bank (-200 to 800m). This semi-arid region is in the rain shadow of the central highlands with annual precipitation ranging from 200 mm in the south to 400 mm in the north. The main agricultural activity is animal grazing.

<b>Semi-coastal region</b>	<b>470.5</b>	<b>The smallest of the West Bank's agro-ecological regions, it is located in the north west corner of the West Bank (100 to 400m). It is a productive agricultural area receiving 600 mm of annual precipitation. The main agricultural activities are field crop production and citrus trees.</b>
<b>Central highlands</b>	<b>3144.5</b>	<b>This highland area of the West Bank extends from Jenin in the north to Hebron in the south (400 to 1000m). It is the main catchment area for the West Bank aquifers with annual precipitation ranging from 500 to 800 mm. The main agricultural activity is fruit tree production (e.g, olive trees).</b>
<b>Coastal region (Gaza Strip)</b>	<b>365</b>	<b>This small strip of land is located along the coast of the Mediterranean Sea (0 to 100 m). Annual rainfall ranges from 200 mm in the south to 400 mm in the north. The main agricultural activities are irrigated vegetable and citrus tree production. Also horticulture production is prevalent.</b>

# Agro-ecological zones in Palestine

Zone	Area Km <sup>2</sup>
Semi costal	470.5
Central high land	3144.5
Costal	365
Jordan Valley	413
Eastern slopes	1594
Total	5987



## Water Resources :

- Water available for agriculture amounts to **150 million cubic metres (  $\text{mm}^3$ )** per annum, (**70 MCM** in the West Bank and **80  $\text{mm}^3$**  in the Gaza Strip).
- The irrigation water is supplied by groundwater wells and springs, and Israel confiscates 82% of Palestinian ground water.

## Water Resources: Natural Recharge of the Palestinian Aquifer Basins

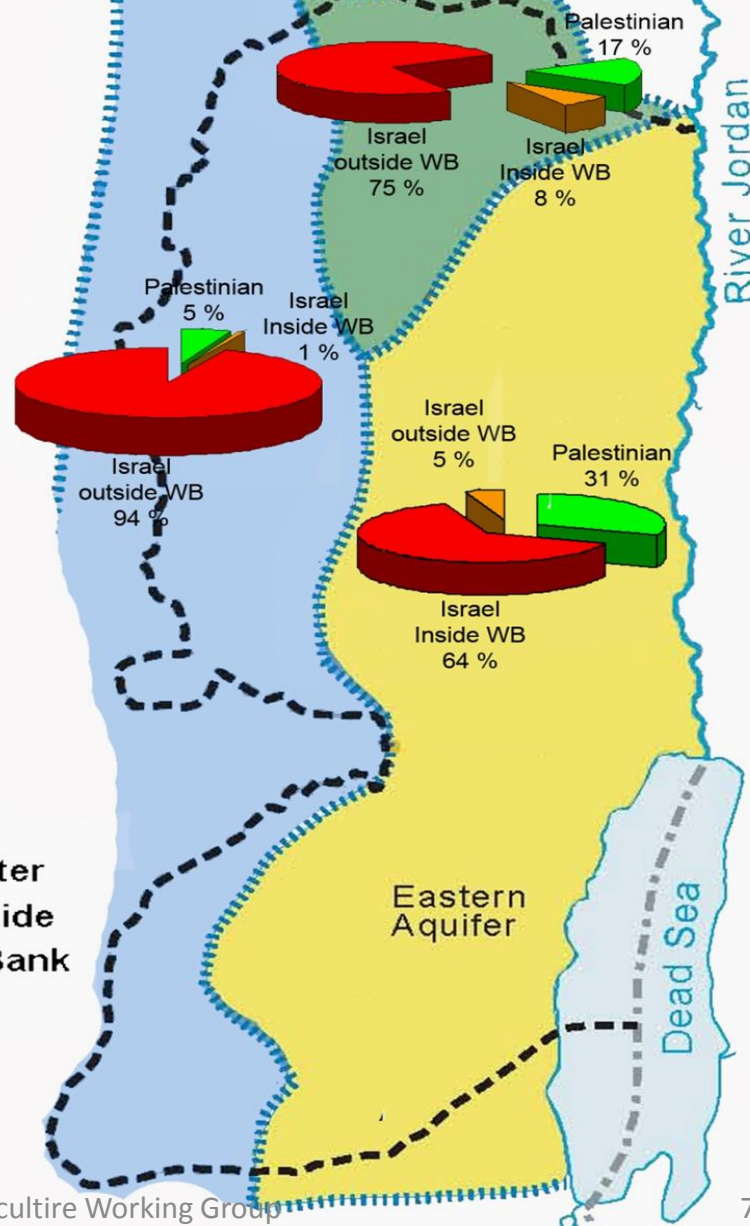
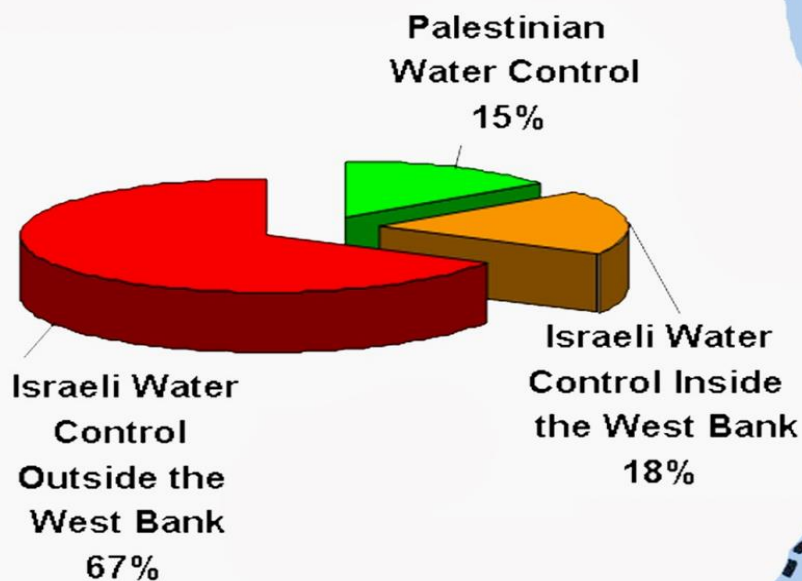
1. Water rights: 900mm<sup>3</sup>.
2. Available water: only 240mm<sup>3</sup>
3. Over 90% of the recharge originates in the Palestinian lands.
4. Israel utilizes 85% of water discharged from the mountain aquifer in West Bank.
5. The Coastal Aquifer Basin recharge is about 304 Mm<sup>3</sup>/yr. Only 50 Mm<sup>3</sup>/yr is Gaza portion of this recharge.



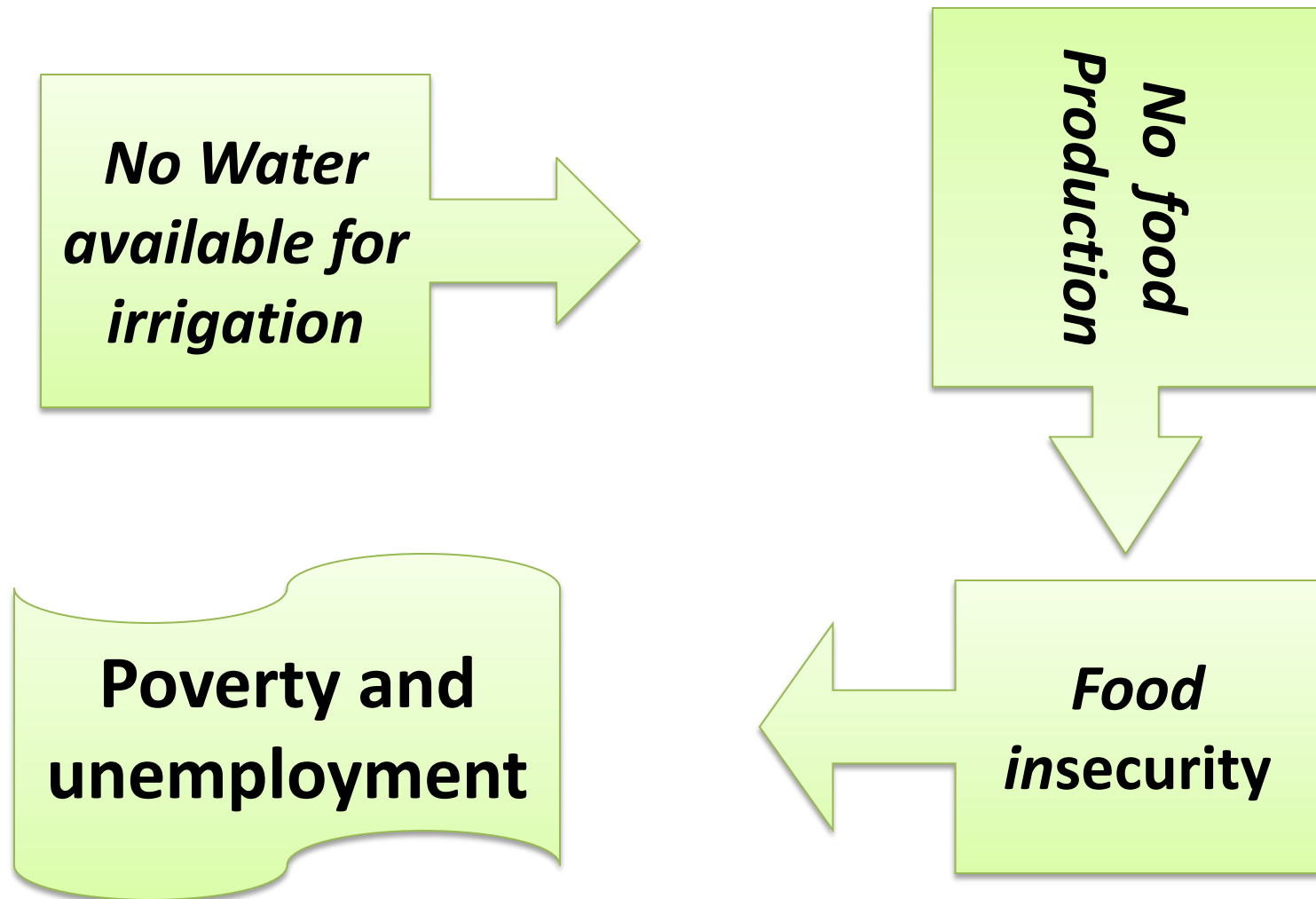
Map adapted from Palestinian Academic Society for the Study of International Affairs (PASSIA), Center for Economic and Social Rights, the Executive Action Team (USGS Overview of MidEast Water Resources) and the Local Aid Coordinating Committee.



## All Basins Water Shared (Eastern, Northeastern and Western)



- Removal of Israeli restrictions and provision of additional water quantities will raise agricultural sector's contribution to the Gross Domestic Product (GDP) by 10% and will create approximately 110,000 additional job opportunities.
- Deteriorated status and inefficient use of water resources, over-pumping of ground water, unlicensed wells are the major obstacles facing the agricultural water resources.



**How to produce more food with less water?**

# *Agricultural Sector Strategy 2011-2013*

## Agricultural Sector Policies

**Policies targeting the effective and sustainable management of agricultural water resources**

• **Increase water availability and improve supply management by:**

1. Rehabilitate water infrastructure
2. Raise water sources designated for agriculture

# Agricultural Sector Policies

## •Improve demand management of the agricultural water by:

1. Enhance the efficiency of water transportation and distribution systems.
2. Upgrade irrigation systems and use complementary irrigation.

# Agricultural Sector Policies

- Sustainable use, increasing the area, reclaiming the land and sustainable use of agricultural biodiversity by:

1. Identify, classify and reclaim lands and enhance productivity
2. Afforest government and privately-owned land
3. Develop and rehabilitate rangelands
4. Conserve and sustainably use of agricultural biodiversity

# Interventions

## ➤ **Spatial Planning Project for Natural Resources Protection:**

Expanding and rationalizing the use of natural resources as a basis for the development of sustainable alternative of random dealing with limited resources.

# Interventions

➤ **Water Harvesting Programs:** optimal use of non-conventional water resources through utilization of available rain water for agriculture.

- 1) small earthen ponds (capacity of 15 thousand m<sup>3</sup>).
- 2) medium earthen ponds (capacity ranging from 150 - 200 thousand m<sup>3</sup>).



# Interventions

## ➤ **Rehabilitation of Wells and Springs Program:**

Conservation and improving water use efficiency to insure the sustainability of available water resources.

## ➤ **Treated Wastewater Reuse Program:**

The optimal use of available conventional and non conventional water in agriculture (16.4 mm<sup>3</sup> in the coming five years , 550 ha.).

# Interventions

## **Fish Water Ponds (aquaculture programs):**

using the ponds' water  
for irrigating vegetables.



















