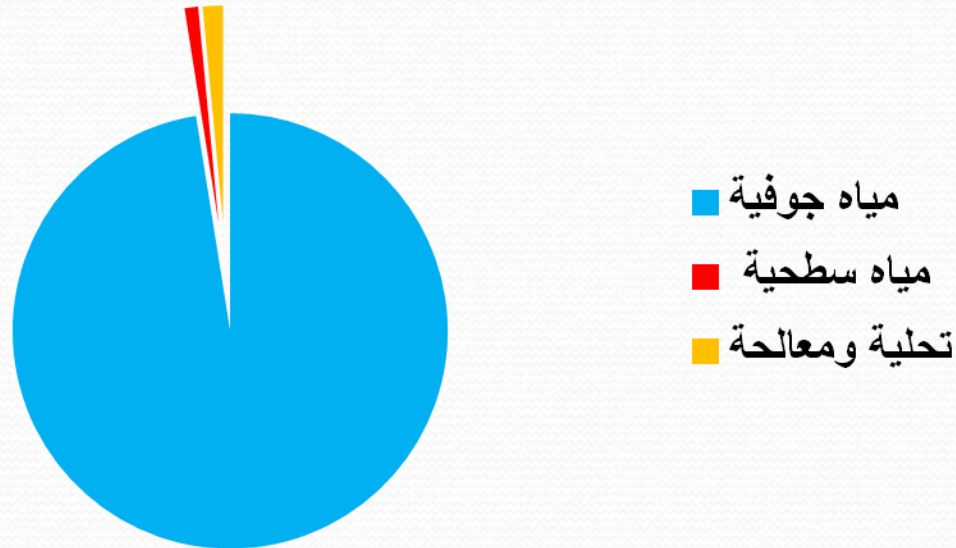


H2020 Review and Monitoring (RM) workshop on  
Assessment 10<sup>th</sup> meeting of the Horizon 2020  
Review and Monitoring (RM) Group 23-24  
September 2019 in Athens, Greece

**Country Presentation**  
**Libya**

# Water Resources

- Total Water Consumed 5.6 :Billion m<sup>3</sup> / Year
- Surface water 60 Million /m<sup>3</sup>/Year (1 %)
- Ground water 97 %
- Desalination and Treated water 1.5 %



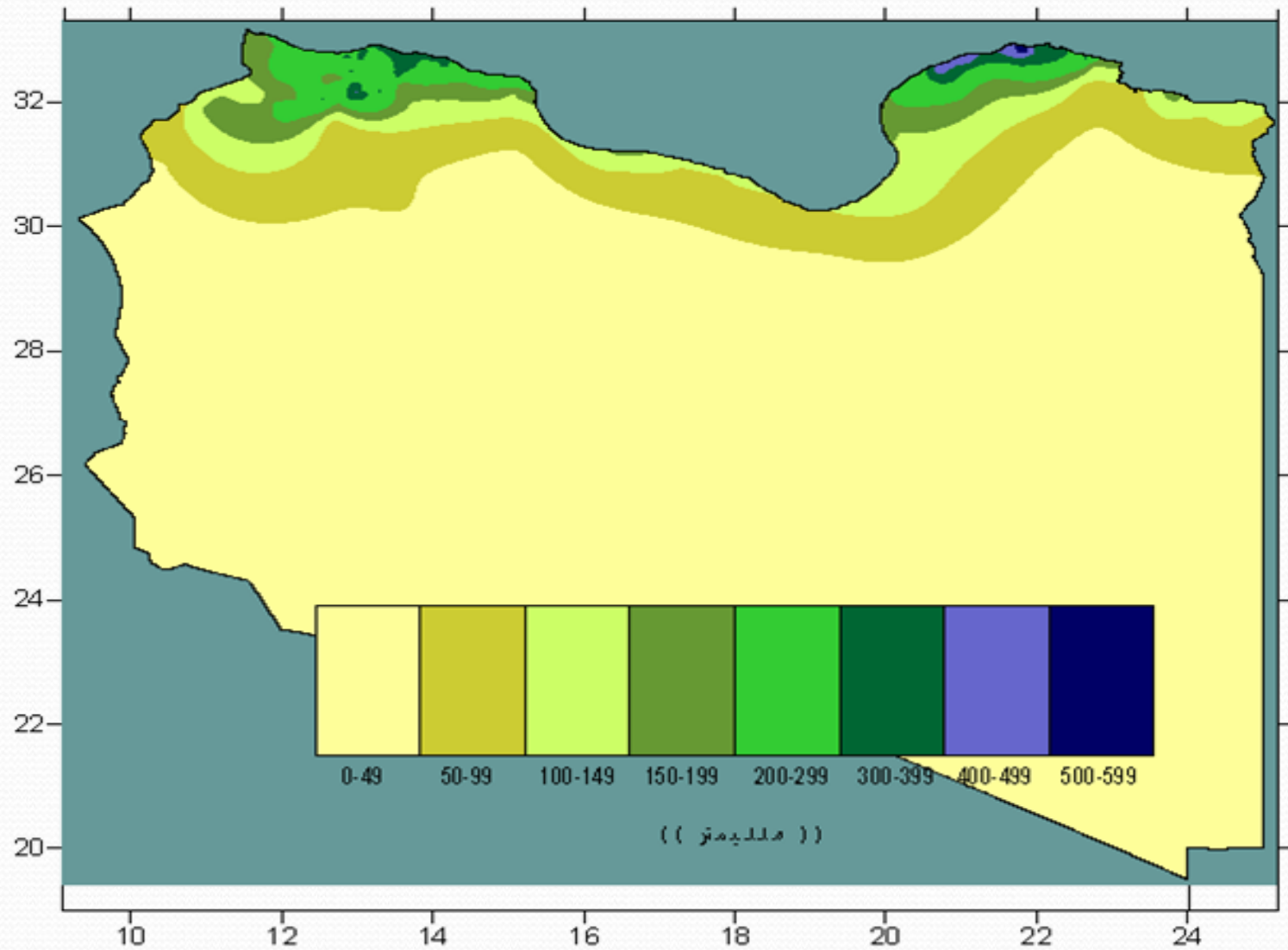
# Water Resources

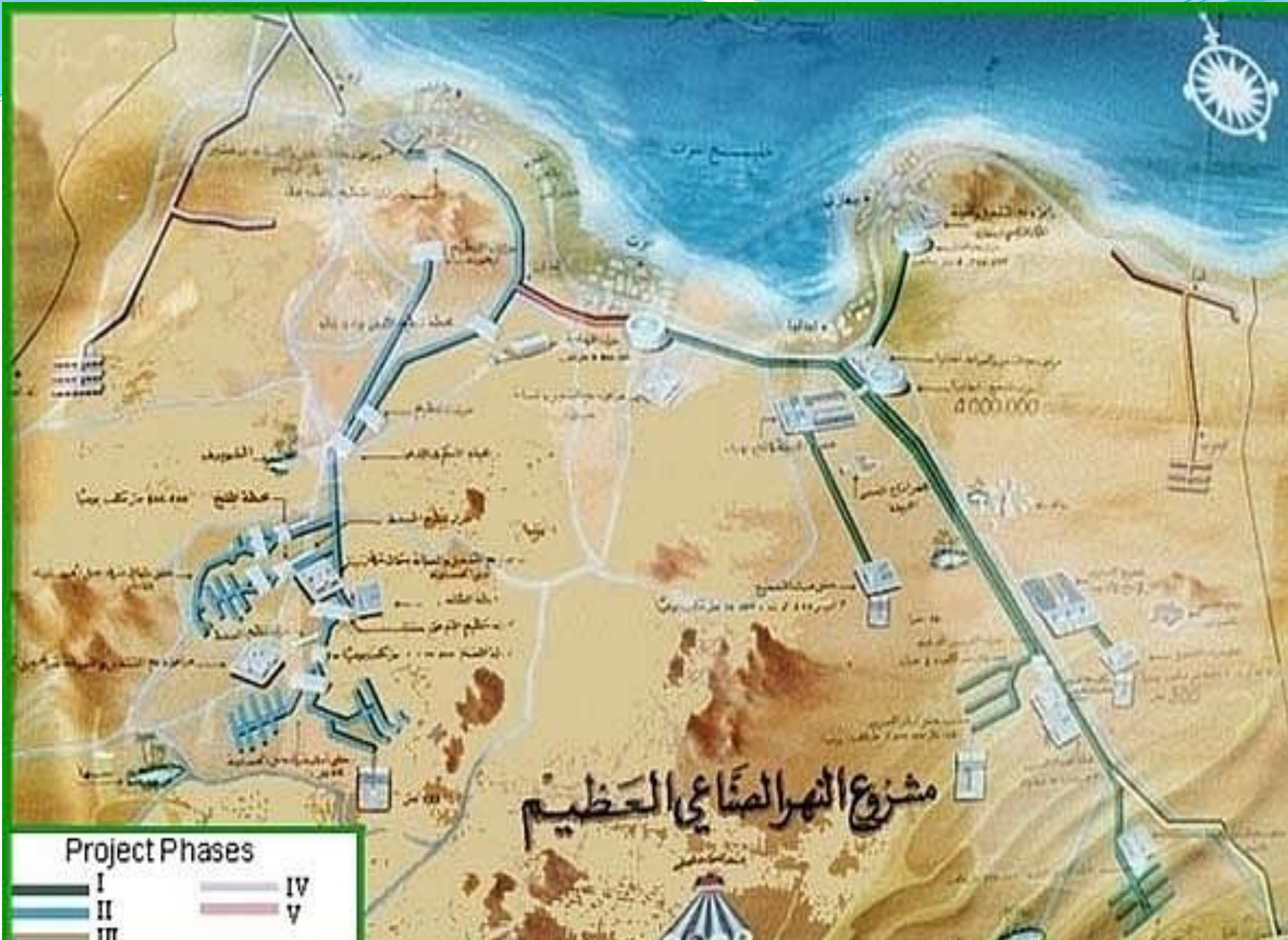
Water supply and sanitation in Libya is characterized by challenges and achievements.

Libya does not share any surface water with other neighboring countries, but most of its groundwater is shared. Libya as one the Northern African countries, that suffers from the scarcity of water. Only 5% of the country area is located above the geographical line for rainfall.

Practically all of Libya's fresh water (97%) is groundwater, mostly from the Great Man-Made River (GMR)(75%). Surface water accounts for 2.3%, while recycled sewage effluent provides 0.9%. Water from desalination is about 0.7% ( according to data of 2005) data):

# توزيع الأمطار في ليبيا





**Project Phases**

- |  |     |   |    |
|--|-----|---|----|
|  | I   |  | IV |
|  | II  |  | V  |
|  | III |   |    |

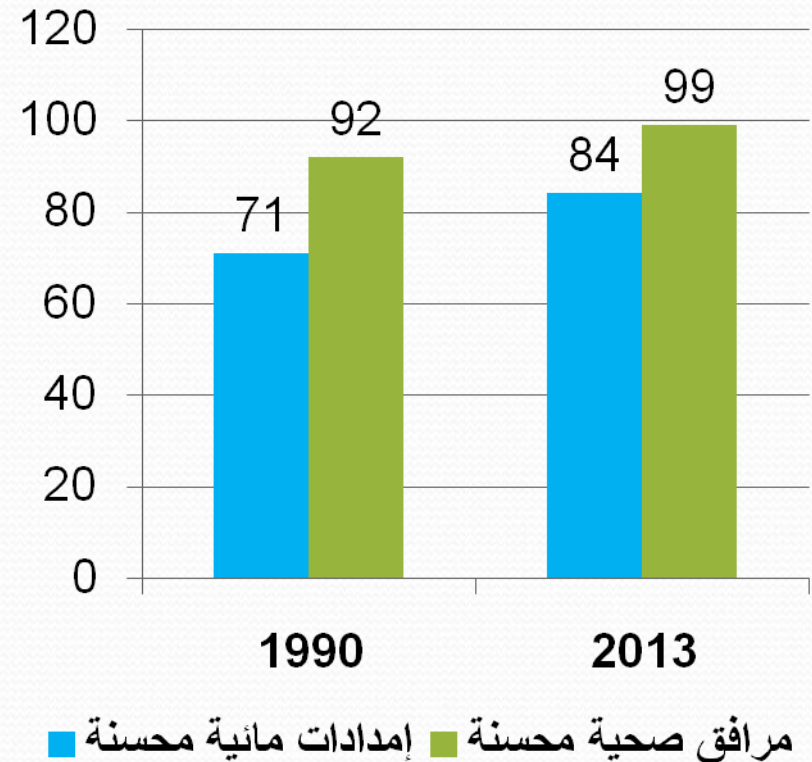
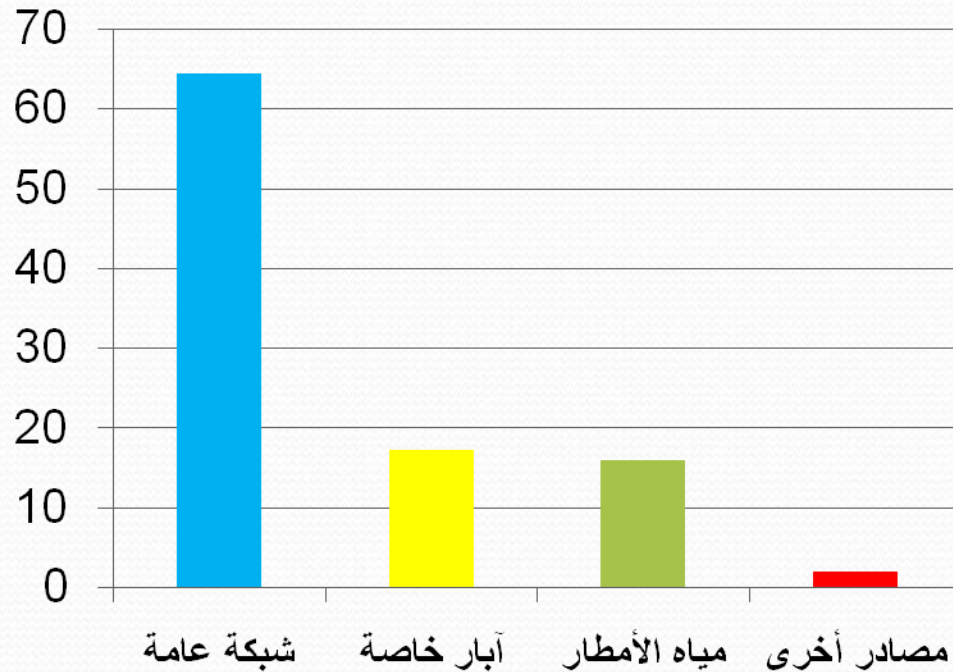
**مشروع النهر الصناعي العظيم**

# Sources of consumption

- ❖ Just above **80%** of the population Lives in the cities and used the public water networks
- ❖ In the countryside and villages peoples uses Wells, springs , by collecting and storing of rain water during winter time and by buying water tanker
- ❖ The domestic use represent **12%** of the Total water used
- ❖ The average Water consumption levels by use per/capita
- ❖ **450 L/Ca/ day**

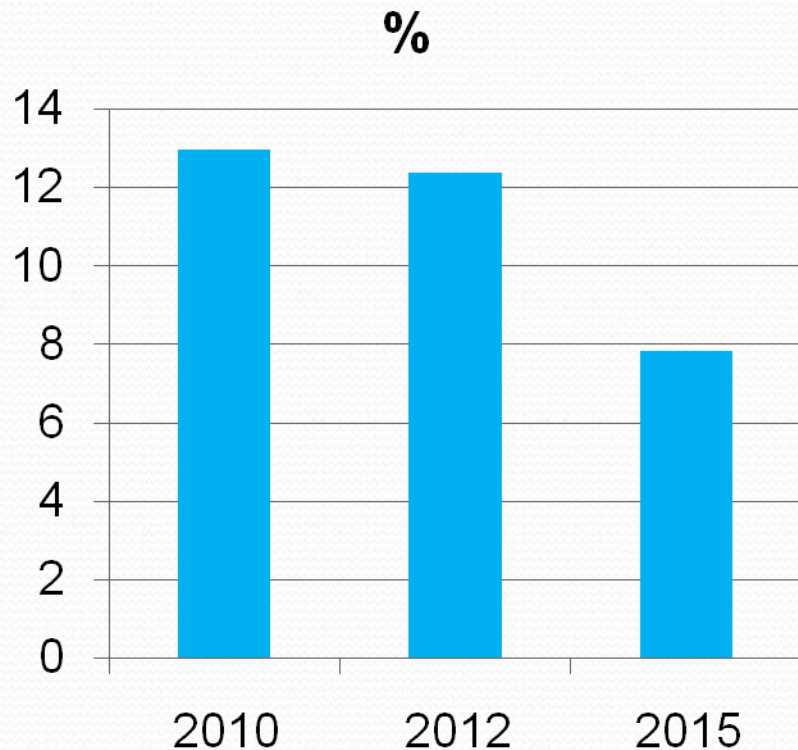
# Trend in the % of Water Supply

%

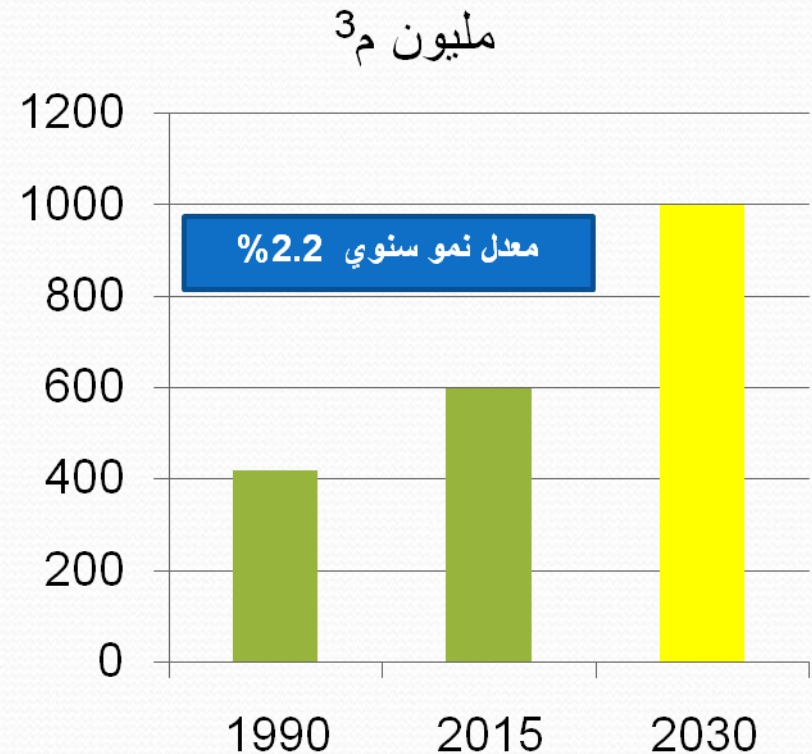


# Trend in water Demand and the contribution of Desalination

## Trend in Desalination

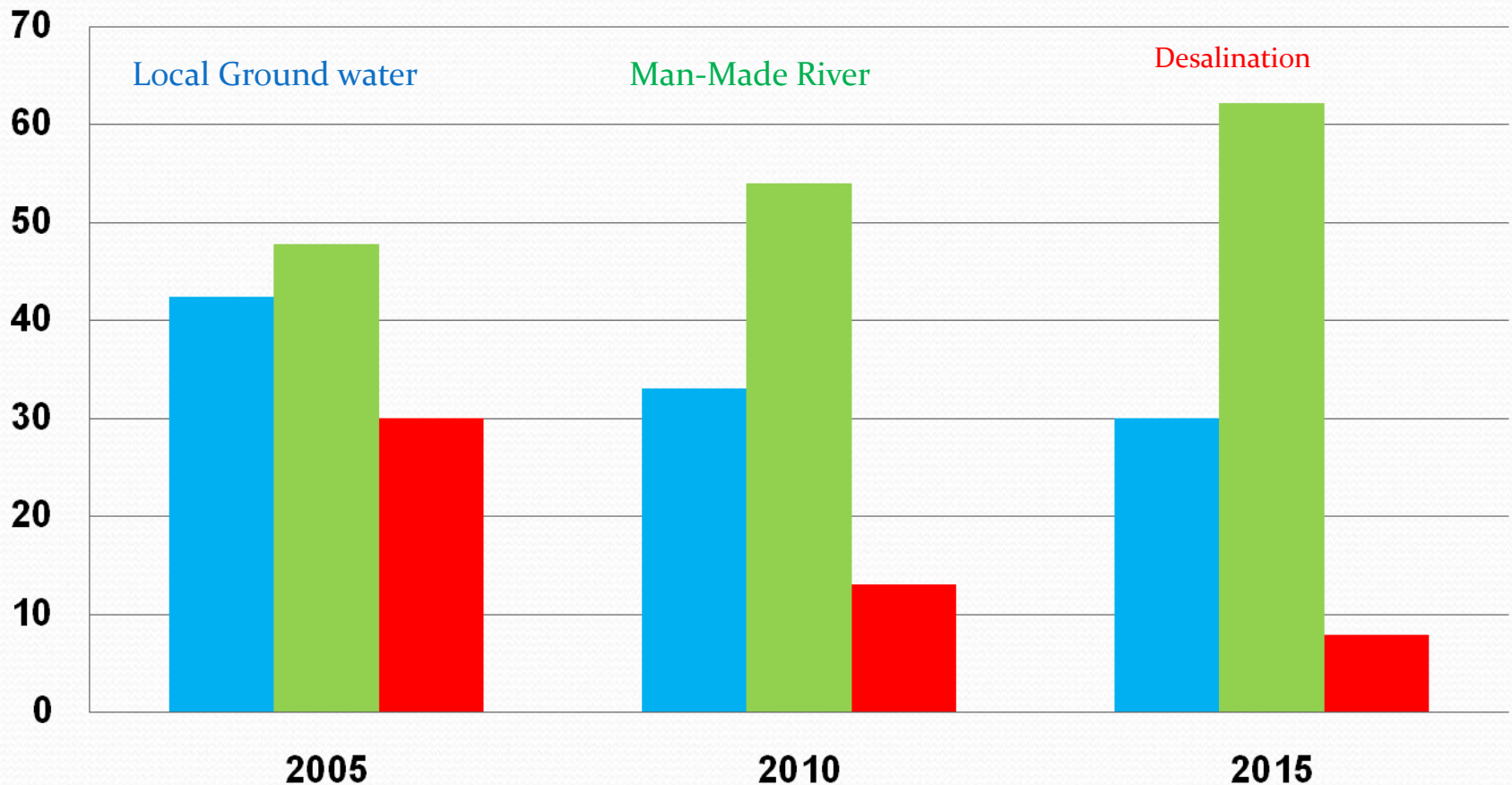


## Domestic Water Demand





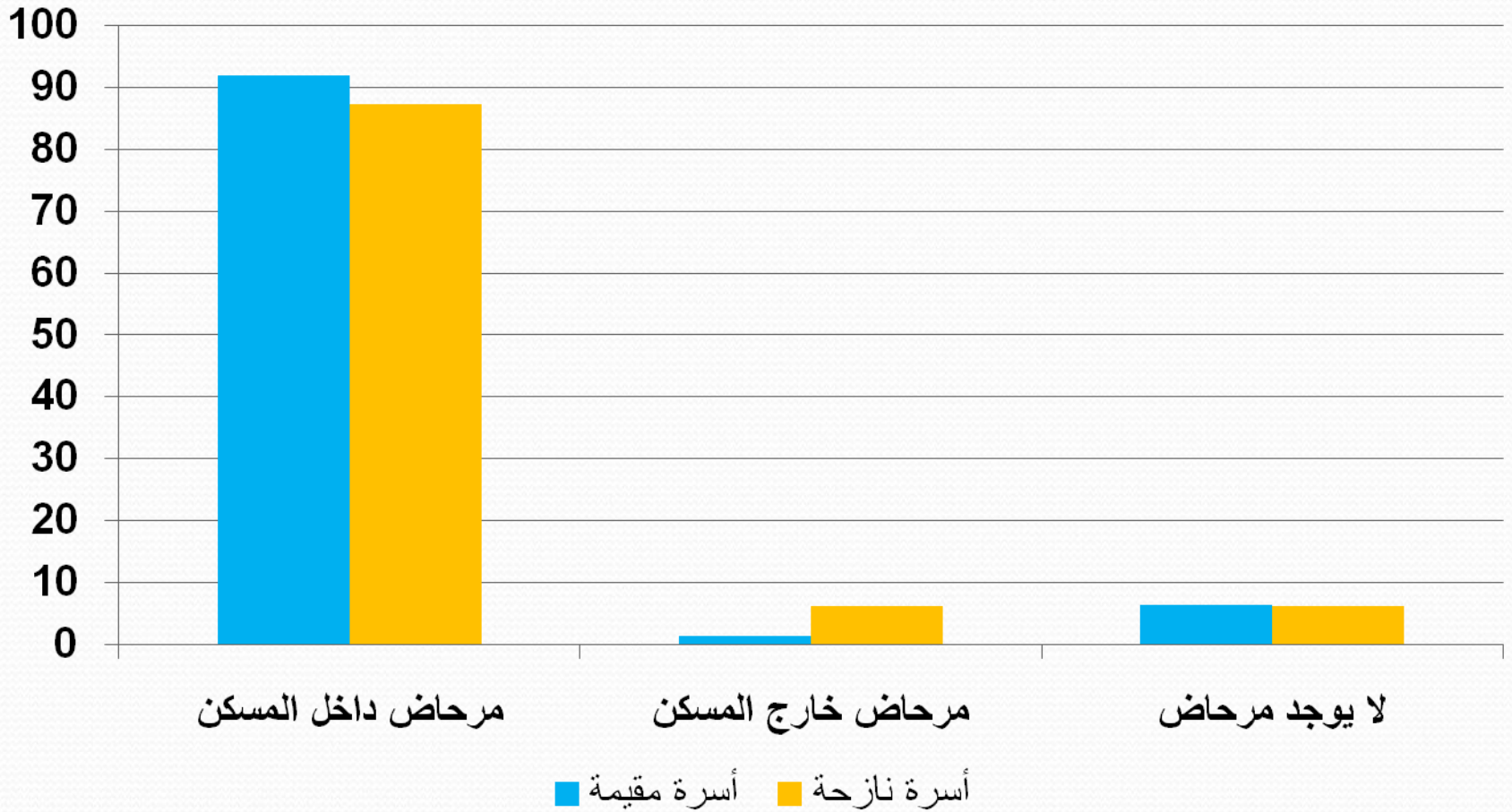
# Trend in the Water supply by the different Sources (%)



# Sanitation

In 2015, the percentage of the population who use sanitation facilities is about 97 % Access to appropriate sewage network is more largely spread with 95% of the population having it in 2007<sup>[2]</sup>. According to the 2007 Pan Arab population and family health project, only 63% of households in Libya are connected to a public sewage system and disposal network, while about 40% of the population are using septic tanks and cess pool .

# الصراف الصحي (%) 2016







West Region **396,200 m<sup>3</sup> /day**

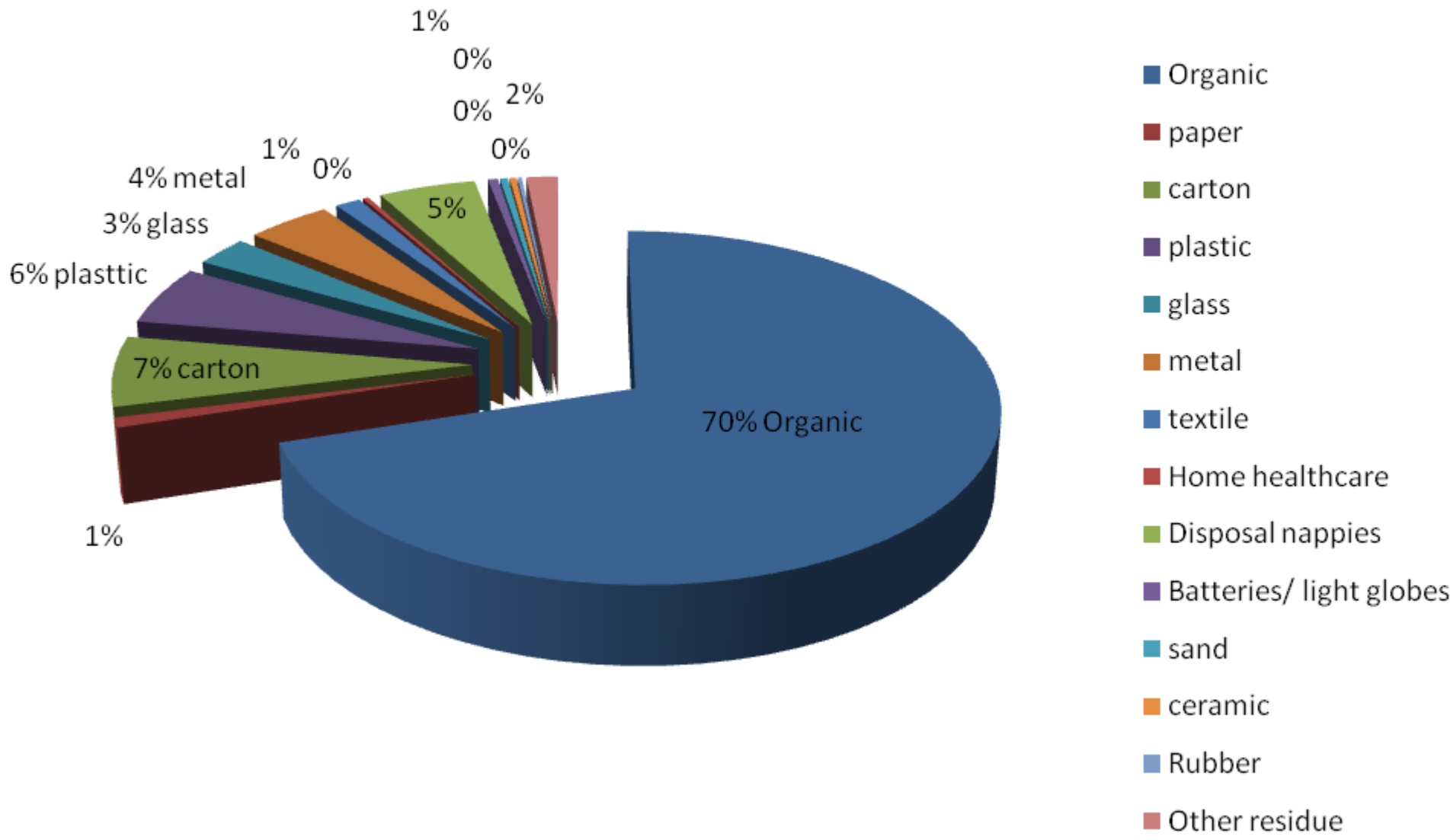
East Region **161,000 m<sup>3</sup> /day**

Southern Region **34,000 m<sup>3</sup> /day**

## The quantity in (tons) and % contribution of each Municipality

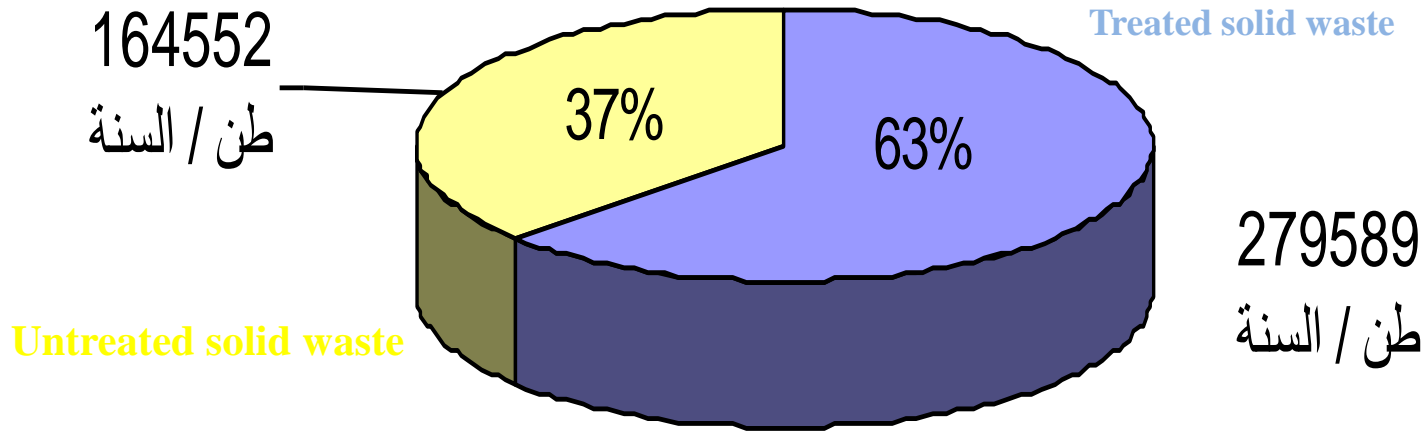
The Name of the Area (Municipality)	Wt in tons/day	%
Abu silm	480	%19.2
Tripoli	844	%33.76
Ain Zara	540	%21.6
Tajora	141	%5.64
Hay	333	%13.32
The Surrounding	162	%6.48
Total	2500	%100

# Solid Waste Characteristics, TRIPOLI Region April 2009



# Treated solid waste Quantity of Treated and untreated solid waste

■ كمية المخلفات المعالجة ■ كمية المخلفات غير المعالجة





# Industrial Discharge (pollution Load)

- Several studies were carried out in order to calculate the pollution Load from the Major Industrial facilities along the Libyan coastline



26/04/2019 10:20

**Table (12) Shows the Flow, the concentrations (mg/l) and Load of BOD, COD Total suspended Solid (TSS), Total Nitrogen (TN), Total phosphorus (TP) of the wastewater that enters the Lake.**

<b>Yearly Load ton</b>	<b>Daily Load ton</b>	<b>Concentration (g/m<sup>3</sup>)</b>	<b>Mean Flow m<sup>3</sup> /day</b>	<b>Parameters</b>
<b>2971.47</b>	<b>8.141</b>	<b>195</b>	<b>41765</b>	<b>BOD</b>
<b>5456.75</b>	<b>14.95</b>	<b>358</b>	<b>41765</b>	<b>COD</b>
<b>1752</b>	<b>4.80</b>	<b>115</b>	<b>41765</b>	<b>TSS</b>
<b>65.7</b>	<b>0.18</b>	<b>4.40</b>	<b>41765</b>	<b>TN</b>
<b>25.55</b>	<b>0.07</b>	<b>1.73</b>	<b>41765</b>	<b>TP</b>





Thank You for Your Attention