

# Water Storage Capacity of GAMA.

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# URAdapt

Managing Water at the Urban-Rural Interface: The key to climate change resilient cities

**Introduction**

**Aim**

**Assumptions**

**Methodology**

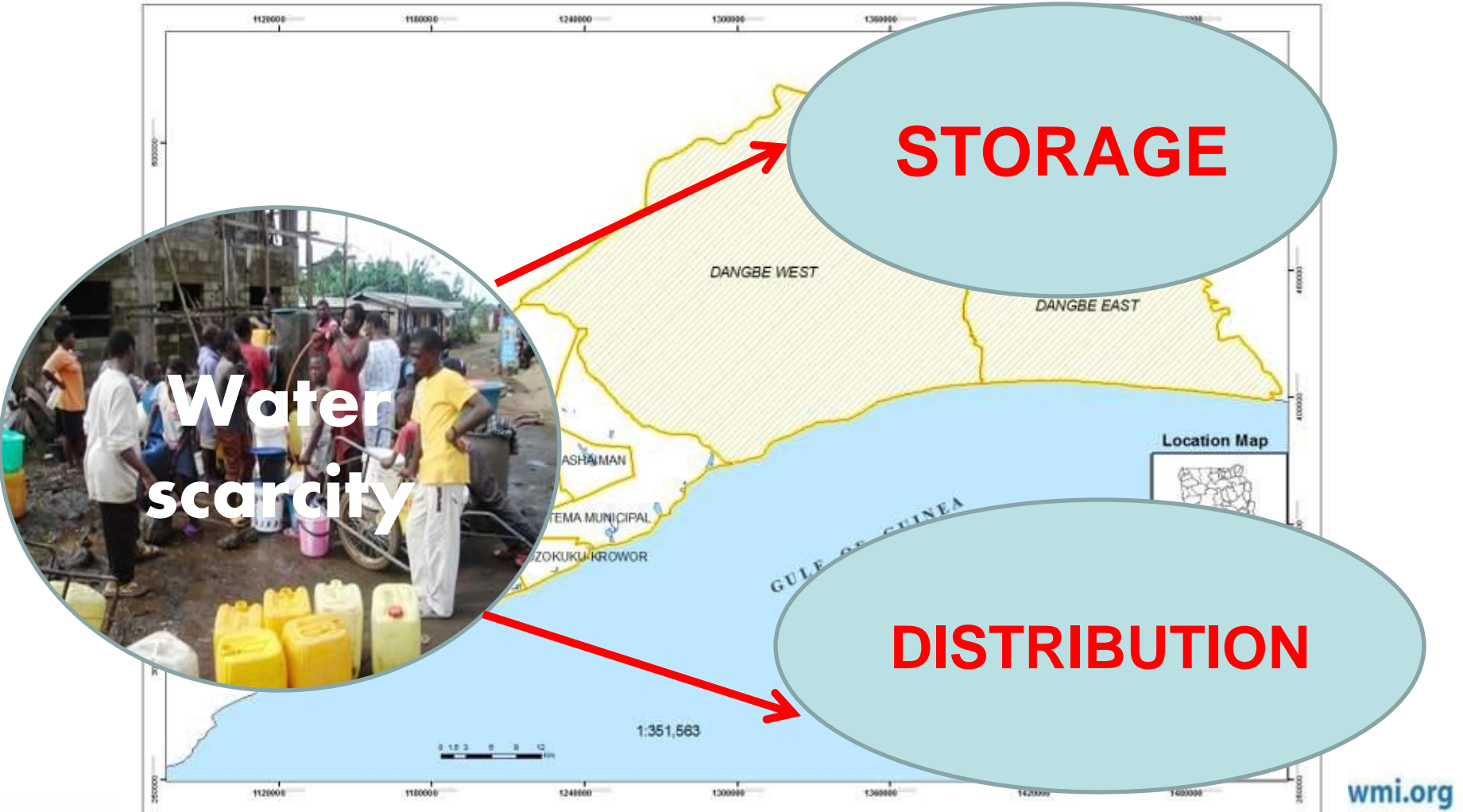
**Output**

**Findings & Implications**



# Introduction

MAP OF GREATER ACCRA REGION





# Introduction



Improving water and land resources management for

**To assess and map the urban storage capacity available in the Greater Accra Metropolitan Area.**

# The urban storage capacity:

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1. **Domestic storage volumes in low income households through medium sized plastic containers;**
2. **Domestic/commercial storage volumes through large plastic storage containers;**
3. **Commercial storage volumes in hospitalities and other industrial complexes through surface or underground built tanks, swimming pools etc**

# Large plastic storage containers

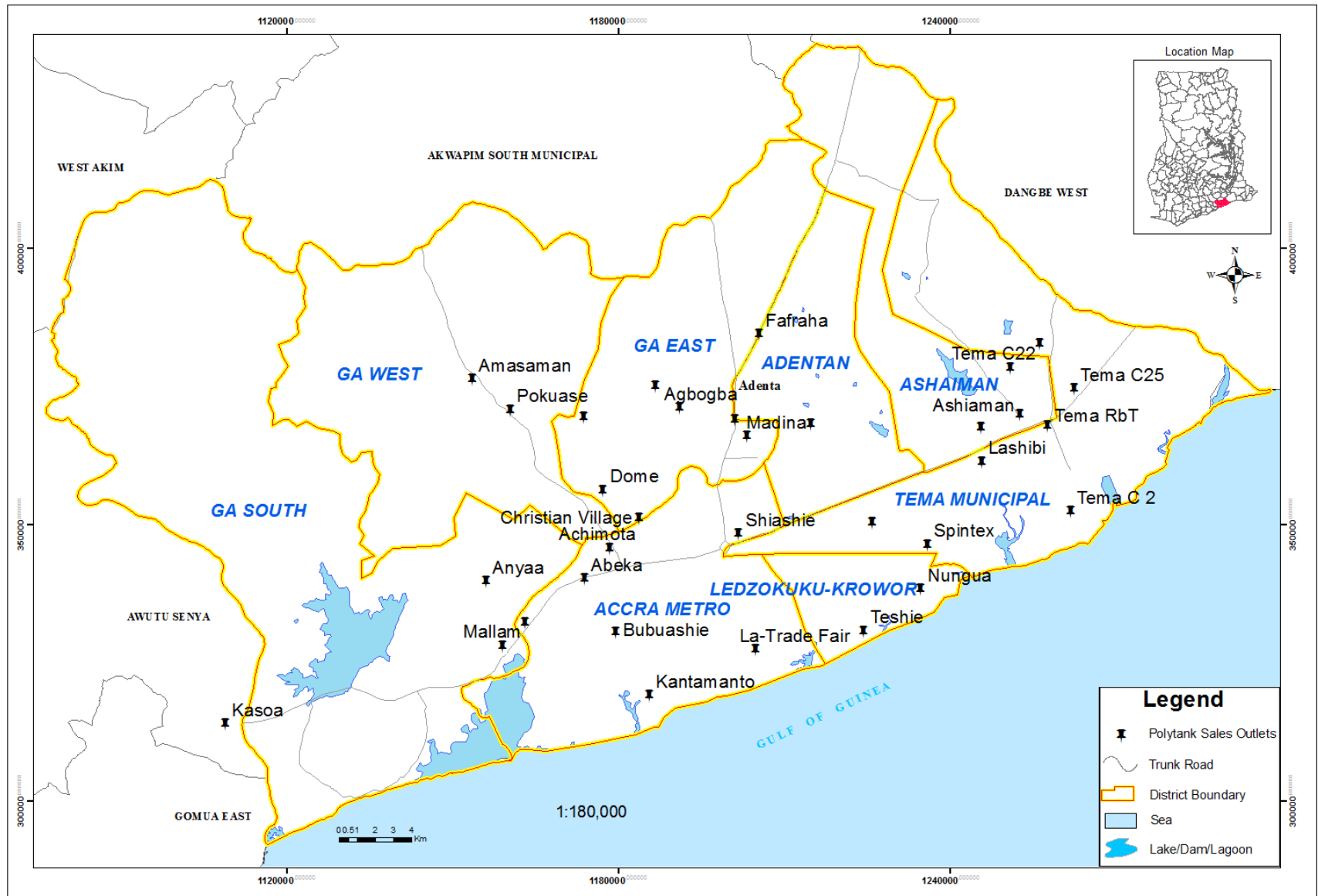
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## Assumptions

- ***Manufactures - Polytank, Polystar and Sintex:***
- ***Most of the sales to the agents in Accra are used internally;***
- ***Plastic storage containers can have a lifetime of ten years;***
- ***Urban expansion and water demand for the ten year period;***

# Output – Storage Map

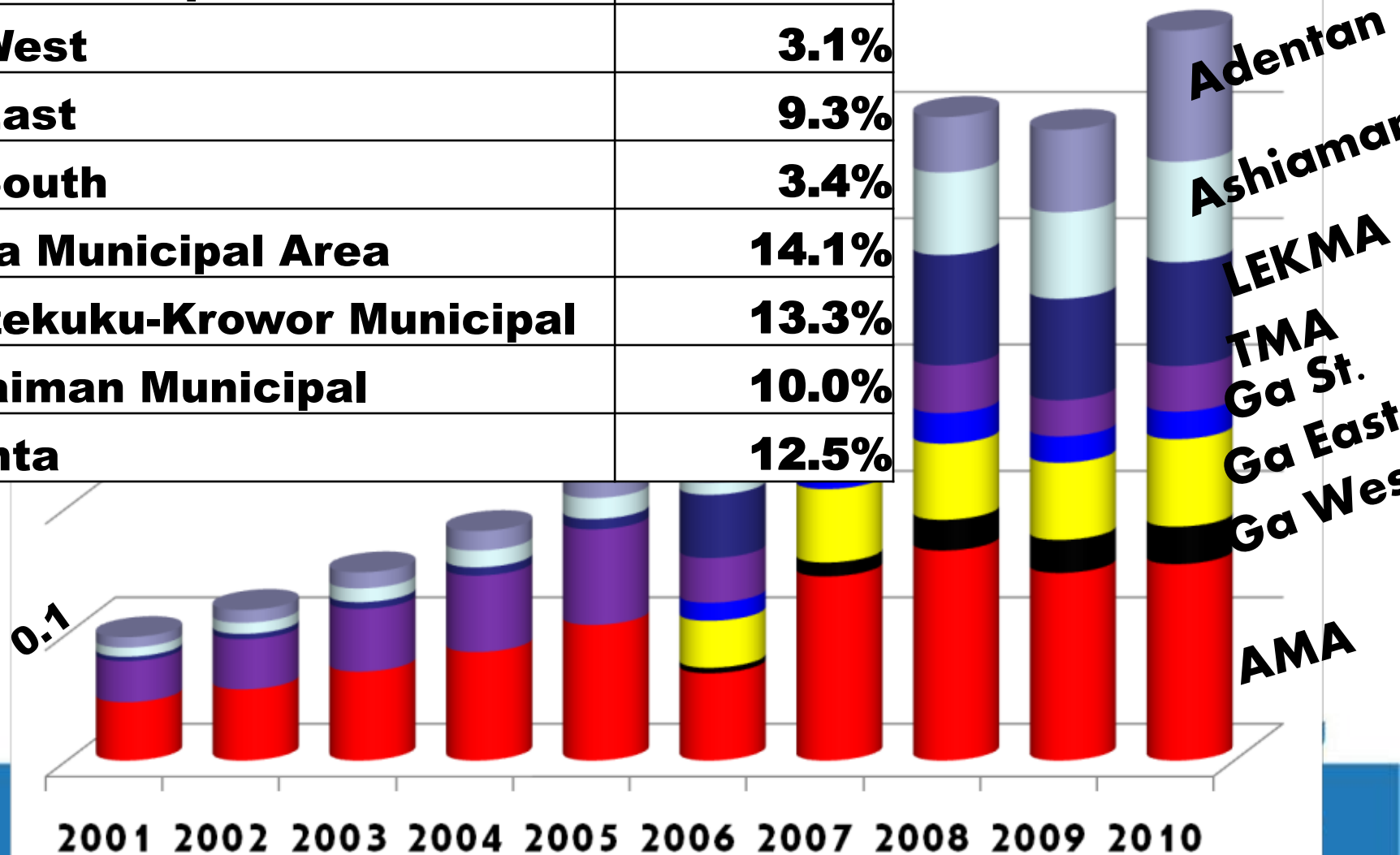
POLYTANK SALES OUTLETS IN GREATER ACCRA METROPOLITAN AREA (GAMA)



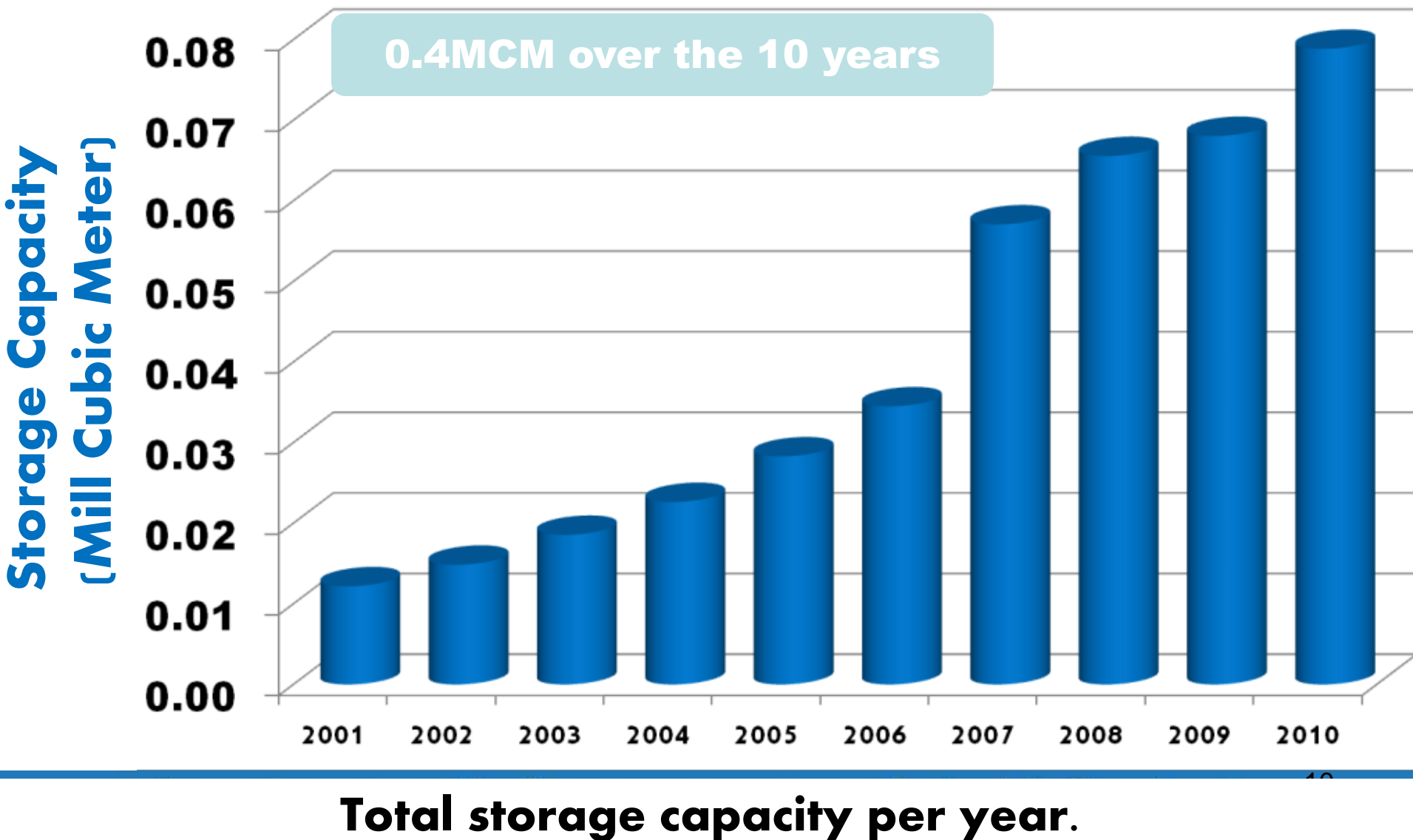


# Output – Storage Map

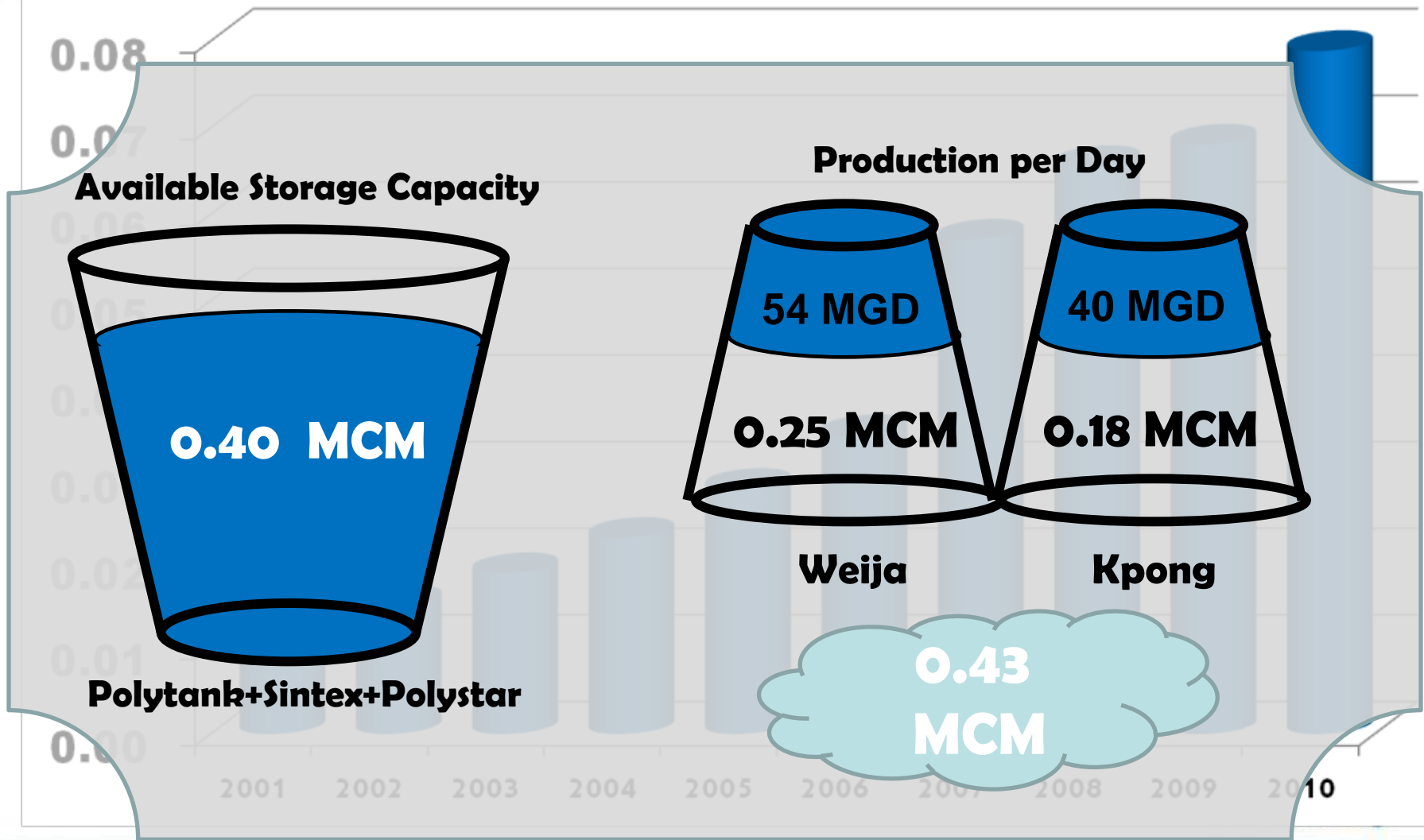
<b>Accra Metropolitan Area</b>	<b>34.3%</b>
<b>Ga West</b>	<b>3.1%</b>
<b>Ga East</b>	<b>9.3%</b>
<b>Ga South</b>	<b>3.4%</b>
<b>Tema Municipal Area</b>	<b>14.1%</b>
<b>Ledzekuku-Krowor Municipal</b>	<b>13.3%</b>
<b>Ashaiman Municipal</b>	<b>10.0%</b>
<b>Adenta</b>	<b>12.5%</b>



# Output - Large plastic storage containers



# Output - Large plastic storage containers

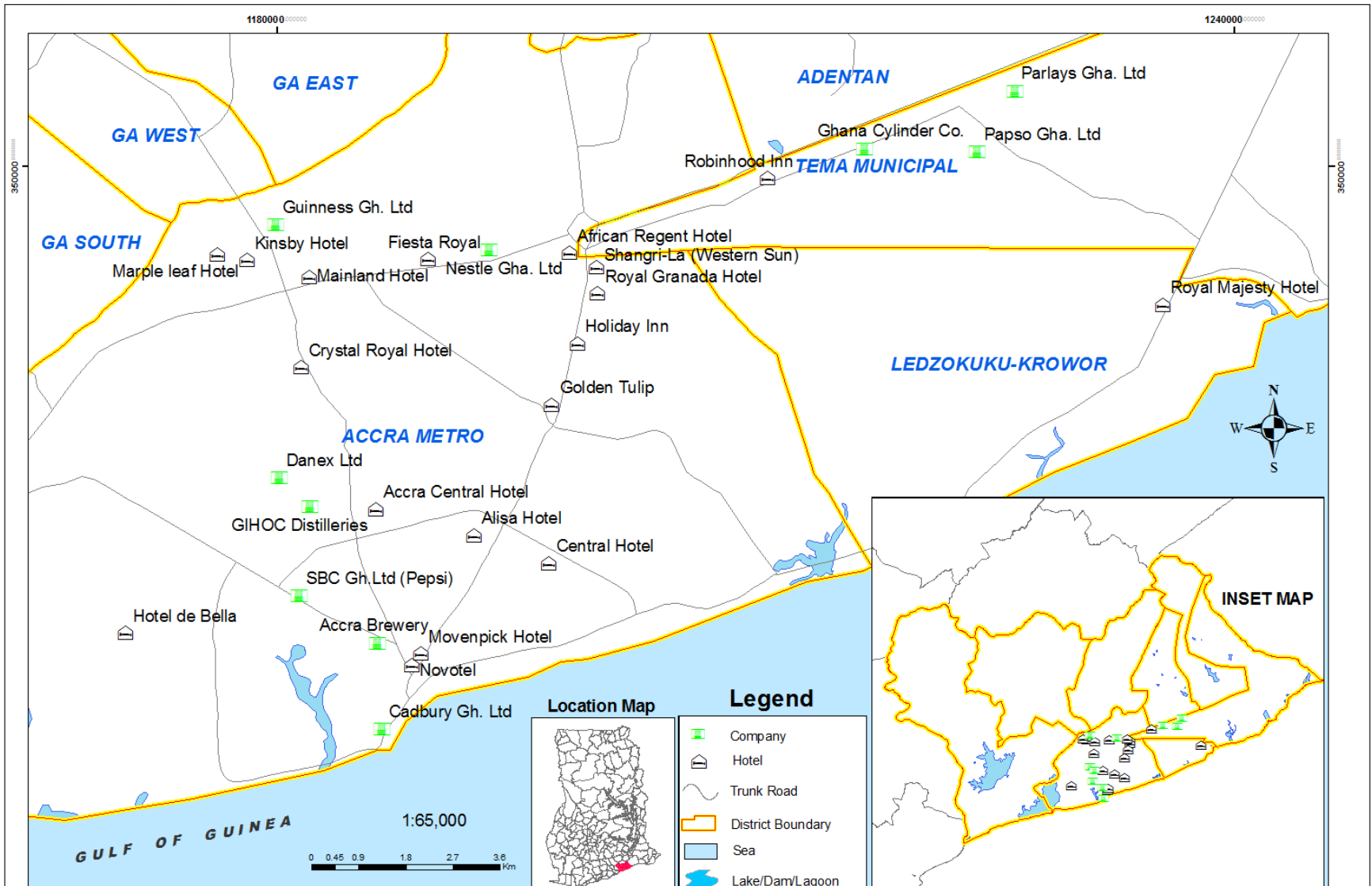


# Assumption

**Surface or underground storage systems:**  
**Hotels, Industries**



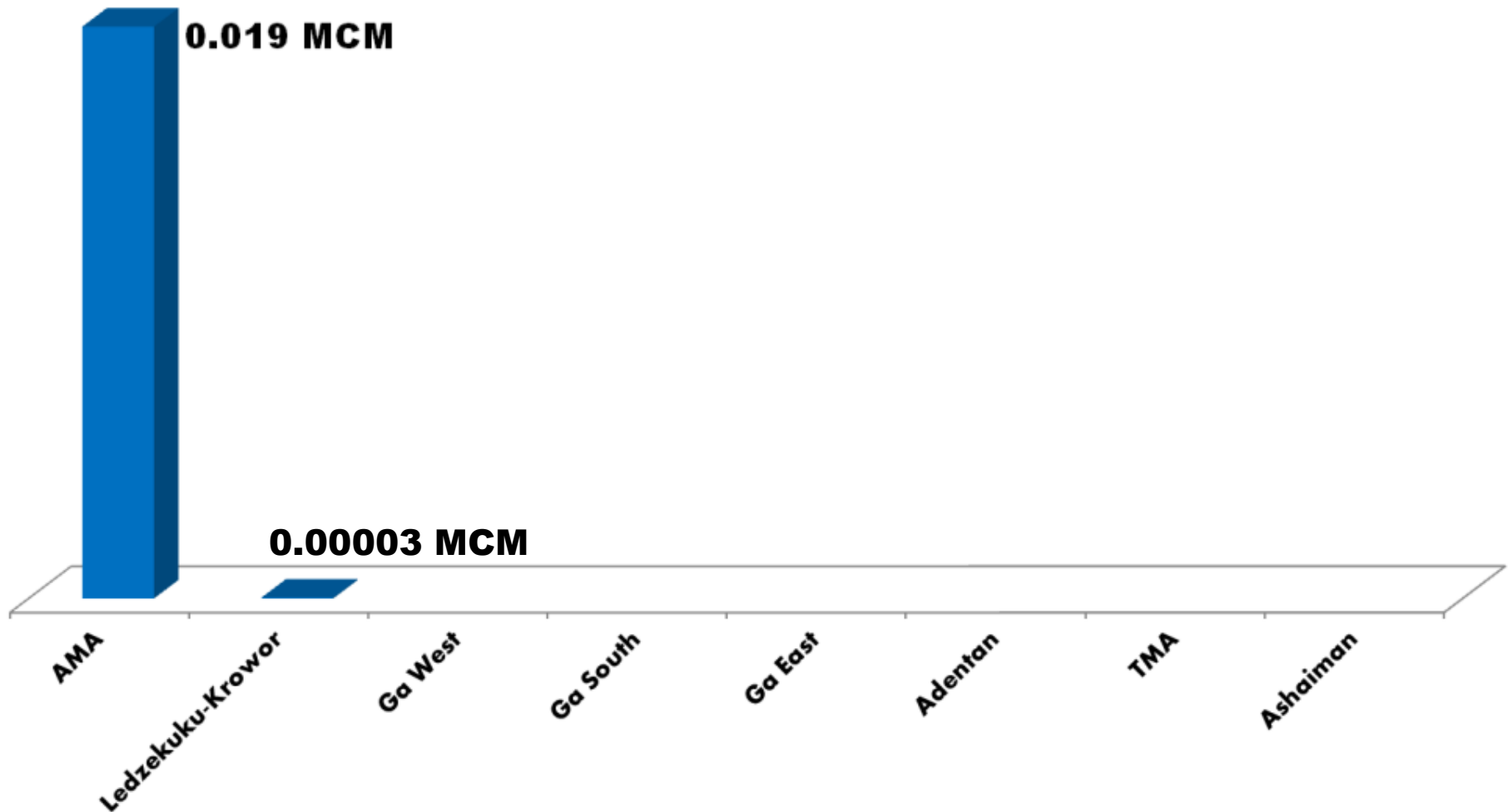
# Output - Surface or underground storage



**Surface/underground storage in hospitalities and industrial complexes**



# Output - Surface or underground storage



Surface/underground storage in hospitalities and industrial complexes

# Assumption

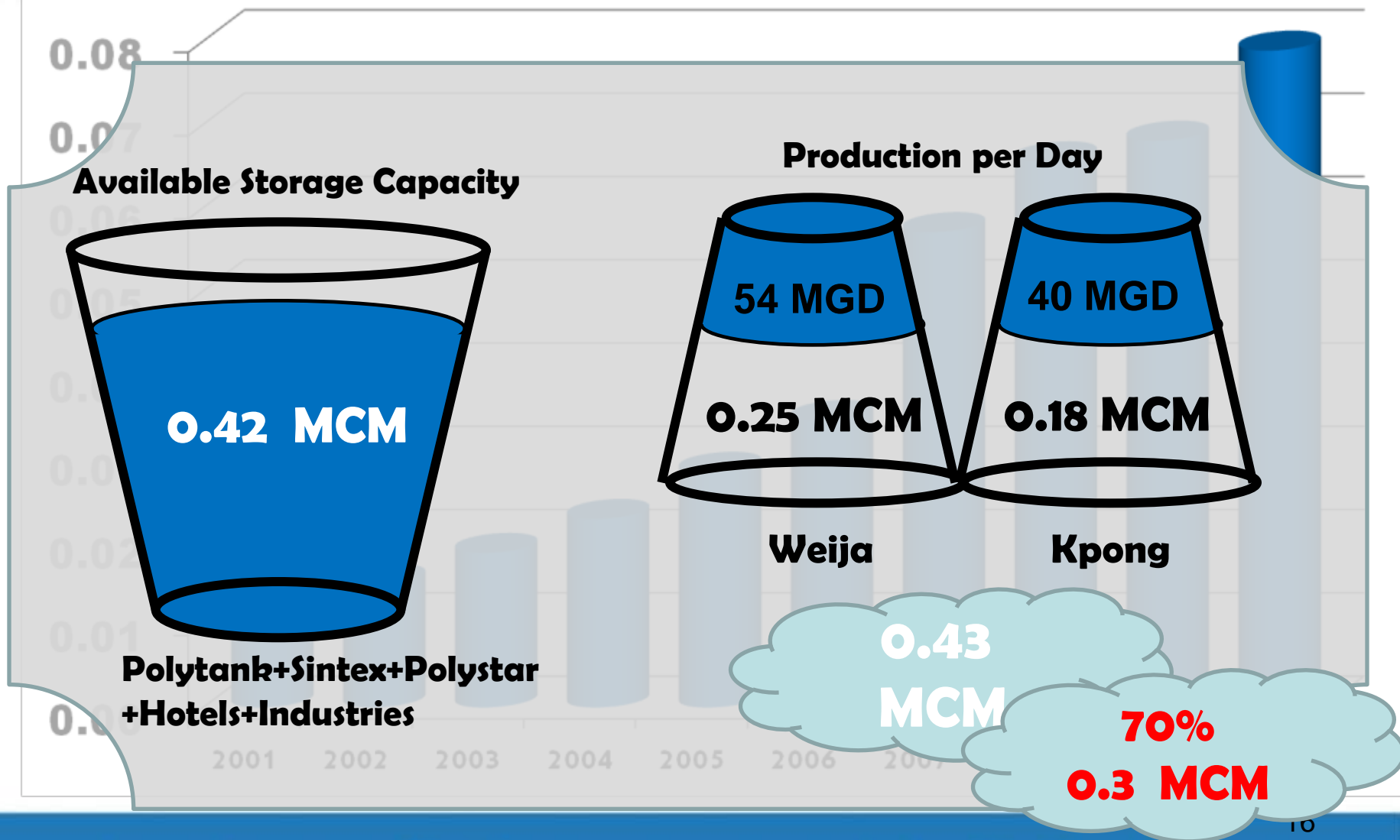
**Medium sized plastic containers; hh storage;  
three days.**



ources manager



# Output – All storage



# Findings & Implications

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- 1. The city has enough storage capacity for a day's production of GUWCL.**
- 2. The storage explains how the GAMA Supply-Demand GAP is temporarily bridged.**
- 3. Biased to the high income group who are therefore less vulnerable to the water shortage situation.**

# Findings & Implications

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- 4. Installing more buffer storage in low income areas will reduce vulnerability of the poor.**
- 5. Further investigation on urban buffer storage capacities in cities to respond to CC induced temporary water scarcity.***



