



# **H2020**

Urban Wastewater Project  
Preparation and Implementation

**Exercise Project  
Preparation**

# Subjects

- **Logical Framework Analysis**
  - Introduction
  - **Exercise Project Preparation:  
Case Lembang**



# Exercise Lembang

## Example: Lembang Case (list the problems)

<b>Population</b>	<b>128,175</b>
<b>Water Supply Connections</b>	<b>1,823</b>
<b>Service Coverage</b>	<b>10%</b>
<b>Installed Capacity</b>	<b>32 l/s</b>
<b>Idle Capacity</b>	<b>20 l/s</b>
<b>Unaccounted-for-water</b>	<b>29%</b>

### Possible problems:

- low service coverage
- idle capacity
- unaccounted-for-water
- poor quality water
- idea that water should be free



# Lembang Case Study

- The city of Lembang has had a water supply company for about ten years now. After an initial few good years during which the number of connections increased, the growth in the connections has come to standstill and the system serves only 10% of the population.
- Lembang has a large population of urban poor living in settlements within the supply area of the water company. Among this community very few have taken a connection.
- The system was designed to serve a much larger population, and the capacity of the system is now underutilized. Company income is lower than expected. Unaccounted-for-water has been on the increase lately and now stands at 29%, and drinking water only just meets the standards for microbiological quality.
- The water company wants to address the situation and has decided to develop a series of projects to reverse the undesirable situation that now prevails.

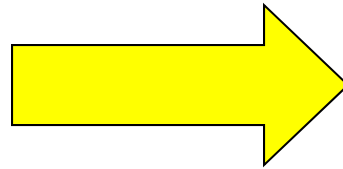


# Analysis

# The Analysis Phase of OOP

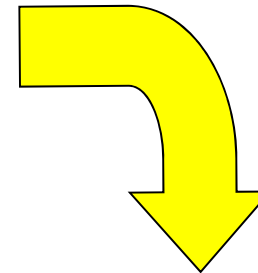
## Stakeholder Analysis

Determining the stakeholder interests



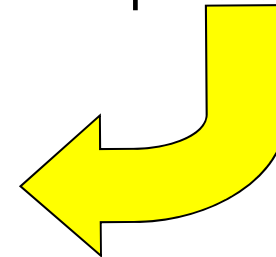
## Problem Analysis

What is the problem?



## Objectives Analysis

What objectives need to be achieved to 'solve' the problem?



## Options Analysis

Which option is most suitable to achieve the objective

# Stakeholder Analysis

Stakeholder	Interest	Perceived problem
Water company	Increase water consumption	Idle system capacity
Population	Affordable and reliable water supply	Expensive and poor quality water

The main problem according to the utility manager, is that the company has significant *idle capacity in its water system*, whilst only *10% of the population is connected* to the network.





# Problems identified: Staff and Customers

Connection fees are unaffordable

Idle capacity does not generate income

Unskilled staff

Consumers are unable to connect

Low-income level consumers

Consumers believe water should be free

Consumers are unwilling to connect

Low service coverage

Poor O&M practices

Idle water system capacity

Consumers believe water is of bad quality

Lack of training opportunities

Low tariffs

Water company offers only house connection

Low billing and collection rates

Insufficient funds for O&M

Low level of water company income

Connection only after full payment of connection fee

UFW is too high

