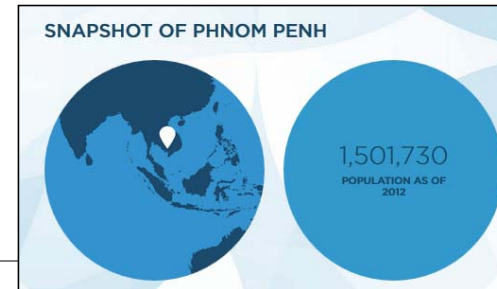


Phnom Penh Resilience City

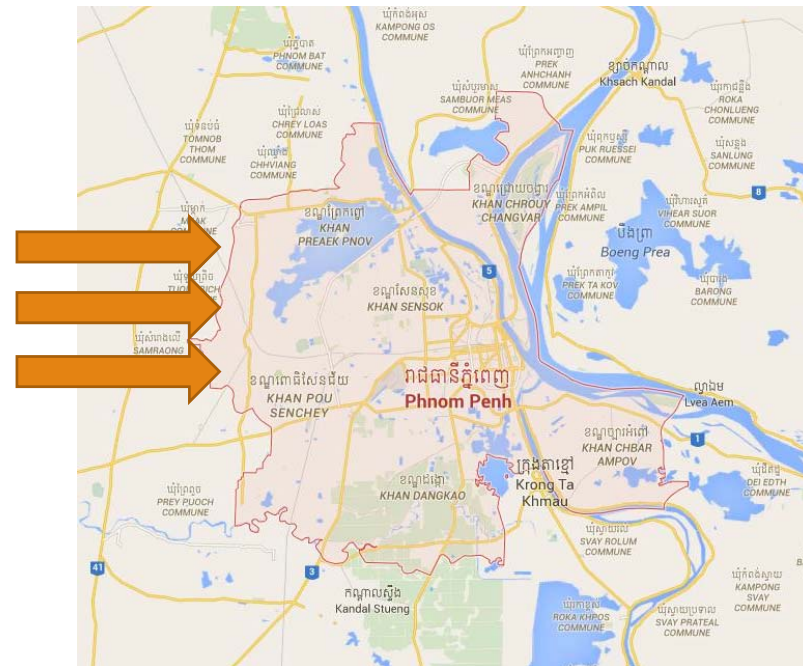
High Level Seminar, Johor Bahru, Malaysia, 10 02 2015

City Location



Geo Environmental Location:

- Located in the junction of 3 main rivers: Mekong, Basac and Tonlesap, risks of River flooding .
- At the flat pan areas which are usually have a dredging while raining season.
- located at downstream (low land level), always received Rain water from the upstream level, kampong speu Province, cause flooding.
- Surrounding by dike to protect flooding issue.

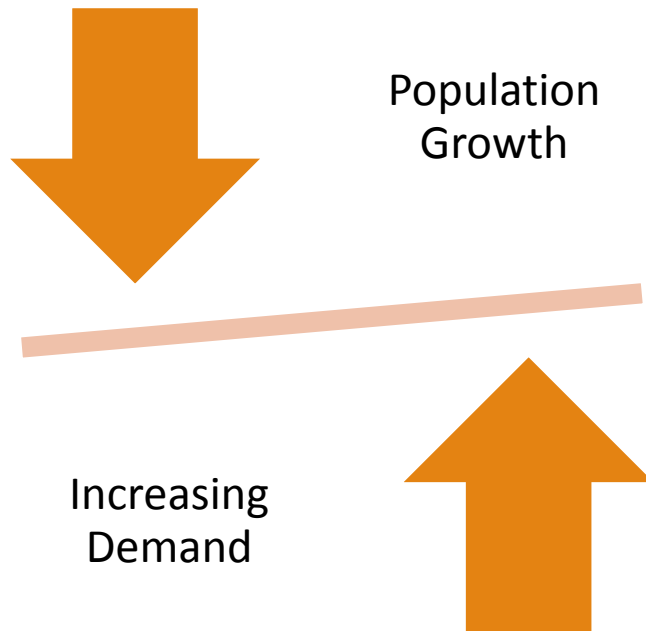


People and Administrative

- ❖ City Extended from 375 Km² in 2002 to 678 km² by now.
- ❖ Dividing into 12 districts and 96 Communes
- ❖ Having Population aprox. of 2.5 Millions which is including migration and workers.
- ❖ Led by City Governor and City Council
- ❖ District Governor and district council
- ❖ Commune leader and commune council



(1) What has been Changed



- ❖ Extending living areas
- ❖ Land use problems: narrowing natural water catchments/ lagoon treatment facility.
- ❖ Increasing Houses
- ❖ Increasing food/ Energy/ drinking water
- ❖ Traffic jam
- ❖ Problems on wastewater/ solid waste
- ❖ Need some more leisure place and services.

How to solve?

- Improving the Solid waste Management:
 - Collection and Cleansing roads
 - Composting and biogas
 - Food waste for Pig Farm
 - Plastic bag reduction
 - Recycling and reusing
- Fostering the wastewater treatment at sources and mobilization.
- Improving garden / exercising space

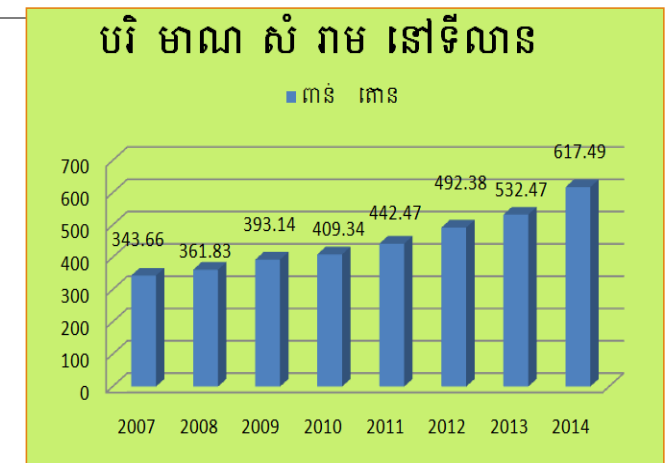
Solid Waste Management

The number of Generation/disposal waste were increased accordingly.

from 343000ton in 2007 to 617000ton in 2014

- The 3Rs policy has been introduced
- Composting works and Biogas work has been applied for Organic wastes.
- Plastic bag reduction measure has been made and implemented.

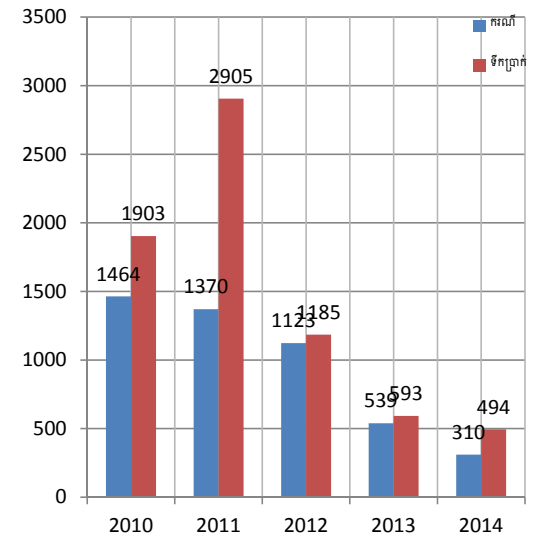
NUMBER OF WASTE AT LANDFILL



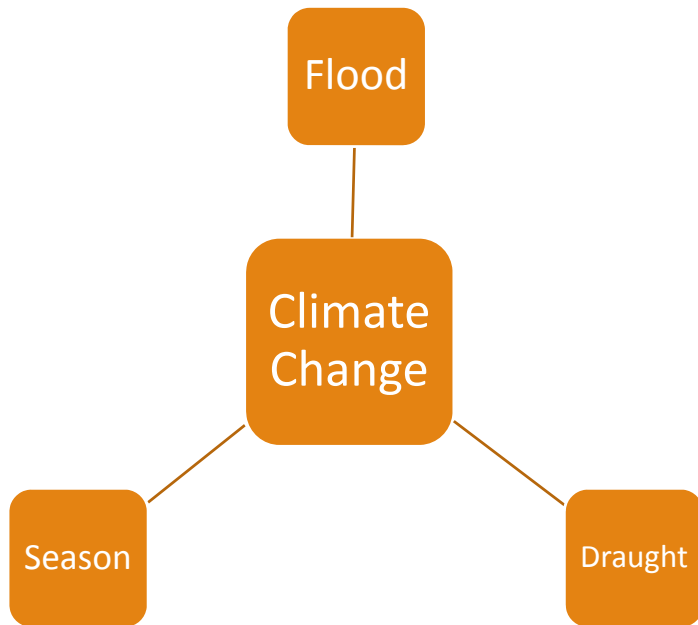
Awareness and Penalty



Penalty program has been took in place for littering waste



(2) What has been Changed?



- FLOODING
 - onside source
 - Outside sources
- DRAUGHT
- RESOURCES SCARE

How to solve?

- Awareness Promotion on changing their crop species to the short term production.
- Improving the canals and sewers system for flooding protection
- Aware the outskirts city living for improving their tree-fruiting at their property land to keep shadow and temperature.
- In addition enhancing them to keep the water during rainy season for using in dry season by:
 - Ponds improvement Program
 - Rain water Tank Program



Some of sewers system were clogged by sand and rubbish.

Outside sources of flooding came from the upstream land (Hill, mountains) in Kampong Speu Province.





Cause of flooding issue all the small pipes system has been changed.

Onside flooding was came from Increasing # of used water and rain water at the low land areas(city).





Ponds and Tanks has been introduce to use.

They have a lot of water in rainy Season But in the dry season they scare on water.



Quote

Phnom Penh Resilience/ 100 world

Once the epicenter of a violent civil war, Phnom Penh has emerged as a young and vibrant city. But economic and population growth place increasing demands on an energy system that is not keeping pace. Rolling blackouts and soaring tariffs put economic activity and public health at risk. Public investments in coal-based power plants are increasing energy supply, but along with increased private car ownership the cause air pollution that puts enormous pressure on the city's environment.

Throughout its history, the city has grappled with seasonal flooding. In addition to revising the drainage infrastructure plan with support from international partners, the city is working to improve solid waste collection to keep sewage systems free from blockages that increase flood risk. Foreign investment and assistance have contributed to municipal sewage and connectivity infrastructure upgrades.

Resilience Challenges

Flooding (Coastal and Rainfall)

Resource Scarcity

Social Inequity

Thank you for your attention

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