

**SMARTCITY**  
EXPO WORLD CONGRESS  
14-16 NOVEMBER 2017  
BARCELONA

  
**Fira Barcelona**

[www.smartcityexpo.com](http://www.smartcityexpo.com)

#SCEWC17    



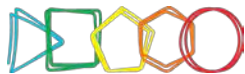
EMPOWER **CITIES.** EMPOWER **PEOPLE.**

**Firmino Filho**  
Mayor - Teresina - Brazil



Teresina

‘Daughter of the Equator Sun’



# VIDEO - TERESINA, A CITY FOR PEOPLE

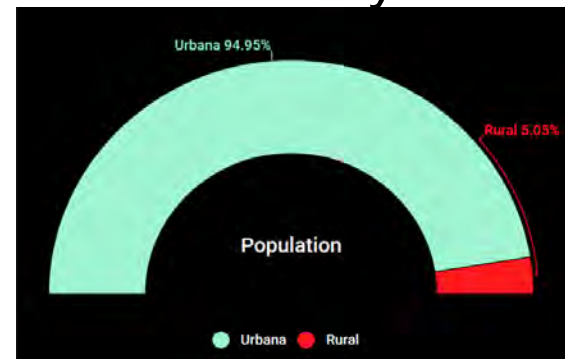
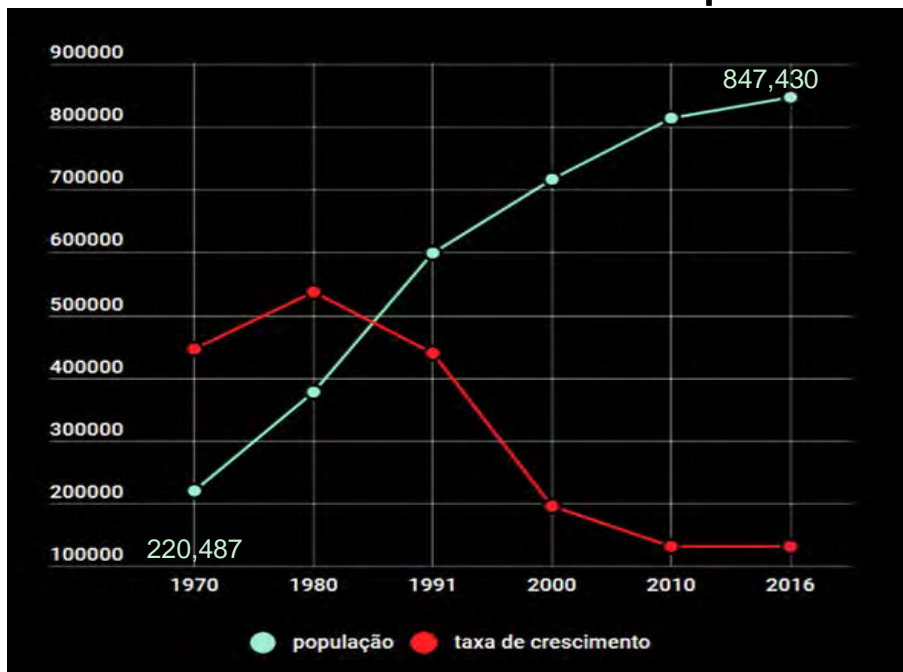


## HOW TO MAKE TERESINA RESILIENT TO CLIMATE CHANGING ?

### MAIN ISSUES

- Flood
- High Temperatures  
and Dry weather

# 1. Present Scenario: Population and Economy

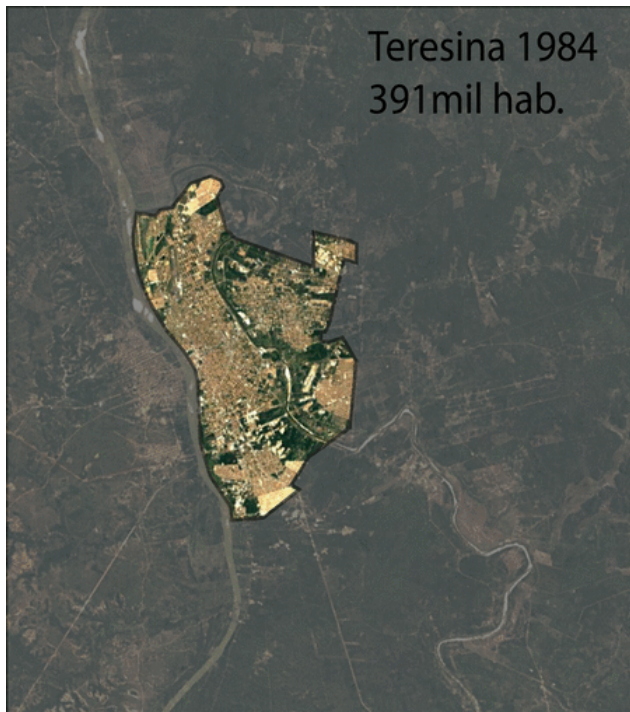


GDP: USD 5,6 billion

GDP per capita: USD 6,729

HDI: 0.751

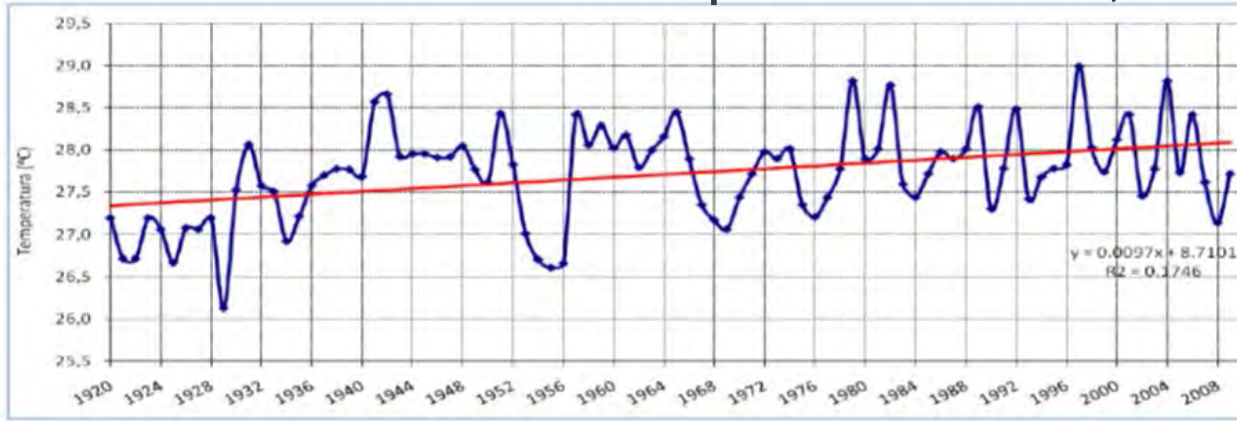
# 1. Present Scenario: Urban Sprawl



Teresina 1984  
391mil hab.

847,430

# 1. Present Scenario: Temperature increases, humidity reduces



Temperature has raised over the last century

Med: 27,1°C

Max: 41,1°C

Absolute Values. Source: [Instituto Nacional de Meteorología](http://www.inm.es) (1961-present).





## 2. Tackling flood and landslide: North Lagoon Complex

Drainage

Sewage

Housing

Environmental protection

Parks and Recreation Area

IMPACTED POPULATION 92,000

INVESTMENT

USD 216,000,000

AREA 1,300 HA



**BEFORE**





## 2. Tackling flood and landslide: North Lagoons

**AFTER**



Melhores Práticas em  
Gestão Local CAIXA

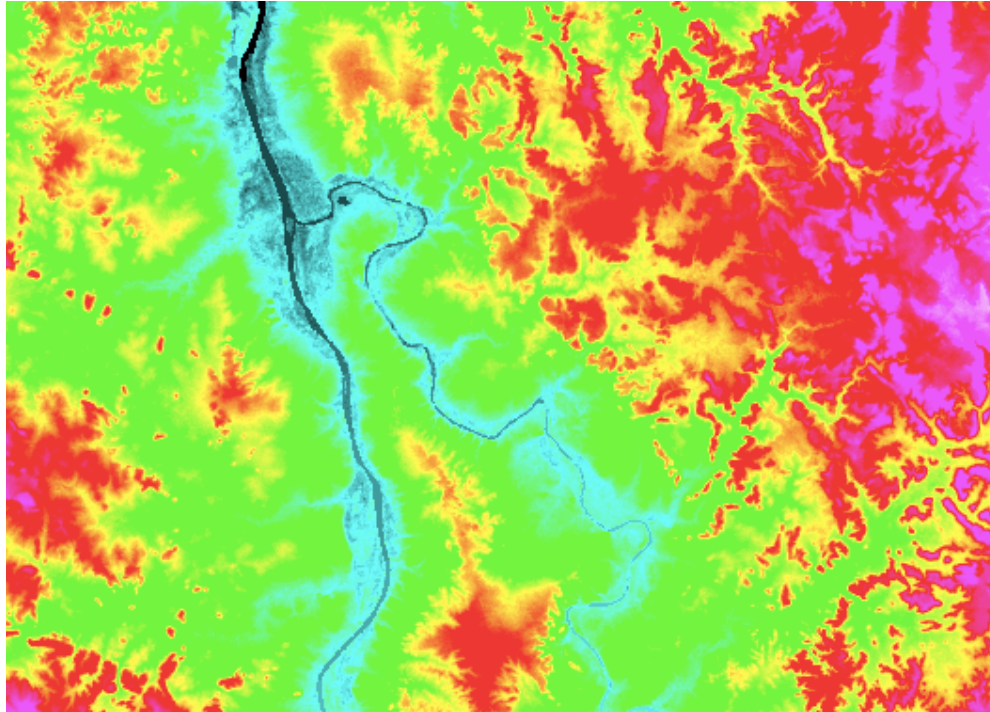
Submitted, by the Federal  
Government, to Dubai  
International Award for Best  
Practices - UN Habitat

## 2. Tackling flood and landslide : North Lagoons

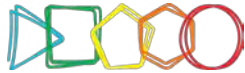
**FUTURE**



## 2. Tackling flood and landslide : Drainage Master Plan







### 3. REDUCING HEAT ISLAND EFFECT

Bus Rapid Transit (BRT)

Transit Oriented Development (TOD)

Compact City

8 Terminals

62 Qualified Bus Stations

84 KM of Exclusive Corridors and

Bus Lanes





### 3. REDUCING HEAT ISLAND EFFECT

#### Bus Rapid Transit (BRT)

System to be in full operation in 2018



### 3. REDUCING HEAT ISLAND EFFECT

#### New Green Areas



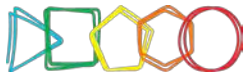
#### Citizenship Park PARQUE DA CIDADANIA



INVESTMENT USD 4,127,650

AREA 8,2 HA





### 3. REDUCING HEAT ISLAND EFFECT

#### New Green Areas



### Community Garden HORTAS DO DIRCEU



Congreso Internacional de  
Urbanismo y Movilidad  
Buenos Aires

Biggest Urban Community Garden in  
Latin America

AREA 45 HA, EXTENSION: 4,5 km  
INVESTMENT USD 2,580,851





### 3. REDUCING HEAT ISLAND EFFECT

New Green Areas

Fossil Forest Park

Parque Floresta Fóssil

Paleontological site within the central urban area

Fossils with approx  
280 million years

INVESTMENT **USD 4,333,900**

AREA **33,15 HA**





### 3. REDUCING HEAT ISLAND EFFECT

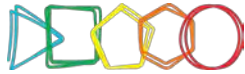
New Downtown - NOVO CENTRO



Afforestation Plan - PLANO DE  
ARBORIZAÇÃO







## 5. Future: Challenges

To deal with **fire** along dry periods

To reduce **greenhouse gases**

Implementation of the **Drainage**  
Master Plan

To elaborate a comprehensive  
Urban **Resilience** Master Plan





**THANK YOU!**  
**Obrigado!**

# SMARTCITY

EXPO WORLD CONGRESS

