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CLIMATE  
RESILIENT  
AND INCLUSIVE  
CITIES



# PANGKALPINANG CITY



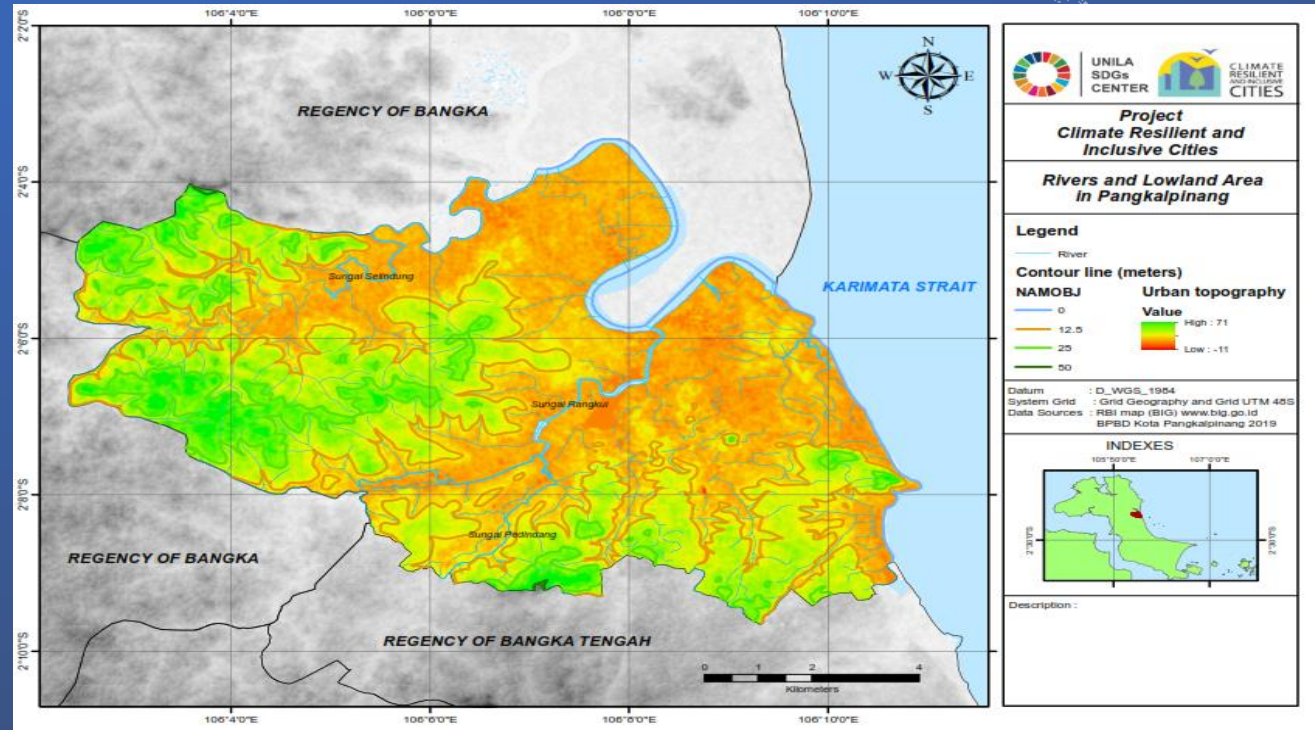
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- The capital and the largest city of Bangka Belitung Islands province of Indonesia.
- Some significant environmental issues: floods and inundation, fires, water pollution and impacts of mining operation from neighboring cities (Bangka Regency and Central Bangka Regency) as well as the existence of illegal tin mining operations in the river.



# RESEARCH METHODOLOGY

## Quantitative and Qualitative Approaches



No	Methods	Documents and Sample
1	Desk research	Related policies documents (RJPMN, RJPMD, KLHS, RTRW, etc.)
2	Online questionnaires	28 expert city stakeholders
3	Online semi-structured interviews	12 expert informants from various background
4	Hybrid Focus Group Discussion (FGD)	12 representatives from 12 different local government offices
5	Field observation	Public facilities, public spaces, housing/settlements and rivers

# CLIMATE MITIGATION AND ADAPTATION

1) Minimum government policy related to climate change adaptation and lack of integrated policies on climate change issues.

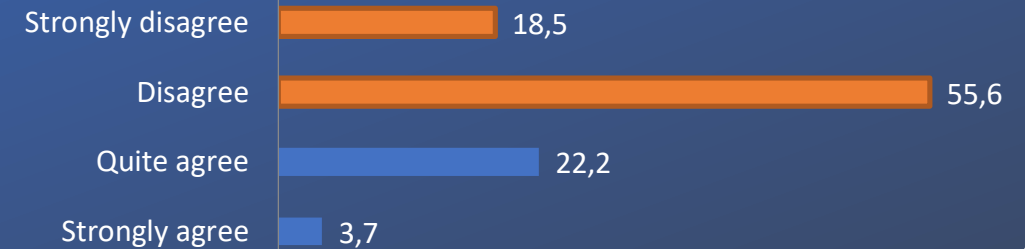
2) Lack of government budget on climate change mitigation and adaptation.

3) Lack of coordination among stakeholders in formulating policies related to climate resilience.

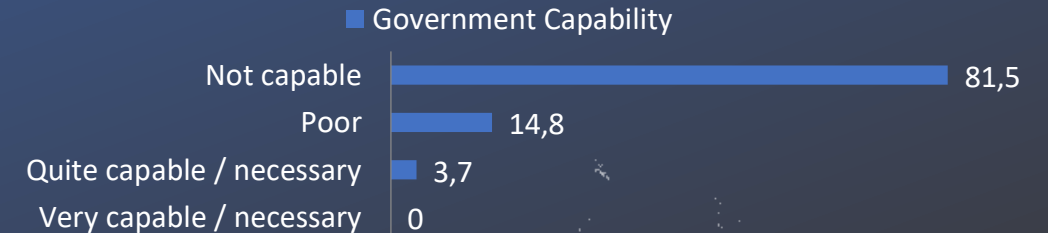
4) Weak of public awareness on climate change issues due to minimum socialisation and campaign.

5) The absence of disaster vulnerability map and disaster management strategies.

Climate change issue has been integrated into local policies adopted by the City Government of Pangkalpinang

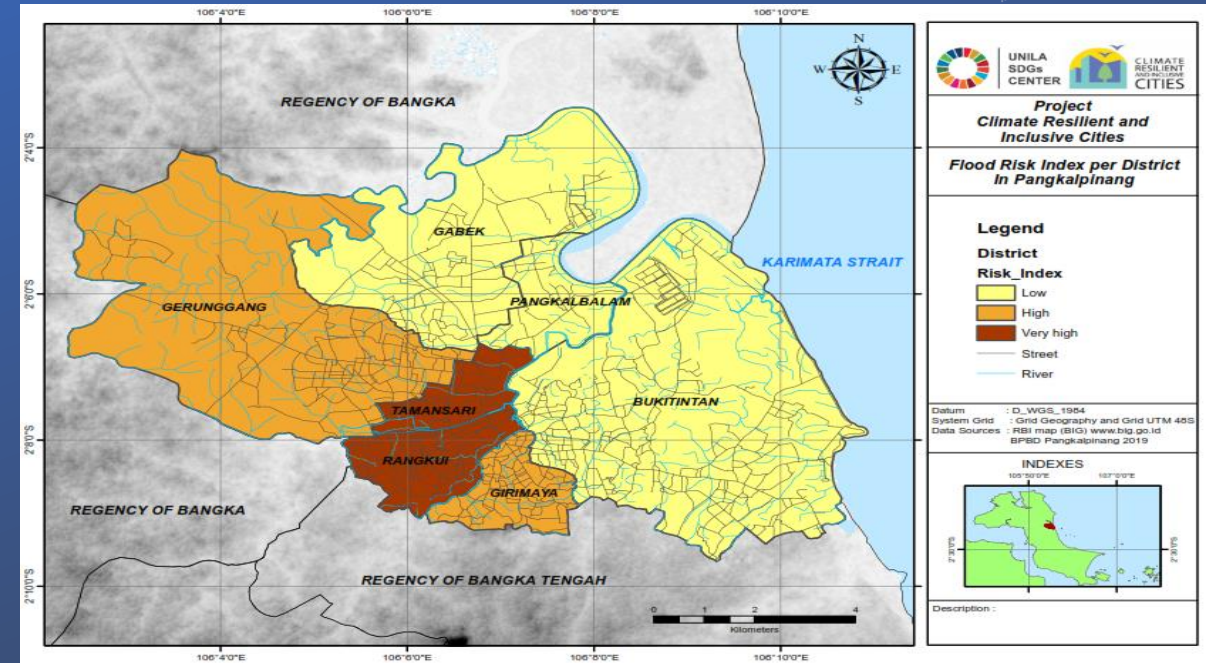
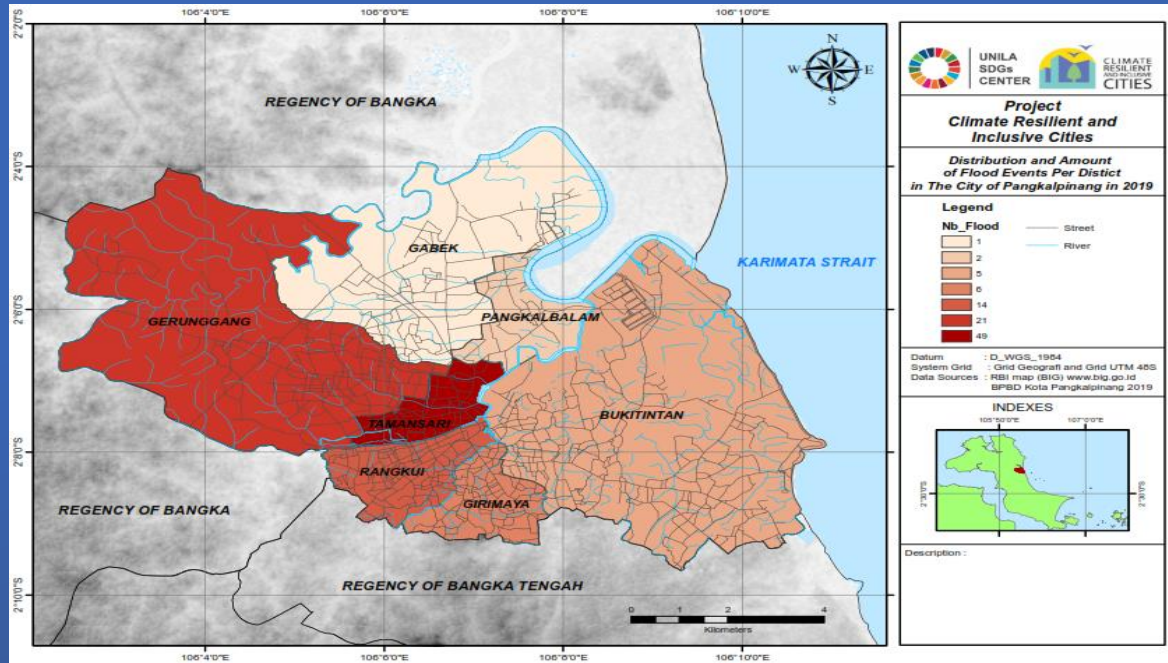


The City Government in making climate change adaptation and disaster mitigation policies in the management of urban spatial planning and the construction of public facilities?





# DISASTER PREPAREDNESS, PREVENTION AND RESILIENCE



Strong legal backing: Article 58 of Regional Regulation No. 10 of 2019 concerning the Implementation of Disaster Management: rapid assessment of location, damage and resources, determining the status of emergency, rescue and evacuation of affected communities, fulfillment of basic needs, protection of vulnerable groups, immediate recovery of vital means, and implementation of the final phase of the emergency response.



# RIVER POLLUTION

The existence of conventional illegal tin mining affects water pollution and the damaged of mangrove areas.  
A huge sedimentation up to thousands of tons and high chloride level due to the influx of sea water into the inland areas during high tides.



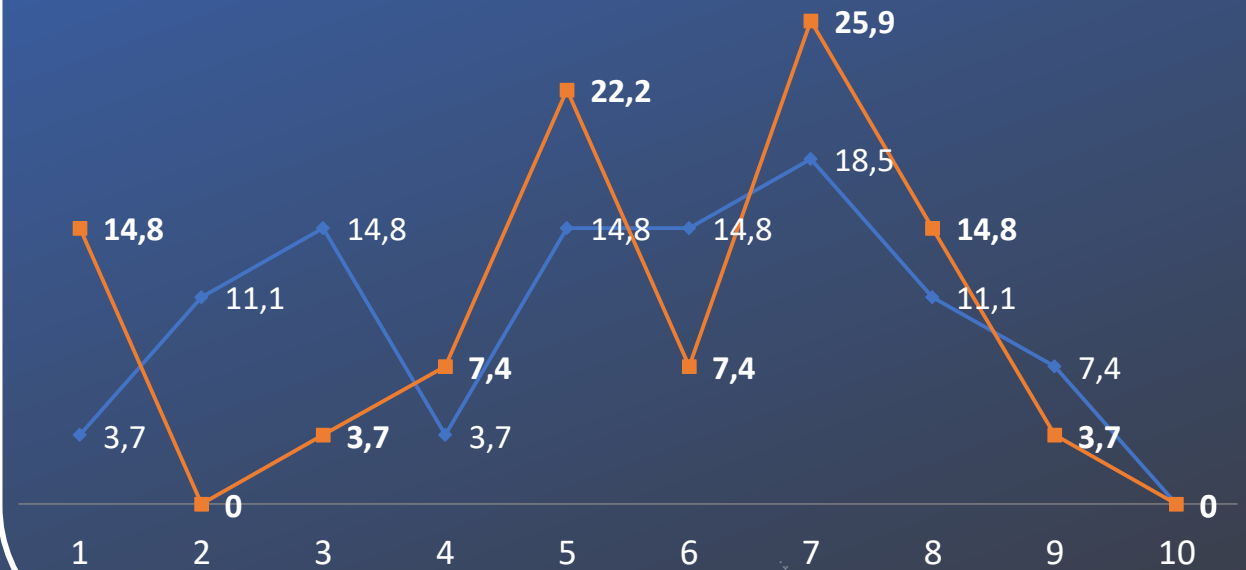
# WASTE MANAGEMENT



- The existence of waste temporary collection and integrated waste processing sites.
- However, landfill spaces becomes limited (as predicted for only for another two to three years from now).

— Waste collection and recycling system in the city of Pangkal Pinang

— Data or information related to waste conditions





# HOUSING/SETTLEMENTS

Majority housing/settlements is legal. But, many of potential water catchment areas in the city have been converted into housing areas. The slums are colliding with each other and they are concentrated in one area.





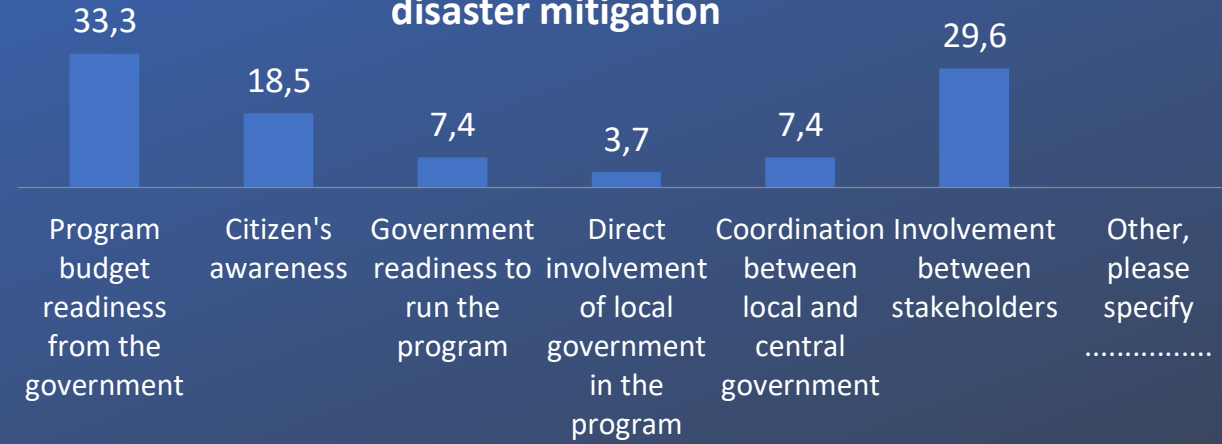
# PARTICIPATION OF CIVIL SOCIETY AND GOVERNANCE

- Low level participation and engagement of civil society and grassroots organisations on climate resilience and inclusive city.
- 'Grey participation' of civil society in the decision-making process.
- Although respondents stated the importance of collaboration with external parties, 78.1% still rated the interaction poor.
- Lack of good governance practice in illegal mining eradication.

**The level of collaboration between the city government and other stakeholders in climate change adaptation and disaster mitigation in Pangkal Pinang city**

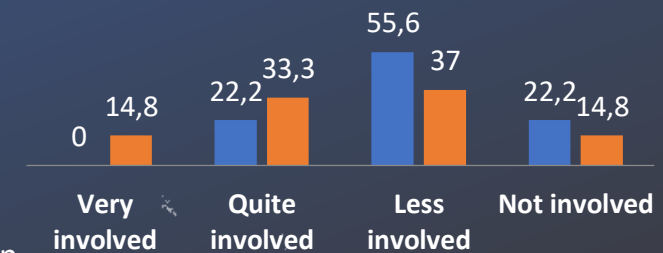


**Main challenges on climate change adaptation and disaster mitigation**



**Stakeholder involvement in disaster management programs**

**the involvement and role of the private sector or companies and business associations in climate change adaptation and disaster mitigation**



# CHALLENGES: LAND USE AND SPATIAL PLANNING

- Land use is concentrated in the city center.
- City infrastructure is inadequate causing hindrance to the optimisation of the city development.
- Problems on clean water and electricity supplies. This situation hinders both new investment and expansion of existing investments.
- The issue of traditional market arrangement: the increase of street vendors, lack of development of new traditional markets. All these affect in narrowing roads, safety and hygiene problems, and inconvenient shopping.

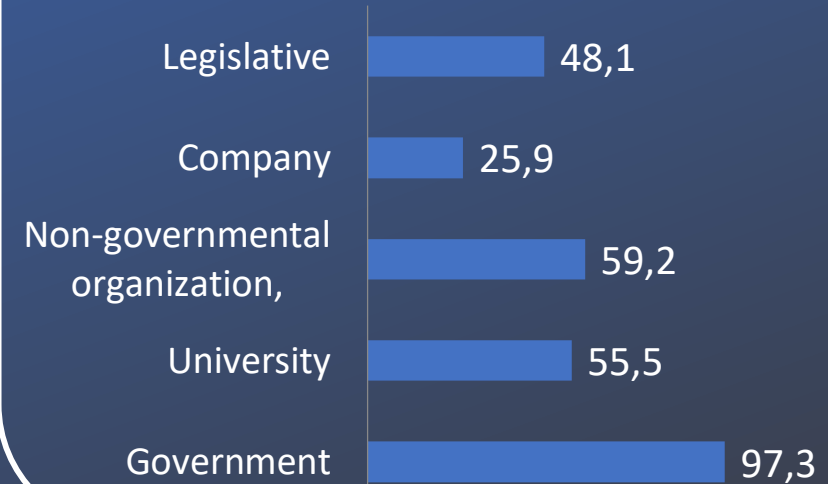




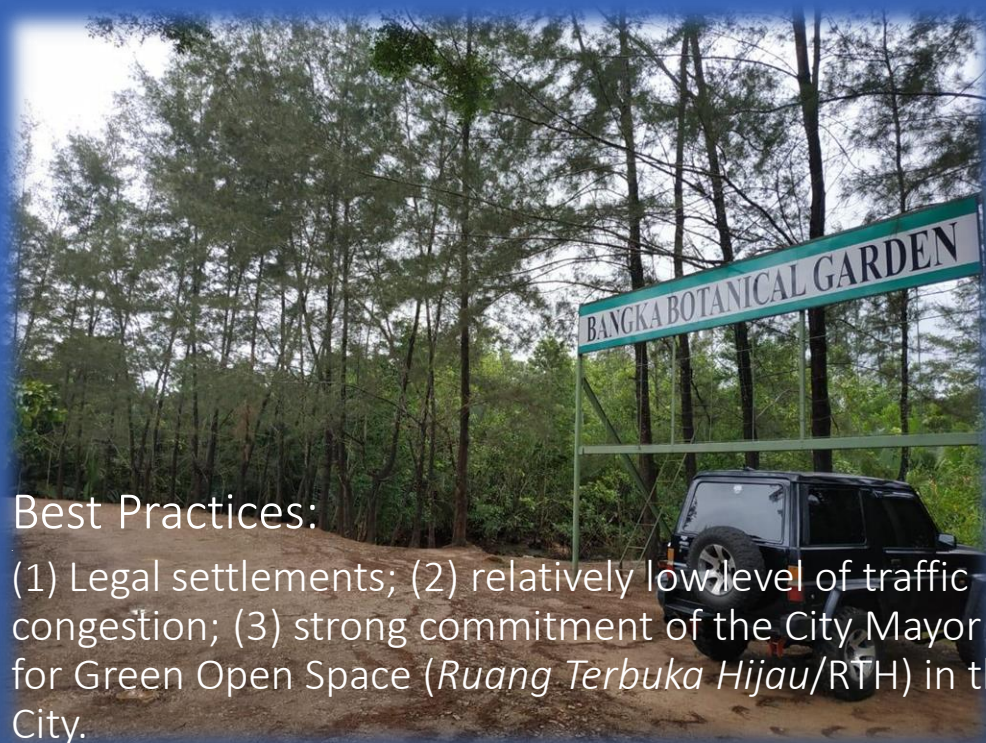
# ARTICULATION WITH THE NATIONAL POLICIES

- The Minister of Public Works Regulation No. 17 of 2009 concerning guidelines for the drafting of City Spatial Planning and the importance concept of Urban Spatial Plan (RTRW).
- Strategic Environmental Assessment/*Kajian Lingkungan Hidup Strategis* (KLHS) in Spatial Planning as a form of strategic action in guiding, directing, and guaranteeing policies and practices on spatial planning.

## Key stakeholders in climate change adaptation and disaster mitigation in the City of Pangkalpinang (Stakeholders' Perception)



# BEST PRACTICES AND CHALLENGES OF THE MUNICIPALITY



## Best Practices:

(1) Legal settlements; (2) relatively low level of traffic congestion; (3) strong commitment of the City Mayor for Green Open Space (*Ruang Terbuka Hijau/RTH*) in the City.

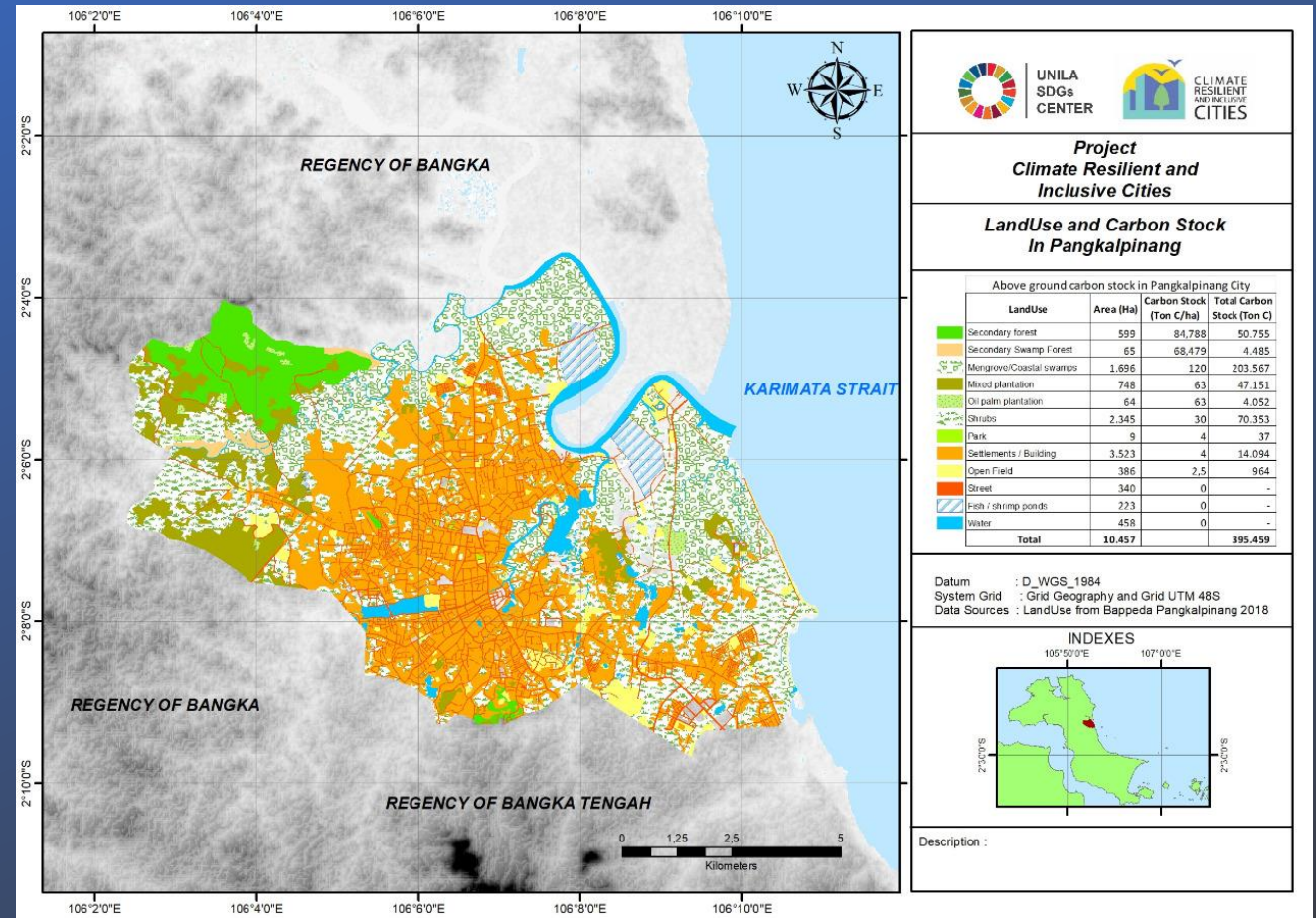
## Challenges:

- The advancement of technology on water supply and waste management
- Good governance practice in illegal mining eradication.
- Financing climate resilience.
- The development of City's infrastructure.
- Food supply and limited land for farming and agriculture.
- GHS emission policies and advance equipment for vehicle emission test including GHG emission map.
- Waste management and Limited landfills.
- Low level of civil society participation and engagement.
- Policies and management on disaster mitigation including flood risk management, disaster vulnerability map and disaster early warning system.



# GHG MAPPING AND ANALYSIS

- The absence of GHG emission map. Nonetheless, to provide an insight to GHG emission of the city, Bangka Belitung Islands Province in 2010 produced emissions per capita of 2.99 tCO<sub>2</sub>e/capita with emission intensity of 136.94 tCO<sub>2</sub>e/Million Rp (CAIT Climate Data Explorer [cait.wri.org](http://cait.wri.org)).
- There is the need to have strict supervision on periodic emission test and on the use of standard fuel.



# RECOMMENDATION

**Policy aspect:** ensuring programs and activities of city development which are in line with sustainable development and climate change adaptation and mitigation through Local Medium-Term Development Plan/RPJMD and Local Action Plan; building integrated policies on social, economic and environmental aspects.

**Technical aspect:** normalising rivers with periodic dredging activities; installing technological-based equipment of breakwaters to temper the abrasion; developing advance drainage and reservoirs for tackling floods; conducting strict supervision and periodic emission test; building an advance of waste management system; creating an advance map of disaster vulnerability and early disaster warning system.

**Behavioural aspect:** building more public participation and engagement on city development including on climate change adaptation and mitigation such as through early education, capacity building and collaborative works.

