ACCCRN
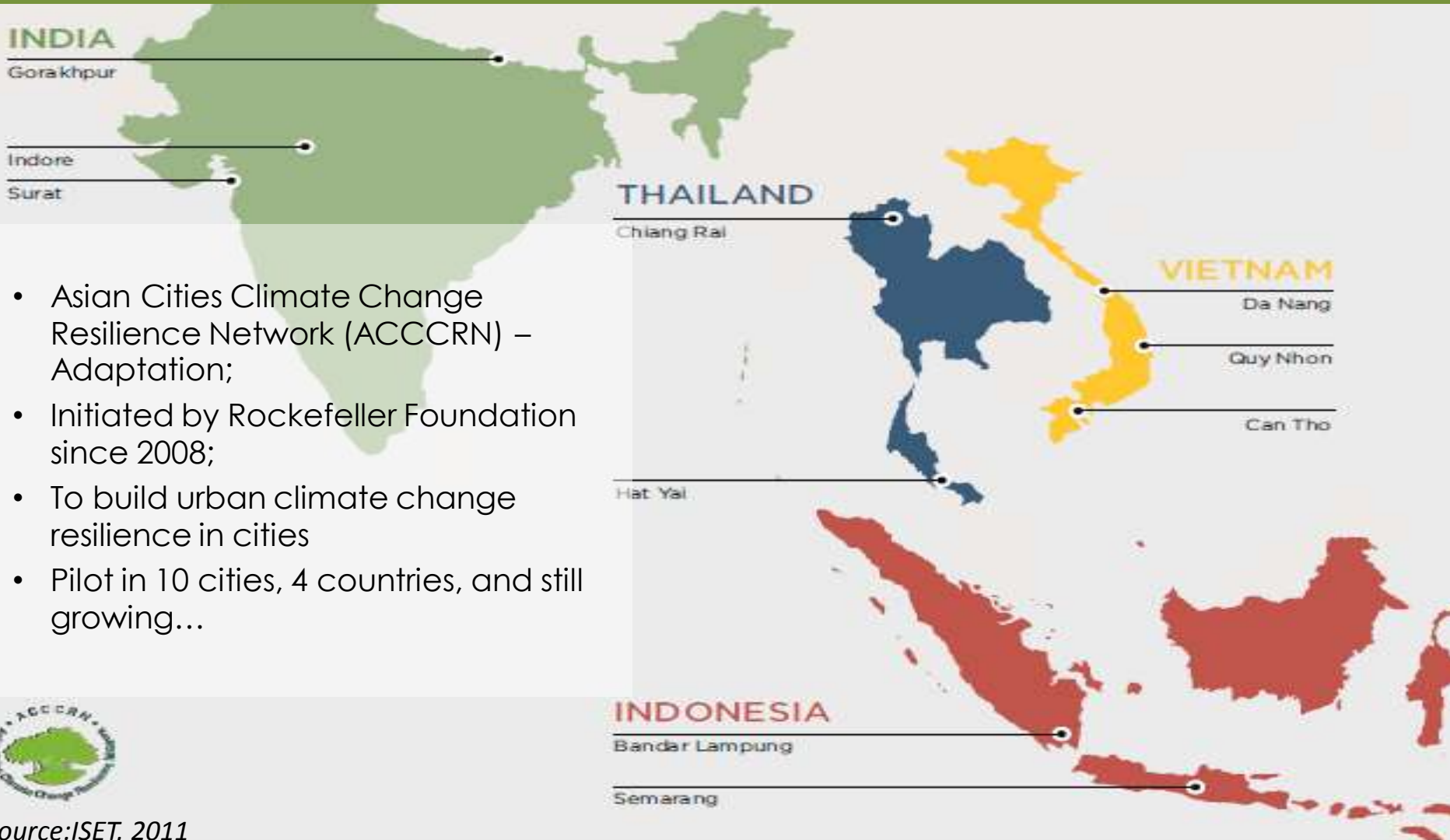## Asian Cities Climate Change Resilience Network

APAN, KL - 2014

Building UCCR in Coastal Areas of Indonesia

By: Nyoman Prayoga

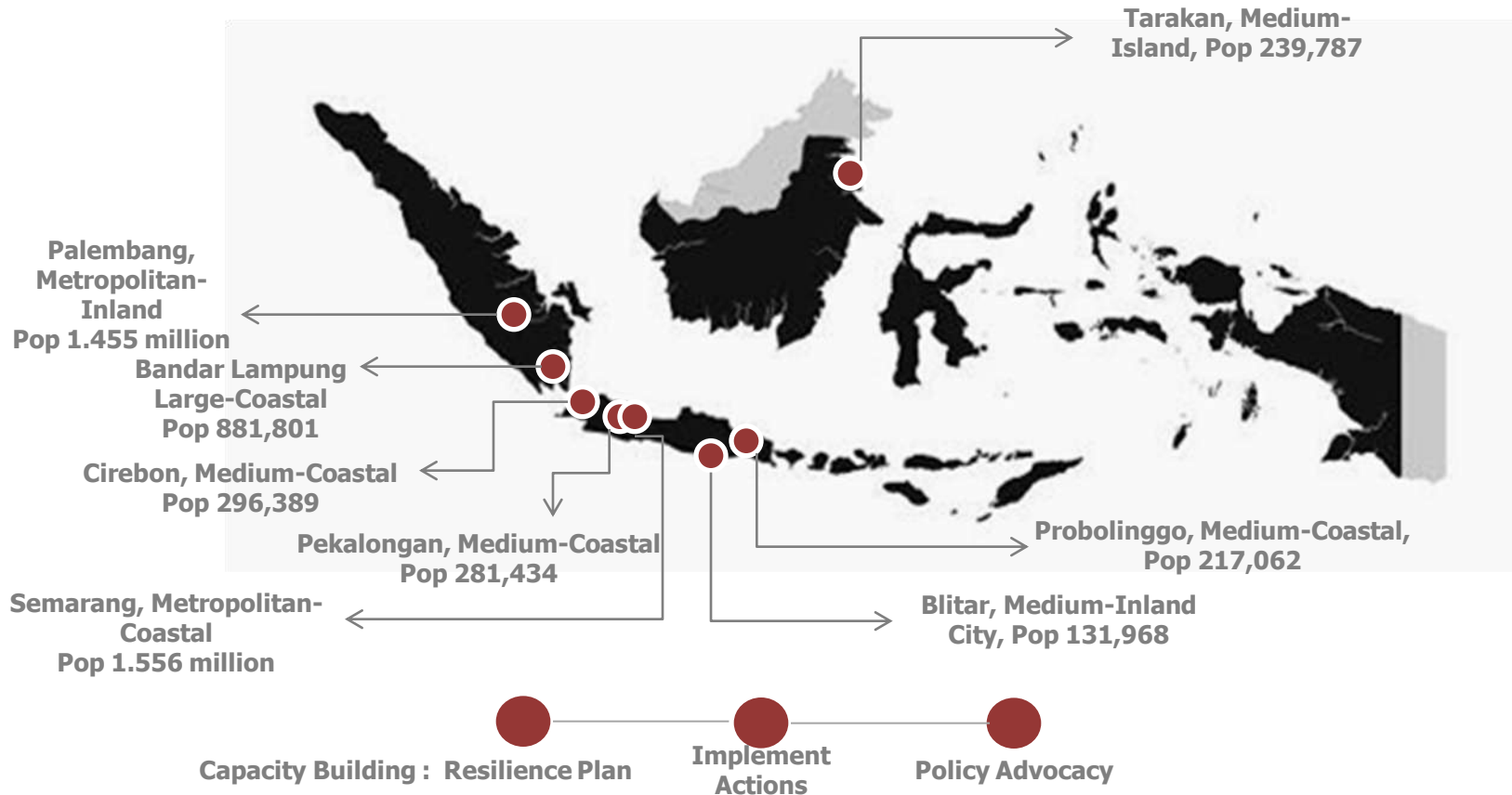THE ROCKEFELLER FOUNDATION

Mercy Corps Indonesia

What is ACCCRN?

- Asian Cities Climate Change Resilience Network (ACCCRN) – Adaptation;
- Initiated by Rockefeller Foundation since 2008;
- To build urban climate change resilience in cities
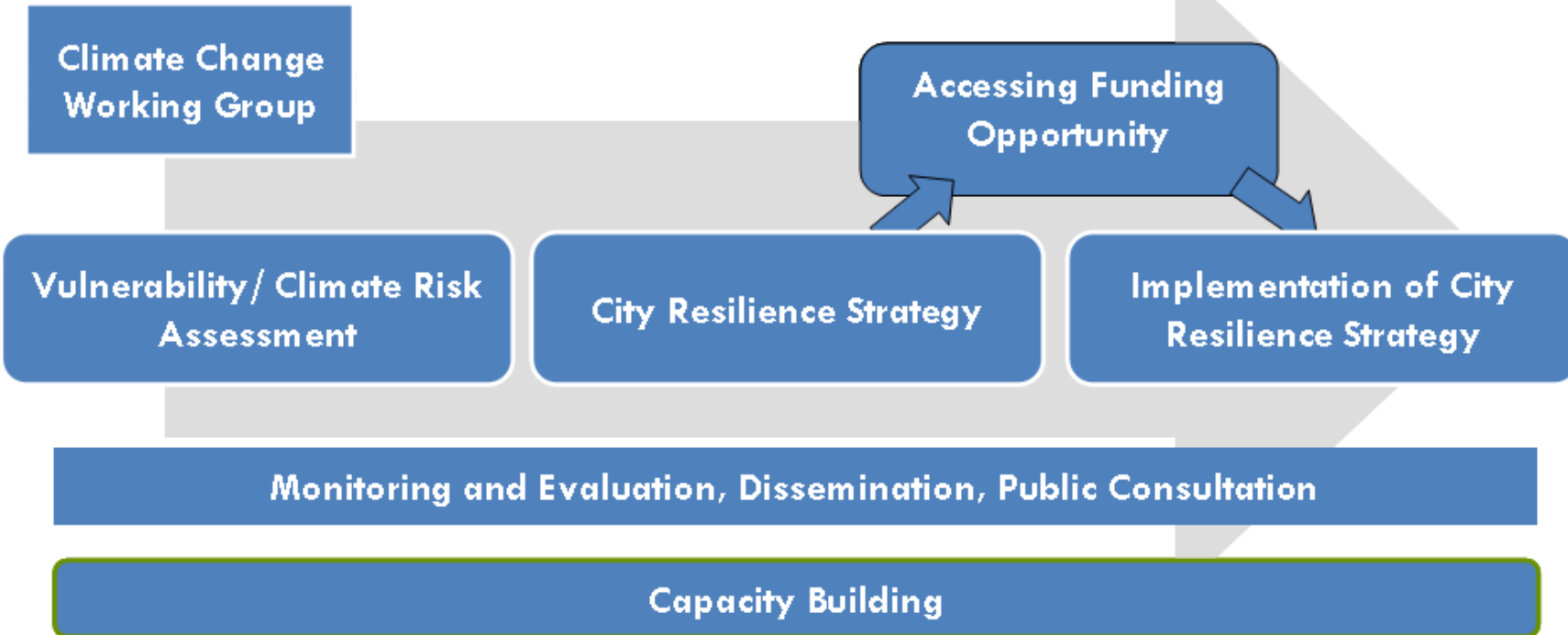- Pilot in 10 cities, 4 countries, and still growing…

INDIA
Gorakhpur
Indore
Surat

THAILAND
Chiang Rai
Hat Yai

VIETNAM
Da Nang
Quy Nhon
Can Tho

INDONESIA
Bandar Lampung
Semarang

Source:ISET, 2011

ACCCRN in Indonesia

Tarakan, Medium-Island, Pop 239,787

Palembang, Metropolitan-Inland Pop 1.455 million

Bandar Lampung Large-Coastal Pop 881,801

Cirebon, Medium-Coastal Pop 296,389

Pekalongan, Medium-Coastal Pop 281,434

Semarang, Metropolitan-Coastal Pop 1.556 million

Probolinggo, Medium-Coastal, Pop 217,062

Blitar, Medium-Inland City, Pop 131,968

Capacity Building : Resilience Plan — Implement Actions — Policy Advocacy

BUILDING UCCR IN CITY

Climate Change Working Group

Accessing Funding Opportunity

Vulnerability/ Climate Risk Assessment

City Resilience Strategy

Implementation of City Resilience Strategy

Monitoring and Evaluation, Dissemination, Public Consultation

Capacity Building

Sea Level Rise (Permanent Water Inundation)
Sea water come up from rivers and canals and low land surfaces,

Ristek, DKP, UNDIP, IPB, 2009

Sea Level Rise 15,5 cm (20 years SLR simulation model)
Sea water come up from rivers and canals and low land surfaces,

Sea Level Rise 46,5 cm (60 years SLR simulation model)
Sea water come up from rivers and canals and low land surfaces,

Ristek, DKP, UNDIP, IPB, 2009

Sea Level Rise 62 cm (80 years SLR simulation model)
Sea water come up from rivers and canals and low land surfaces,

Ristek, DKP, UNDIP, IPB, 2009

Sea Level Rise 77,5 cm (100 years SLR simulation model)
Sea water come up from rivers and canals and low land surfaces,

Ristek, DKP, UNDIP, IPB, 2009

Source: www.tempo.co

Source: www.republika.co.id

1,56 Km
4,49 Km
3,52 Km
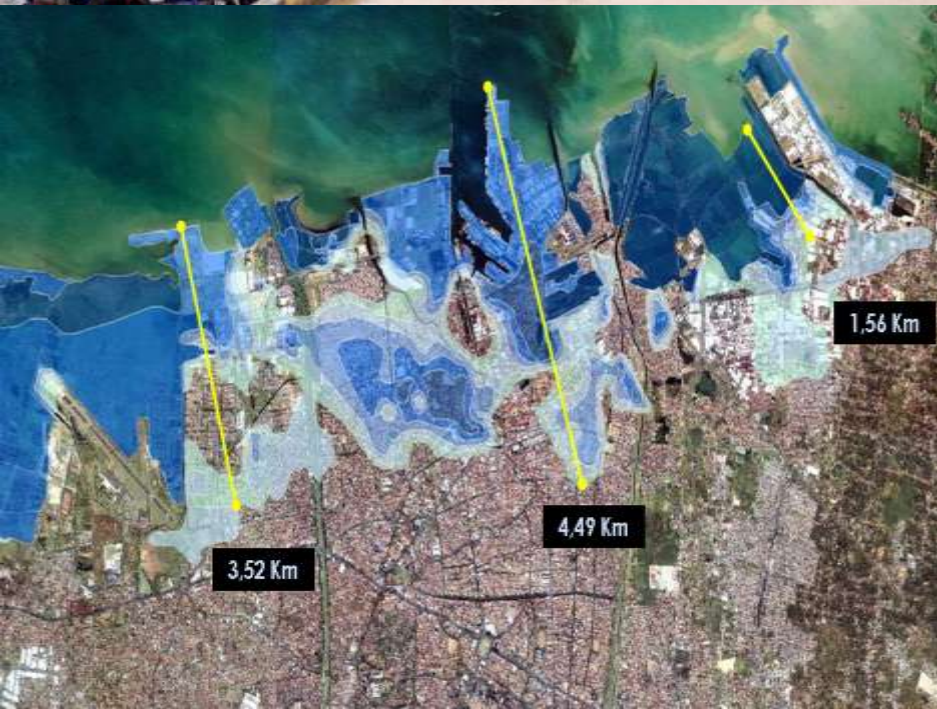
Intervention Project in Semarang City

Flood Early Warning System

The project aims to reduce vulnerability to and impact of flood disasters by building preparedness capacity of the most vulnerable communities and local government through the development of an early warning system & evacuation strategies.

Mangrove Reforestation

The goal is to enhance the climate resilience of vulnerable people living along the coast of Semarang City in two coastal districts by strengthening the mangrove ecosystem and adaptive capacity of coastal community.
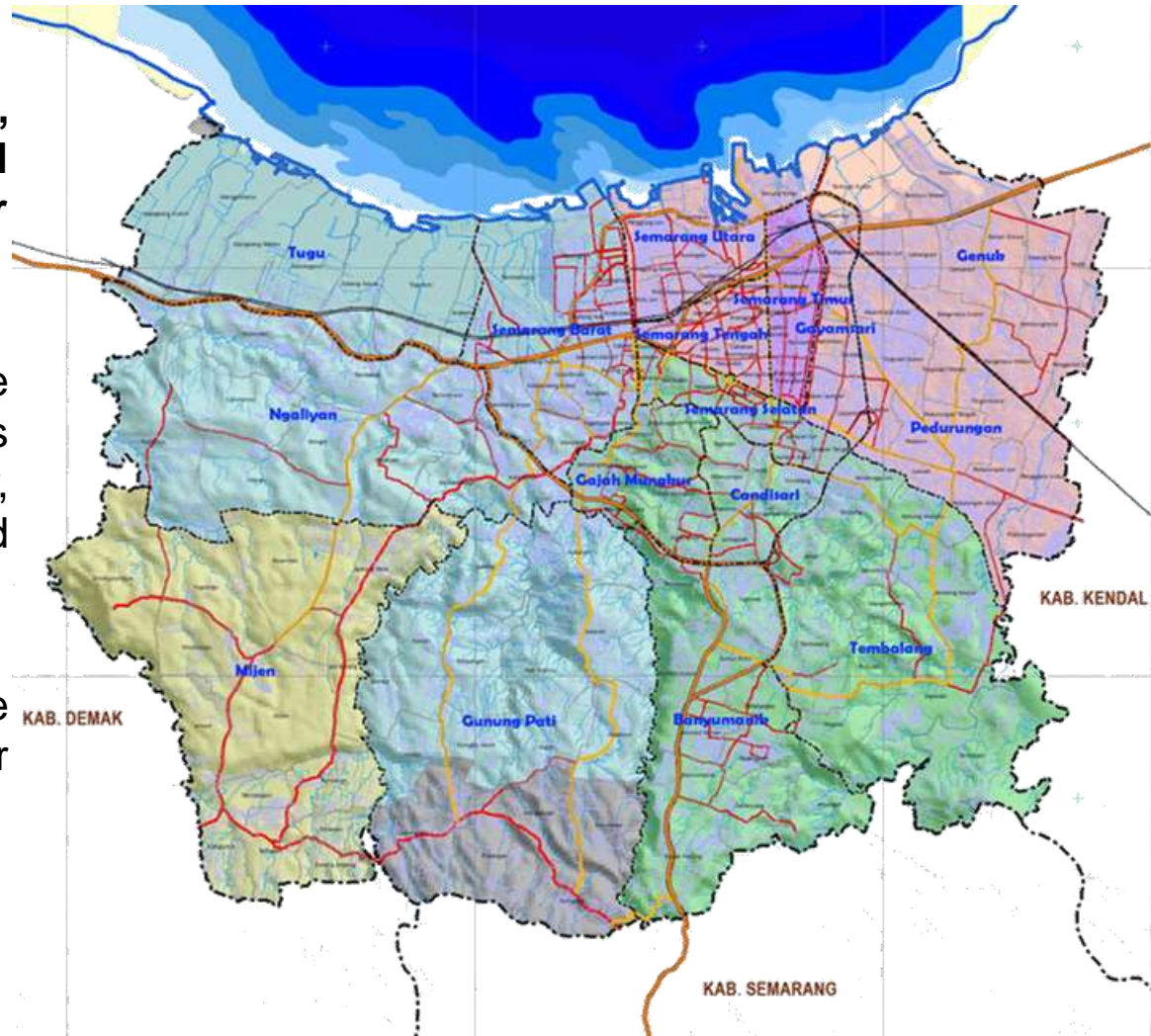
Semarang as Coastal City

Challenges:

Storms, coastal erosion, drought, flooding, coastal inundation, depleted water supplies.

Land subsidence and inadequate drainage exacerbate these impacts by disrupting the local economy, endangering livelihoods and increasing health problems.

Flooding in Semarang may originate upstream from heavy rainfall or along the coast from tidal flooding.

Total Area: 374 km2
Population: 1.629.924 people

Enhancing Coastal Community Resilience by Strengthening Mangrove Ecosystem Services and Developing Sustainable Livelihoods in Semarang City

This project is implemented in two districts, Tugu and Genuk, and focus in seven villages.

During this project period (01/13 - 12/16): **Mangrove nursery are developed** to support seedling for mangrove rehabilitation and species enrichment in Semarang coastal.

Seawall (*Alat Penahan Ombak*/ APO) is also built **to protect planted mangrove** and to reactivate the broken fishpond.


The outcomes to achieve are as follows:
1. Improving ecosystem services & strengthening the coastal protection
2. Strengthening adaptive capacity
3. Encouraging replication, scaling up, mainstreaming lesson learned into existing cross-sector local development plan

- There is a **challenge** in working in this site since the land belongs to private sector.
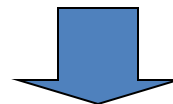
- Project team is **coordinating** and proposing a formal letter through government to landowner in order to get formal responses from the landowner.
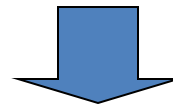
- Landowner allows the project to develop in the proposed area.

Enhancing Coastal Community Resilience by Strengthening Mangrove Ecosystem Services and Developing Sustainable Livelihoods in Semarang City

Progress:

- A community group in Mangkang Wetan is growing 10,000 of *Bruguiera gymnorrhiza* and 5,000 of *Sonneratia casiolaris.*
- 75,000 seeds that is seedling by community groups
- 43,500 *Rhizopora mucronata*, 2,000 *Soneratia casiolaris* are planted in the fishpond. 10,700 *Rhizopora mucronata* and *Avicenia marina* has planted by private sector.
- Capacity building for implementer and community about climate change and farming field school

Source: www.griyawisata.com

Source: www.eastjavatraveler.com

Flood Early Warning System (FEWS)

The project aims to reduce vulnerability, loss, and casualties due to floods by strengthening communities and government response and also preparedness through flood information system development, and evacuation strategy, as well as identification of evacuation shelter.

Progress:

- Improved communication and coordination between the stakeholders in the project

- Increased capacity of disaster preparedness group. There are 7 groups, each consists of 13-18 persons.

- Flood early warning system is built, which consists tools such as automatic river water level (AWLR) and automatic rainfall recorder (ARR).

Impact to City Resilience

- Communities have **more understanding against natural phenomenon** (including climate change) happening around them
- Communities have **better ability and capacity** of their contextual problems around them, such as precautions against disasters, to improve livelihood sustainability
- City government gets **lesson learned to replicate** similar projects to other locations within the city that has similar characteristics, or to improve their planned program.
- City government able to **build their network** with other cities which joined in climate change national working group, also with donor and other institutions
- **Increased coordination** between stakeholders (better engagement)

Terima Kasih