DRR and CCA at Coastal Areas in Indonesia: Best Practices of 'PDPT' and the Revitalization of North coast of Java

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Outline

1. Background
2. Disaster mitigation and climate change adaptation through the development of coastal resilient village
    1. Conception of the coastal resilient villages (PDPT)
    2. Best practices and lessons learnt
3. CCA best practices in the North Coast of Java
    1. Problems of coastal erosion in the North of Java
    2. Initiatives by the Ministry of Marine Affairs and Fisheries
4. Remarks and ways ahead

1. Background:

Geographical, land use and geological conditions of Indonesian coastal areas

- **Indonesia as a maritime continent with 17,480 islands 95.181 km coastline.**
- **Coastal area covers ~ 10,000 villages, 7,000 of them are prone to coastal disasters**
- **Prone to the low frequency but high impact disaster (geological disaster) such as earthquake and tsunami, and also the high frequency but low impact disaster (hydro-meteorological/Climate change induced disaster)**

2. Development of CRV (PDPT)

Why should start from villages?

- Hyogo Framework for Action (HFA, 2005)

  'Disaster risk arises when hazards interact with physical, social, economic and environmental vulnerabilities', thus risk reduction should be integrated into development policies and planning at all levels of government, including ***poverty reduction*** *in the multi-sector policies and plans.'*

- Sendai Framework for Disaster Risk Reduction (2015-2030)

  '..building resilience to disaster to be addressed with a renewed sense of urgency in the context of sustainable development and ***poverty eradication*** *and as appropriate to be integrated into policies, plans, programmes and budget at all levels.'*

- Actual condition of suburbs and villages in Indonesia

  –High levels of poverty in suburbs and villages (7.9 million people in 2010).

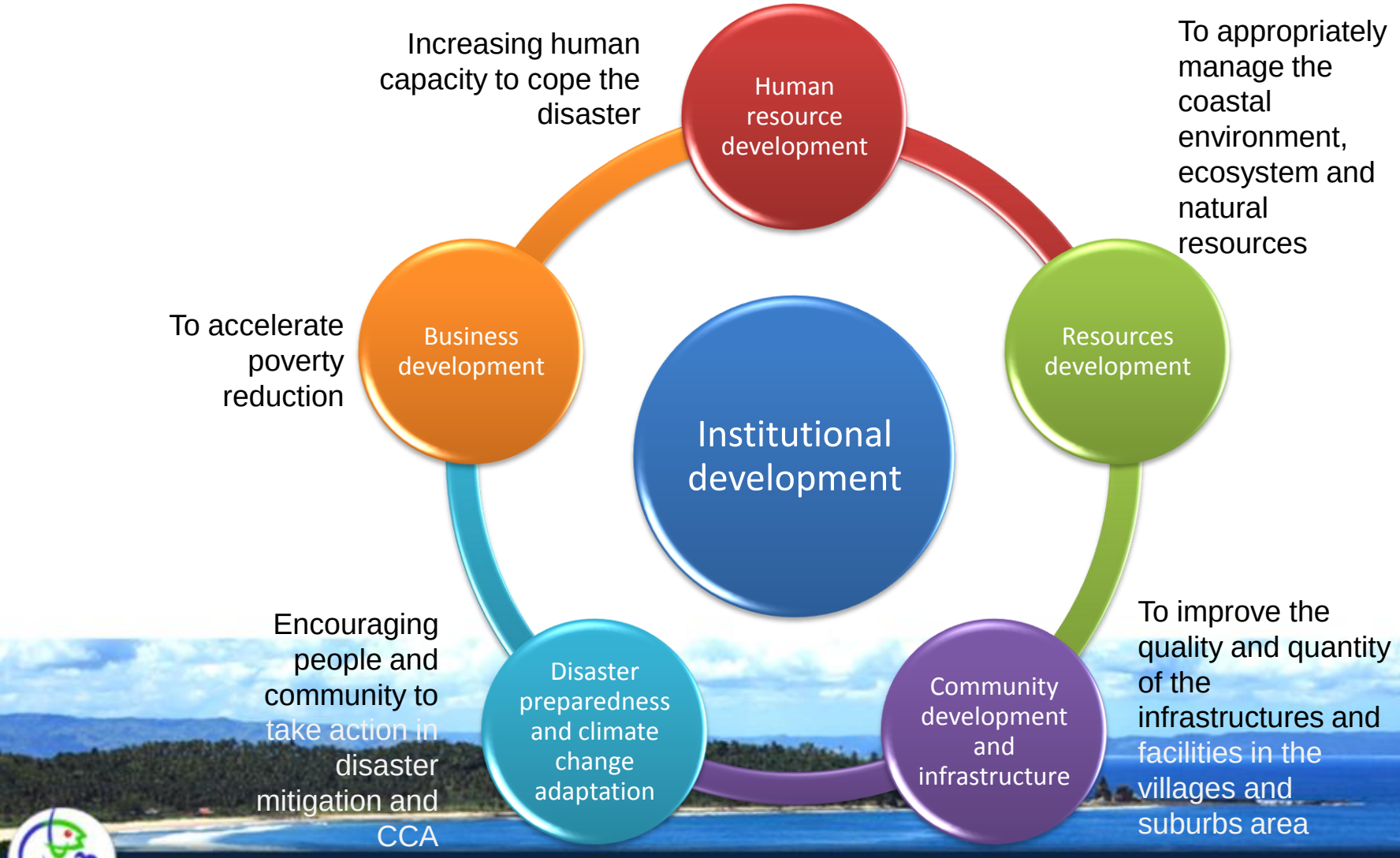
  –The low quantity and quality of village infrastructure, bad condition of the residential environmental health and low level of independency of the village's social organization.

  –The destruction of the coastal environment, ecosystem and natural resources.

  –Encourage poverty reduction through the village economic empowerment and environmental restoration.

2. Development of CRV (PDPT)

Conception of Coastal Resilient Village



2. Development of CRV (PDPT)

Pathway of PDPT

Coastal Resilient Village

Year I

Strengthening community capacity in planning
Coastal village development plan /Rencana Pengembangan Desa Pesisir (RPDP)

Year II

Implementation toward resilience with focus on five priorities

- *Bina Siaga Bencana dan Perubahan Iklim,*
- *Bina Sumber Daya, dan*
- *Bina Lingkungan dan Infrastruktur*

Year III

Exit Strategy focus on institutional capacity

BUM Desa/ Koperasi/Kelompok/ ...

2. Development of CRV (PDPT)

What we have been done so far..

Activities:

- Coverage: 66 villages in 22 districts.
- Type of disaster considered: tsunami, flooding, coastal erosions, drought, social disasters (economic/poverty).
- Development of basic needs and facilities of a family in rural area:
  - Family toilet: 451 units
  - Sanitations: 142 unit in total with 5,020 m length of installed pipeline
  - House retrofitting: 66 units
- Development basic infrastructures in village:
  - Coastal roads: 65,391 m
  - Community waste processing facilities: total 106 units
- Development of structural disaster countermeasures:
  - Coastal forest planting program: 931,436 trees
  - Construction of emergency shelters and the village disaster information center: 21 units
  - Construction of the coastal protection structures: 4,982 m.
  - Construction of the coastal disaster information humpies: 8 units
- Development of the economic resiliencies and human capacity programs
  - 214 activites
- Total government budget: ~ 56 billion IDR (5,6 million US$)
- Village development plan developed: 66 documents (66 villages)
- ~ 100 coastal disaster resilient communities were established

2. Development of CRV (PDPT)

Output of PDPT per-December 2014

66

Rencana Pengembangan Desa Pesisir/RPDP (*Village Development Plan*) and Rencana Kerja Kelompok/ RKK nya

56.020.619.000

Total Direct Community Incentive Fund

Numbers of *Kelompok Masyarakat Pesisir (KMP)*

2. Development of CRV (PDPT)

Best practices and lessons learnt

- We promote discussions among stakeholder in the village by encouraging **gender** equity and participation.
- We strengthen the **bottom-up** process by continuously involving local characteristics, norms, and culture in every step of the planning process.
- Identification of the vulnerability in the coastal villages is done by exploring the **actual condition** reveals by the locals through the active participation in discussions and field observations.

2. Development of CRV (PDPT)

Best practices and lessons learnt

- **Collective responsibility** can be raised up if people have understanding about the potential risk in their village and what they can do to cope the disaster.
- In the coastal resilient village program, people agreed to donate their **private land and properties** to construct community needs in disaster mitigation.
- Figure: people donates their land to construct the road for tsunami evacuation.

2. Development of CRV (PDPT)

Best practices and lessons learnt

- Limited budget and resources are overcome by ‘gotong royong’ (voluntarily) spirit to build collective resilience.
- The collective responsibility in building the resilient village will create the ‘sense of belonging’ to ensure the sustainability and maintenance of the developed physical and social structures.
- In this program, **no work** being done by **paid labor**. It was done by the coastal disaster resilient communities, which is established through this project.

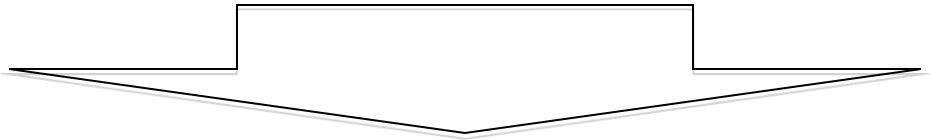
CCA best practices in the North Coast of Java

3. CCA in the North Coast of Java

Problem of Coastal Erosion in the North Coast of Java

North coast of Java:

- Center for the national and strategic economic growth (Industries, fisheries, transportation and tourism)
- Consists of 5 provinces|33 districts with a total length of coastline about 1,687.15 km
- Eroded coastline: 745.41 km (44%) with a total eroded coastal area about 12,878.53 Ha (2014)
- Mangrove area: 10,988.64 Ha|85.4% were damage (9,393.49 Ha).

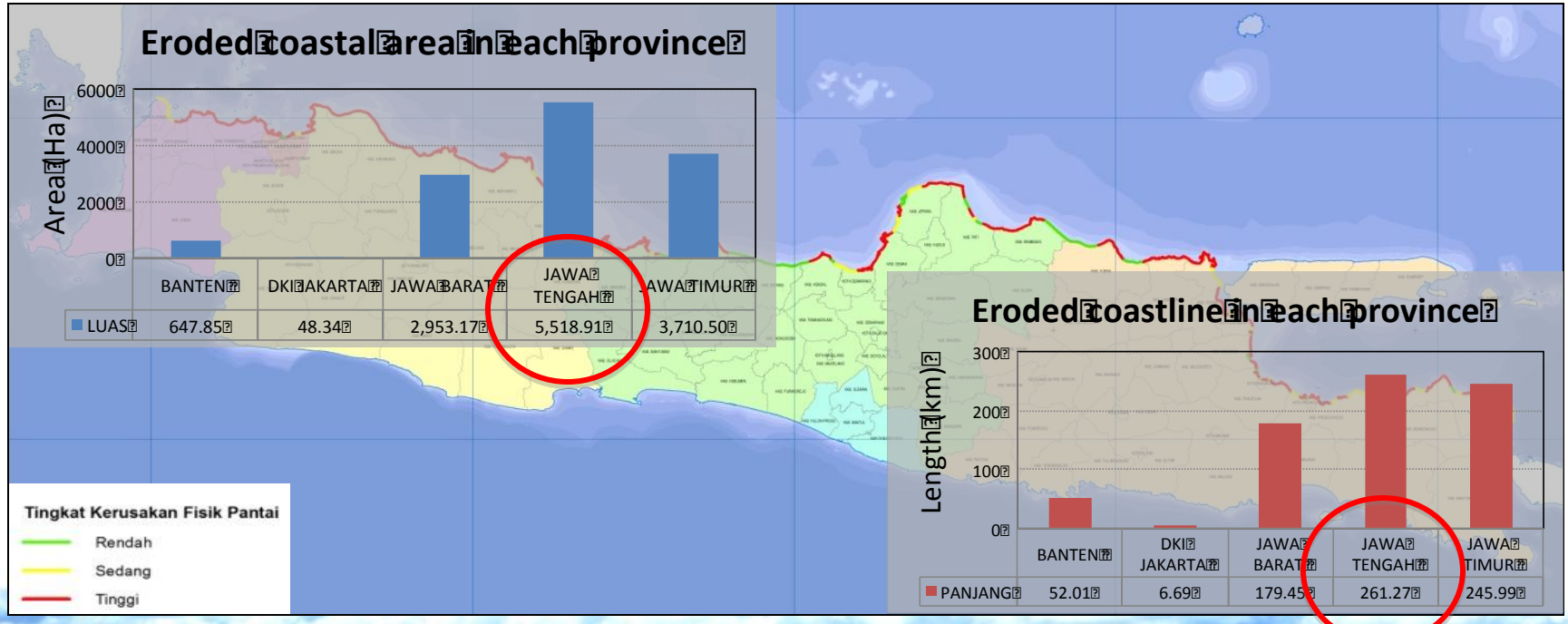


- Rate of destruction > rate of rehabilitations.
- MMAF put the coastal rehabilitation and revitalization in the North Coast of Java as the primary activity in the strategic plan for 2014-2019.

3. CCA in the North Coast of Java

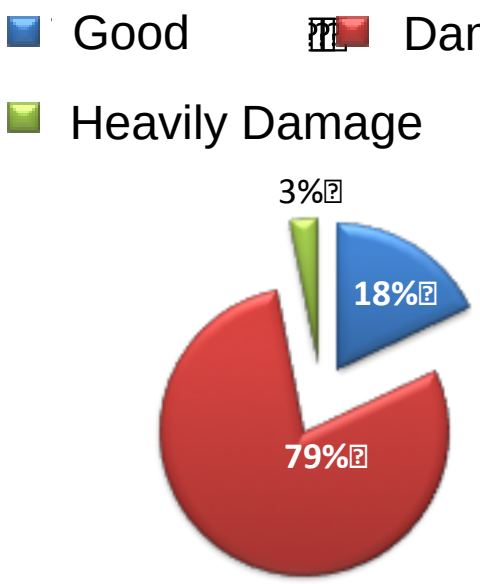
Problem of Coastal Erosion in the North Coast of Java

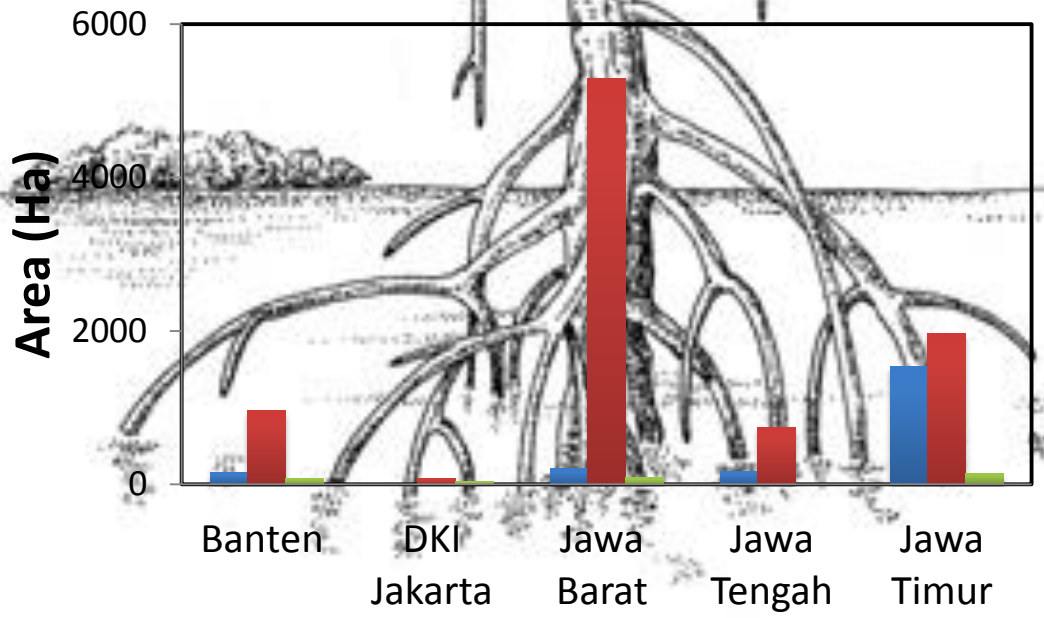
Coastline conditions in the North Java



3. CCA in the North Coast of Java

Condition of Mangrove forest in the North Coast of Java



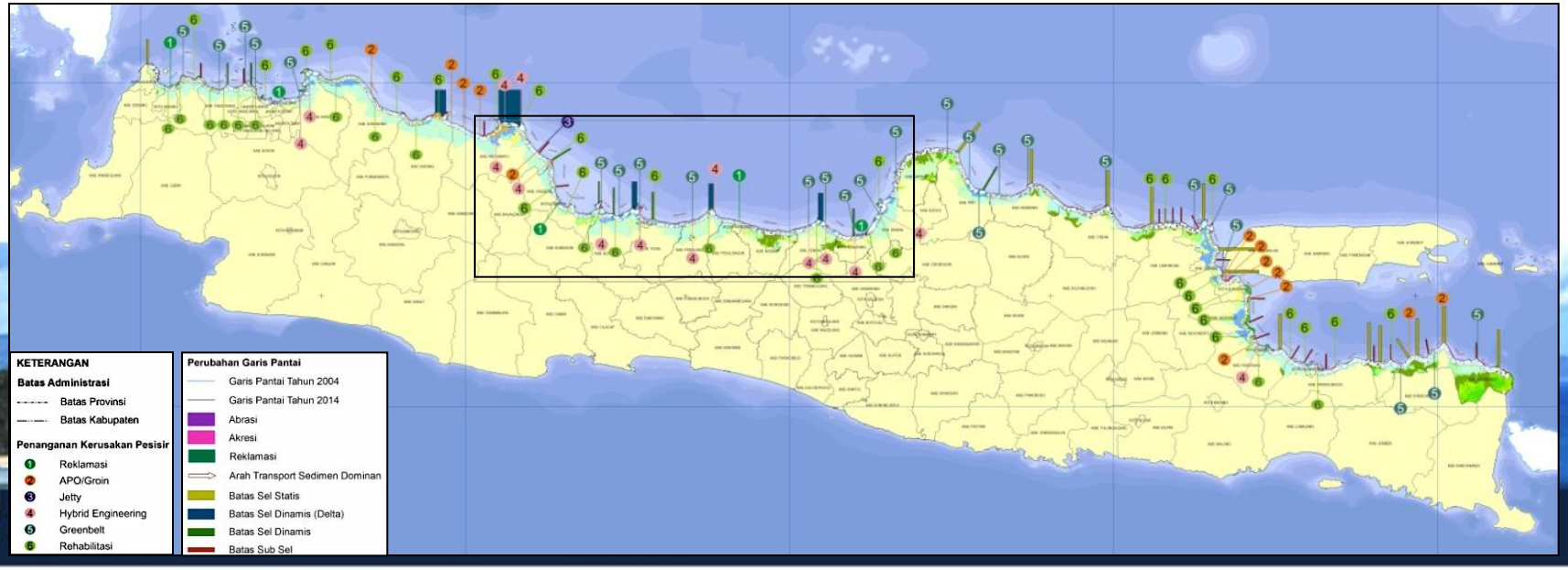


Good	: **2.061,51**
Damage	: **9.049,68**
Heavily Damage	: **343.81**

3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

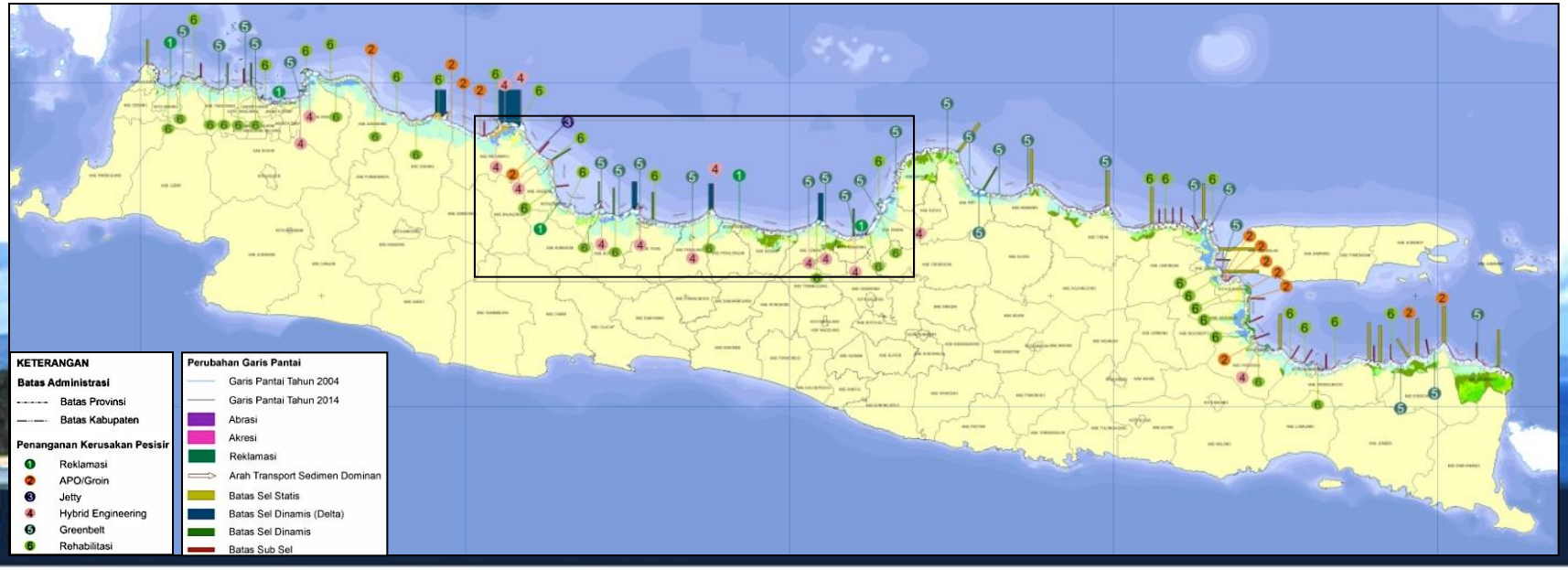
- Law enforcement
  - Law No. 27/2007 Jo. 01/2014
  - Presidential decree on Coastal Zonation (in preparation)
  - Conservation areas
- Implementation on the mitigation and rehabilitation efforts
  - Soft protections
  - Hard protections



3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

- Rehabilitation of coastal forest
  - Mangrove rehabilitations
  - Center for mangrove restoration and educations
- Development of coastal protection structures
- Community empowerment
- National campaign: '*love Indonesian sea*'



3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

- Mangrove nurseries
- Mangrove planting
- Maintenance and sustainability

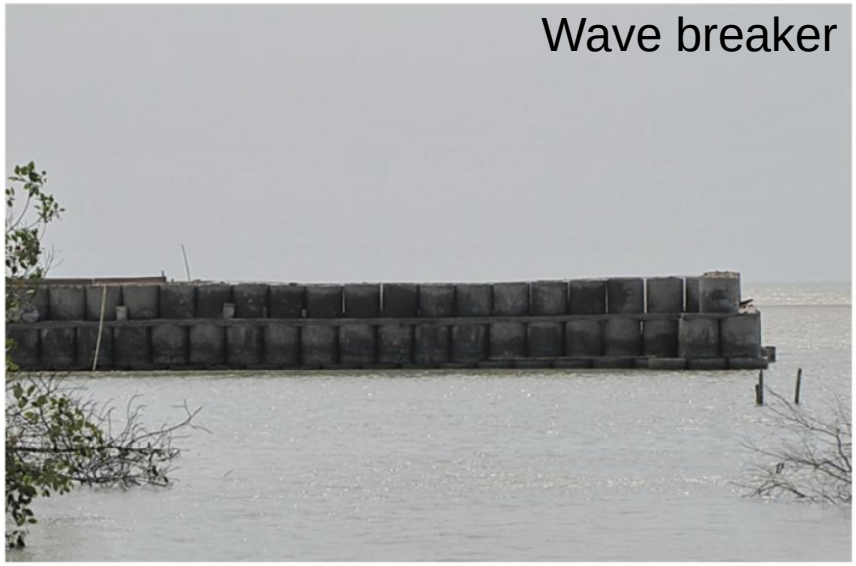
3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

- Center of mangrove restoration and educations is directed to be a place for the recovery and restoration of mangrove ecosystem.
- Also, it is directed to be an integrated tool for education, natural lab. and ecosystem based tourism destination.

3. CCA in the North Coast of Java

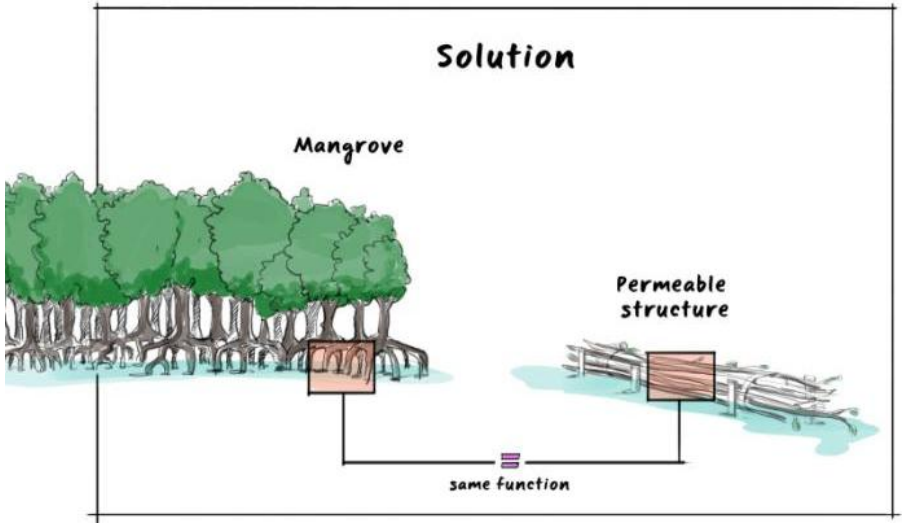
Initiative by the Ministry of Marine Affairs and Fisheries

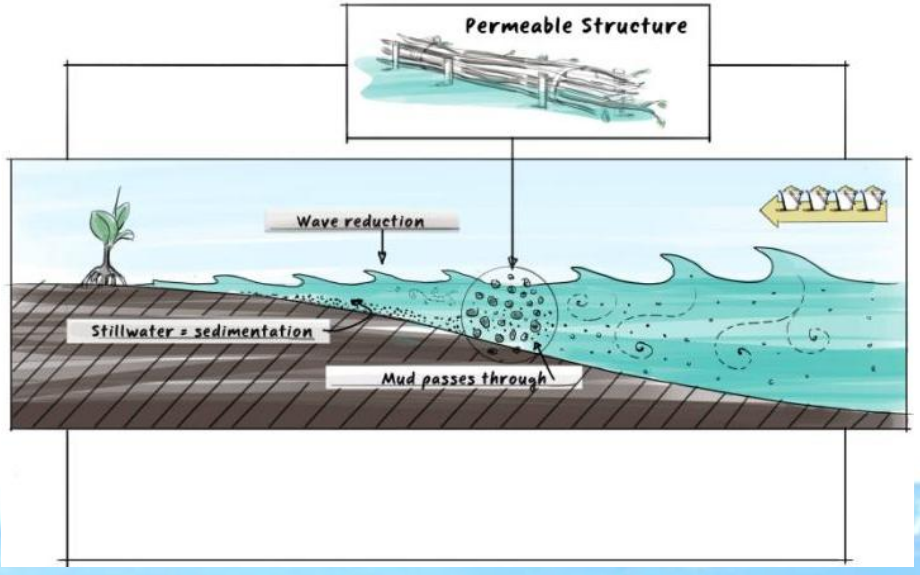


3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

Conception of Hybrid Engineering





3. CCA in the North Coast of Java

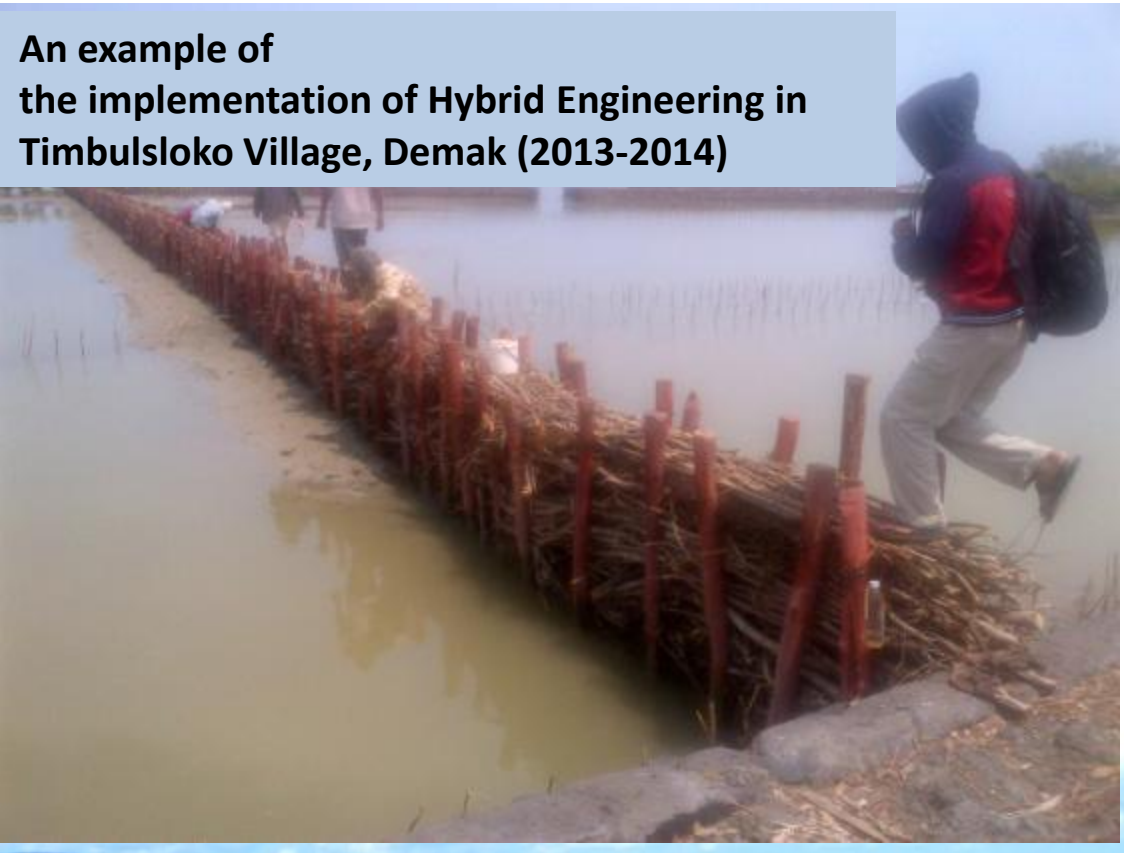
Initiative by the Ministry of Marine Affairs and Fisheries

Implementation of Hybrid Engineering
An example in Demak, Central Java

3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

An example of
the implementation of Hybrid Engineering in
Timbulsloko Village, Demak (2013-2014)



3. CCA in the North Coast of Java

Initiative by the Ministry of Marine Affairs and Fisheries

Annual Monitoring of the hybrid engineering in Timbulsloko, Demak

4. Remarks and ways ahead:

- The coastal resilient village program is successfully developed basic criteria in developing resilience in rural areas/village,
  - The ability of the locals to identify their environmental vulnerability based on the actual condition and local characteristics.
  - The willingness to take action on mitigation by utilizing personal and community resources (and belonging) to develop a collective resilience.
  - The spirit '*identify..plan..and do it by our self*' creates sense of belonging that will ensure sustainability of the program and continuous maintenance of the developed structures.
- We believe that national and global resilience should start from the smallest community to reduce problems on funding, culture (local characteristics) and approaches to use should be natural based method that is more cost efficient particularly in developing countries.
- If this initiative can be replicated massively, we believe that global resilience based on local characteristics and culture can be achieved!

Thank you for your attention

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