

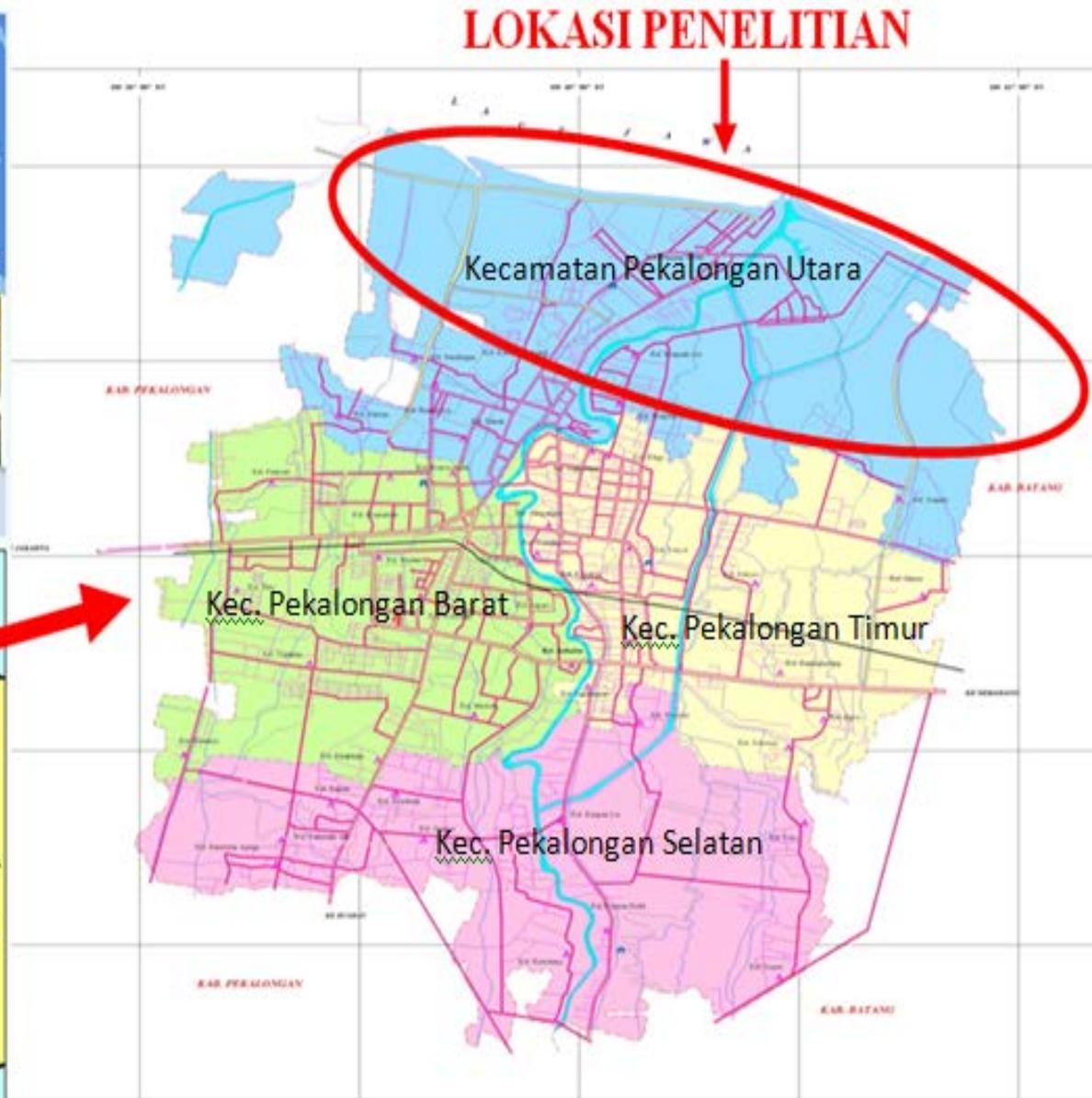
# **SURVIVAL OF WOMEN FISHERS IN SECURING THEIR HOUSEHOLD'S INCOME UNDER THE CLIMATE CHANGE: A CASE STUDY IN PEKALONGAN – INDONESIA**

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# MAP OF STUDY AREA



# SYMPTOM OF CLIMATE CHANGE

- Sea level rise,
- Increased of unpredicted storm,
- Increase of wave height and global temperature,
- More frequent extreme weather,
- Changes in rainfall patterns,



VULNERABLE GROUP :  
MAIN SOURCE OF LIVELIHOOD  
HIGHLY DEPENDING ON THE  
WEATHER CONDITION



vulnerable stocks + revenue

Collapse in  
Household Income  
→ seeking help !  
Rescued by wife &  
other party

# Simulation of Rise of Sea Surface Level : 100 years later

(a) 20 tahun kemudian, 16 cm.



(b) 40 tahun kemudian, 32 cm.



(c) 60 tahun kemudian, 48 cm.



(d) 80 tahun kemudian, 64 cm.



(e) 100 tahun kemudian, 80 cm.



(f) 100 tahun kemudian,



# ABLATION : ONE OF THE IMPACTS OF CLIMATE CHANGE



Source : BPBD Pekalongan, 2013

# Women Role in Facing Climate Change Impact

- Man tend to move to the other regions to gain the new occupation, while the women more choose to live in their origin region because they have to take care to their children, thus whatever happened, they have to defend for fulfil the family needs
- When extreme weather, the women have to keep in doing her domestic work such as looking for water and foodstuff for the family.
- Therefore, their rest time is not sufficient for their body and be vulnerable to be infected by disease.

# Women have to be “front liners” (household economic backbone)

- **Productive role** : gain economic income to fulfil household needs
- **Reproductive role** : conducted in their position as a wife and mother
- **Managing community role** : taking part in regular social gathering, social activities (actualisation of her self)
- Besides as **housewife** is also **actively participated to earn living for fulfilling the economic needs** of family in the unpredictable climate condition with the consequence which is **the gathering time with family and children education becomes neglected.**

# Objective of the Study

1. To explore the survival efforts of women fishers to secure their household's income under the climate change
2. To outline the strategy to empowering fishers and their wives in adaptation and mitigation of climate change

# Materials and Method

## Study Area:

*Pekalongan, Central Java*

## Data and Sampling:

- Cross-sectional survey
- Face-to-face interviews (instrument: questionnaire and indepth interview )
- Respondents:
  - Informant : Women fishers (coastal community) (n=52 persons)
  - Key-persons (A-B-G-C)
- Sampling method: Snowball sampling and Purposive Sampling

## Tools of Analysis:

- Mixed Method (Creswell, 2007)  
Descriptive statistics as Quantitative Tools
- Trianggulation based on indepth interview as Qualitative Tools

## Related Study:

- Triple Roles of Women (Bordat et al, 2011; Luke, 2011; Susilowati et al. 2013; 2014)
- Empowerment of Fisheries (Susilowati, et al. 2004; 2005; 2006)
- Adaptation for coastal community (Ribeiro, 2008; Resurreccion. 2011. Escobar et al. 2008)

**OBJECTIVE #1 :**  
**SURVIVAL EFFORTS OF WOMEN FISHERS**

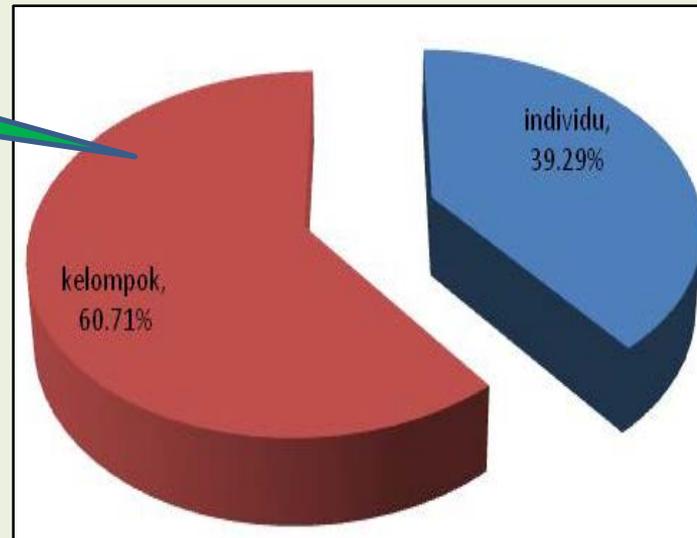
# Productive Role

Secondary Job of Women :  
**Side Job Involvement (54%)**



- Selling the catch fish
- Home Industries : SMEs (salting fish, processed fish, etc)
- Retailer : traditional/small shop
- Food stall, etc

BY GROUP



# PRODUCTIVE ACTIVITY





Production  
Access

- **Government Program through Collective Group of Production**
- **Weak of Cooperative/ Finance Institution Role**

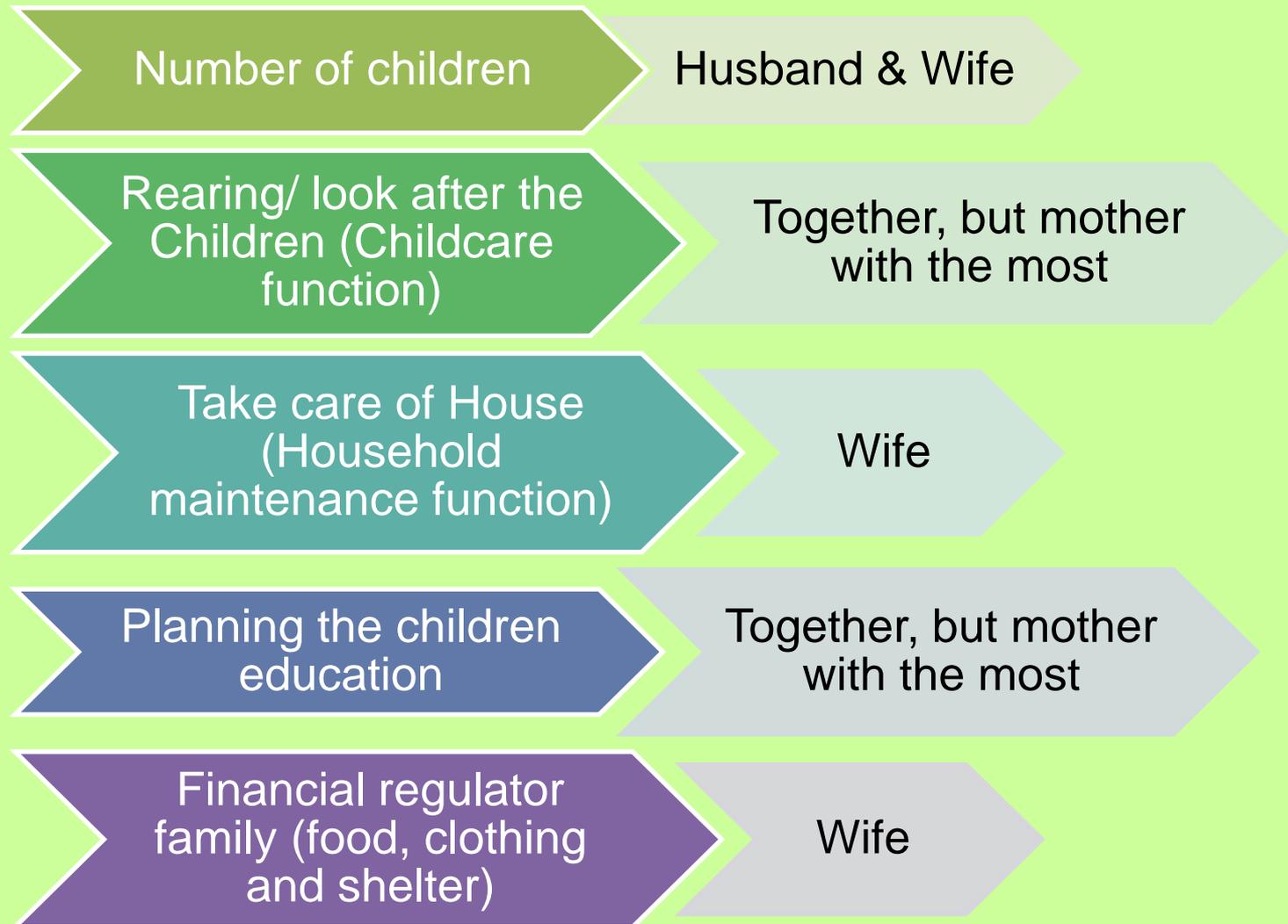
Market  
Information  
Access

- **Marketing Constraint (the way and channel)**

Technology  
Access

- **Unproper grant from government : equipment/machine can't used (unappropriate needs)**

# Reproduction Role





Managing Community Role



Social Capital

Group activities/ gathering  
:Involvement in the  
community activities and  
self-existence



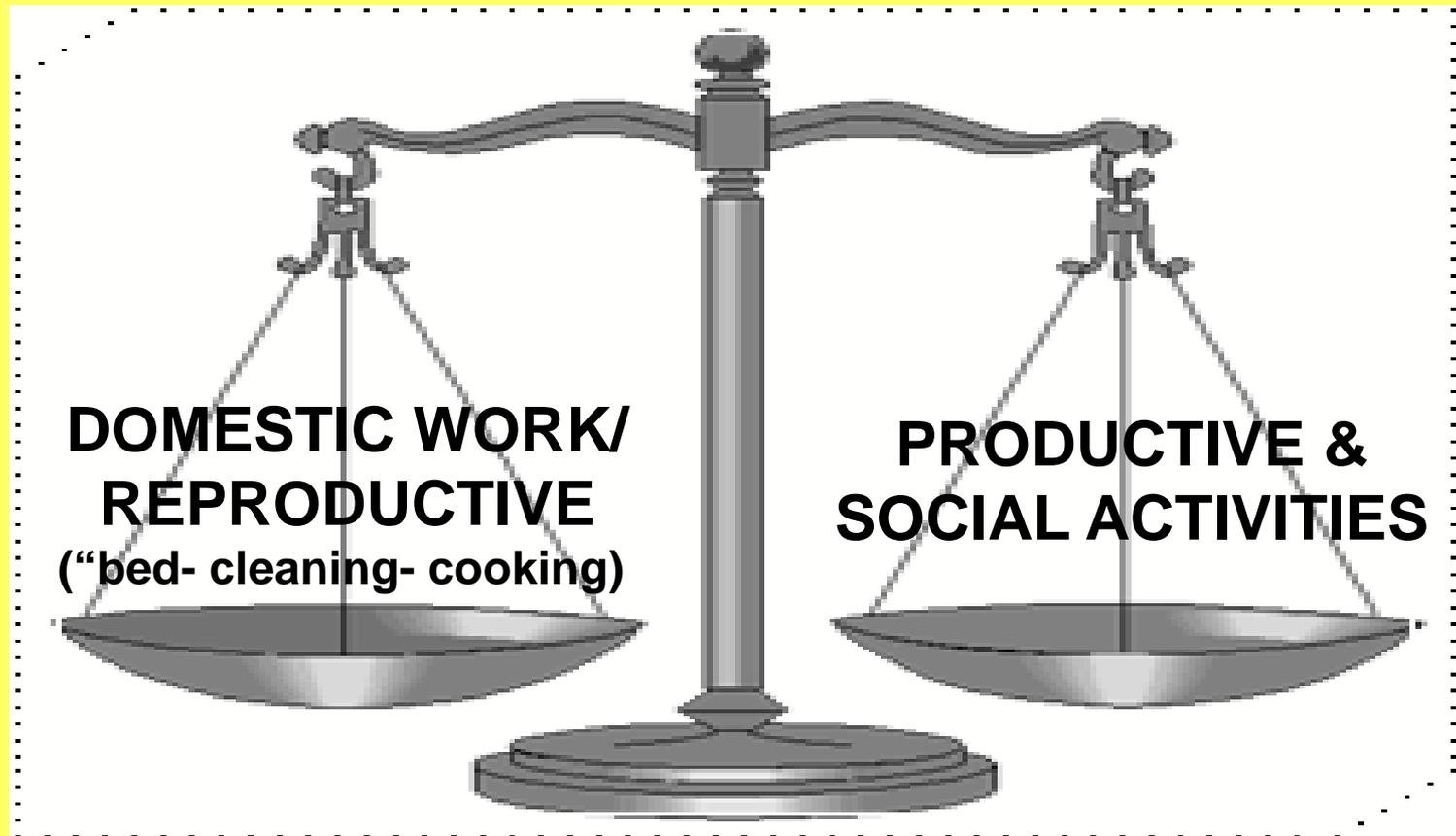
Networking to establish  
safety net : saving and loan,  
deposit, reciprocal donation  
of celebration and other  
mutual cooperation.



# FINDINGS

- The women is forced to be stronger in facing the impact of the climate change than men.
- Women burden was getting heavier in the climate change which is less profitable but they have to fulfil their roles for production, reproduction and managing community
- Women fishers have to work hard searching or developing the income resources.
- Creation of the income resource through the alternative livelihood are highly urgent needs to answer their survival living.

## **OBJECTIVE #2 : STRATEGY TO EMPOWERING THE ROLE OF WIFE**



**MAIN  
STRATEGY**

**EMPOWERING FOR  
GOOD QUALITY OF LIFE**

**Existing condition  
of Households?**

- Vulnerable revenue/income
- Low in purchasing power
- Weak in lobbying access
- Less awareness & readiness
- Etc..

- 1. PRODUCTIVE ACTIVITIES : GAIN INCOME**
- 2. ECONOMIC AND NON-ECONOMIC POWER**
- 3. AWARENESS & READINESS IN FAMILY LIFE**

**Achievement?**

Improve in participating to cope the climate change.

# EMPOWER WOMEN FISHERS:

Empowerment for **IN PRODUCTION ASPECT**, perhaps through:

- ✓ Extension, campaign, training
- ✓ Pilot project / bussiness incubation
- ✓ Product diversification
- ✓ Optimalization the role of a cooperative (economic enterprise), finance institution, etc.
- ✓ empowerment of disaster alert village

# EMPOWER WOMEN FISHERS :

Empowerment **IN REPRODUCTION ASPECT**, perhaps through:

- ✓ Family programming extension
- ✓ Extension about education for her child
- ✓ Extension about the way to get healthy life for households and good environment
- ✓ etc

# EMPOWER WOMEN FISHERS :

Empowerment for **IN MANAGING COMMUNITY ASPECT**, perhaps through:

- ✓ Forming small group for information exchange, self-actualization,
- ✓ Regularly social gathering activities for updating with current situation (information, technology, communication)
- ✓ improve the cooperation among the stakeholder
- ✓ Dialogue, Development, Enhancement
- ✓ Open-minded and always welcome to any innovation and suggestions

# ADAPTATION

Community	Adaptation
<u>FISHERS</u>	
•Decision Making	extension information system: ICT
•Awareness of Climate Changes	There is changes phenomena of climate → Need improvement of awareness
•Technology	-Required application of technology to accommodate the climate changes : -Diversification of commodities (for safety strategy to avoid a failure harvest
•Entrepreneurship	-Multiple job (trader, processor, and other secondary job) -Capacity building (ability to lobby, networking, etc)

# MITIGATION

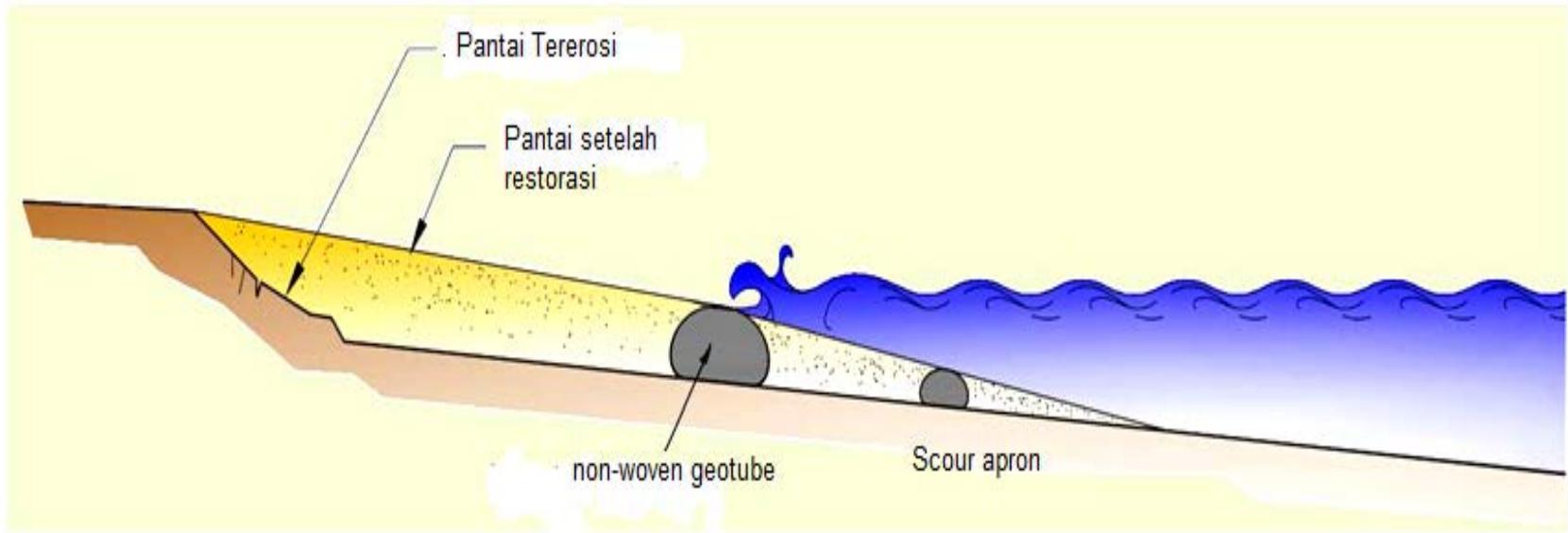
- **PHYSIC:** growing vegetation of mangroves and other coastal vegetation to structure from sea level rise (tide), wave, etc.
- **NON-PHYSIC:** need adjustments in behavior of farmers and their community in socio-economic, habit, culture, life-style, etc.



- A. Gerbang Utama
- B. Parkir & Area Komersial ( sovenir ,kulinetr )
- C. Krematorium
- D. Pusat Penelitian & Informasi mangrove. Kantor Pengelola
- E. Dermaga
- F. Sculpture
- G. Akses Jalan Adventour
- H. Timberdeck ( tepi sungai )
- I. Timberdeck ( hutan mangrove )

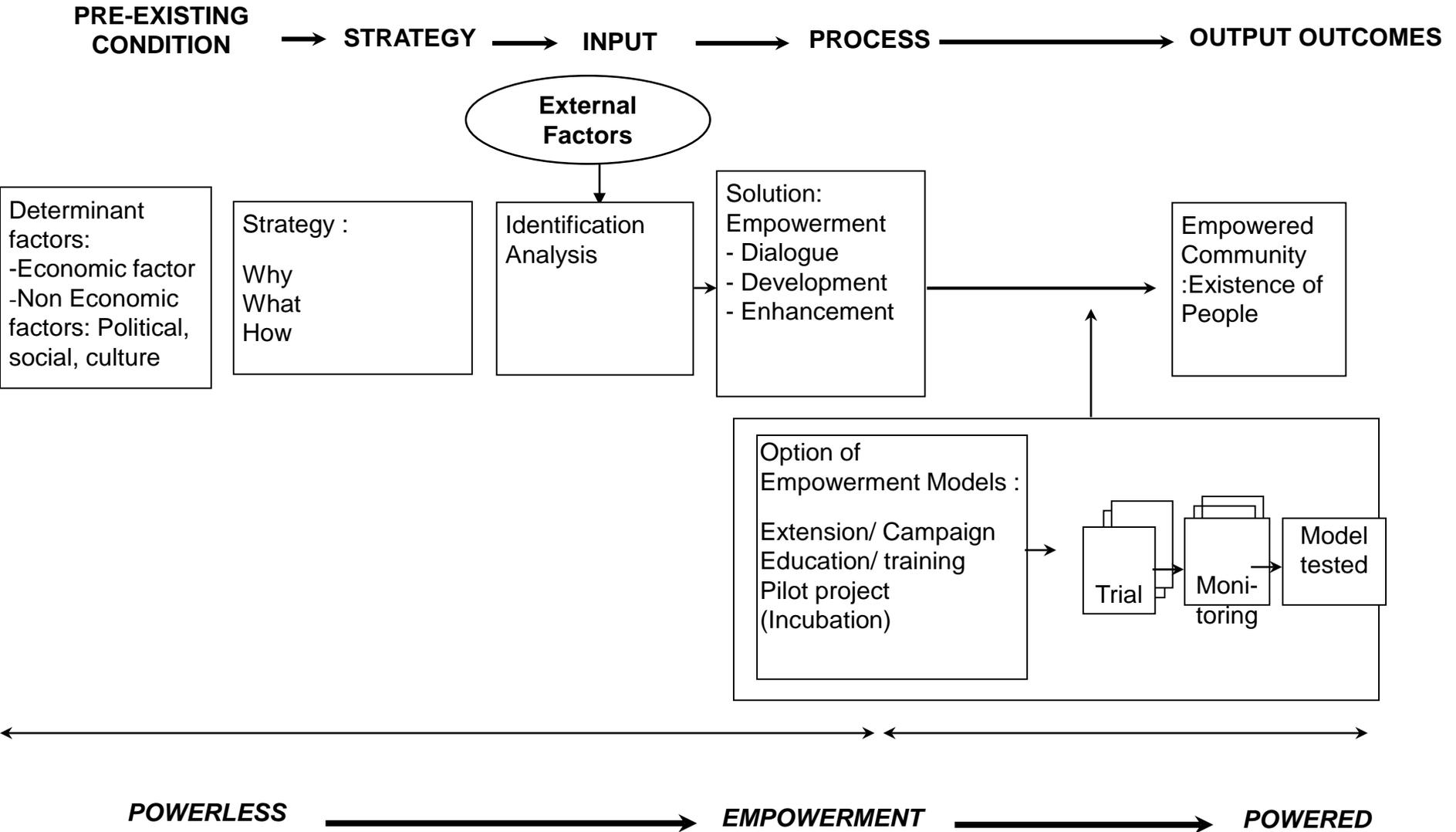
- J. Museum Ekologi
- K. Playground, Panggung Terbuka & Area Komersial
- L. Wahana Permainan Air
- M. Restaurant
- N. Homestay & Penginapan
- O. Kawasan Wisata Tepi Pantai
- P. Tambak Dan Seafood resto
- Q. Ternak Kerbau
- R. Parkir Service & Loading Dock
- S. Poulder

# GEOTUBE



# APPENDIX 1

## EMPOWERMENT STRATEGY



Source : Harry (2001) (Susilowati et al., 2004) with necessary modification

# CONCLUDING REMARKS

- PEOPLE HAVE NOT READY YET (TO HAVE NATURAL SHOCK → due to climate change) since longtime benefited the natural ENDEVOUR.
- BALANCING IN ECONOMIC-POLITICAL MOTIVE
- THEREFORE, NEED AGENDA FOR ADAPTATION & MITIGATION → for all STRATA (A-B-G-C)
- The adaptive capacity improvement as the long term main strategy and the pattern of double livelihood as the main strategy in the short term.

women fishers need to be intensively  
empowered to support the household economy  
as one of the climate change survival efforts and  
betterment of the community's  
welfare/ happiness

THANKS YOU  
FOR YOUR ATTENTIONS

