



# SOCIETAL AND ECONOMIC BENEFITS OF MARINE RESEARCH

By

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**INTERNATIONAL WORKSHOP ON SUSTAINABLE USE OF COASTAL AND MARINE RESOURCES IN  
KENYA: FROM RESEARCH TO SOCIETAL BENEFITS,**

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# Introduction

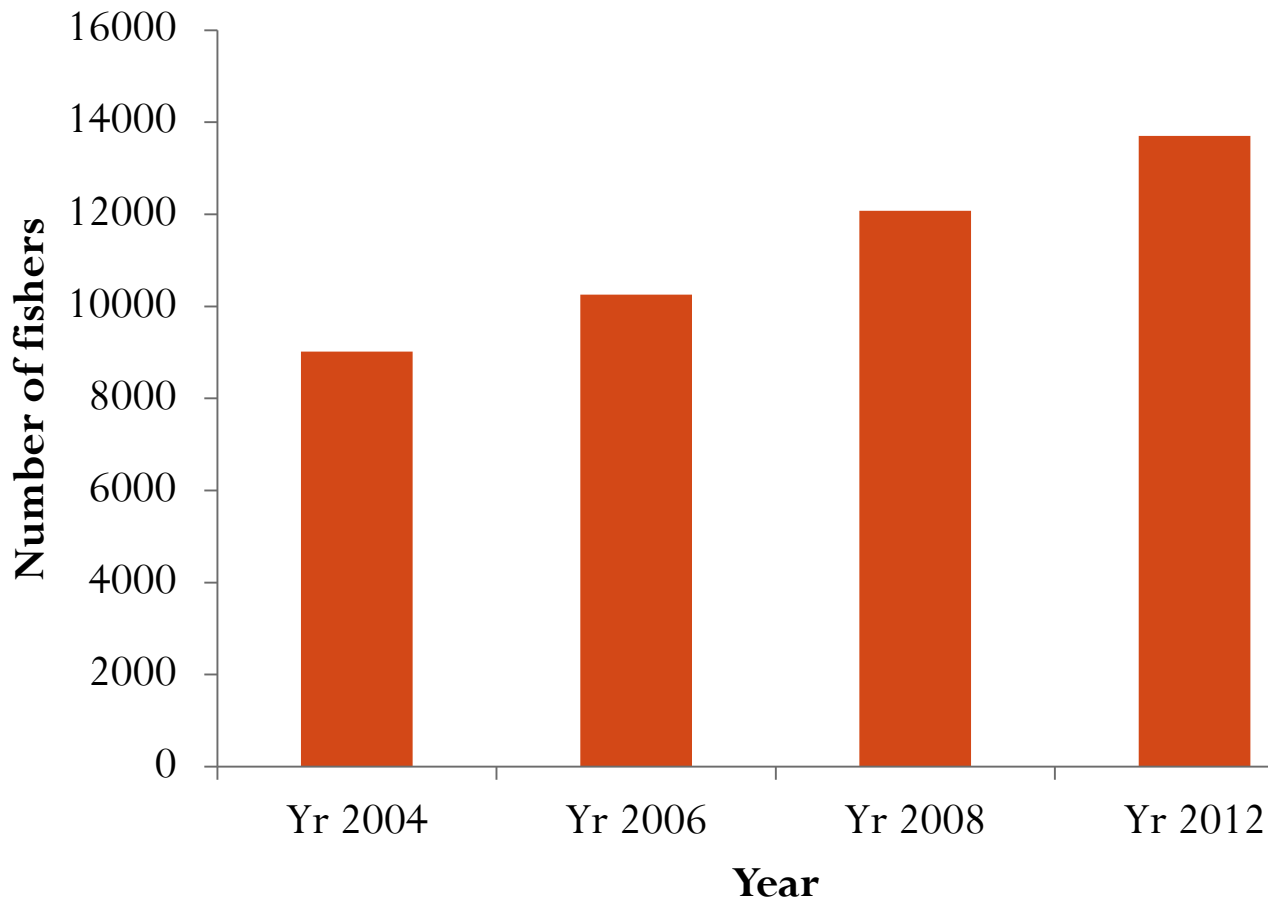
- The coastal zone of Kenya is endowed with rich natural resources both in the ocean & land.
- The marine resources provide livelihoods & income to coastal dwellers.
- Concern: exploitation of these resources has resulted in a “natural resources trap” with high poverty levels among local communities.

# Status & demand for social science research

- **Very few social sciences oriented studies have been conducted on the management of marine and coastal resources**
- Until recently most research was on biological and ecological studies.
- In the WIO region, there are very few social scientists involved studies of the marine & coastal resources.
- **The demand on social science studies of marine resources management is increasing**

**KMFRI's experience on how marine & fisheries research information can positively result in to societal & economic benefits**

# Dependency on fisheries & other marine resources



- **Marine fisheries:** about 27,000 people in sea & shore-based activities

- **Aquaculture:** about 550 people directly

- **Coastal tourism:** >300,000 people

# Impacts of increased no. of fishers

- Increased fishing pressure
- Depletion of fish stocks
- Declining catch per person
- Declining real income
- Increased use of destructive fishing gears
- Overexploitation of other marine resources
- Widespread poverty
- Increased vulnerability to climate change (wind speed, increased rainfall variability, droughts & flood).

# Addressing poverty

- Our research has helped to change ways of doing things in order to **avoid madness**
- **Madness** is doing same thing over and over and expect different results – Einstein
- It has helped to stop giving old answers to new problems that call for innovative solutions
- It has also helped to appreciate the past and use lessons learnt to map the future.

**Identification of economically viable  
alternative & supplementary livelihoods**





# Resource & socio-economic challenges

- Negative attitude from a section of the community that do not appreciate the potential benefits of new interventions.
- Theft occurred in some projects. Handling theft cases was problematic since those involved were community members & their arrest caused misunderstanding.
- Low levels of education and awareness.
- Lack of project mgt. skills in the running of mariculture projects.
- Inadequate start-up capital for mariculture projects.
- Seed & feed availability.
- Existence of middlemen in the market erodes profit margin.

# Understanding the value of natural resources to influence policy & resource allocation decisions



# Example: Value of mangroves



# Research & problem analysis

- People ordinarily know the problems affecting them, but they rarely know their underlying causes
- The causes could be **institutional**:- social, cultural, or economic systems
- Hence they **normally address the symptoms, rather than the causes**
- **Outcome: The problem continues unabated**

# Understanding role of institutions in development

- Both formal & informal institutions make important contributions to marine & coastal resources management & development
  - formal institutions include the rule of law, property rights, or patent law
  - informal institutions include religion, culture and social capital
- Informal institutions either slow down or accelerate economic activity.

# Understanding role of institutions in development

- Institutional quality may cause poor people to stay poor
- We have studied the ways in which informal institutions gradually change the actions & interactions of agents in different social organisations.

# Marine & Coastal Resources Management

Resolution of resource use conflicts e.g.  
prawn trawlers vs. artisanal fishers

Devt. & review of mgt  
plans for sustainable  
utilization of resources

Mapping of breeding &  
fishing grounds to enhance  
fisheries management &  
devt.

Strengthening co-mgt.





# Understanding coastal socio-economic dynamics

- Management of marine & coastal resources is not about **human-nature** relationship, but is about **human-human** relationship about nature
- Human-human relationships are both **internal** within communities & **external** between the community and the global environment
- **Power relations & representations** are key in social dynamics within & outside the communities

# How do we achieve sustainability in the face of extreme poverty? Juvenile wastage? beach seining?



**Juvenile wastage**



**Beach seine**

# Way forward: Community Devt. & Empowerment

- 1. What exactly is happening in the community?

- 2. Why is it happening now? who are beneficiaries?

Experience  
– Entry  
point

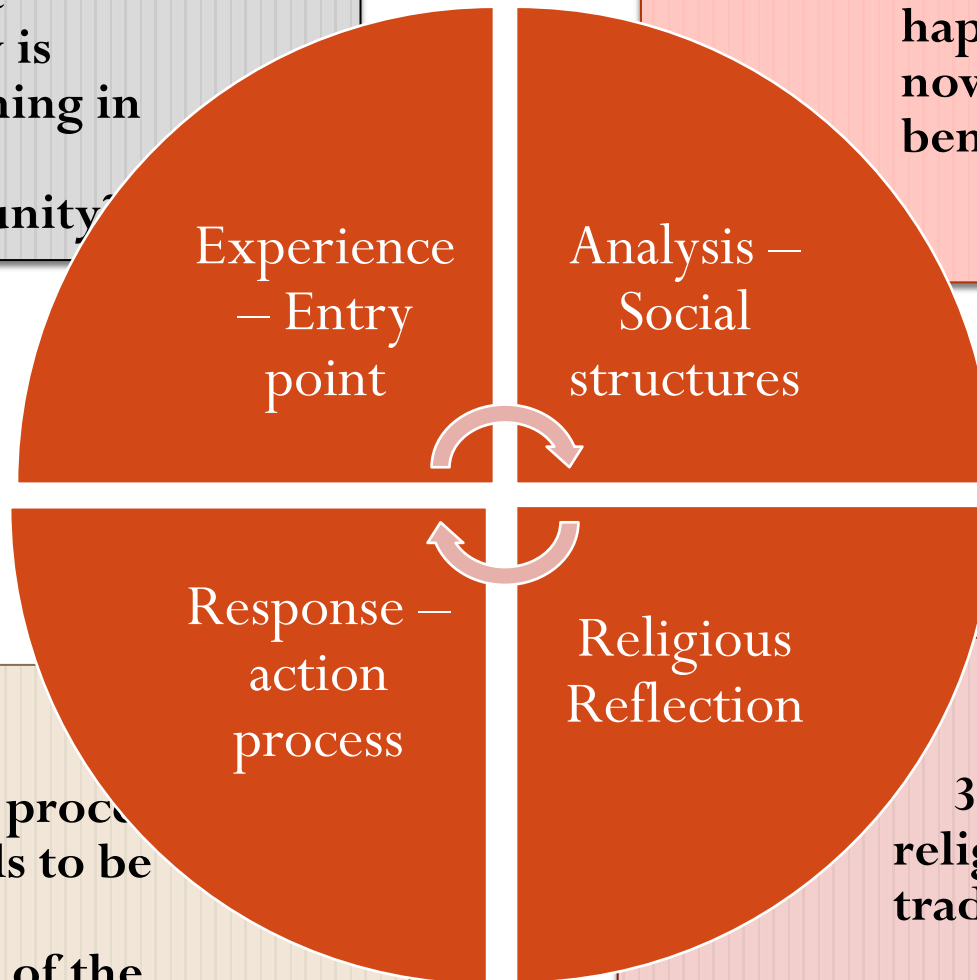
Analysis –  
Social  
structures

Response –  
action  
process

Religious  
Reflection

- 4. Action process that needs to be taken by members of the society

3. Tap on  
religious  
traditions



**ASANTE SANA**  
**Thank you**