



# RISK PERCEPTION, COMMUNICATION AND MANAGEMENT

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## A CASE STUDY OF FOSU LAGOON, GHANA

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# Outline

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Brief Introduction

Methodology

Results

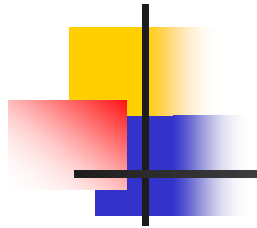
Discussion

Recommendation



“To the rich fishing is a passion,  
to the poor, it is survival”





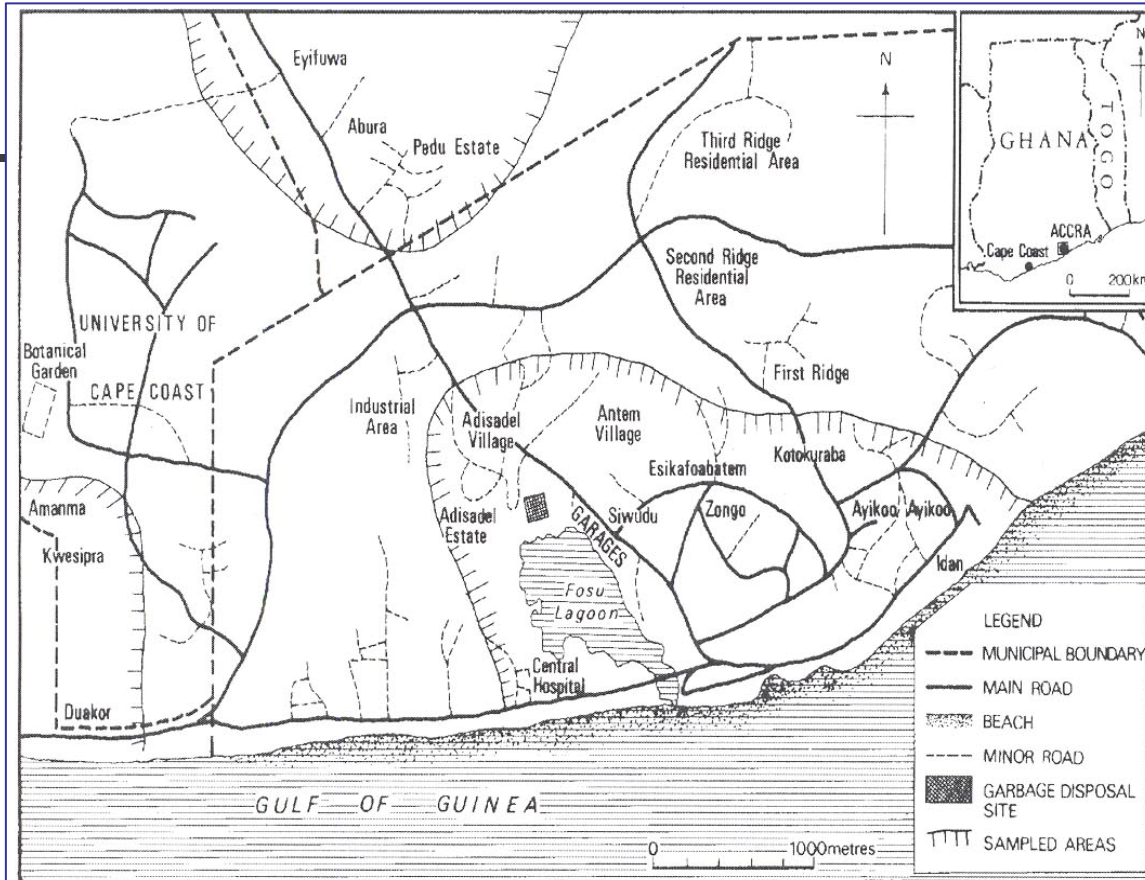
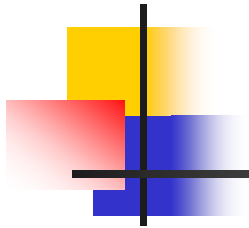
Ghana



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- ★ Capital City
- ★ Regional Capital City
- ◆ Significant City
- Important City - Town
- Attraction - Landmark
- River
- ▲ Highest Point



Source: Survey of Ghana.



## Introduction Cont'd

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- Objectives

- Examine fish consumption and risk perception of fishermen in the Fosu Lagoon

- Research Questions

- 1. How do fishermen perceive risk in relation to eating fish from a polluted lagoon?

- 2. What level of knowledge do fishermen have that may influence their decisions about eating fish from the lagoon




# Methodology

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- Study site and sample  
Siwudu
- In-depth Interviews  
20 fishermen with knowledge about the history and fishing in the lagoon
- Survey Questionnaire  
120/132 fishermen (response rate 91%)  
SPSS Version 12 was used for analysis

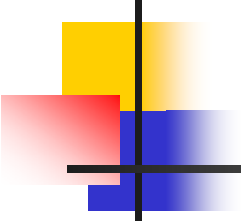




Results: Table 1: Selected Demographics of fishermen (N=120)

	Percent (%)	No of fishermen
<b>Age</b>		
21-30	17.5	21
31-40	30	36
<b>41-50</b>	<b>40.8</b>	<b>49</b>
51-60	7.5	9
61-70	4.2	5
<b>Ethnicity</b>		
Fante	87	104
Hausa	13	16

Results Cont'd: Table 2: Percent fishermen  
consuming fish daily by  
education and ethnicity



Education & Ethnicity	Number of fishermen	% consuming fish daily
No formal	22	100.0
Basic/primary	62	90.3
Middle/trade	36	100.0
Fante	104	94.2
Hausa/ frafra	16	100.0





# Factors Influencing fishermen Knowledge and Beliefs

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- **Informal education**

- no information about health risks of eating the fish
- relied on information handed down from generation to generation

- **Personal experience**

- Sensory characteristics

- **Tradition**

- honoring the gods so they bless them with bumper fish



## Sources of Pollution

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- Wrong siting of facilities

- building the district hospital close to the lagoon; garages

- Poor sanitation facilities

- lack of toilet facilities for individuals living close to the lagoon

- lack of refuse collection system



# Management and Conflict of Interest

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- Government versus fishermen
  - Tourist attraction, food, income and tradition
- Public participation
  - building of bridge without consulting/involving fishermen
  - use of indigenous knowledge to help build the bridge



## Discussion

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- Similar to other research involving anglers from US perceived risk was low
  - Beehler et al. (2003); Beehler et al. (2001); Burger et al. (1998); May & Burger (1996)
- Management & conservation of Lagoon
  - taboos, cultural practices



# Indigenous versus Science Knowledge

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- Education

- mixing indigenous knowledge and science

- Management of physical & chemical environment of the Lagoon

- use adaptive management





## Discussion Cont'd

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- Organization for Economic Cooperation and Development (OECD) (1980)
  - oxygen demand of a ton of mineral oil equals sewage generated by 40,000 persons
- Anthropogenic load (heavy metals, PAH)
  - garage inputs Cd, Ni and PAH
  - residential area inputs Mn and its associated PAH



## Conclusion

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- Fishing is a means of survival for the study population contributing to lower perceived risk
- The value of fishermen's understanding of the environment and fishing practices may not be enough to help reduce their exposure to risk of eating polluted fish.
- Therefore educational programs based on the importance of tradition, experience and scientific information may be an appropriate intervention



# Recommendation

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- Decisions about the lagoon and management of its resources should involve the fishermen:
  - 1. because they may have alternative knowledge and perspectives based on their locally developed practices of resource use
  - 2. they could contribute to enhance management of the Fosu Lagoon by co-management.

THANK YOU

