



“Impacted, coping or adapting? Fishermen’s response strategies to ENSO-induced climate variability in Northern Peru”.

Badjeck Marie-Caroline
Center for Tropical Marine Ecology
Fahrenheitstr. 6, D-28359 Bremen
Germany



Introduction

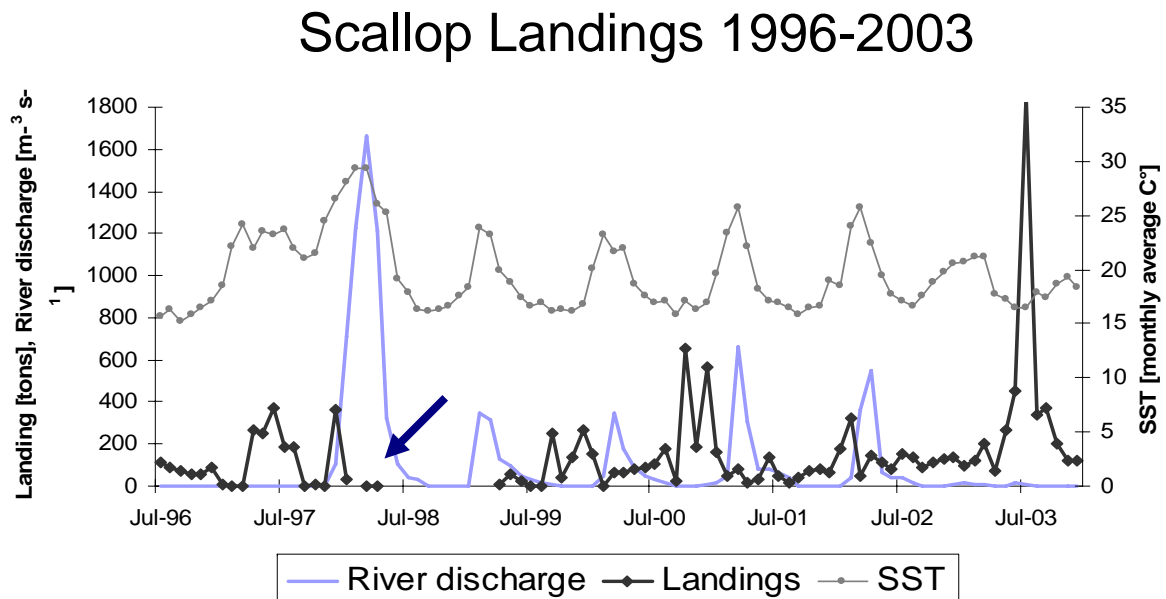
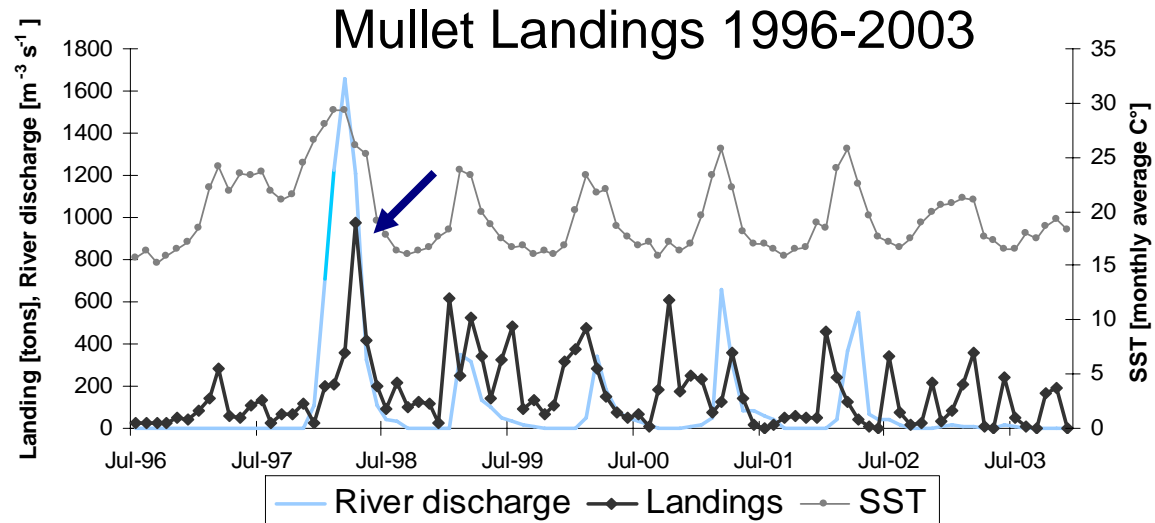
- How are fisherfolk impacted and respond to El Niño (EN) events?
- Role of institutions in DRM?

Case study: Sechura Bay

- Piura arid coastal region
- EN event: 8 since 1950
- > 40% of the pop. lives below the poverty line
- >30% of EAP in fisheries sector (1993)



El Niño: Changes in Natural Capital



Fishermen coping strategies

- Divers: migration to other fishing areas and prey-switching (octopus; shrimps)
- Non-divers: took advantage of abundance of brackish water species like mullet

Next El Niño?

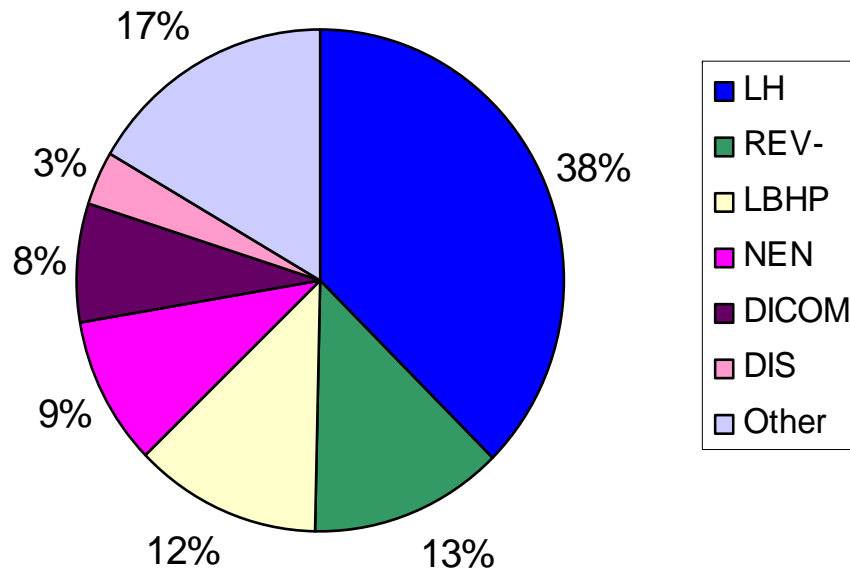
- Migration => desire to restrict access to outsiders in other fishing areas
- Scallop aquaculture (adaptation to markets) vulnerable to floods



Impact of El Niño on households

- 60% felt EN had a negative impact on their household

Effect of EN on household (n* = 395)



High acceptance of risk when it comes to housing

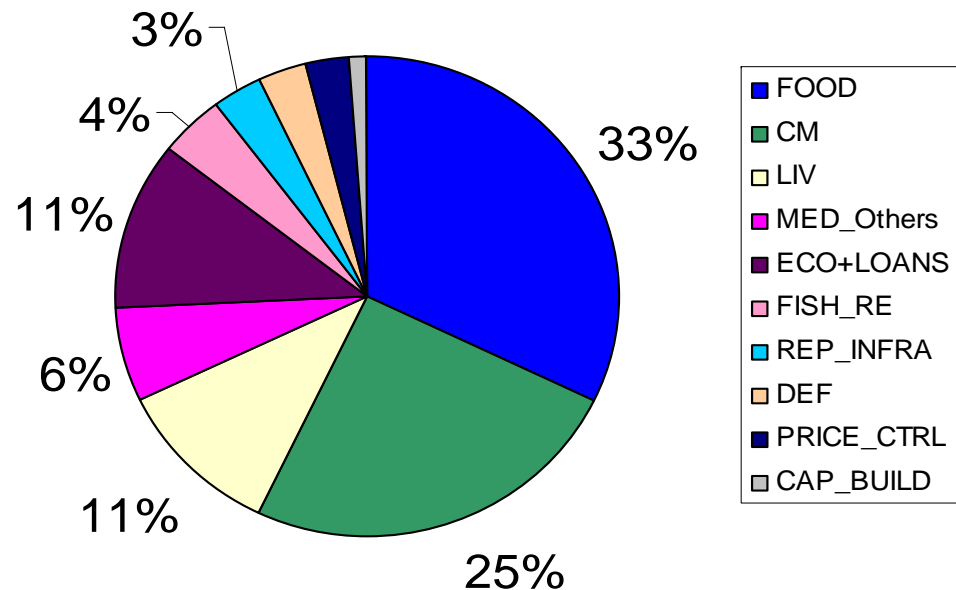


n*=total number of answers

Can households cope on their own?

- 48, 9% required emergency aid, source of aid government agencies (>60%)
- Type of aid received
 - **food (34.4%)**
 - construction material (26.7%)

What kind of aid would you have liked to receive?
(n* = 174)



n*=total number of answers

Conclusions

Fishermen:

- Differential impacts on fishing activity
- Traditional coping strategies might not hold in the future
- Risk prevention mentality absent (housing)
- Food insecurity and high reliance on government aid
- More access to credits and livelihood alternatives

Institutions:

- DRM and climate variability focus on the agricultural sector
- Aquaculture development => no risk management plan

Recommendations

Individual and households level:

- Increase self-protection capabilities
- Risk financing schemes not only for agricultural sector

Sector wide:

- Climate variability and DRM:
 - narrow sector divide between agriculture and fisheries (\$\$ and capacity building)
- Develop adaptive management plan + scenarios and models for coastal artisanal fisheries

Acknowledgements

- EU-project CENSOR (Climate variability and El Niño Southern Oscillation: Impacts for natural resources and management, contract 511071)
- Staff and students from the following institutions in Peru:
 - Universidad Nacional Agraria La Molina
 - Universidad Nacional de Piura
 - Vice Ministry of Fisheries – Piura office and IMARPE
- Fishermen from Sechura Bay
- WorldFish Center and University of East Anglia

