

Fisher Questionnaire Antsiranana Bay

Personal details

Name: Age:
Marital Status: Number of Children:
Main occupation / income: Other sources of income:

Antsiranana Bay

1. What is your main interest in the bay?
 - i. *Fishing as a way of living (commercial gain)*
 - ii. *Subsistence fishing for personal, family and village use (no commercial gain)*
 - iii. *Means of transport (using boats to access different parts of the bay that are not reachable by road)*
 - iv. *Moral obligation (to use the bay as part of their heritage)*
 - v. *Aesthetic value (as a natural area to use for recreation and relaxation)*
 - vi. *Religious value (as part of local religious and traditional customs)*
 - vii. *Conservation area (to safeguard its biological value for future generations)*
 - viii. *Tourism (as a source of income)*

Fishing practices

2. What kind of fish species do you target?

Fish (14 commercially important families):
Haemulidae (vovoko) / Lethrinidae (capitaine) / Carangidae (batola) / Serranidae (alovo)
Mullidae (mondrazy) / Siganidae (henjy) / Labridae (tabaka) / Scaridae (angotra)
Caesionidae (mahaloky) / Lutjanidae (menaeliky) / Chanidae / Acanthuridae (riadriaka)
Scombridae (thon) / Carcharhinidae (akio)

Invertebrates (2 commercially important families):
Holothuriidae (dingadingana) / Octopodidae (orita)
3. Why target species?
 - i. *Common fish – fish that are seen as abundant and widely available*
 - ii. *Highest income fish – fish that are generating the greatest income when sold*
 - iii. *Gear – gear / materials available which could restrict certain species or families they are able to target*
 - iv. *People like these fish – fish that are recognised as a popular food item villagers like to eat*
 - v. *Used to catching this species – fish that are targeted by fishers because have the best knowledge and experience to successfully target and catch them*
 - vi. *Other*
4. In what months do you fish in Antsiranana Bay?
Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec
5. What kind of fishing gear do you use?
Fishing net / Seine net / Speargun / Hook and line / Poison / Other
6. Did you change your fishing techniques in the years that you have been fishing? If yes, what changed?
7. Estimate how many kg of fish do you catch on average per catch?
0-24kg / 25-49kg / 50-75kg / > 75 kg

8. In the time you have been fishing has:
- Catch size: *Decreased / Stayed the same / Increased / Do not know?*
Fish abundance: *Decreased / Stayed the same / Increased / Do not know?*
Average fish size: *Decreased / Stayed the same / Increased / Do not know?*
9. If catch size has changed, why do you think this happened?
- No change*
 - No answer*
 - Less rain has led to more fishing instead of farming*
 - More fishers*
 - Use of Seine nets by fishers in Ramena*
 - Coral damage through spear fishing techniques*
 - Bigger octopus move to deeper water*
 - Overfishing*
 - Effects of climate change*
 - Seasonal*
 - Other*
10. Do you throw fish back in the sea? *Yes / No*
If yes, under what circumstances?
11. Where do you sell your fish?
Antsikala / Antsiranana / Antsiranana (buyer) / Ramena / Do not sell
12. Do cultural traditions influence fishing activity in the bay? Are there any *fady* (traditional beliefs or taboos) that apply to fishing?

Environmental awareness

13. In order to determine the level of environmental awareness fishers have towards the use of marine resources within the bay choose the response that best represents your opinion on the following statements:

Indicate to what extent you agree or disagree with a statement.

I agree strongly	I agree	Neutral	I disagree	I disagree strongly
1	2	3	4	5

- Only fish in specific areas*
- Use fishing nets with mesh size bigger than 4 cm*
- Communities should work together to control the size of fish catches*
- Deforestation in coastal areas should be stopped*
- Only catch large fish*
- Nothing specific, there is enough fish for this and future generations in the sea*
- Only go out fishing on certain days*
- Each fisherman should decide himself how much fish he catches*
- Prey for more fish or ask ancestors*
- The government in Diego should control the size of fish catches*
- Eat less fish*
- Only catch certain fish species*
- The head/chief of the village should control the size of fish catches*
- Get more tourists to the bay as an alternative source of income*