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RESEARCH GROUP AQUATIC ECOLOGY

Optimization of video monitoring of fish for reef assessment and management

Stijn Bruneel, Amber Schoeters, Rafael Bermudez and Peter Goethals

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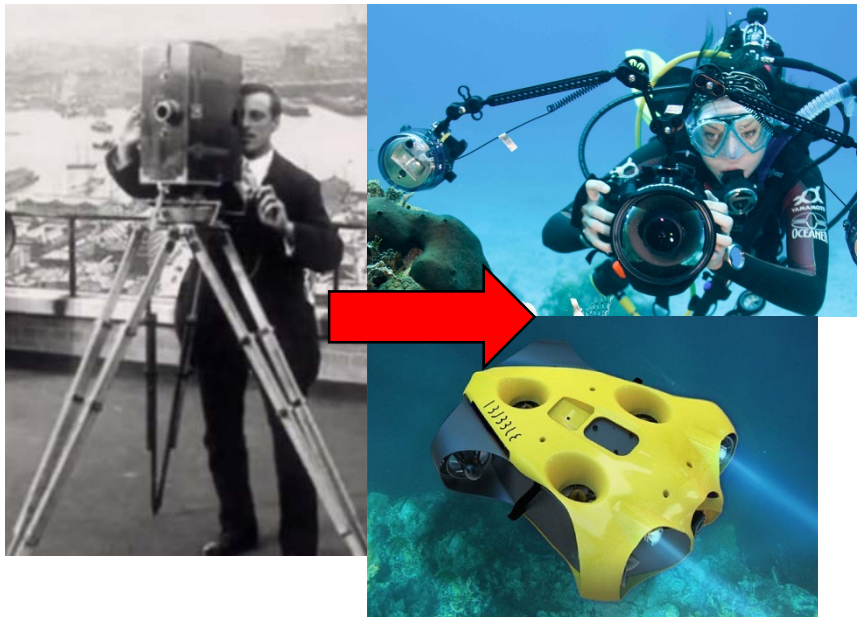
Why videomonitoring?



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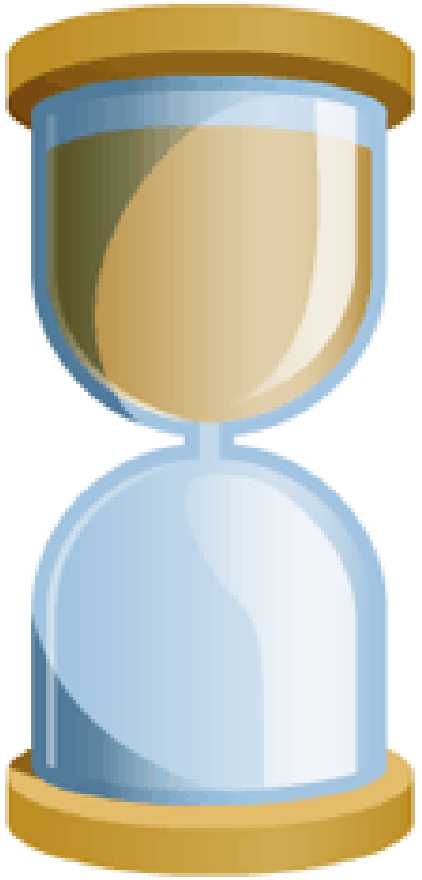
Field work



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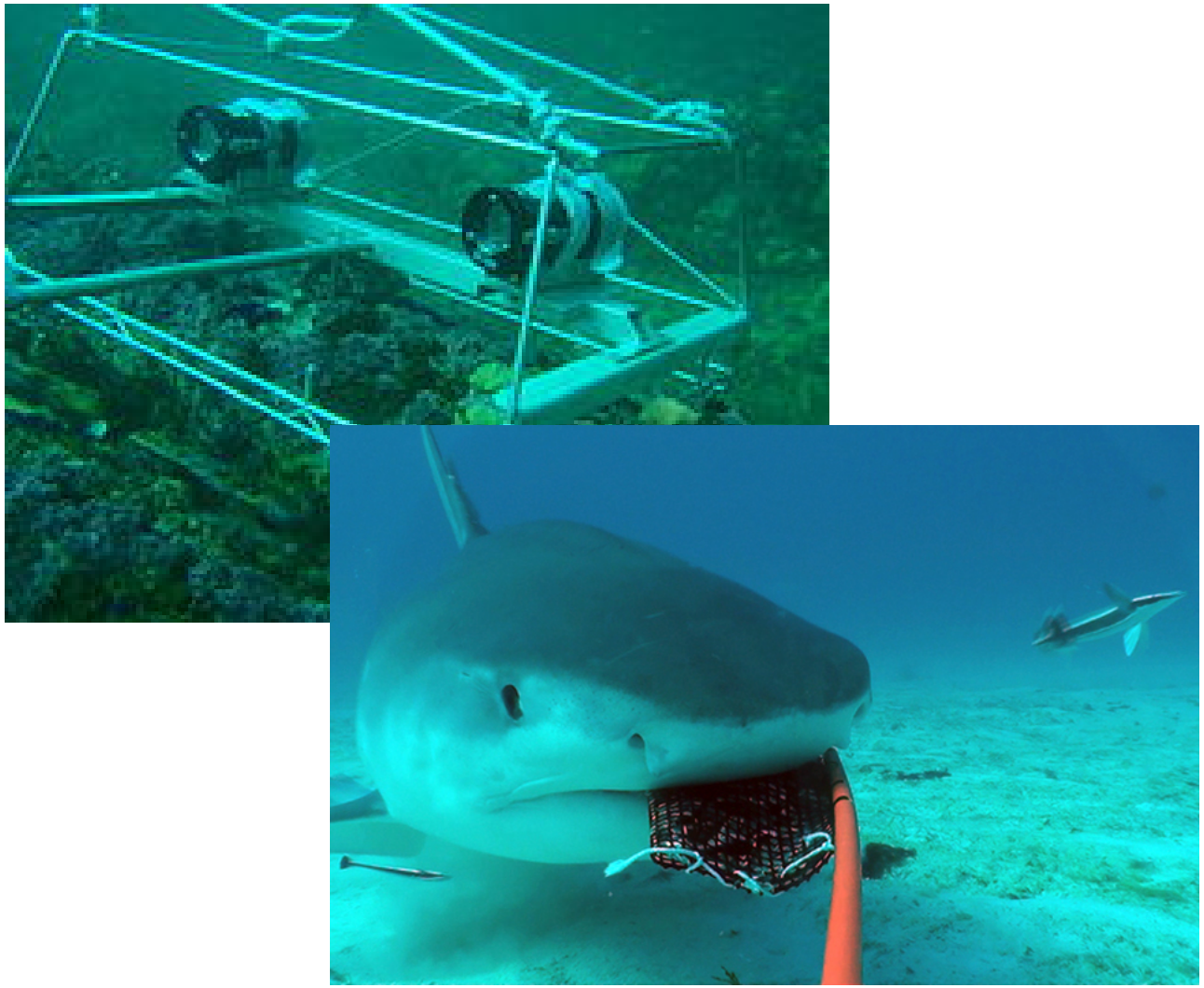

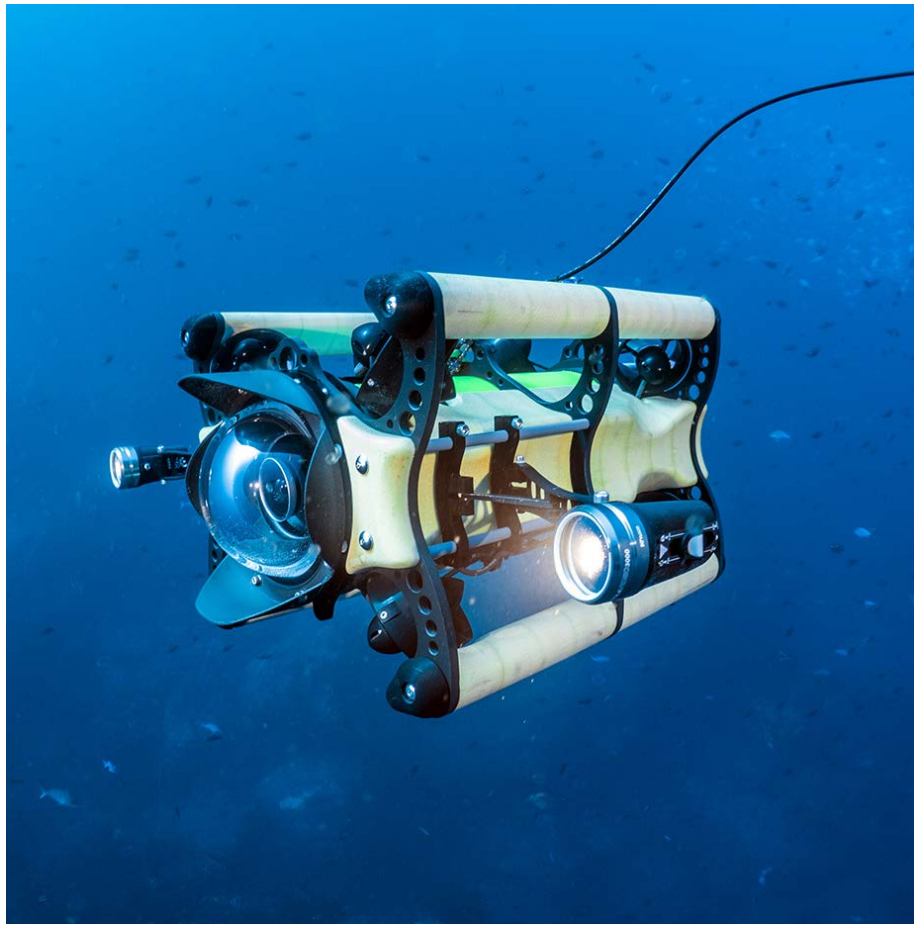

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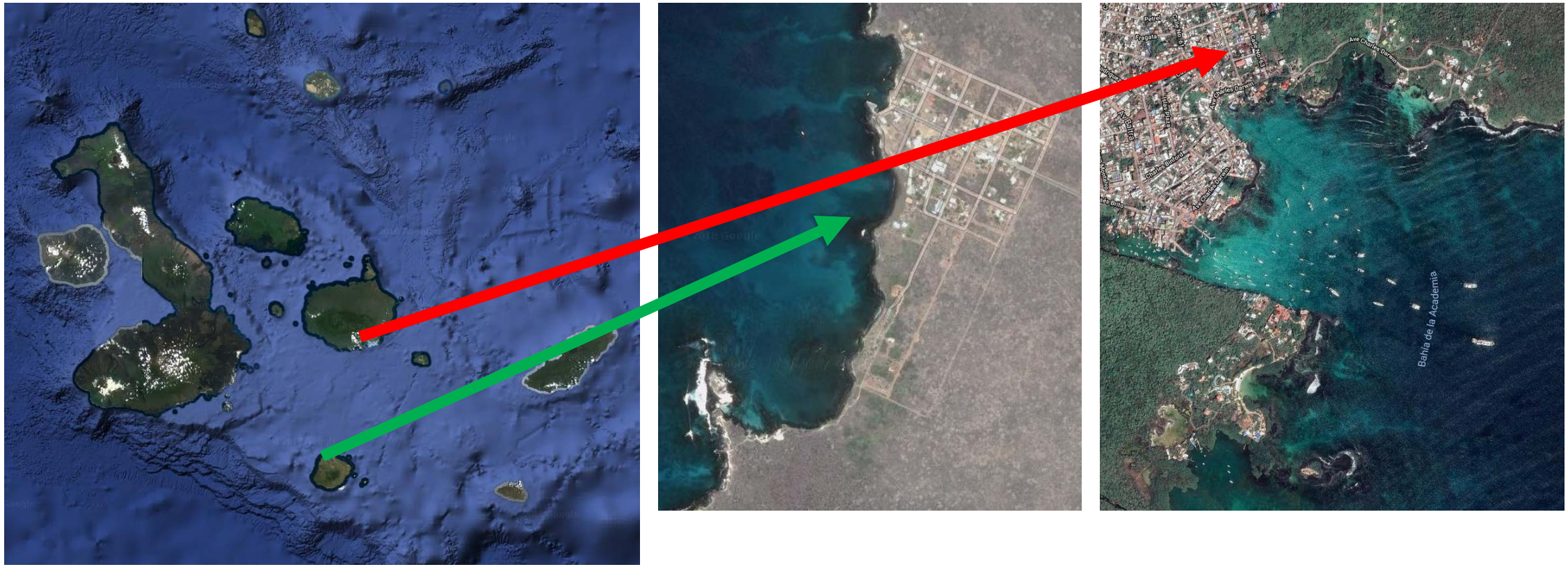
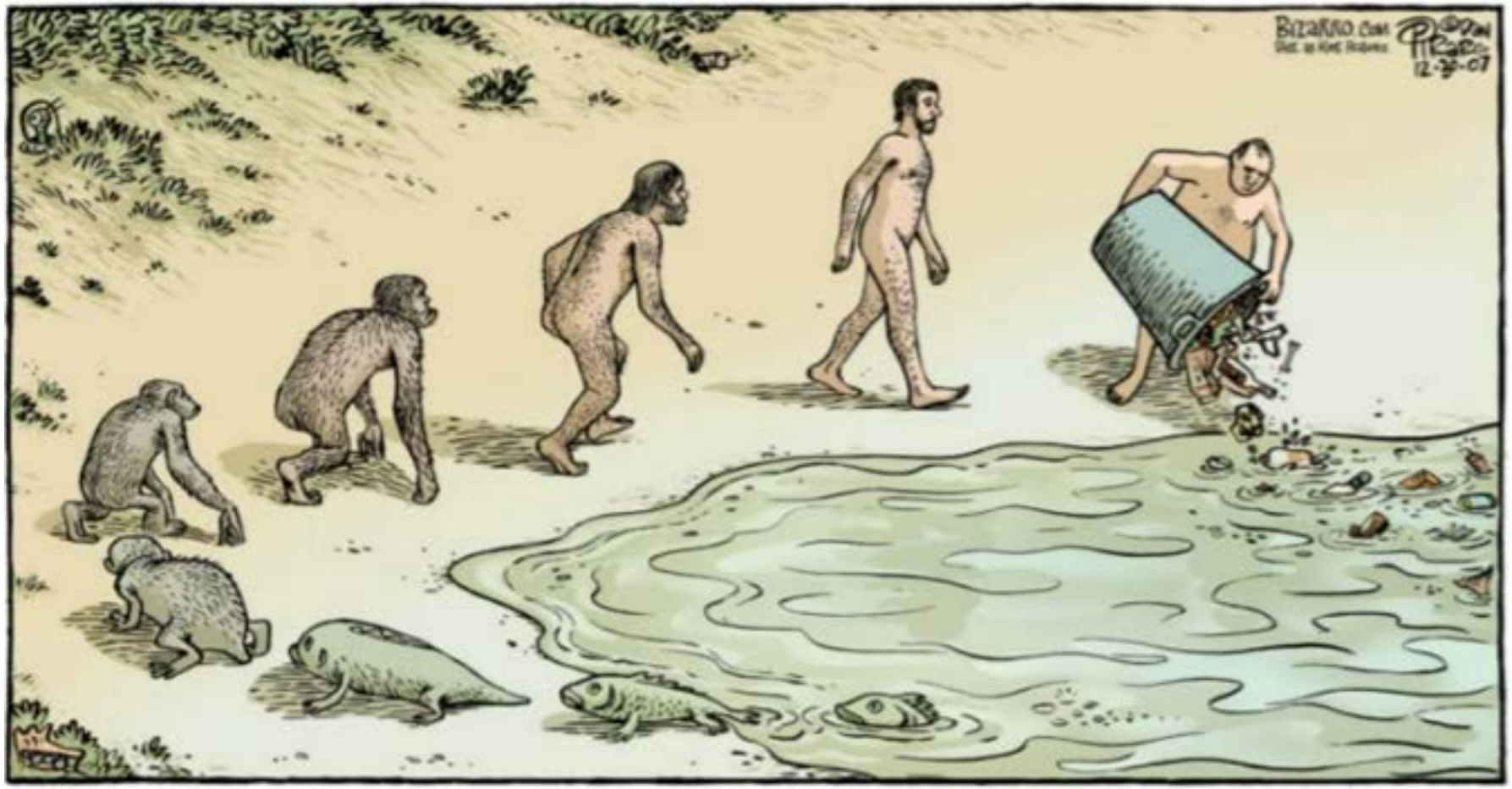
Study Area: Galapagos archipelago (Ecuador)




BIZARRO

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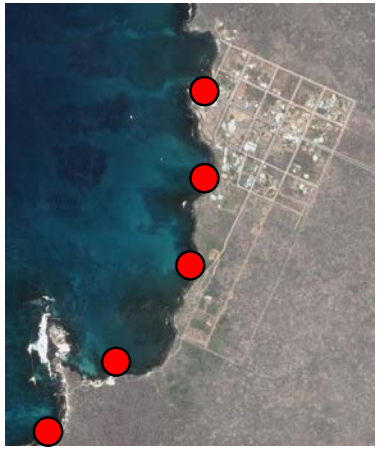
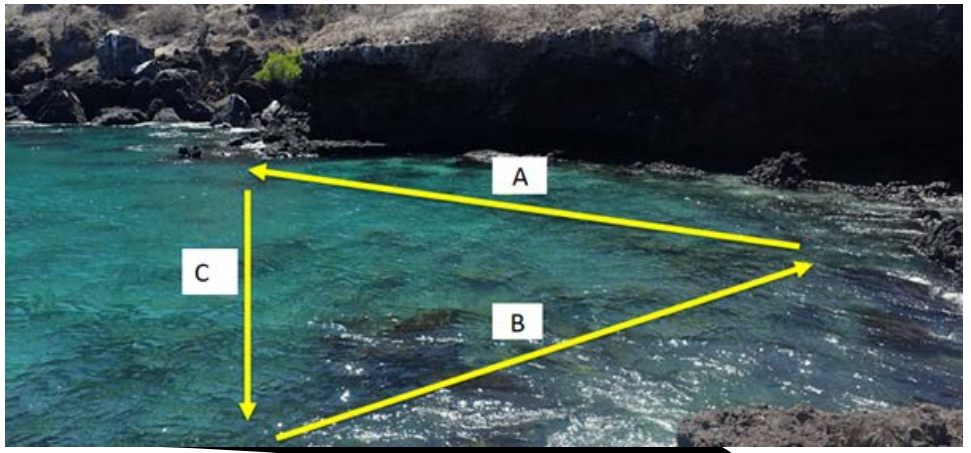
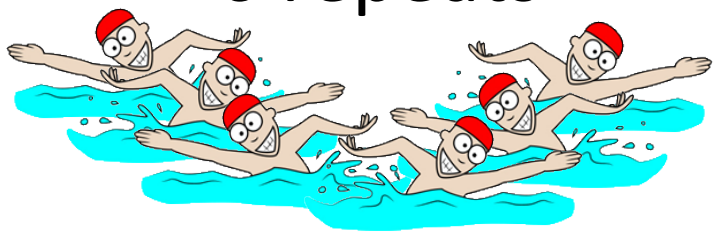


10 locations on 2 islands

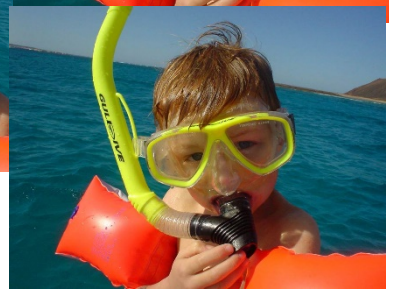
3 transects



6 repeats



3 persons



Objective

- How to get the highest precision at the lowest cost?
- How many repeats, different persons and different transects are necessary to assess fish communities?
- What is an appropriate sample distance?

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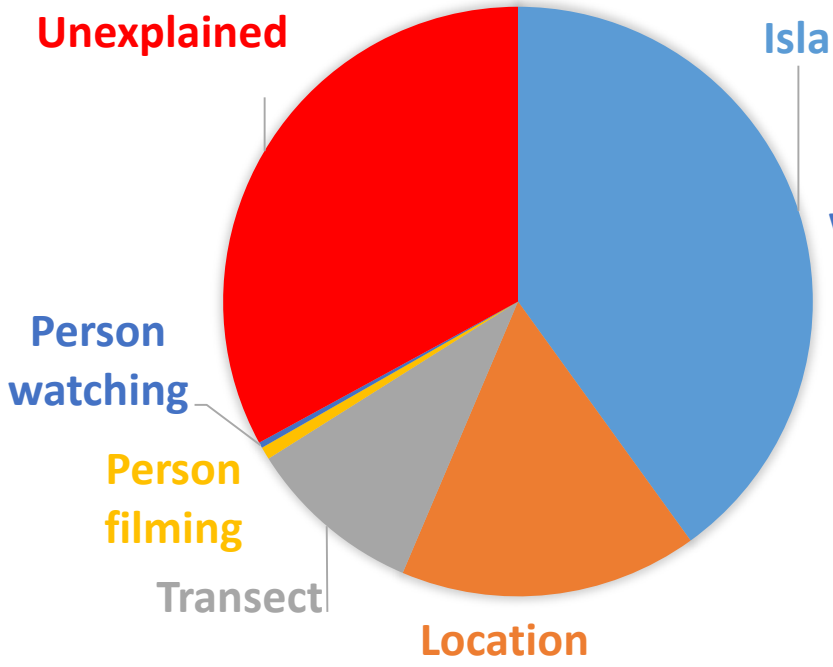
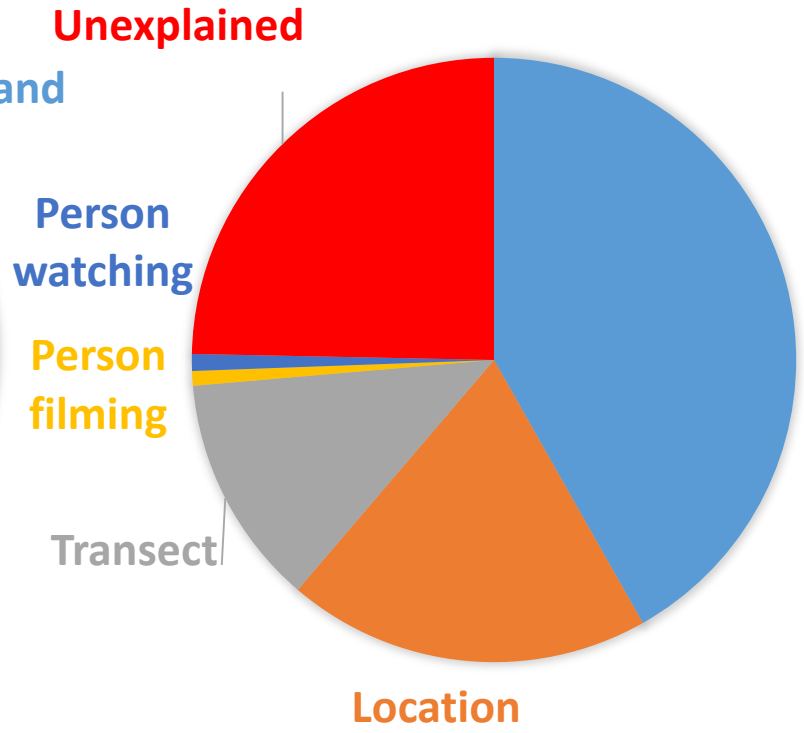
Differences in fish community composition

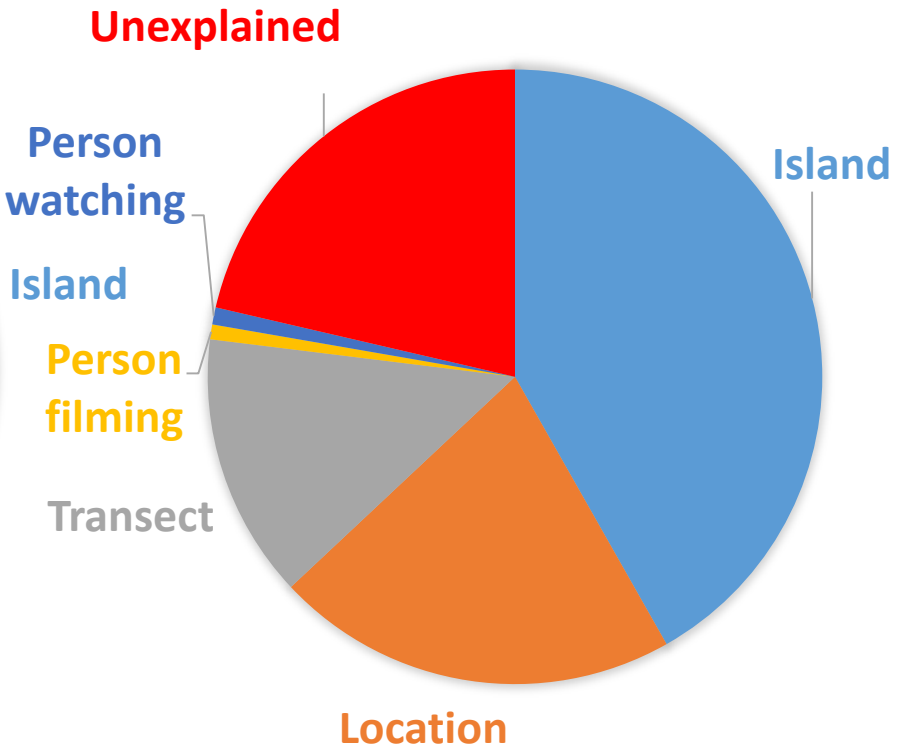
17 METER TRANSECT



33 METER TRANSECT

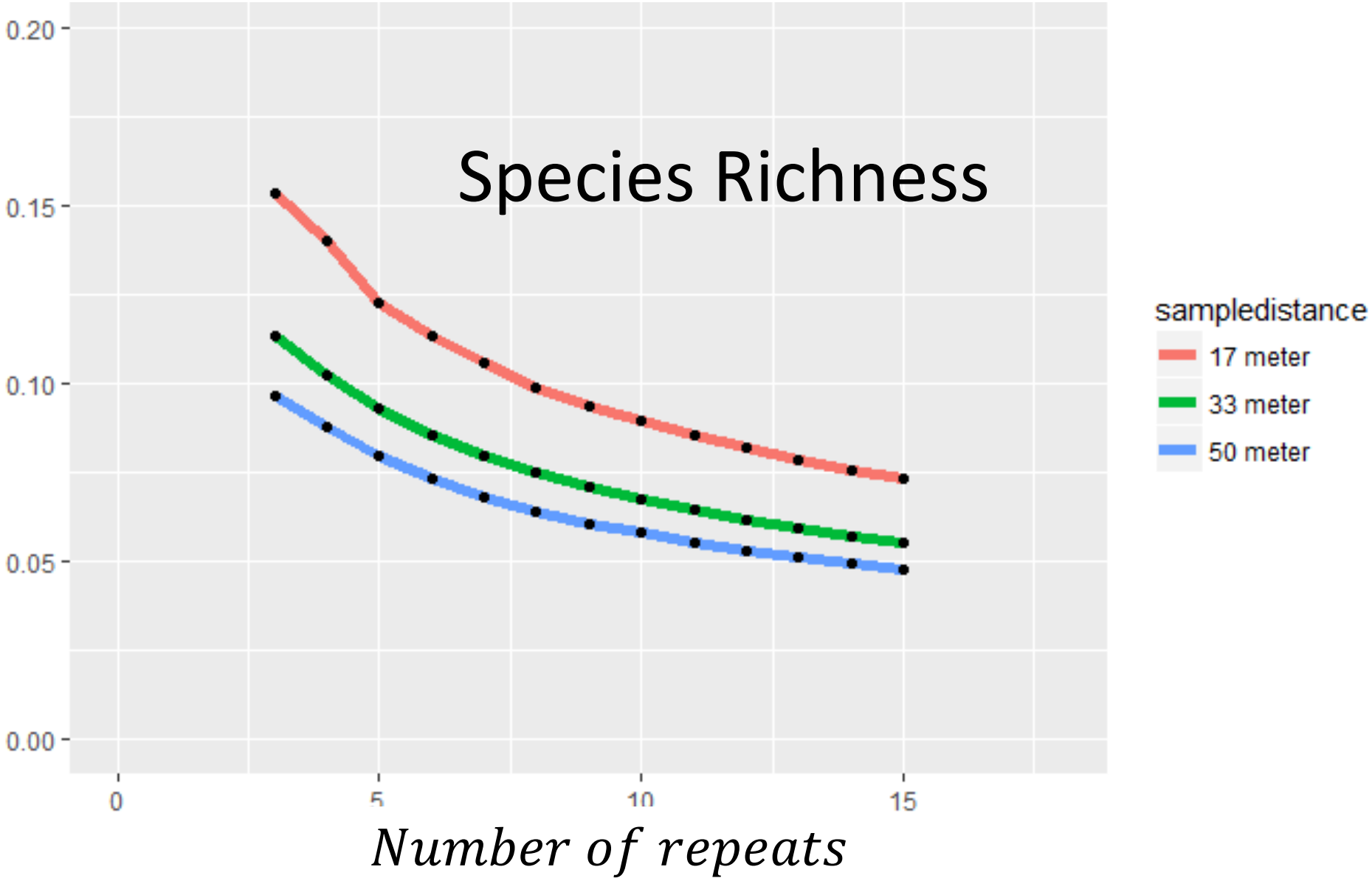


50 METER TRANSECT



Species Richness

$$\frac{Standard\ error}{Mean}$$



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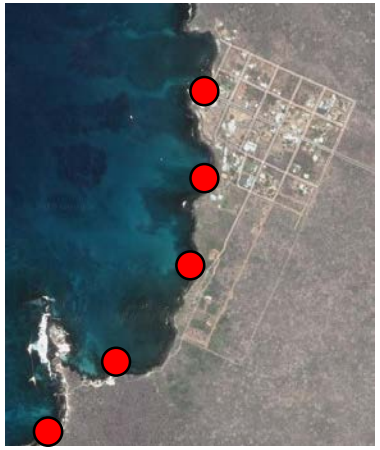

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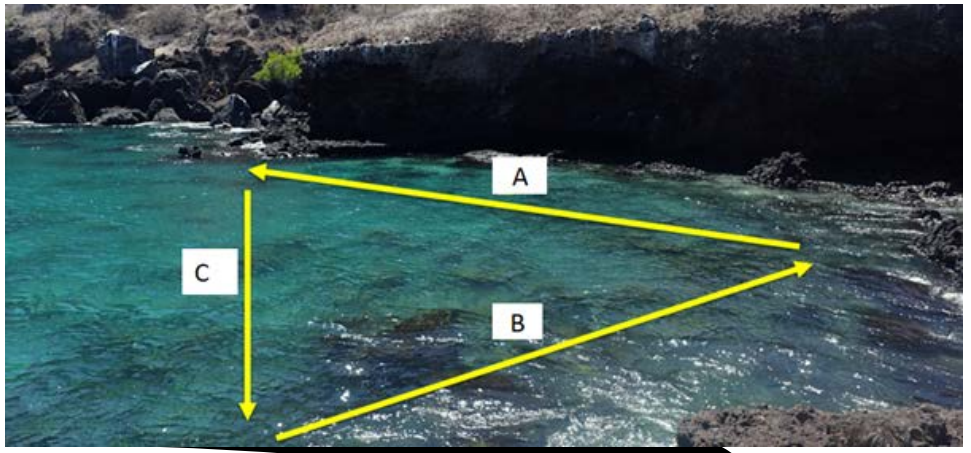

1 person

5 repeats

Conclusion

- Personal bias is negligible
- Within site variability is important
- Higher sample distance provides better insight into fish community compositions
- Benefit of time investment depends on time allocation