Marine Turtle Bycatch in FWI Net Fisheries

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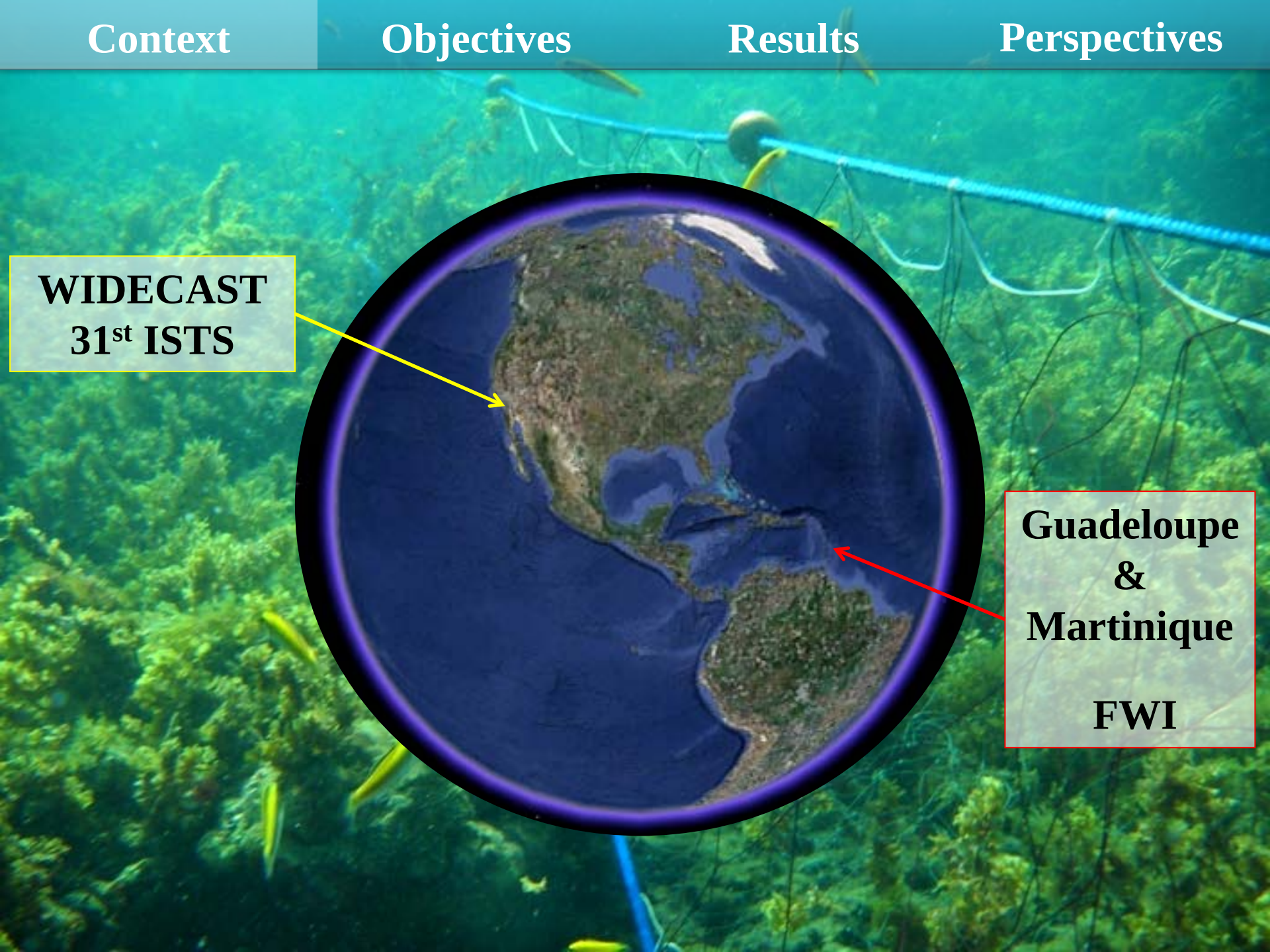
WIDECAST Annual Meeting 10-11 April 2011 San Diego, USA


WIDECAST
31st ISTS
Guadeloupe
&
Martinique
FWI

THE FWI FISHERIES

- 2100 boats
- Small scale
- Coastal (> 60%)

IFREMER, 2009

THE FWI FISHERIES

- 2100 boats
- Small scale
- Coastal (> 60%)

- Main fishing gears :

  - *Antillean traps*
  - *Line*
  - *Nets (gill & trammel)*

IFREMER, 2009

BOTTOM NETS

Fish

Gill net
(tight meshes)

Lobster

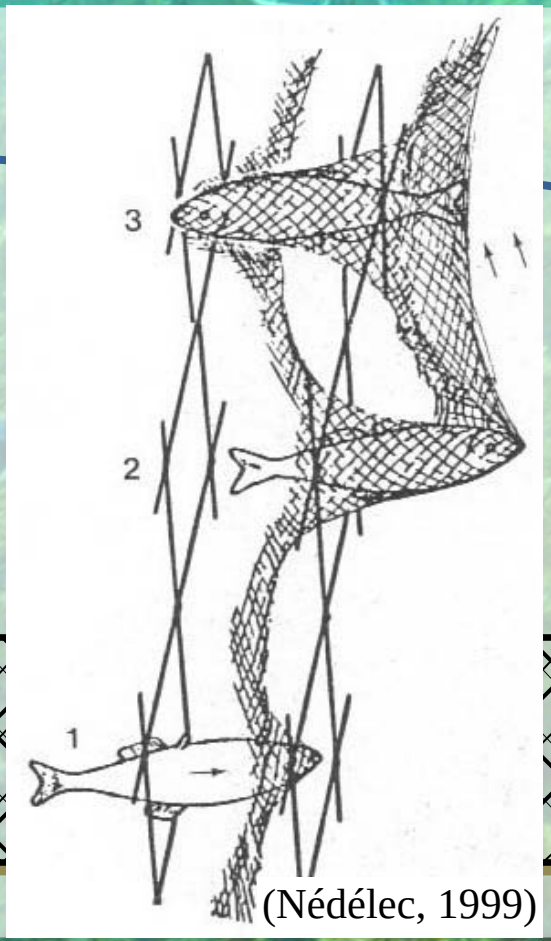
Trammel net
(tight/loose meshes)

Queen conch

Folle net
(loose meshes)

The Trammel Net

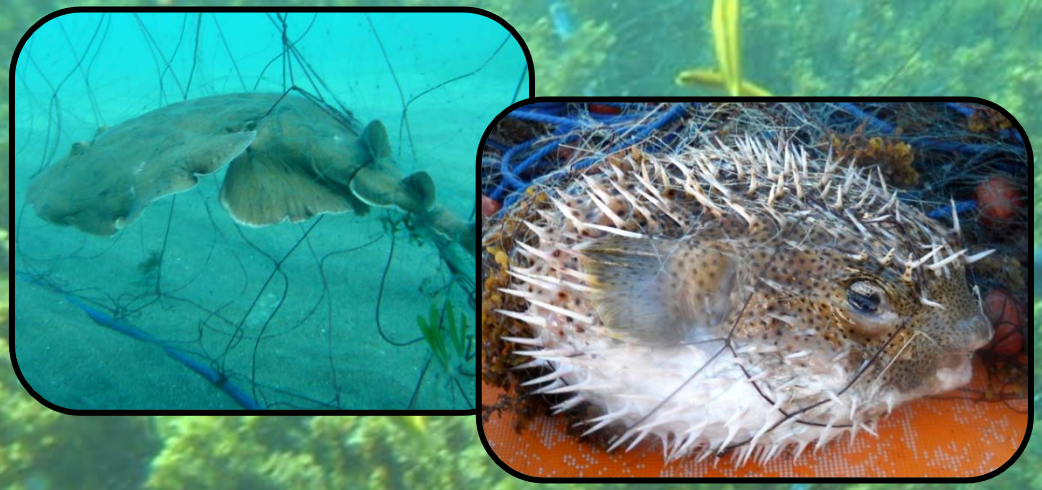
- Bottom net
- 3 layers superimposed



(Nédélec, 1999)

The Trammel Net

Discards



Bycatch

⇨ **Problems of sustainability**

OBJECTIVES

1. Determine the bottom net techniques

2. Test and compare professionnal and modified nets

   - improve the selectivity
   - maintain the productivity
   - decrease the bycatch

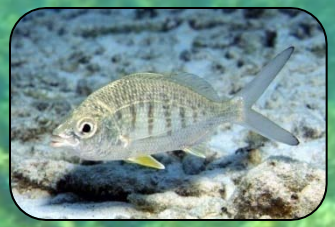
METHOD

Technique	**Height**	**Incline**
gill / trammel / folle	low / high	floats / no floats

Fish Nets

72 experimental trials

2769 individual captured ⇨ 64 species







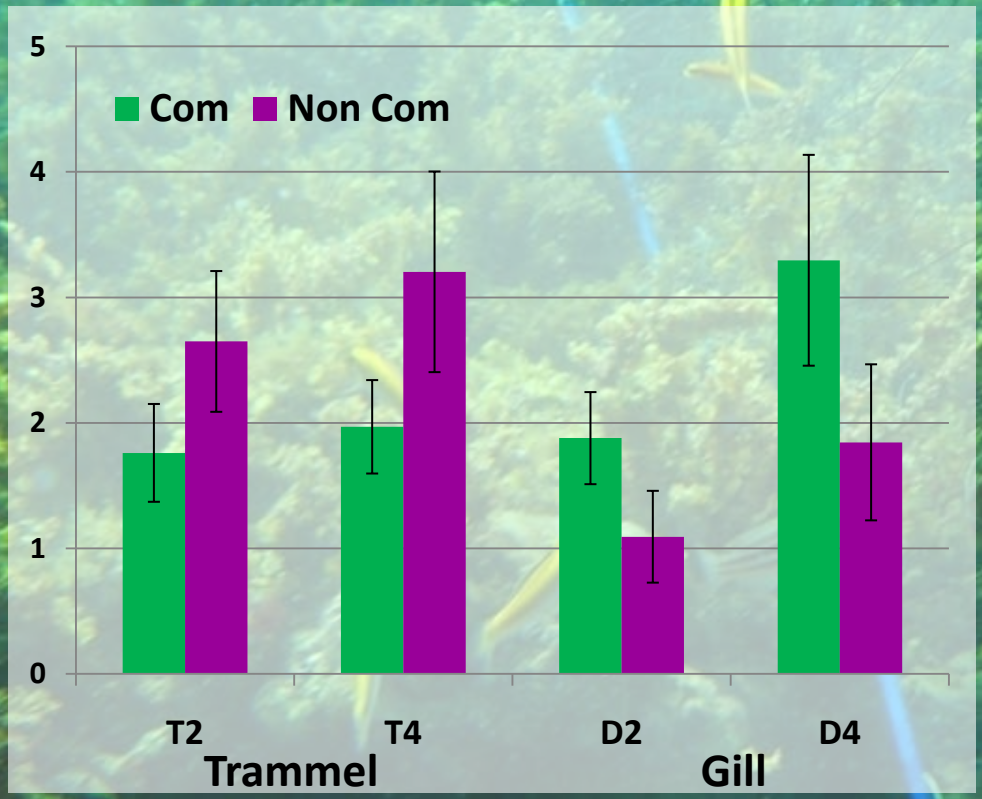




Photos : fishbase.com

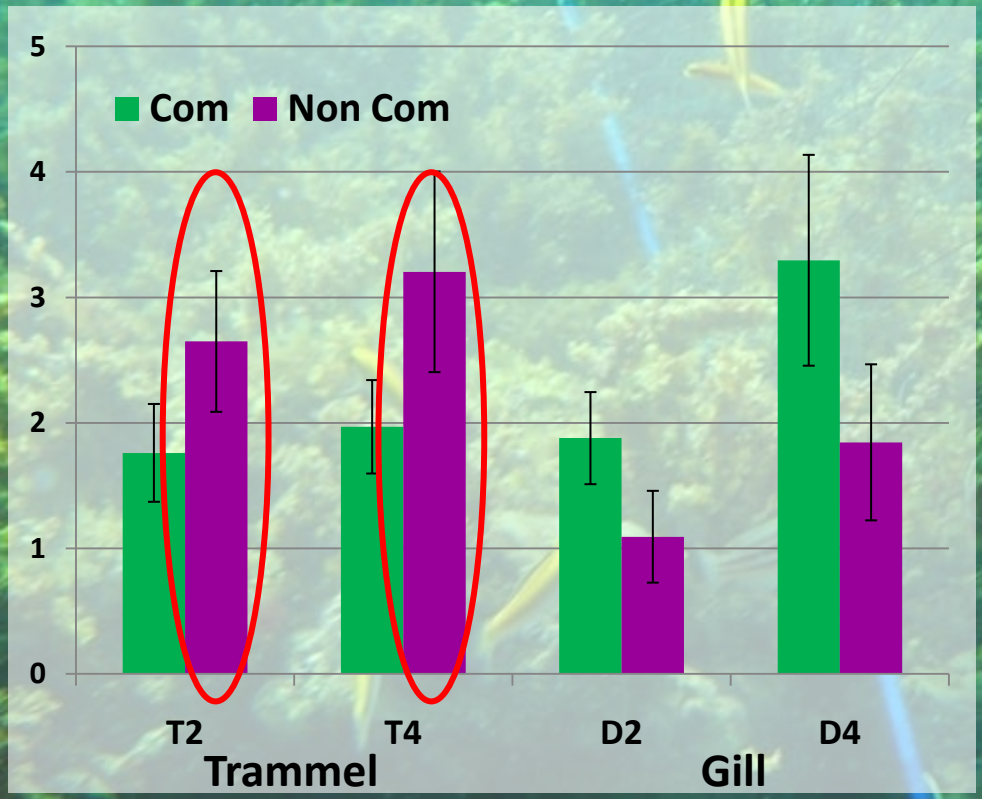
Fish Nets

Marketable sp vs non marketable



Fish Nets

Marketable sp vs non marketable

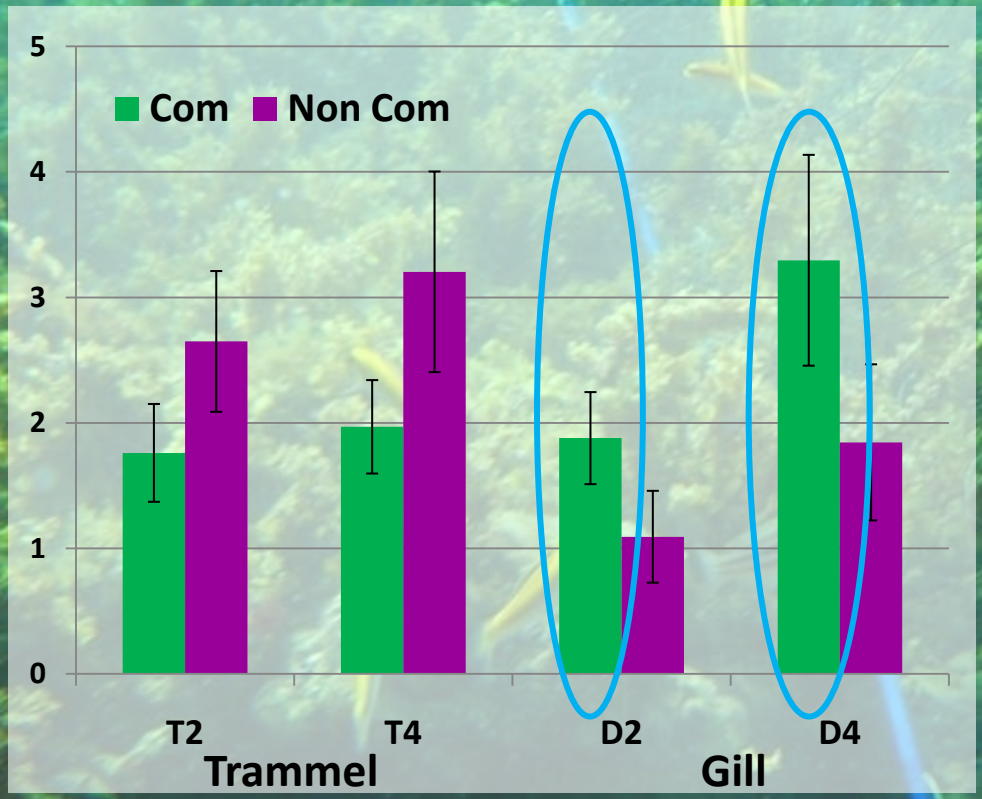


Selectivity

More discards in trammel nets

Fish Nets

Marketable sp vs non marketable



Selectivity

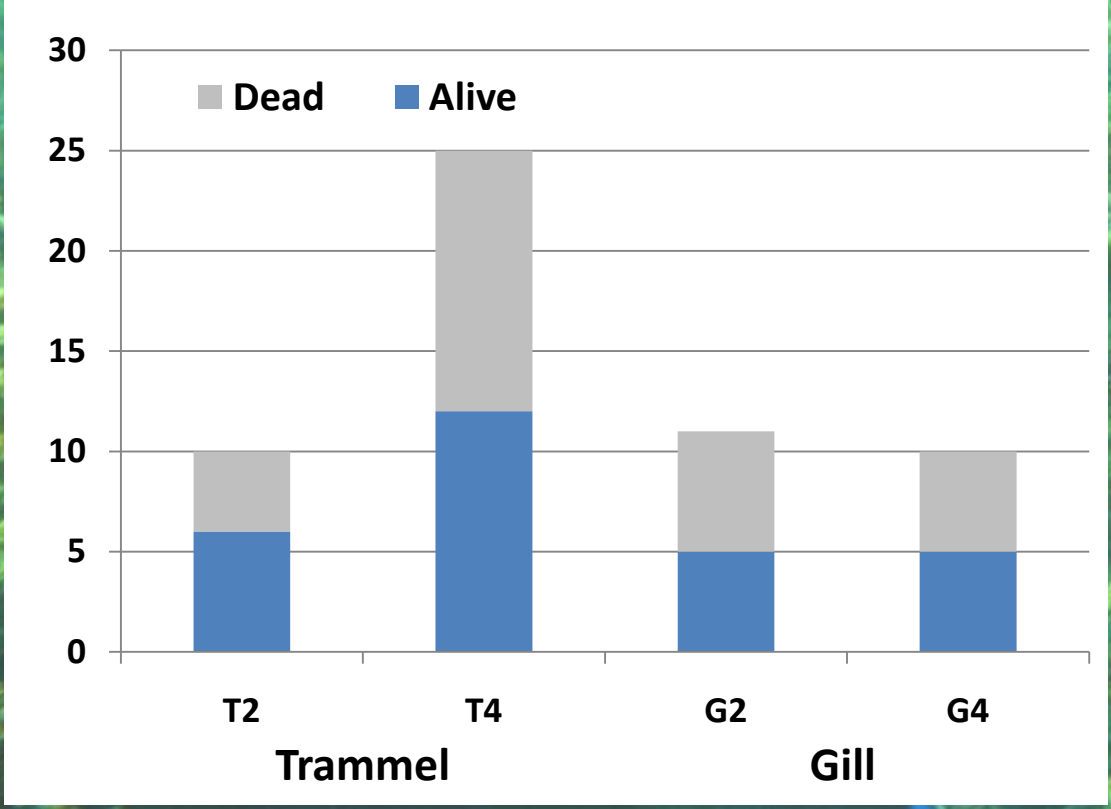
More discards in trammel nets

Productivity

Gill net more productive

Fish Nets

Marine Turtle Bycatch



50% of mortality (mean soak time: 5h)

Fish Nets

Marine Turtle Bycatch

50% of mortality (mean soak time: 5h)

High profile trammel net

LOBSTER NETS

78 experimental trials

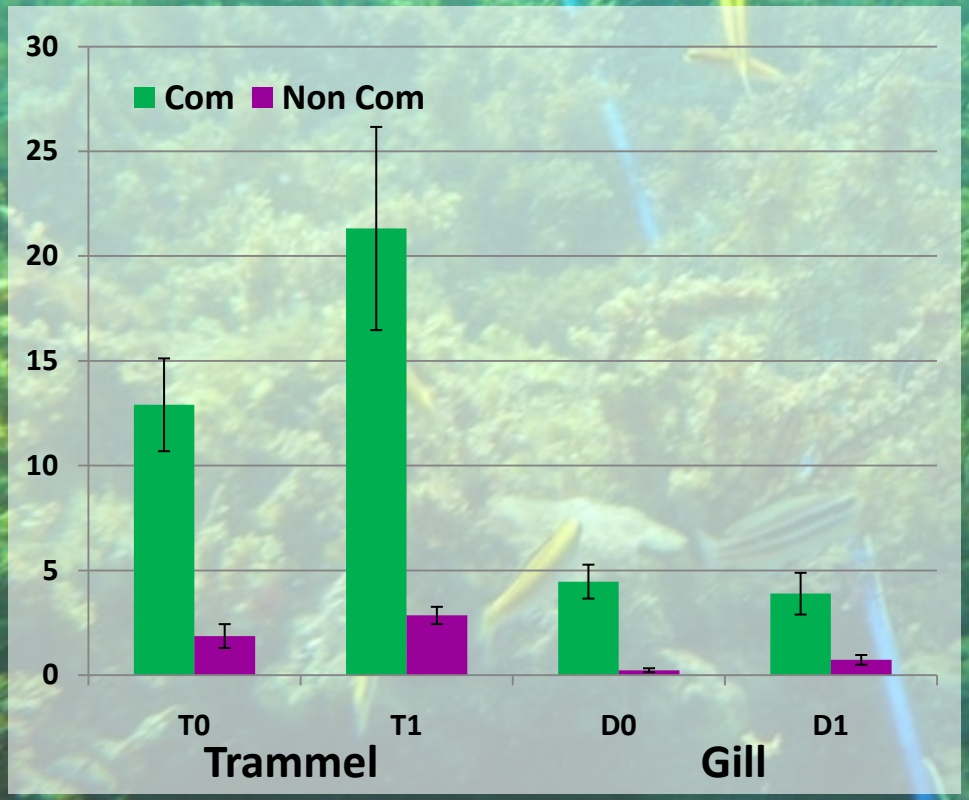
4962 individual captured ⇨ 59 species

↳ *2832 lobsters* ⇨ *3 species*

Photos : fishbase.com

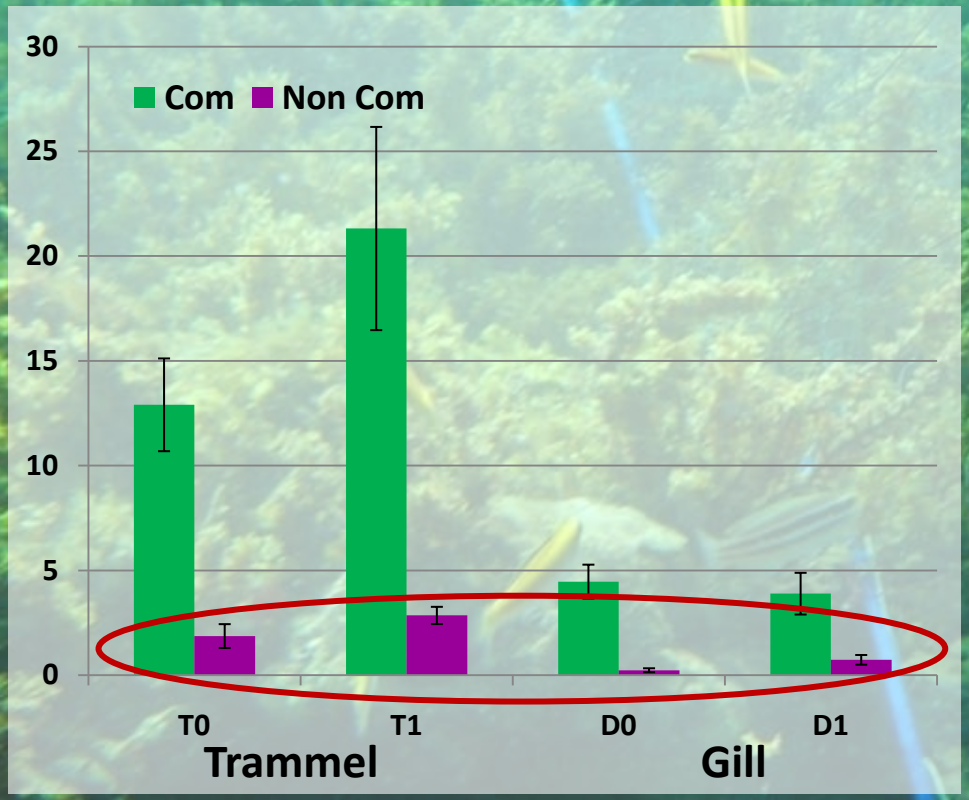
LOBSTER NETS

Marketable sp vs non marketable



LOBSTER NETS

Marketable sp vs non marketable

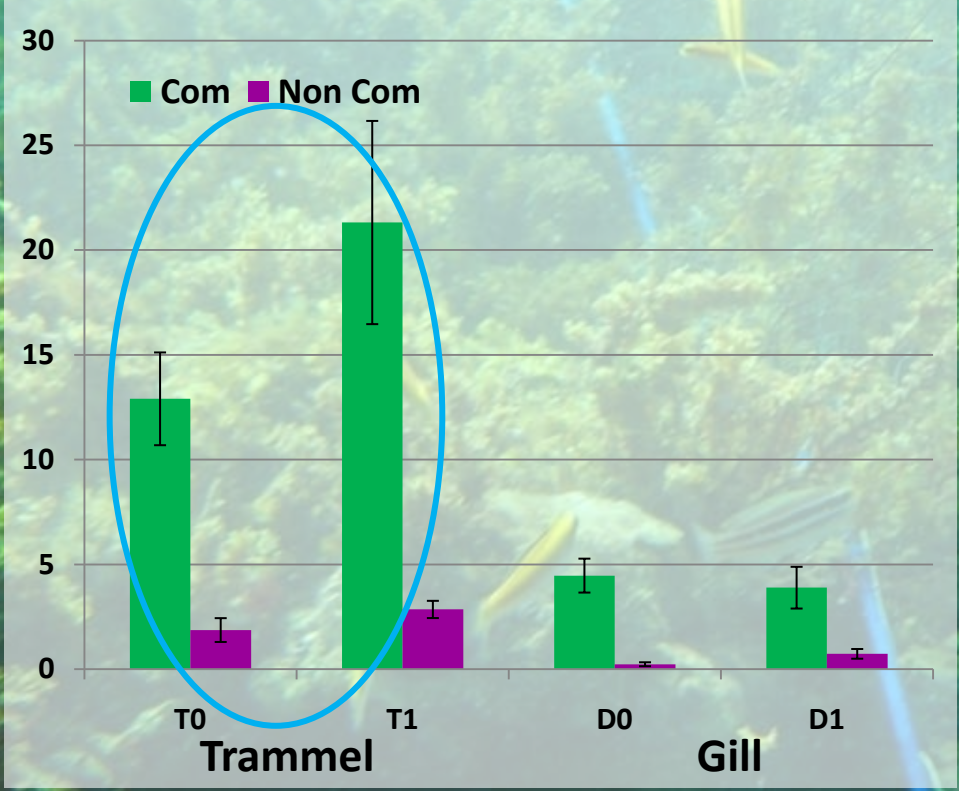


Selectivity

Few discards

LOBSTER NETS

Marketable sp vs non marketable

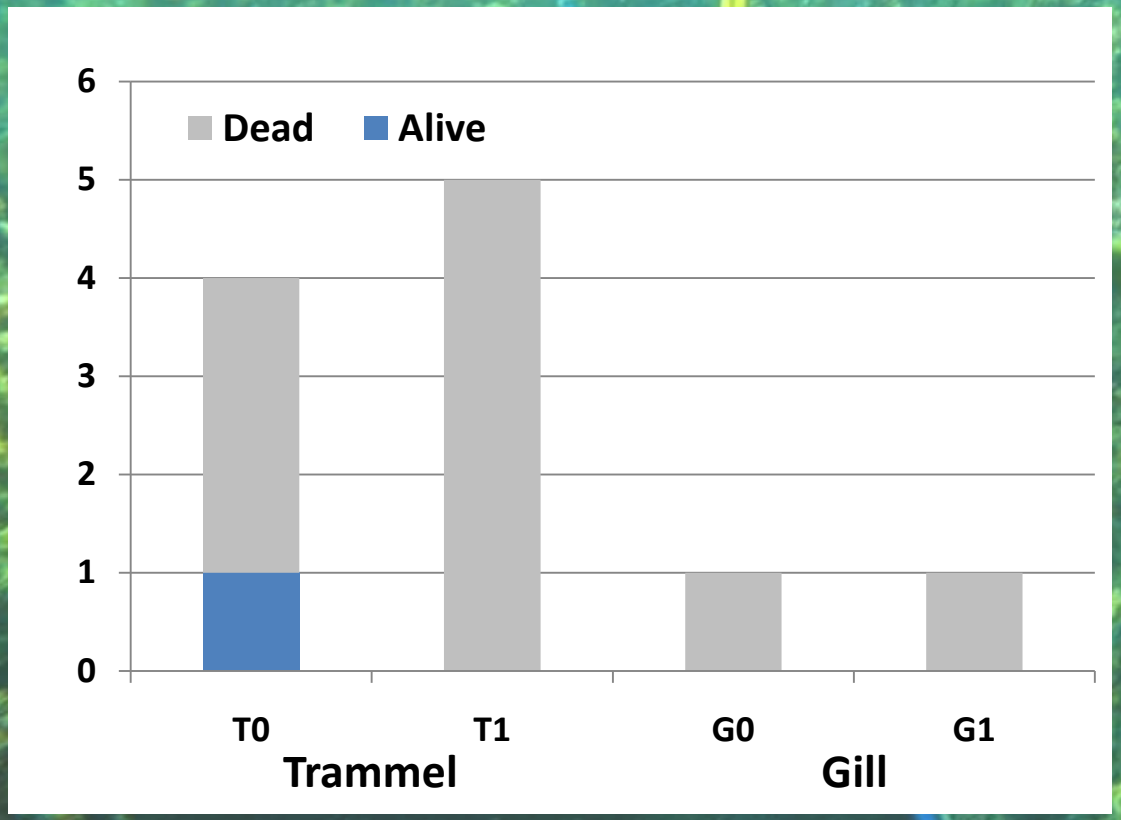


Selectivity
Few discards

Productivity
Trammel net more productive

LOBSTER NETS

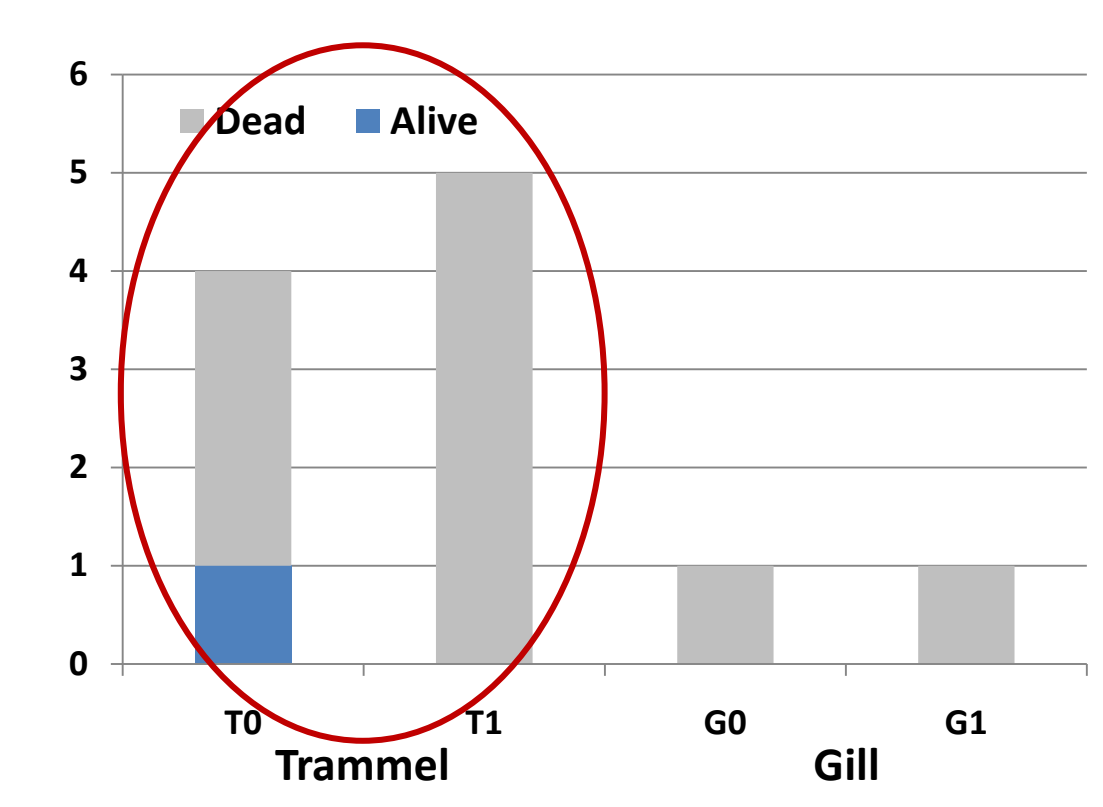
Marine Turtle Bycatch



90% of mortality (mean soak time: 13h)

LOBSTER NETS

Marine Turtle Bycatch



90% of mortality (mean soak time: 13h)

More bycatch in trammel nets

CONCH NETS

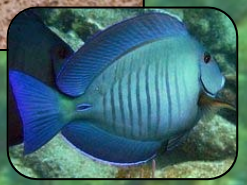
76 experimental trials

2738 individual captured





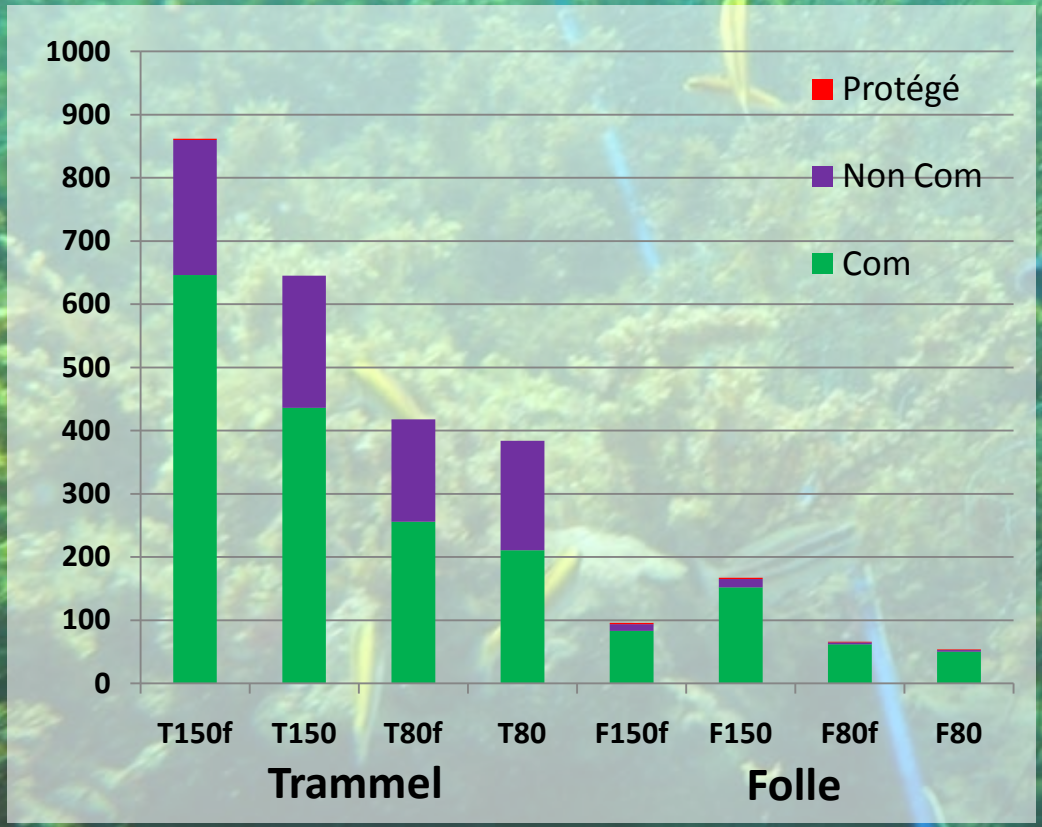





Photos : fishbase.com

CONCH NETS

Marketable sp vs non marketable



CONCH NETS

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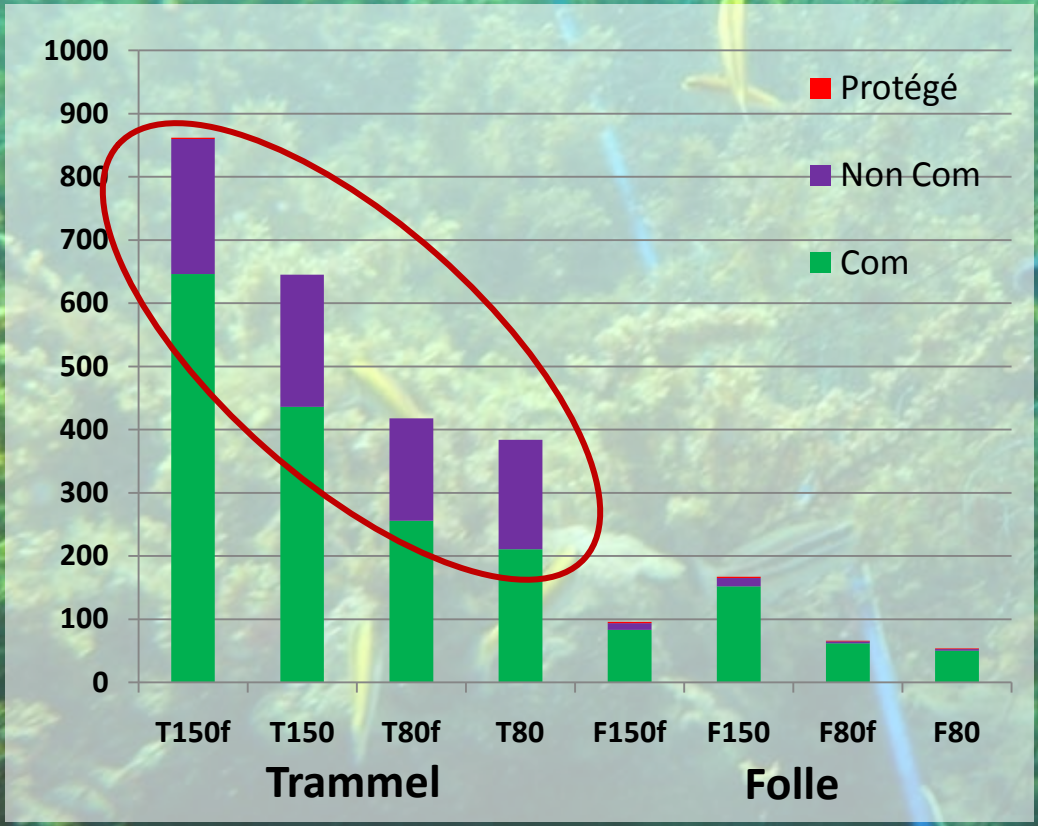
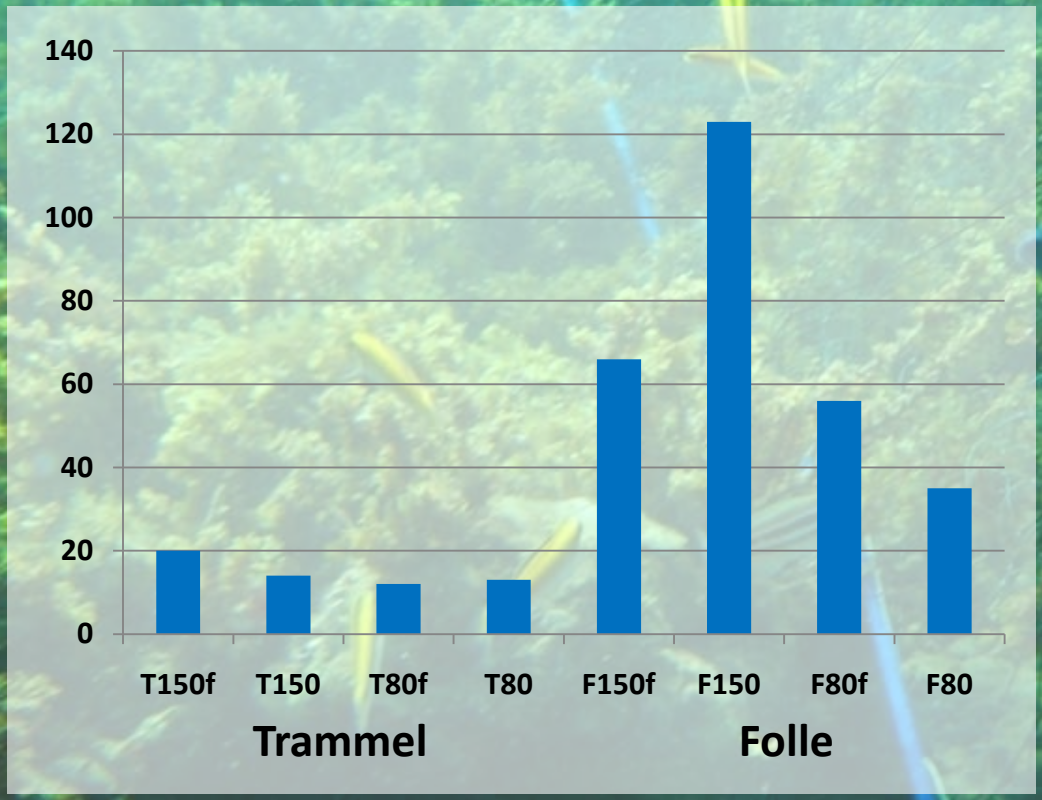


Selectivity

Trammel net non selective

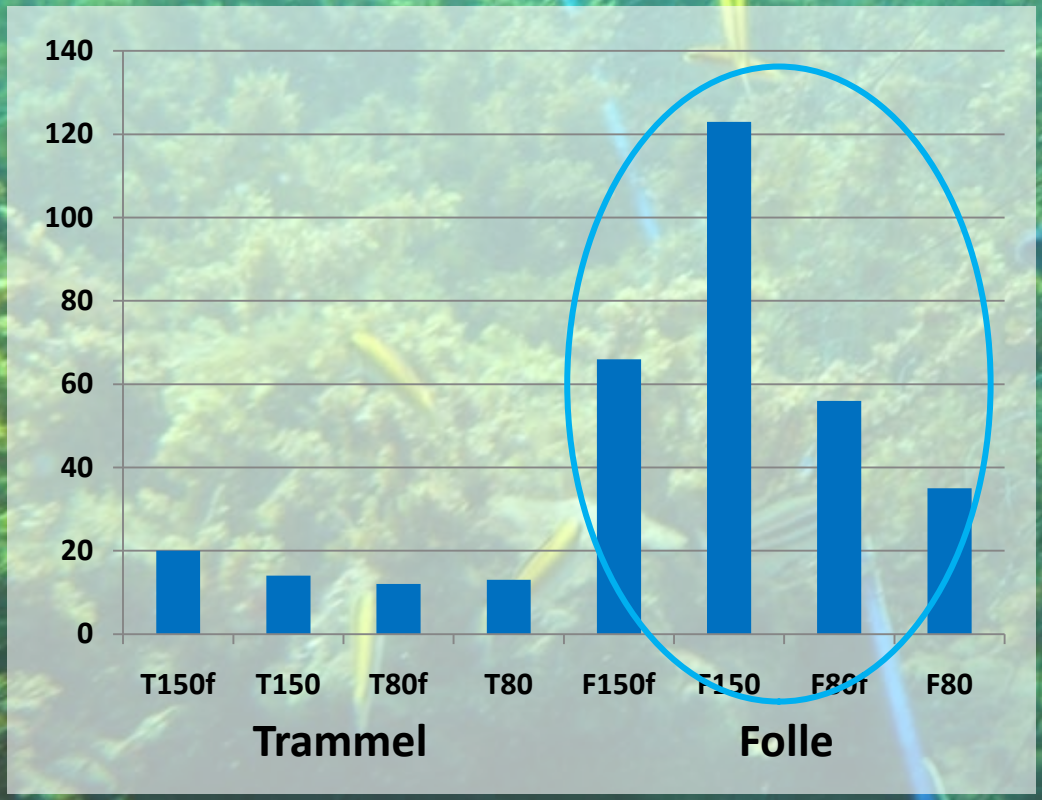
CONCH NETS

Queen Conch catches



CONCH NETS

Queen Conch catches



Productivity

Folle more selective

CONCH NETS

Marine Turtle Bycatch

94% of mortality (mean soak time: 24h)

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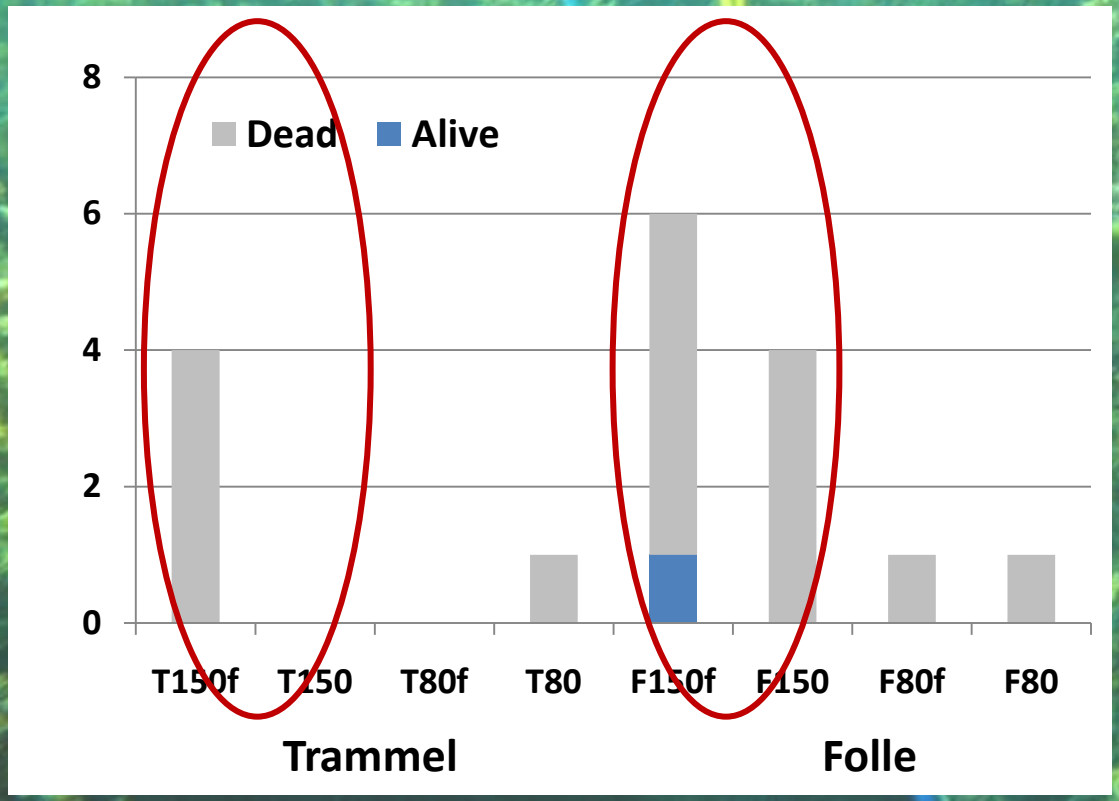
Marine Turtle Bycatch

94% of mortality (mean soak time: 24h)

Folle nets

CONCH NETS

Marine Turtle Bycatch



94% of mortality (mean soak time: 24h)

Folle nets

High profile nets

MARINE TURTLE BYCATCH

Total Bycatch

84 marine turtles (Ei & Cm) for 226 trials → 2000 turles in FWI

Mortality

54 dead turtles (64%)

Beaching

2 stranded turtles (4%)

Conclusions

Trammel net non selective

Folle nets murderous

Low profile nets interesting

Soak time < 4h

Lot of mortality but few stranding

FISHING REGULATION

Alternatives

MPAs - Soak times

Trammel net (ban?)

Low profile

Folle net

Ban ?

Sustainable Fishery

ACKNOWLEDGMENTS

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Fishermen

ACKNOWLEDGEMENTS

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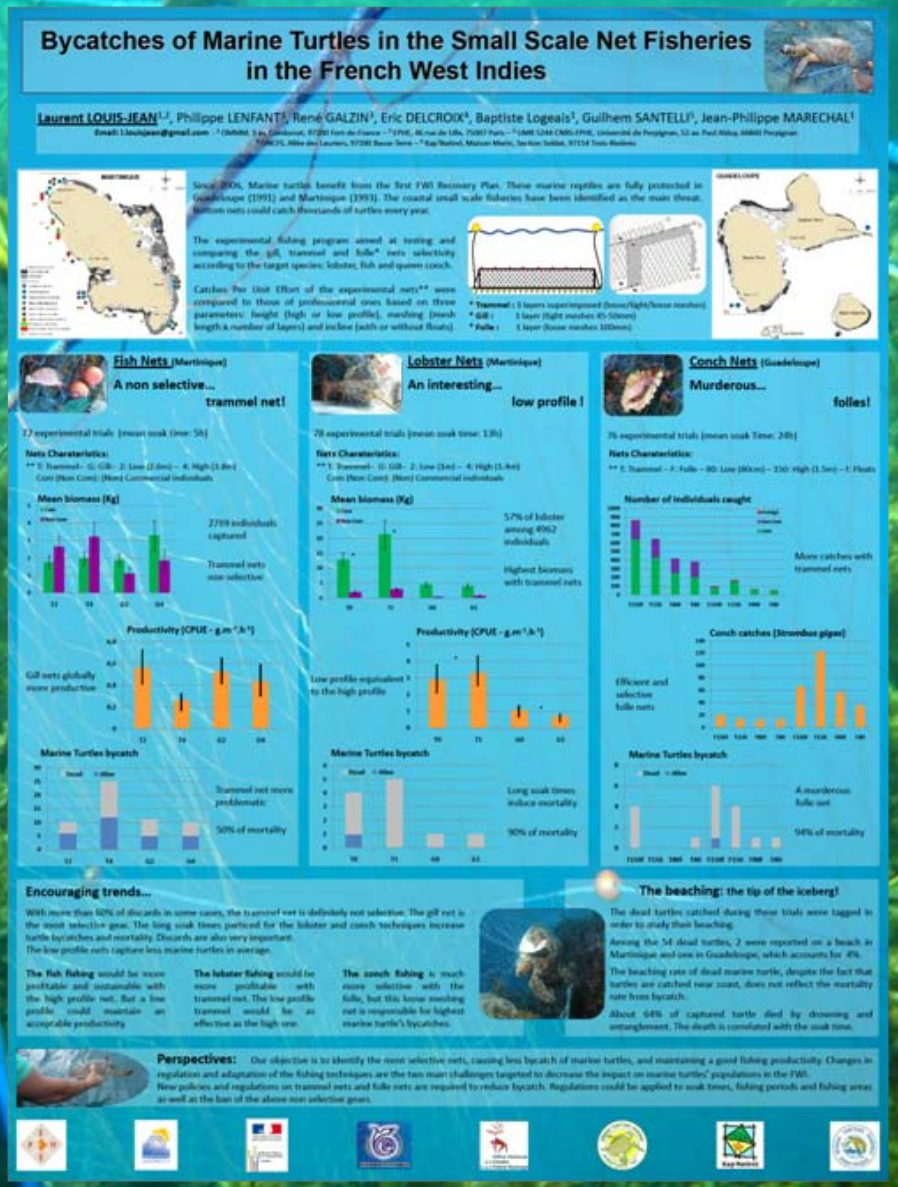


Thank you for your attention