REEF SHARKS: WHY SHOULD THEY BE PROTECTED?

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Plan de l’exposé

- Why sharks are so vulnerable?
- What is their role in the reef ecosystem?
- Quick overview on current status and protection
Reproduction - varied but not efficient

**OVI PAROUS**
Ex. Leopard shark, etc.

**OVOVI VI PAROUS**
Ex. Whale shark, Tiger shark etc.

**VI VI PAROUS**
Ex. Grey reefer, lemon shark, etc.

Oophagy, cannibalism
130 offsprings
1 offspring

Role of Mangroves
**Exemple of the Tiger Shark**

**Tiger shark** *Galeocerdo cuvieri*

- Max. size 7.4 m
- Max. age >30 years
- Maturity: around 10 years (3 m)
- Pregnancy: 13 to 16 months
- Phase 1: eggs in the internal cavity (50 embryos)
- Phase 2: development during 9 months
- Cannibalism, natural death: 10 juv.

Ecosystem: 20 years for replacing a Tiger shark
Resilience of ecosystems: old theories

Theory of the « rivets »

Theory of the « driver and passengers »

Hybrid theory

SHARKS: driver or passenger?
DIRECT « CASCADING » EFFECTS (1)

INDIRECT « CASCADING » EFFECTS (2)

Drivers for natural selection (3)

- Eradication of weak and sick animals

Storage

Reproduction
OVERFISHING

> 50,000,000 OF SHARKS PER YEAR


Since 1986, decreasing stocks:
Hammerhead = 89%
White = 79%
Tiger = 65%
Blue = 60%
Mako = 49%

Since 1992, decreasing stocks:
Coastal sharks (Carcharhinus sp.) = from 49 to 83%
Increasing demand for shark fins

Development of a specific fishing for sharks, including coastal reef sharks

Solomon islands
Sept. 2009

1 kg = 200 US$
« Shark Finning »: inacceptable technic

Removing of anal, pectoral, dorsal and caudal fins

Live sharks thrown back at sea

Waste: <5% of the total weight

Reason: economic approach (room available in fishing boats)
Insufficient international regulation

National decision: banning of « finning » by USA, Canada, Australia, New Zealand

Convention for International Trade of Endangered Species

Annex II of CITES

- Basking shark (Cetorhinus maximus)
- Whale shark (Rhincodon typus)
- White shark (C. carcharias)
Alarming situation in the Pacific

Urban concentrations:
Area <50 km
Level of decrease: 99%
Area <400 km
Level of decrease: 60% à 85%

Annual decrease of stocks: 17% and 7%

Figures ICRS2008
SHARKS: a valuable and bankable asset

Eco-tourism

Moorea: based on presence in diving sites, the annual economical value for a lemon shark varies from 30 to 60,000 US$.

CULTURAL: TOTEM ANIMALS
Real danger: key figures...

(source: International Shark Attack File, Florida)

During the same period of time, 10,000 people died in India through Cobra attacks
(source: WorldWatch Institute)
Man, the ultimate predator

23:50
Lucy, the oldest ancestor

23:59:59:98
Modern man

13:00
First dinosaurs

20:00
Last dinosaurs

7:00
First sharks

Noon

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