


# MARINE TURTLE HATCHRIES

## WHAT IS THEIR ROLE IN CONSERVATION?

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Green turtle      Hawksbill turtle      Olive ridley turtle

Loggerhead turtle      Leatherback turtle      Flatback turtle

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## CURRENT THREATS



Egg collection      Tortoiseshell products      Predators

Habitat destruction      Turtle by-catch      Turtle Hatcheries !!

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## IN – SITU CONSERVATION



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## EX – SITU CONSERVATION



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## WHY YOU NEED HATCHERIES?

- If in-situ nest protection is impossible or too expensive
  - Clutches those laid too close to the water
  - Nests laid too closer to bright lights
  - Nests laid on path of vehicles or walkways
  - If the beach is not suitable for incubation
  - If predation is very high
  - To protect nests from human egg poachers

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## LIMITATIONS

- Expensive. Financial and human resources required
- Hatching success is usually lower than in natural nests
- Hatching success ratios are often skewed towards one of the sexes
- Improper methods produce high rates of mortality
- Effective operation always depends on well trained staff
- Create a dangerous dependence on human intervention
- Harmful psychological effect on people

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## RECOMMENDED METHODS

- Site selection & construction
- Egg collection or handling
- Transport
- Reburial
- Protection and maintenance
- Hatching release
- Tourism / sustainability
- Monitoring & evaluation

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## CASE STUDY – SRI LANKA

Marine turtles are protected under the fauna and flora protection ordinance since 1972.

All turtle hatcheries are operated illegally.

**BUT.....**

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## POSITIVE ASPECTS

- Economic gains to the country
- Otherwise eggs are robbed in many nesting sites
- Alternatives to local community members
- Research value
- Education & Awareness

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## NEGATIVE ASPECTS

- Create a market for turtle eggs
- Low hatching success rates
- Cannibalism
- Create feeding stations for fish
- Reduces survivorship
- Harmful psychological effects

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## HATCHERY PRACTICES



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## REBURIAL



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## SWIM FRENZY



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## FEEDING BEHAVIOUR



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## CANNIBALISM



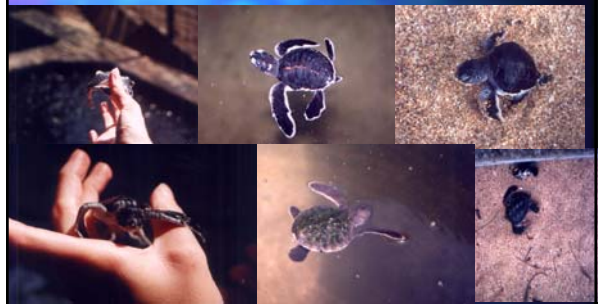
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## CANNIBALISM CONT.....



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## DEFORMED HATCHLINGS



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## TOURISM



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## FEEDING



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### Improper technique

- Eggs relocated after many hours
- Nests located too close together
- Didn't consider nest depth
- Hatchlings held in several day in tanks before releasing
- Hatchlings released during high day time temperatures
- Hatchlings always release from the same place
- Hatchlings released close to the sea
- Adults/Juveniles kept in tanks

### Possible Effect

- Embryo damage
- Temperature disruption and transfer of diseases
- Unnatural sex ratios, Deformed
- Inability to imprint homing mechanism, Injuries, Remain in shallow waters.
- Dehydration and hyperthermia
- High predation
- Reduce imprinting
- Remove potential breeders from gene pool

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## TRAINING HATCHERY STAFF



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## EDUCATION & AWARENESS



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## RESOURCE MATERIALS FOR HATCHERY MANAGEMENT

- Research and Management Techniques for the Conservation of Sea Turtles (IUCN/SSC-MTSG Pub No. 4)
- Hatchery guidelines prepared by NARA – Sri Lanka
- Hatchery guidelines prepared by TCP – Sri Lanka
- Guidelines for marine turtle nest protection and egg relocation conservation projects – WSPA
- PROJECTO TAMAR – Brazil

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Having guidelines in place shouldn't be taken as encouragement to go out and start hatcheries in your home countries!

Try *in-situ* first

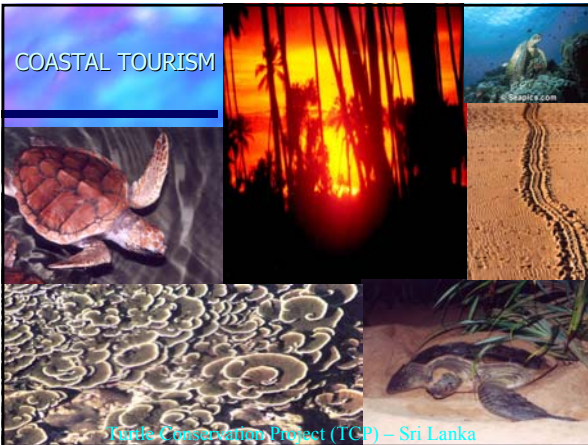
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## Community based ecosystem conservation approach for Sea turtles



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## COASTAL TOURISM



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## TURTLES & TOURISM



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**THANK YOU!**

**Save Sea Turtles**

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