PRESENT STATUS OF MANGROVE RESTORATION IN BATTICALOYA DISTRICT, SRI LANKA: IS IT SUCCESS...?

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• Mangroves – discontinuous around Sri Lanka, found around and the vicinity of estuaries

• Total area of mangroves in Sri Lanka is likely to be close to 9,500 ha as indicated in 1996.

• Batticaloa has significant mangrove cover – around 1606 ha (approx. 17% of the country), but it is reducing in recent past.

• According to the data available, around 500 ha of mangroves had been reduced for a period of 22 years from 1985 to 2007, with an average annual change of 1.15%....many reasons...

• The mangrove cover is not estimated in the recent past in the Batticaloa district.

• Approaches to protect/conserve: restoration, rehabilitation, management.
RESTORATION

Around 3 estuaries
1. Batticaloa – major
2. Valaichenai – minor
3. Vaharai - minor

Main restoration
After the 2004-Asian Tsunami
More restoration: 2006 onwards

Main species used
Major: Rhizophora apiculata

Minor: Bruguiera sp.
Exoecaria sp.
RESTORATION

Around 3 estuaries - 15 sites
1. Batticaloa – 10 sites
2. Valaichenai – 03 sites
3. Vaharai – 02 sites

Mode
• Isolation
• Group – 10 to 30 individuals

Planted individuals
160, 500 individuals from 2006 to 2014

Survival
• In 2014: 169 seedlings/young plants
• 90 % of sites - failed to establish
• Success rate: 0.01 %
RESTORATION

At different stages .......
SUCCESS OR FAILURE.....

Species selection

**Success**: Mixed species of stand – together with large-leaved mangrove plants (e.g. *Bruguiera* sp.)

**In this case**: monoculture species, *Rhizophora apiculata* – external shock, resilience…??

Mud and water coverage

**Success**: Ambient level of mud and water coverage

**In this case**: less favorable

Reference site, history of restoration site and Local knowledge

**Success**: Scientific designing by considering the above

**In this case**: lacking
SUCCESS OR FAILURE…..

**Natural disasters**
- **Success:** ????
- **In this case** -
  - TWO flood incidences in 2011 and 2012. Salinity turned to ZERO.
  - Physically damaged by debris brought by the flood

**Post-planting care**
- **Success:** frequent observation, prevent physical damage
- **In this case** - minimal; physical damage – cattle, fishing, canoe riding

**Long-term monitoring, financial support**
- **Success:** Long-term monitoring and protection measures
- **In this case** - limited due to financial restriction
SUCCESS OR FAILURE......

In assessing the success of mangrove restoration, both positive and negative impacts need to be considered.

emphasizes on a proper scientific planning

scientifically assess the stress factors before be a large capital investment
THANK YOU