PRESENT STATUS OF MANGROVE RESTORATION IN BATTICALOA DISTRICT, SRI LANKA: IS IT SUCCESS…?

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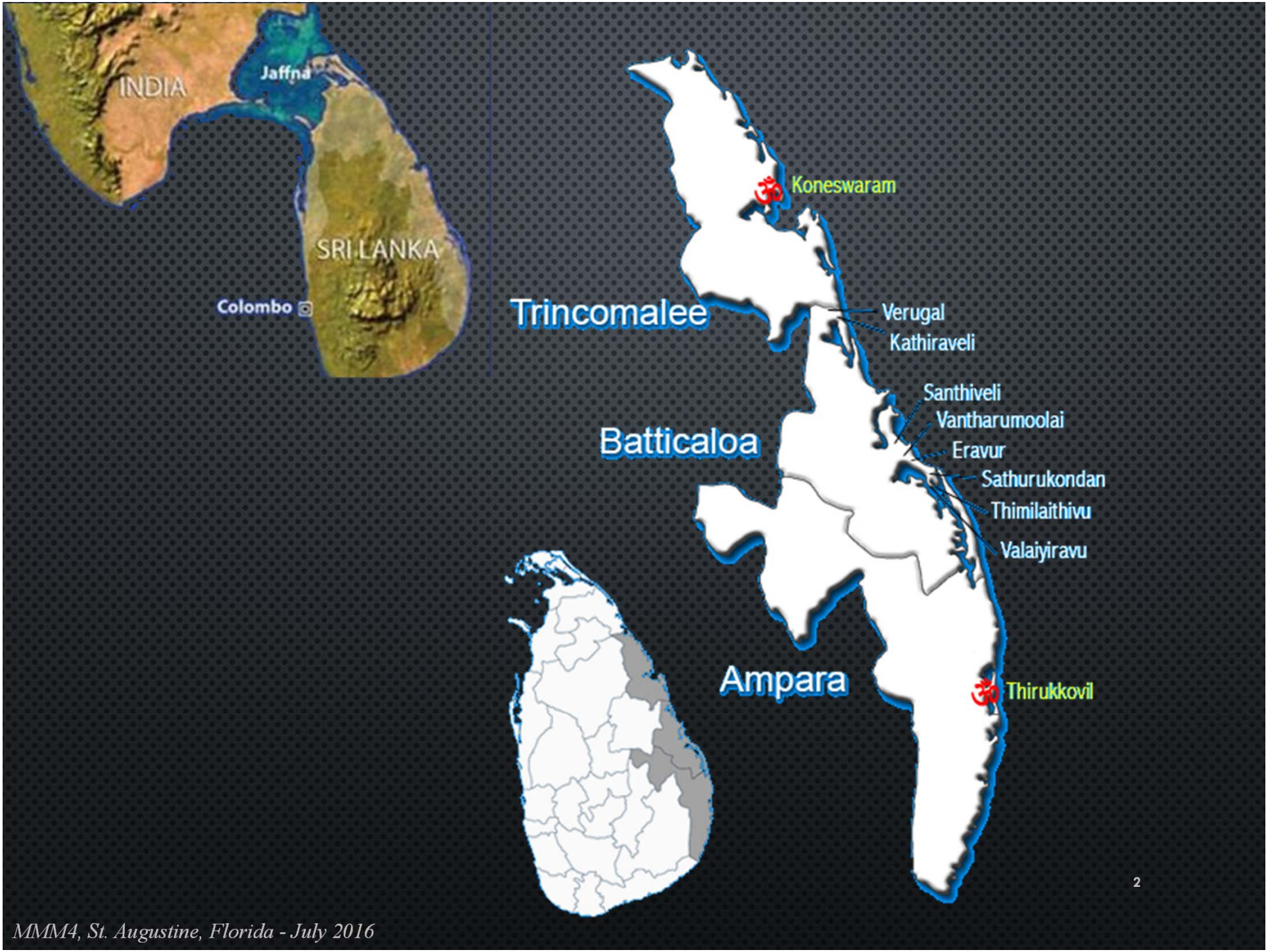

INDIA
Jaffna
SRI LANKA
Colombo
Koneswaram
Trincomalee
Verugal
Kathiraveli
Santhiveli
Vantharumoolai
Batticaloa
Eravur
Sathurukondan
Thimilaithivu
Valaiyiravu
Ampara
Thirukkovil
2

BRIEF…..

- 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

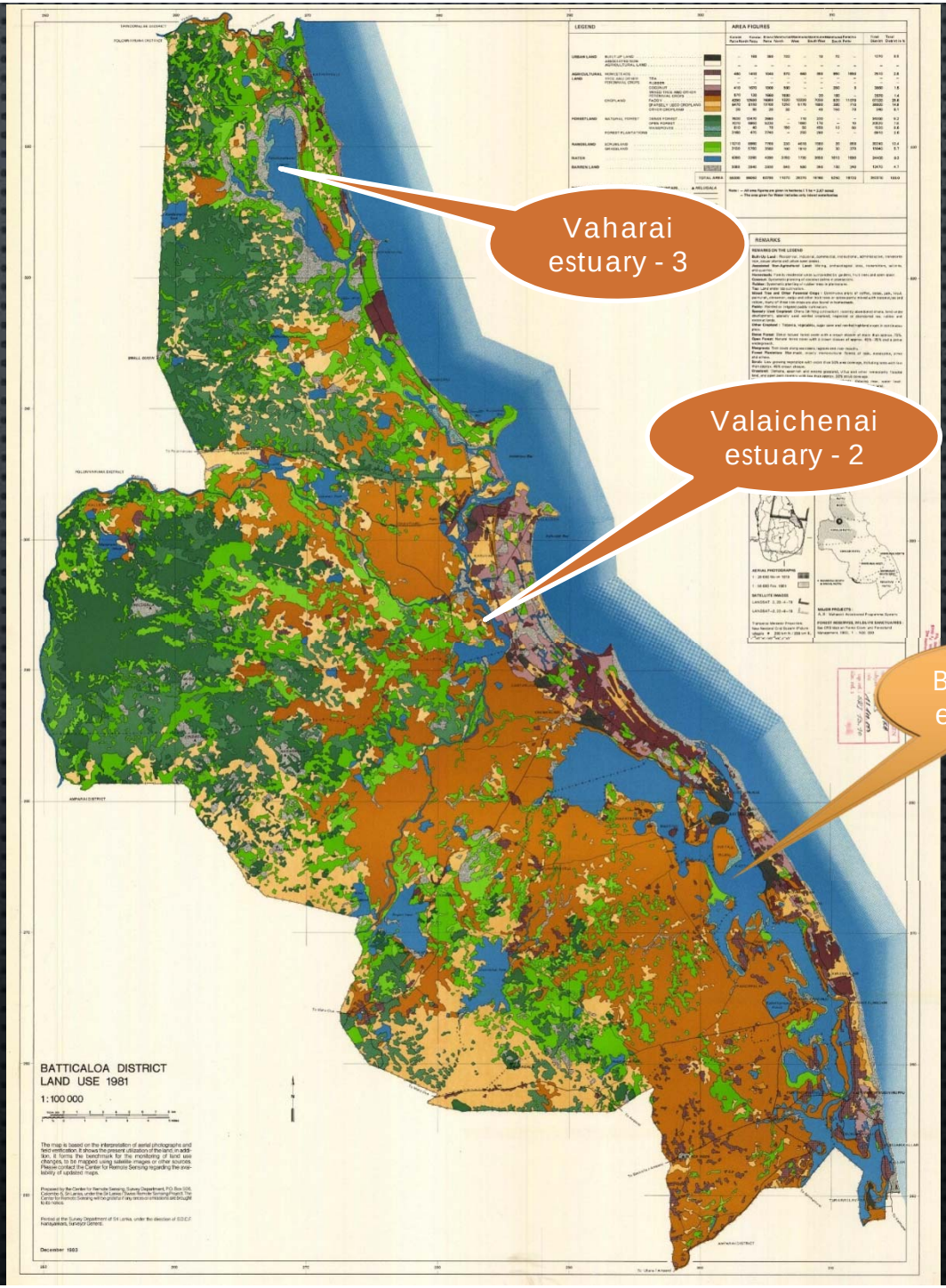
Major:

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 ……..

MMM4, St. Augustine, Florida - July 2016

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

emphasis on a proper scientific planning

scientifically assess the stress factors before be a large capital investment

THANK YOU