VIDU 9-1-20

PRIORITIZING MULTIPLE USES OF MANGROVES FOR ESTABLISHING ECONOMIC DEVELOPMENT POLICIES FOR THE MANGROVES OF SRI LANKA

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(Paper presented at the special workshop for mangrove managers held in Phuket Island, Thailand in September 1986.)

Summary

The existing small area of mangroves in Sri Lanka is threatened as a result of population expansion and development. Aquaculture and land reclamation are major threats while extraction of molluscs and firewood adversely affect the ecosystem. Attempts are made to map and classify the mangrove ecosystem for multiple uses.

Introduction

The mangroves in Sri Lanka are discontinuously distributed along the coast, around lagoons, bays and estuaries covering an area between 6000 – 7000 ha. About 28 species of mangrove plants are found distributed forming a mixed vegetation. Mangroves in the dry zone occur together with saltmarshes. In such areas *Avicennia marina* is the dominant species.

1. The beneficiaries of the ecosystem

The chief beneficiary of the mangrove ecosystem in Sri Lanka has been the coastal inhabitants, mainly the fishermen. Traditionally they have used the mangrove ecosystem for their day to day existence. It is unfortunate that the current situation in the north has inhibited the utilization of the mangrove resource by the fishermen of the north.

It is only in recent years that large scale exploitation of mangroves, on commercial ventures such as aquaculture is taking place.

2. The extractible uses and their effect on mangroves

The coastal inhabitants derive benefits from the mangroves. They use the mangrove wood for making poles, fishing gear, fishing crafts, and tannins. They extract prawns, crabs and fish from the mangrove waters. The export of crabs, prawns and ornamental fish is a thriving business.

Some fishermen use the mangrove plants, especially *Avicennia marina* to make brush piles, a fishing method unique to Sri Lanka. However these operations seem to be less adverse on the ecosystem since the rate of extraction is not so rapid as to make a spectacular depletion of the resource or destruction of the ecosystem.

3. Extractible uses that are becoming a threat

3.1 Lime

The removal of molluscan shells for calcium carbonate is increasing after the total ban of the coral mining. Removal of *Telescopium telescopium*, in truck loads to the kilns from the mangroves is taking place.

Crassostrea sp., *Sacosstrea* sp., *Meretrix casta* and *Geloina coaxans* are also removed from the mangroves to a lesser extent.

3.2 Firewood

Although there is no special preference for mangrove firewood, the inhabitants living in the coastal areas find easy access to mangrove forests and remove wood for kiln and bakery operations.

4. Operations that mutually exclude other activities

4.1 **Aquaculture:** Prawn culture is gaining grounds in Sri Lanka. Entrepreneurs are requesting for crown lands to be developed for aquaculture. When such requests are made the sight is examined.

If it is barren land (close to a mangrove patch) or when it is in the salt marshes (near mangroves) permission is granted with certain restrictions on the area.

Applicants are encouraged to go into semi-intensive and intensive aquaculture but never extensive aquaculture.

4.2 Land reclamation

Land reclamation of mangroves for building houses and hotels has taken place in some parts of Sri Lanka. Some of these activities would have been better planned after considering all the aspects of the mangrove land compared to other available land.

5. Some management strategies

5.1 Mapping

Since the distribution of mangroves has been estimated roughly and that, a few decades ago, attempts are being made to study and categorize the mangrove localities according to their quality. The new estimates show that the extent of mangroves much more than it was thought to be. Some areas have been mapped out by LANDSAT facilities with physical verification.

Some areas have already been identified to be set aside as reserves.

5.2 Integrated research programme

Since information is scarce on the socio-economics, biology, hydrology and ecology of the mangroves of Sri Lanka, a project has been launched by NARESA to involve many universities and research institution in an integrated research programme. It is expected that after one year of research, data collected would be useful to make better decisions and policies on the mangrove ecosystem in Sri Lanka. Already some of these projects have been completed.

5.3 Implementation of the law

The forest ordinance prohibits the felling of trees in the mangrove as in other forests. The coastal area up to 300 m landwards and 2 km up the estuaries falls within the jurisdiction of the Coast Conservation Department. All activities that destroy the coastal habitat is forbidden. Yet implementation of the law has been a problem.

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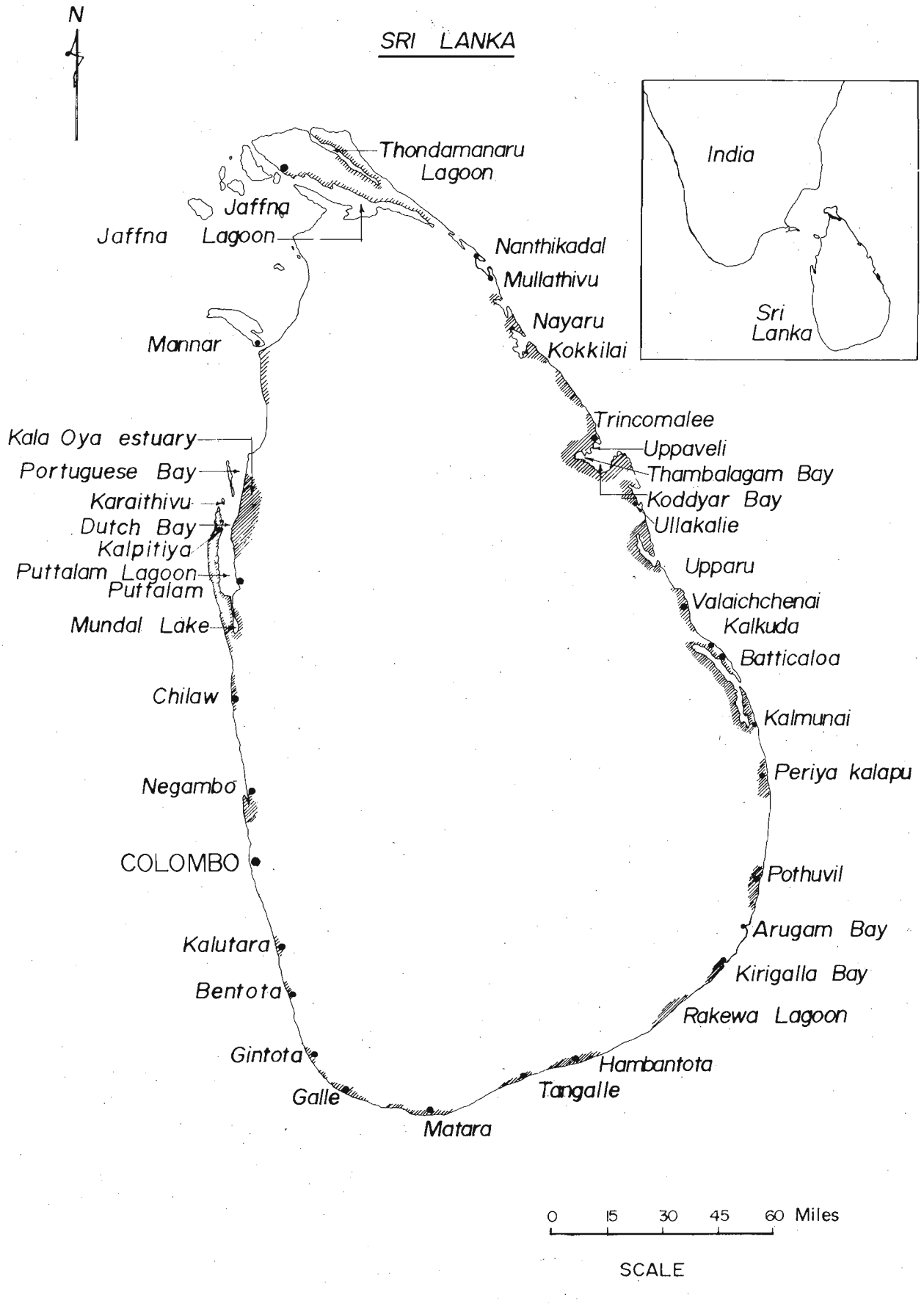
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India
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Thondamanaru Lagoon
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Jaffna Lagoon
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Mannar
Trincomalee
Kala Oya estuary
Uppaveli
Portuguese Bay
Thambalagam Bay
Karaithivu
Koddyar Bay
Dutch Bay
Ullakalie
Kalpitiya
Upparu
Puttalam Lagoon
Valaichchenai
Puttalam
Kalkuda
Mundal Lake
Batticaloa
Chilaw
Kalmunai
Periya kalapu
Negambo
COLOMBO
Pothuvil
Arugam Bay
Kalutara
Kirigalla Bay
Bentota
Rakewa Lagoon
Gintota
Hambantota
Galle
Tangalle
Matara
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SCALE