MANGROVE ECOTOURISM
IN SOUTHEAST AND EAST ASIA

by

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Outline of Presentation

- What is “Ecotourism”?  
- Guiding Principles for Ecotourism  
- Mangrove Resources as Ecotourism Asset  
- Case Studies on Ecotourism Development in Southeast and East Asia (with special reference from Malaysian experience)  
- Ecotourism Management Tool/Approach  
- Key Issues and Challenges
What is Ecotourism?

Ecotourism is:

- "Responsible travel to natural areas that conserves the environment and improves the well-being of local people"
- Ecotourism is about connecting conservation, communities, and sustainable travel
- Niche market - low impact tourism with high interpretation, education and awareness values
- Not “mass tourism”
Guiding Principles

- minimize (low) impact
- build environmental and cultural awareness and respect
- provide positive experiences for both visitors and hosts
- provide direct financial benefits for conservation
- provide financial benefits and empowerment for local people
Mangrove Resources as Ecotourism Asset

- Mangrove plant and animal biodiversity
- Livelihood diversity from various sectors
- Indigenous (local people) knowledge and culture
Mangrove Plant Diversity
Mangrove Animal Diversity
Livelihood Diversity – Fisheries
Livelihood Diversity – Forestry
Livelihood Diversity – Other Products
Local Cultural and Spiritual Value
Case Studies on Mangrove Ecotourism Development in Southeast and East Asia
(with special reference from Malaysian experience)
Case Studies from Malaysia

- Community based mangrove ecotourism
- Local government - local community partnership
- Private - local community smart partnership
- Private sector driven initiative
- Non-governmental organisation (NGO) initiative
- Government based ecotourism initiative
Community Based Mangrove Ecotourism

- Kuala Gula (Perak)
- Implemented by the Wetlands International and funded by Danish International Development Assistance (DANIDA); from April 2003 to June 2005
- Main objective: to equip local communities with skills, knowledge and understanding of ecotourism
- 2 community groups – Keindahan Alam Laut Aktiviti Manusia (KALAM) for the Malay group dan Community Ecotourism Association (CETA) for the Chinese group
Community Based Mangrove Ecotourism

- Training: Nature interpretation skills and basic knowledge on mangrove ecology
- Work as nature guides and boatmen
- Certified guiding licenses from MOCAT
- Activities: mangrove trail, bird watching, firefly watching, boat ride, visit to fishing and aquaculture, charcoal making (day package: RM30; overnight group package: RM70 per person)
Community Based Mangrove Ecotourism

- Kuala Gula (Perak)
Community Based Mangrove Ecotourism

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Community Based Mangrove Ecotourism

- 8–10 tours (300–400 visitors) per month for each group
- Cooperation from government agencies and travel agencies - technical assistance and ecotourism promotion
- Spinning effects: homestay programme, chalet, local seafood restaurant business, fisheries products, etc
- Benefit sharing - operators, association trust fund, community development fund
- Ecotourism as a sustainable development tool - increase local income; alternative employment for fishermen (reduce fishing pressure); conservation and protection of mangrove resources
Local Government–Local Community Partnership

- Kampung Kuantan, Kuala Selangor (Selangor)
- Started in 1987 as small scale ecotourism operation - fireflies watching
- Managed by local council; with strong local community involvement in the ecotourism operation
Local Government–Local Community Partnership

- Fee - RM40 per boat/sampan (for 4 persons)
- Revenue sharing - Local council RM20 (small portion go to village development fund - JKKK), Boatman RM10, Insurance/Safety/Lifeguard RM10
- Spinning effects: hotel/chalet operation, local seafood restaurant business, fisheries products
Private - Local Community Smart Partnership

Klias Wetland, Klias (Sabah)

Private ecotourism operator - boats, tour guides, operation and promotion

Local partner - boatmen, local food and drink, local souvenirs, homestay programme

Activities: mangrove river tour, proboscis monkey and fireflies watching
Private - Local Community Smart Partnership

- Group package: RM60 per person
- Profit sharing – between ecotourism operator, tour agent and local partner
- Recently gazetted as protected area for ecotourism
Private Sector Driven Initiative

- Labuk Bay (Sabah) – privately owned mangrove land
- From oil palm planter to mangrove ecotourism operator - Labuk Bay Probocsis Centre
- Activities – proboscis monkey watching, mangrove trail, mangrove river cruise, flying fox and bird watching
- Centre of excellence – interpretation, education, exhibition, school children programme
Private Sector Driven Initiative

- Entrance fee to watch proboscis monkey for an hour?
- To become the single largest proboscis monkey sanctuary!
- Proactive role in mangrove rehabilitation, protection and conservation
NGO Initiative

- Kuala Selangor Nature Park
  - State Government mangroves; but managed by Malaysian Nature Society (MNS)
  - Activities: education and awareness programmes, mangrove trail, bird watching, research & conservation
  - Maintenance of park and activities through nominal entrance fee collection (RM2)
  - Increase local income - hotel/chalet, seafood restaurant business
  - Useful approach where governments have limited resources
Government Based Ecotourism Initiative

- Mangrove Ramsar Sites: Sungai Pulai, Tanjung Piai & Kukup Island
- Managed by Johor National Park Corporation
Government Based Ecotourism Initiative

- Mangrove Ramsar Sites: Sungai Pulai, Tanjung Piai & Kukup Island
Government Based Ecotourism Initiative

- Mangrove Ramsar Sites: Sungai Pulai, Tanjung Piai & Kukup Island

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Government Based Ecotourism Initiative

- Matang Mangrove Forest Reserve (Perak)
- Excellence facilities: mangrove boardwalk, interpretation centre, research
- Activities: mangrove trail, boat ride, bird watching, firefly watching, visit to fishing and aquaculture, charcoal making
Government Based Ecotourism Initiative

- Experience on sustained yield forest management
- Strengthen support for local economy
Regional Experience in Mangrove Ecotourism
Mangrove Ecotourism in Singapore

Sungei Buloh Wetland Reserve
Mangrove Ecotourism in Singapore

Sungei Buloh Wetland Reserve
Mangrove Ecotourism in Singapore

http://www.sbwr.org.sg
Mangrove Ecotourism in Singapore

Sungei Buloh Wetland Reserve

Guided Tours

Pre-booked Guided Tour

For better guide and visitor interaction, pre-booked guided tours in Sungei Buloh Wetland Reserve will be limited to a maximum of 15 people per guide as of 1 Jan 2007. The charge for the pre-booked guided tour remains at $30.00. You can book the guided tour from Mondays to Saturdays at either 9:00am or 3:30pm with one month's notice. This guided tour is about one hour and covers approximately 1/4 of route one or the mangrove boardwalk. Admission fee applies on Saturdays, Sundays, Public Holidays and School holidays.

Free Guided Tour

As of 1 Jan 2007, free guided tours on Saturdays will run at 9:30am and 3:30pm time slots (except on Public Holidays). Each tour is also limited to a maximum of 15 people per guide and on the first come first served basis. The free guided tours will merge with any activities that might be running consecutively and are weather permitting. Admission fee applies.

Day: Saturdays
Time: 9:30am, 3:30pm
Venue: Visitor Centre, Sungei Buloh Wetland Reserve

Volunteers

Sungei Buloh Volunteers in Reserve Service

We, the Sungei Buloh Volunteers in Reserve Service, are a bunch of dedicated, enthusiastic people with a passion for local wildlife, who believe in the importance of nature conservation, enjoy working in the outdoors and like to share what we know about the unique flora and fauna of the reserve.

We are the very valuable volunteers of the reserve. Read on to find more about us...

Vision

We aim to develop and retain a core group of volunteers to support the activities of Sungei Buloh Wetland Reserve, which are as follows:

- educate
- stimulate awareness
- conservation
- research
Mangrove Ecotourism in Hong Kong

Mai Po Nature Reserve
Mangrove Ecotourism in Hong Kong

Mai Po Nature Reserve
Mangrove Ecotourism in Vietnam

Can Gio Mangrove Biosphere Reserve (UNESCO-MAB)
Mangrove Ecotourism in Vietnam

Can Gio Mangrove Biosphere Reserve (UNESCO-MAB)
Mangrove Ecotourism in Thailand

Ranong Biosphere Reserve (UNESCO-MAB)
Mangrove Ecotourism in China

Dongzhaigang National Nature Reserve (Hainan)
Ecotourism Management Tool/Approach

- Carrying capacity – fixing the “magic” number
- Fisheries management – Maximum Sustainable Yield (MSY)
- Limits of Acceptable Change (LAC)
Application of LAC

Marine Ecology

Limits of acceptable change: a framework for managing marine farming

John Zehfuss, Malcolm Feeney, and John Wilson explain how a novel management framework has been implemented to protect the environment as well as the interests of many stakeholders in the aquaculture industry.

Sustainable management of marine farming requires certainty for industry investment, while maximising the health and integrity of coastal ecosystems.

- Can we agree on rules governing environmental effects?
- If the rules are breached, how can the regional council responsible for managing the health of the local coastal ecosystems respond?

When formulating the rules, how can we accommodate uncertainty in the science about effects of operations on ecosystems?

When raised by Environment Waikato (EW) to help answer these questions, NWAA suggested limits of acceptable change (LAC). This management framework has been applied to a couple of trials ranging from tourism to US national parks to disposal of dredged spoil on the Great Barrier Reef, but had never before been trialled with aquaculture. LAC is not a tool for determining resource use levels that are ecologically sustainable, but it indicates a certain carrying capacity, and provides an adaptive management framework to prevent significant adverse environmental effects during resource use.

As a result of NWAA's suggestions, EW has implemented a "trigger point" framework for aquaculture management for the Wilson Bay Marine Farm Zone in the Bay of Thames. The Aquaculture Management Area (AMA), with a total area of over 3000 ha, has become the first major focus of marine farms in New Zealand. EW's Regional Coastal Plan stipulates that the marine farming zone should be developed in stages to ensure that farming activities do not cause significant adverse effects.

In ecological terms, it can be hard to determine what constitutes "tolerable" and "significant," and the LAC approach acknowledges the difficulty in defining levels of acceptable ecological change. Nonetheless, it has undermined the acceptable degree of change agreed upon. The approach provides a collaborative framework for identifying environmental indicators of change, setting levels of acceptable change in the indicators, and identifying management responses when the limits are exceeded.

Stakeholder participation at Wilson Bay is well illustrated by our experience at Wilson Bay. There were initial meetings between EW, Auckland Regional Council, Environment Bay of Plenty, and stakeholders such as the Environment Trust and NWAA. Based on the best scientific advice available for the eighteenth aquaculture, NWAA made recommendations for acceptable levels of population and functional impacts, which were peer-reviewed by the Council.

NWAA's scientific advice was based on extensive ecosystem research in the Thames and Hauraki Gulf. It showed that natural changes from year to year in population levels in the fish cause large changes in population levels, which, in turn, cause large changes in numbers of bird life. Population is an important functional resource, so NWAA proposed that some

Setting limits:

- One of the strengths of LAC is that it can accommodate uncertainty in the science about effects of operations on ecosystems.
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Limits of Acceptable Change (LAC)
Limits of Acceptable Change (LAC)

- LAC is a process
- Learning is an important objective in LAC process
- Advantages of planning based on LAC - transparency (involve all stakeholders), adaptive management, and alternative plan (plan “B”)
- Concerns - lack of adequate commitments from agencies/managers (implement actions and changes), lack of capacity
Issues and Challenges in Mangrove Ecotourism Development

- Lack of understanding on “Ecotourism” from the development perspective
- Lack of professional nature guides - merging art and science
- Lack of interpretation facilities, education and awareness programmes
- Language barrier
- Lack of interest in some of programmes (eg. homestay and volunteer programmes)
- Lack of monitoring programme
The Way Forward

- Fairly new and untapped potential - niche market
- Many development approaches/models - community based, NGO, private to government based initiatives
- **Smart partnership**
- Increase understanding on “Ecotourism” through education and awareness programmes
- Training of professional (and multi-language) nature guides - skill and knowledge
- Ecotourism Training Institute, mangrove ecotourism guidebooks, and involvement of mangrove scientist
- Increase interpretation facilities
- Management tool - LAC for mangrove ecotourism projects
ACKNOWLEDGEMENTS

Special thanks to MANGROVE FRIENDS:
- Dr. Ong Jin Eong (Malaysia)
- Prof. Nora Tam Fung-Yee, CityU (Hong Kong, China)
- Dr. Sonjai Havanond, DMCR (Thailand)
- Prof. Sanit Aksornkoae, TEI (Thailand)
- Prof. Phan Nguyen Hong, Vietnam National University (Vietnam)
- Dr. Le Duc Tuan, Can Gio Mangrove Biosphere Reserve (Vietnam)
- Dr. Vien Ngoc Nam, Forestry Dept. of Ho Chi Minh City (Vietnam)
- Dr. Jean Yong WH, Nanyang Technological University (Singapore)
- Dr. Jurgenne H. Primavera, SEAFDEC (Philippines)
- Prof. K. Kathiresan, Annamalai University (India)
- Mr. Harban Singh, Johor National Park Corporation (Malaysia)
- Mr. Michael Lee, Labuk Bay Proboscis Centre, Sabah (Malaysia)
- Wetlands International (Malaysia Programme)
- Singapore National Parks
- WWF-Hong Kong
- Forestry Departments of Peninsular Malaysia, Sarawak and Sabah
- Brunei Forestry Department
- Royal Forest Department of Thailand

Thanks to UNEP and GEF, and staff members of USAINS
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