

Biodiversity Conservation and Sustainable Use: Malaysian Scenario

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Abstract:

Malaysia is in partnership to international agreements such as for Biodiversity, Climate Change, Endangered species, Hazardous wastes, Marine life conservation, Tropical timber 83 and Law of the sea. Like all countries in the pact, she is currently implementing the national biodiversity strategies and action plans that have been strategized. The progression has led to increase in awareness of biodiversity status and enhancement of protected areas, with current statistics of 63% acclaimed forests and woodland in contrast to 10% land use for permanent crops. In spite of this there are indicative trends that Malaysia too contributes to the 42% loss of the Southeast Asian biodiversity approaching 2100. Here we highlight the challenged in conservation efforts and three primary driving forces impacting upon biodiversity:

- Conversion of natural habitat to human ecosystem
- Natural disasters and climate change
- Bioprospecting

Malaysia's strategic location within Southeast Asia, with Thailand in the north, Singapore in the south and Brunei in the east would need a multidisciplinary approach in order to address issues of biodiversity threats which one country has on its neighbours. This will be discussed in three main components:

- Invading operational activities
- Domestic activities
- Resources affected by international activities

In summary, a realistic solution would be an overall participation from all major stakeholders and a trasboundary effort such as the international ecological footprint.

Keywords:

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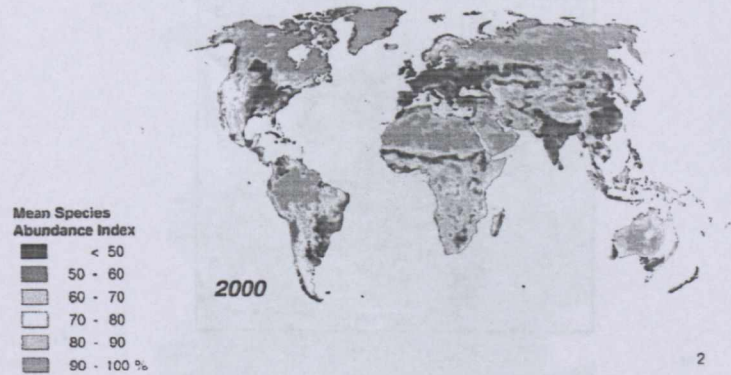
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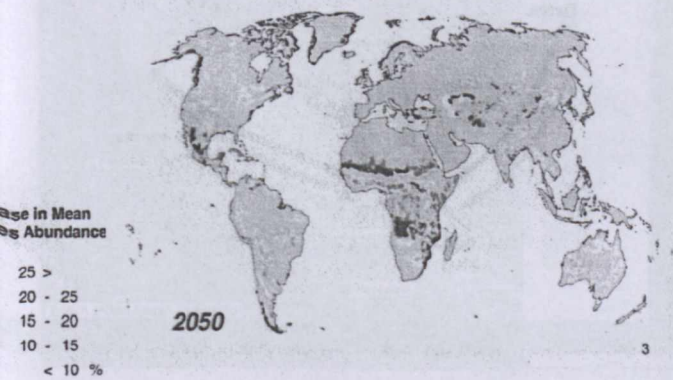
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Figure 2. Global biodiversity loss in the year 2000. Adopted from: <http://www.unep.org/geo/geo4>



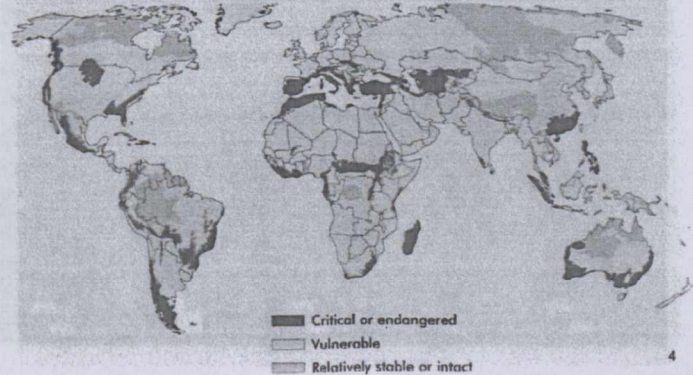
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Figure 2. Projected global biodiversity loss in the year 2050. Adopted from: <http://www.unep.org/geo/geo4>



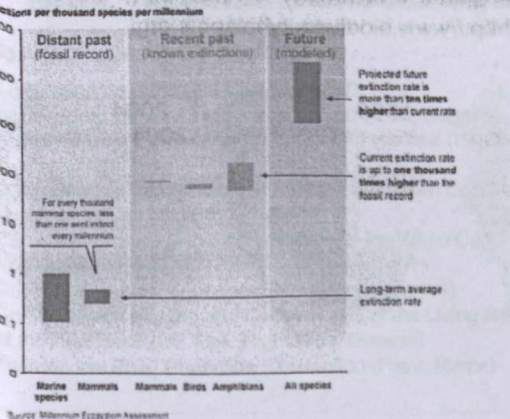
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Figure 3. Global status of terrestrial ecoregions. Adopted from <http://maps.grida.no/go/graphic/>



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Figure 4. Contrasting species extinction rates from past, present and future. Adopted from: <http://maps.grida.no/go/graphic/>



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Figure 5. World Biodiversity Hotspots (R.A. Butler, 2006)

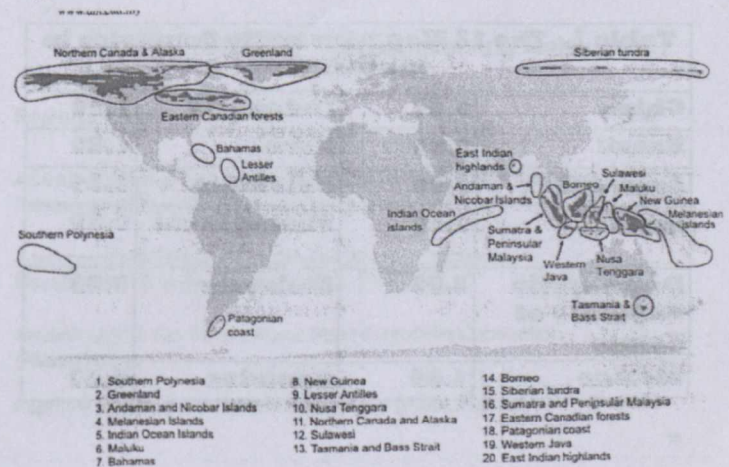


Figure 6. Biodiversity hotspots revisited: Indo-Burma. Adopted from <http://www.biodiversityhotspots.org/>



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Figure 7. Biodiversity hotspots revisited: Sundaland. Adopted from <http://www.biodiversityhotspots.org/>



Figure 8. Faunistic species numbers and degree of endemism

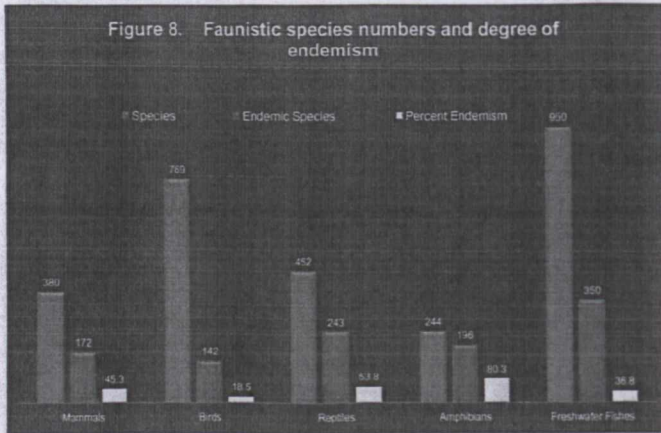


Figure 9. Indonesian exports of forest products with their destinations such as China, Japan and North America. Almost three quarters of the wood end in destinations in Asia.

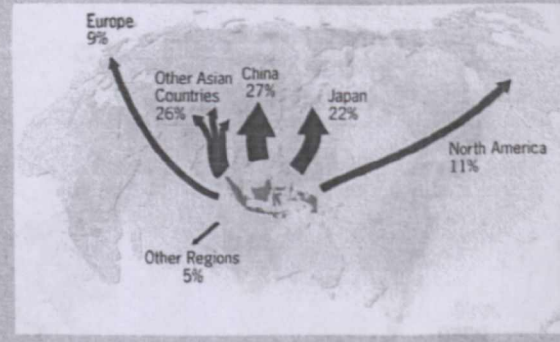


Table 1. The 12 Mega-Diversity Countries in the World

China	9.57	Indonesia	1.90
Brazil	8.55	Peru	1.28
Australia	7.68	Colombia	1.14
India	3.16	Madagascar	0.59
Democratic Republic of Congo	2.35	Malaysia	0.33
Mexico	1.96	Ecuador	0.27

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Figure 10. Orangutan distribution on Borneo (Malaysia, Brunei & Indonesia). Adopted from <http://www.biodiversityhotspots.org/>



Table 2 : Areas Cultivated with Commercial Crops in Peninsular Malaysia. Source from Department of Agriculture, 1995

Crop	Hectares	% of Total Land Use
Oil Palm	1,858,448	14.05
Rubber	1,854,744	14.02
Rice	425,080	3.21
Cocoa	46,564	0.35
Mixed Horticulture	289,080	2.19
Coconut	189,785	1.43
Orchard	103,261	0.78
Others	8,462,012	63.97

Figure 11. Countries affected by Tsunami. Source: 2004 Indian Ocean Earthquake



Figure 12. Important Bird Areas potentially affected by the tsunami. Adopted from Birdlife International, www.birdlife.org.

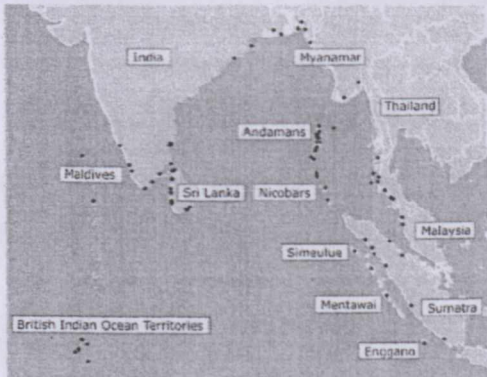


Table 3: Summary of trawl results obtained by Ahmad et al. 2005 a, b in Malaysia off Kedah and Penang coasts.

Survey	Trawls	Pre-tsunami	Post-tsunami	Results	Conclusions
Kedah	45	Feb 2004	Feb 2005, May 2005	Increased in density, diversity and trophic level 2 months after the tsunami; Return to normal after 5 months. Catch data less variable post-tsunami.	Effect of tsunami on resources appeared low.
Penang	36	July-Aug 2000	Jun 2005	No significant changes in density and diversity. Increase in trophic level. Catch data more variable after tsunami.	Effects of tsunami not clear.

Table 4. Global Conventions Involving Malaysia

Global Conventions	Year
Convention on Biological Diversity (CBD, Rio)	1992
International Tropical Timber Agreement (ITTA, Geneva)	1983
United Nations Convention on the Law of the Sea (UNCLOS, Montego Bay)	1982
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, Washington)	1973
Convention concerning the Protection of the World Cultural and Natural Heritage (WHC, Paris)	1972
Convention on the High Seas (High Seas, Geneva)	1958
Convention on Fishing and Conservation of the Living Resources of the High Seas (Liv. Res. High Seas, Geneva)	1958
International Plant Protection Convention (Plant, Rome)	1951

Table 5. Regional Treaties Involving Malaysia

Regional Treaties	Year
ASEAN Agreement on the Conservation of Nature and Natural Resources (ASEAN Agt., Kuala Lumpur)	1985
Agreement Establishing the Southeast Asian Fisheries Development Center (SE Asian Fish, Bangkok)	1967
Amendment to the International Plant Protection Convention (Plant, Rome)	1967
International Plant Protection Convention (Plant, Rome)	1956