Scientific Research, Ecotourism and Protected Area Management: Sabah Parks Experience Within The Heart of Borneo

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Sabah Parks

International Conference on Heart of Borneo Natural Capital: Unleashing their potential for sustainable development, 11-12 November 2013, Kota Kinabalu, Sabah, Malaysia
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Introduction

• Park system in Sabah?
• Sabah Parks Board of Trustees
• Tourism, Culture and Environment Ministry, Sabah
• Entrusted to manage state Parks gazetted under the Parks Enactment 1984
Introduction

• Parks Enactment 1984
  – National Parks Ordinance 1962
  – PE (Amendment) 1996
  – PE (Amendment) 2002

• Since 1964, 49 years ago.

• **Aim**: To share park experience in conducting scientific research and ecotourism activities to unleash park potential for sustainable growth in Sabah.
Park Area

• Premier PAs of Sabah, fully protected.
• 8 Parks of Sabah:
  – 3 terrestrial parks (our main concern)
  – 5 marine parks
• Total terrestrial park areas: 234,261 Ha
<table>
<thead>
<tr>
<th>No.</th>
<th>Parks</th>
<th>Year Gazetted</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>TERRESTRIAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Kinabalu Park</td>
<td>1964</td>
<td>75,370</td>
</tr>
<tr>
<td>5</td>
<td>Tawau Hills Park</td>
<td>1979</td>
<td>27,972</td>
</tr>
<tr>
<td>6</td>
<td>Crocker Range Park</td>
<td>1984</td>
<td>139,919</td>
</tr>
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<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td>243,261</td>
</tr>
<tr>
<td></td>
<td><strong>MARINE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tunku Abdul Rahman Park</td>
<td>1974</td>
<td>4,929</td>
</tr>
<tr>
<td>3</td>
<td>Turtle Islands Park</td>
<td>1977</td>
<td>1,740</td>
</tr>
<tr>
<td>4</td>
<td>Pulau Tiga Park</td>
<td>1978</td>
<td>15,864</td>
</tr>
<tr>
<td>7</td>
<td>Tun Sakaran Marine Park</td>
<td>2004</td>
<td>35,000</td>
</tr>
<tr>
<td>8</td>
<td>Sipadan Island Park</td>
<td>2009</td>
<td>16,860</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td>74,393</td>
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Park Area

• Unique areas of Sabah (flora/fauna)- priceless natural capital
• Important component of the HoB Initiative (physical/ presence/org. behavior)
• Terrestrial parks: probably a crown jewel of Sabah’s natural capital:
  1) Kinabalu Park – Mt. Kinabalu
  2) Crocker Range Park - Rafflesia
  3) Tawau Hills Park- Home of hornbills, World’s Tallest Tropical Tree.
Kinabalu Park as a W.H.S.

• Why Kinabalu Park was selected as a World Natural Heritage Site by UNESCO?, 2 December 2000

‘ABC’ reasons:

(1) **Abiotic.** The scenic beauty of the Kinabalu area with a panoramic view of the majestic Mt. Kinabalu, simply impressive.

(2) **Biotic.** The richness of natural resources – unique flora & fauna.

(3) **Cultural.** The best management and conservation practices- local participation.
Protected Area Management

• Preservation of park area:
  – Enforcement
  – Boundary demarcation
  – Regular patrol
  – Visitor management (rescue)

• Park management projects/ programs:
  – BBEC II (2008-2012): Community Use Zone (CUZ) at CRP
  – Kinabalu EcoLinc Project
BBEC Program

Kinabalu EcoLinc Project
Management Plans

- Management and Development Masterplan (1992)
- 5 strategic thrusts towards sustainable development:
  1) Conserving the biological and physical resources
  2) Spearheading scientific research and educational values
  3) Increasing recreational and touristic activities
  4) Preserving cultural and historical values
  5) Instituting management procedures to support the other 4 strategic thrusts
Scientific Research

- Has always been the essence of park management (scientific expedition, collaborative research, own research)
- Initiated as an Ecology Section at KP: 1979
- Establishment of R&E Division: 1994
- Further expansion: 2000
- Latest expansion: 2008
40 taxonomists spent two weeks in Kinabalu Park and the Crocker Range (September 2012) – Sabah Parks++ and Naturalis Biodiversity Center (NBC)
Research facilities across park stations
Scientific Research

- Internal research (by own staff)
- External research (by visiting scientists)
- Documentation/Publication
- Natural history collection
- Ex-situ Garden (research/ tourism)
- Nature education/ awareness
Flagship Research

- Rafflesia of the world
- Medicinal plants of Kinabalu and Crocker Range
- Primates of Tawau Hills Park
- Birds distribution across altitudinal gradient of Mt. Kinabalu
- Amphibians and reptiles of Kinabalu and Crocker Range
- Biology of marine turtles at the Turtle Islands Park
- Tissue culture of threatened wild orchid species
Research Collaboration

- Flora of Kinabalu, with Prof. Dr. J.H. Beaman, MSU/RBG Kew
- Wild Orchid research, with the Royal Botanic Gardens, Kew, UK
- Herpetological research, with the Field Museum of Natural History, Chicago, US
- Floristic plots along the gradient of Mount Kinabalu, with Prof. Dr. Kitayama (Kyoto University), Japan
- Insect diversity in a tropical rainforest, with the German Society for Tropical Ecology
- Montane birds of Kinabalu, with Dr. Tom Martin, University of Montana, USA.
- Lowland birds of Tawau Hills Park, with Prof. David Winkler, Cornell University, USA.
Visiting Scientist Research

- Research permits issued to visiting scientists:
  - 2011: 17 permits (8 expired in April)
  - 2012: 21 permits (4 to foreigners)
  - 2013: 17 permits (as of August 2013)

- Reports acquisition (over 2008-2012):
  - More than 50 thesis/dissertations.

- Foreign institutions around:
  1) University of Queensland, Australia
  2) National University of Singapore
  3) University of Oxford, UK
  4) Lousiana State University, USA
  5) University of Montana, USA
  6) University of Newcastle, UK
  7) University of Cornell, USA
Scientific Collection

- Natural History Collection of Sabah Parks (since 1988)
- Location: Kinabalu Conservation Center Buiding, Kinabalu Park
- The reference collection:
  - Herbarium
  - Entomological Museum
  - Zoological Museum
- Total: **135,732** specimens
Types of Collection

• Types of collections:
  1. Herbarium (40,171 specimens)
  2. Entomology Museum (55,207)
  3. Zoology Museum (37,757)
  4. Marine Museum (2,264)

• Inventory of flora and fauna:
  • Taxonomy
  • New species findings
Research Revenue Stream

• Researcher = park visitor/ tourist:
  – Cost of doing research; foreign researchers
  – Labour/ field assistants
  – Accommodation, transportation and food.

• Research tourism - a new adventure activities:
  – Scientific research (revenue oriented)
  – Eastern Kinabalu - a secret unveiled; more unanswered questions
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<tr>
<td>Conservation Fee / entrance fee</td>
<td>3,287,350.50</td>
<td>2,895,720.50</td>
<td>3,923,940.00</td>
</tr>
<tr>
<td>Permit to Climb Mt. Kinabalu</td>
<td>2,146,301.50</td>
<td>2,023,257.00</td>
<td>2,412,958.00</td>
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<tr>
<td>Chalets/rest houses &amp; accommodation</td>
<td>585,380.00</td>
<td>776,470.16</td>
<td>1,323,945.00</td>
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<tr>
<td>Canopy Walkway Fee</td>
<td>439,961.00</td>
<td>383,066.50</td>
<td>584,302.50</td>
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<tr>
<td>Montane Garden</td>
<td>107,036.00</td>
<td>84,547.50</td>
<td>148,687.00</td>
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<tr>
<td>Guided walk, multivision show</td>
<td>15,932.00</td>
<td>11,668.00</td>
<td>18,282.50</td>
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<tr>
<td>Kinabalu Natural History Gallery</td>
<td>12,143.00</td>
<td>17,880.00</td>
<td>29,780.00</td>
</tr>
<tr>
<td>Sale of publications</td>
<td>47,782.51</td>
<td>7,364.75</td>
<td>6,458.00</td>
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<tr>
<td>Sale of VCDs</td>
<td>12,858.00</td>
<td>11,794.00</td>
<td>14,763.00</td>
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<tr>
<td>Tropical Garden, Butterfly Farm, Orchid Garden, Filming fee, etc.</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>7,893,661.51</strong></td>
<td><strong>7,660,471.63</strong></td>
<td><strong>10,642,261.40</strong></td>
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Sustainable Ecotourism

• Main parks revenue
• Local community involvement
• Research for expansion and remedy
• Conservation campaign
• Wise management of preserved natural capital
Ecotourism development in Long Pasia, in 2011-2012, a study case within HoB.

Multi agencies initiative:
- Sipitang District Office
- Department of Forestry
- Sabah Forest Industry (SFI)

University Malaysia Sabah
Pertubuhan Peladang
Local community
Discussion

• Challenges- population increase, demand for land
• Increase number of tourist, demand for more tourism product & park space.
• More research works needed, await young fieldworker/ researcher
• Unveiling blind spots in managing parks
• Unleashing more natural capital potentials.
Conclusion

• Scientific research is important for PAs management and ecotourism development
• A pivotal tool to unleash park’s natural capital potential for sustainable growth in Sabah.
• Towards the 50th Anniversary of Sabah Parks, people of Sabah live in harmony with nature.
Thank you