Wildlife Conservation vs Conflict in Sarawak
Outline of Presentation

1. Sarawak Sustainable Land Use Policy
2. Forest area in Sarawak
3. New policy on oil palm and forestry
4. Way forward for oil palm and forestry
5. Conservation
   • Biodiversity at a glance
   • Policy and Laws
   • Conservation Strategies
     • Habitat Protection
     • Species Management
   • Stakeholder Engagement
   • Heart of Borneo
   • International recognitions
     • RAMSAR, EAAFP, WHS
   • Orangutan

6. Human-Wildlife Conflict
7. Mitigation Measures
8. Management Strategies
## SARAWAK SUSTAINABLE LAND USE POLICY

<table>
<thead>
<tr>
<th>NO</th>
<th>LAND USE TYPES</th>
<th>TARGETED AREA (MIL.HA.)</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>FORESTRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Permanent Forest Estates (PFE)</td>
<td>6.0</td>
<td>48.4</td>
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<tr>
<td></td>
<td>b. Totally Protected Areas (TPA)</td>
<td>1.0</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.0</td>
<td>56.5</td>
</tr>
<tr>
<td>B</td>
<td>AGRICULTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Oil Palm Estates &amp; Smallholdings</td>
<td>3.0</td>
<td>24.2</td>
</tr>
<tr>
<td></td>
<td>b. Other Crops (i.e. Sugar cane, corn, coffee &amp; tea)</td>
<td>1.0</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.0</td>
<td>32.3</td>
</tr>
<tr>
<td>C</td>
<td>MISCELLANEOUS (Settlement, Towns, Industrial, Areas, Dam Reservoir Area)</td>
<td>1.4</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12.4</td>
<td>100</td>
</tr>
<tr>
<td>FOREST AREAS</td>
<td>TOTAL AREA (Ha.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Permanent Forest Estates (PFE)</td>
<td>4.3 Mil. Ha.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Forest Reserve, Protected Forest,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communal Forest)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Totally Protected Areas (TPA)</td>
<td>903,769.40 Ha.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(National Park, Nature Reserve,</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Wildlife Sanctuary)</td>
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</table>
Adenan reiterates no more state land for plantations, timber licences

By Johnson K Saai
reporters@theborneo.com

KUCHING: The state government has stopped alienating state land for plantations, says Chief Minister Datuk Patinggi Tan Sri Adenan Satem.

The move is to protect the forest from further destruction through opening up of large oil palm plantations.

“We are not going to allow any more new plantations, except on communal and NCR (native customary rights) land,” he said when receiving a courtesy call by Kuching Division Journalists Association (KDJA) executive committee members at his office in the State Legislative Assembly (DUN) complex in Petra Jaya here yesterday.

Adenan said large portions of the state’s forest had been developed for oil palm plantations apart from being destroyed by legal and illegal logging activities.

“We have enough of that already and we are not going to open up any more plantations. Besides, there will be no more new timber licence and on top of that we will put a stop to illegal logging,” he reiterated.

The chief minister said when he first took action against illegal logging, he thought that the problem was small but now realised it was beyond his imagination.

“Illegal logging happens like nobody’s business. They (culprits) are so daring and they even go to fell timber in national parks without the knowledge of the forest officers or they just pretend not to know,” he said.

He said the government was very serious about stamping out illegal logging and had armed Forest Department’s enforcement officers with guns to better deal with the problem.

“We need cooperation from everybody. We are not only expecting enforcement officers to carry out their duties as expected out of them but we also appreciate information from the public and the press people.

“So far the media have been very supportive and we should continue to work together. This problem was not to do with politics. It does not matter whether you are pro-government or pro-opposition because what we want is the result. We want to save our forests,” he said.

The new policy was announced by the state government on Feb 2015.

Source: Forest Dept. Sarawak
Way Forward for Palm Oil and Forestry Management

Towards certification:
• Malaysia Sustainable Palm Oil (MSPO),
• Best Management Practice (BMP)
• Good Agriculture Practices (GAP)

Forest Management Certification
• MTCS for Natural Forest and Forest Plantation
CONSERVATION
## BIODIVERSITY AT A GLANCE

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lizards</td>
<td>109 species (Sarawak 82 species)</td>
</tr>
<tr>
<td>Snakes</td>
<td>154 species (Sarawak 150 species)</td>
</tr>
<tr>
<td>Amphibians</td>
<td>160 species (Sarawak)</td>
</tr>
<tr>
<td>Birds</td>
<td>530 species</td>
</tr>
<tr>
<td>Mammals</td>
<td>185 species (33 species restricted to Borneo)</td>
</tr>
<tr>
<td>Moths</td>
<td>3,000 to 4,000 species</td>
</tr>
<tr>
<td>Butterfly</td>
<td>900 species</td>
</tr>
<tr>
<td>Beetles</td>
<td>5,000 species</td>
</tr>
</tbody>
</table>
DIFFERENT FOREST or HABITAT TYPE

- Coastal and Marine
- Dipterocarps
- Mangrove
- Peat Swamp
- Heath
- Montane
- Karsts / Limestone
BORNEO ENDEMIC
Only found in Borneo

- Bay cat
- Proboscis Monkey
- Red Banded Leaf Monkey
- Orangutan
- Earless Monitor Lizard
- 130 out of 180 amphibians
POLICY and LAWS

- National Parks and Nature Reserves Ordinance, 1998
- Wild Life Protection Ordinance, 1998

adopted as State policy by Cabinet, Jan 1997
CONSERVATION STRATEGIES

- Habitat Protection
- Species Management and Protection
Habitat Protection

Constitutions of TPAs

STATE TARGET – 1 million ha
Achievement to date:
673,980.40 ha terrestrial
229,789 ha waterbodies
903,769.40 ha Total

- Conservation of habitats and biodiversity;
- Environmental protection;
- Protecting areas of natural and cultural significance;
- Provision of socio-economic benefits;
- Provision of locations for environmental education and scientific research;
Wild Life Sanctuaries

- IUCN Category I
- Established under the Wild Life Protection Ordinance, 1998 strictly for conservation and research
- Public access is strictly limited (no commercial tourism is allowed)
- 4 Wild Life Sanctuaries
- Total area = 206,460 Ha
- Lanjak Entimau WS, Samunsam WS, Tukong Ara Banum WS and Sibuti WS
National Parks

• IUCN Category II
• Established under the NP & NR Ordinance for:
  • Conservation of biodiversity and habitat
  • Research on biodiversity
  • Protection of natural scenic beauty, historical sites & monuments
  • Public appreciation, enjoyment & education
• 35 national parks
• 464,981 Ha terrestrial
• 229,789 Ha waterbodies
Nature Reserves

- IUCN Category II
- Established under the National Parks and Nature Reserves Ordinance, 1998 for conservation, recreational, educational, archeological and research purposes
- Area less than 1000 Ha
- 14 nature reserves
- 2,539 Ha
SPECIES MANAGEMENT
Totally Protected & Protected Animals and Plants
SPECIES MANAGEMENT
Control of Hunting
SPECIES MANAGEMENT
Trade Ban of non protected wild animals
SPECIES MANAGEMENT
Hornbill Conservation Initiatives:

1. Western Hornbill Programme
2. Establishment of Hornbill Database
3. Protection of habitats (Piasau NR)
4. Capacity building
   • International collaboration with Thailand’s Hornbill Research Foundation
   • Hornbill training in Belum-Temenggor Forest Complex
Marine Conservation: Sea Turtles

- Improvement in hatchery management
- Total protection of eggs
- Protection of nesting beaches through gazettement of MPAs
- Protection of inter-nesting habitat and migratory routes – Reef balls project
- Public awareness
  - Involvement of stakeholders, Local communities, Special Park Committee, Turtle Adoption Program, School children, Private sectors, Media
- Research collaboration with renowned organization – capacity building
Marine Conservation
Coral Reefs

- Annual reef cleaning with government and corporate agencies
- Reef-health monitoring
- Coral reef monitoring using line transect
- Assessment of ‘ghost net’ coral entanglement
- Research collaboration with universities
- Public awareness
Marine Conservation: SeaGrass

- Permanent transect monitoring
- Dugong feeding trail monitoring
- Exploration and expeditions
- Turtle population structure study (turtle rodeo method)
“Sabah and Sarawak should be proud today as crocodiles in the wild has recovered in the two states. However, this has created a new set of problems i.e. the increase in human-crocodile conflict. The challenge now is how are we going to sustain what we have succeeded to protect as now we have a new problem to address”

Dr. Grahame Webb, Chairman CSG.

HCC Workshop in Kota Kinabalu, Sabah, 23-25 June 2010)
Crocodile Management
Human Crocodile Co-Existence

- Establishment of Crocodile-Removal Zones (CRZ)
- Status downgrading – CITES Appendix I-II
- Drafting of management plan
- Regional crocodile forums
- CEPA
STAKEHOLDERS ENGAGEMENT

Local community involvement
- Special Park Committee / Special Wildlife Committee
- Honorary Wild Life Rangers
- Community Development projects
- Awareness Program
- Joint enforcement
- Ecotourism
Heart of Borneo (HoB) Initiatives

- HoB - THE BALI DECLARATION, 2007
- Transboundary cooperation of the 3 ASEAN Countries: Malaysia, Brunei Darussalam and Indonesia
- Aim to conserve the last expanse of contiguous forest in Borneo
  - Maximize transboundary linkages
  - Promote expansion of protected areas network
  - Maintain forest connectivity and
  - Ensure sustainable land use policies
INTERNATIONAL RECOGNITIONS
Kuching Wetland National Park- RAMSAR Site

• Gazetted as a national park on October 10, 2002
• 6610 ha
• Inscribed on November 5, 2005 as RAMSAR site
• Criteria
  1. Good representative example of a natural coastal mangrove system
  2. Supports endangered species such as the proboscis monkey
  4. Special Value as Nursery Area for the Estuarine Crocodile (Crocodylus porosus)
  8. An important spawning and nursery ground for fish and prawn species
INTERNATIONAL RECOGNITIONS
Bako Buntal Bay as an East Asia Australasia Flyway Network Site
INTERNATIONAL RECOGNITIONS
Gunong Mulu National Park as UNESCO World Heritage Site
ORANGUTAN CONSERVATION
Man of the forest
100,000 yrs ago, orangutans are widely found in Southeast Asia as far north as southern China. Today there exist only two species; the Sumatran orangutan and the Bornean orangutan.
ORANGUTAN IN BORNEO
Three subspecies

Lanjak Entimau Wildlife Sanctuary and Batang Ai National Park
ORANGUTAN Conservation Area

LEWS – Constituted in 1983 (219,000 HA)

BKNP – Declared in 1995 (800,00 HA)

BANP – Constituted in 2000 (39,147 HA)

Part of Trans-boundary Biodiversity Conservation Area (TBCA) with Indonesia, proposed as a World Heritage Site
Orangutan Conservation Area
Lanjak Entimau Wild Life Sanctuary

- Date of Gazettement: 3rd March 1983
- Total Area: 168,758 ha
- Protect the largest population of orangutan in Sarawak
Orangutan Conservation Area
Batang Ai National Park

- Date of Gazettement: 1st January 1990
- Total Area: 24,040 ha
- Protection of orangutan
  - Lake and river boating
  - Longhouse atmosphere and culture
  - Trekking
  - Private accommodation facilities at longhouses, tourist lodges and hotel
Lanjak Entimau Wildlife Sanctuary

Batang Ai National Park

New Orangutan Population at Ulu Menyang area

Ulu Sungai Menyang
Orangutan Rehabilitation

- Since 1962 with the released of some orphanage orangutans in Bako National Park
- Establishment of Semenggoh Wildlife Centre in 1973 – cater for infants and juveniles orphanage and abandoned orangutan
- 1996 – establishment of Matang Wildlife Centre – sister facility to Semenggoh
Orangutan Rehabilitation Centres

Semenggoh Wildlife Centre

Matang Wildlife Centre
Heart2Heart with Orangutan

Orangutan enrichment game
ORANGUTAN ADOPTION

CORPORATE package
5 packages: Copper, Bronze, Silver, Gold and Platinum
Adoption value:
from RM 10,000 to RM100,000

INDIVIDUAL adoption
RM200 per adoption per year
RIMBA INITIATIVES
Research for Intensified Management in Bio-rich Area of Sarawak
Launched on 19.8.15 by the Chief Minister of Sarawak

• To provide a platform for international collaborative research
• To develop intensive, practical conservation management procedures for bio-rich areas
• To provide a broad blueprint for future management of wildlife species
• To showcase conservation efforts in the international arena

• MOU Signed with
  • Smithsonian Institution
  • National University of Singapore
  • Herbarium of the Royal Botanical Garden of Edinburgh
  • Wildlife Conservation Society
Human-Wildlife Conflict

• "any interaction between humans and wildlife that results in negative impacts on human social, economic or cultural life, on the conservation of wildlife populations, or on the environment".
Human-wildlife conflict in Sarawak

Conflict mostly came from two species,
- Saltwater Crocodile (*Crocodylus porosus*)
- Long-Tailed Macaque (*Macaca fascicularis*)
<table>
<thead>
<tr>
<th>Species</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow Loris</td>
<td>5</td>
</tr>
<tr>
<td>Sun Bear</td>
<td>3</td>
</tr>
<tr>
<td>Pig-tailed Macaque</td>
<td>1</td>
</tr>
<tr>
<td>Long-tailed Macaque</td>
<td>3</td>
</tr>
<tr>
<td>Bear Cat</td>
<td>1</td>
</tr>
<tr>
<td>Malay Civet</td>
<td>1</td>
</tr>
<tr>
<td>Wild boar</td>
<td>1</td>
</tr>
<tr>
<td>Soft shell Turtle</td>
<td>2</td>
</tr>
<tr>
<td>Asian Leaf Turtle</td>
<td>1</td>
</tr>
<tr>
<td>Malayan Box Turtle</td>
<td>1</td>
</tr>
<tr>
<td>Reticulate Python</td>
<td>1</td>
</tr>
<tr>
<td>Cobra</td>
<td>2</td>
</tr>
<tr>
<td><strong>Crocodile</strong></td>
<td><strong>39</strong></td>
</tr>
<tr>
<td>Black Hornbill</td>
<td>1</td>
</tr>
<tr>
<td>Eagle</td>
<td>2</td>
</tr>
<tr>
<td>Bees (Hornet)</td>
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</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>65</strong></td>
</tr>
<tr>
<td>Species</td>
<td>Cases</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>1 Slow Loris</td>
<td>4</td>
</tr>
<tr>
<td>2 Proboscis monkey</td>
<td>1</td>
</tr>
<tr>
<td>3 Silver Leaf</td>
<td>1</td>
</tr>
<tr>
<td>4 Pig-tailed Macaque</td>
<td>3</td>
</tr>
<tr>
<td>5 Long-tailed Macaque</td>
<td>27</td>
</tr>
<tr>
<td>6 Leopard cat</td>
<td>1</td>
</tr>
<tr>
<td>7 Bats</td>
<td>1</td>
</tr>
<tr>
<td>8 Soft shell Turtle</td>
<td>1</td>
</tr>
<tr>
<td>9 Reticulate Python</td>
<td>6</td>
</tr>
<tr>
<td>10 Cobra</td>
<td>7</td>
</tr>
<tr>
<td><strong>11 Crocodile</strong></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td>12 Beiga dendrophila (snake)</td>
<td>1</td>
</tr>
<tr>
<td>13 Pit Viper</td>
<td>1</td>
</tr>
<tr>
<td>14 Black Hornbill</td>
<td>2</td>
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<tr>
<td>15 Brahminy Kite</td>
<td>1</td>
</tr>
<tr>
<td>16 Owl</td>
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<td>17 Asian keol (birds)</td>
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<tr>
<td>18 Bees (Hornet)</td>
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<tr>
<td></td>
<td>90</td>
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Human-Wildlife conflict in Sarawak for 2014
Human-Wildlife conflict in Sarawak for 2015

<table>
<thead>
<tr>
<th>Species</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Bear</td>
<td>4</td>
</tr>
<tr>
<td>Pig-tailed Macaque</td>
<td>3</td>
</tr>
<tr>
<td><strong>Long-tailed Macaque</strong></td>
<td>24</td>
</tr>
<tr>
<td>Bear Cat</td>
<td>2</td>
</tr>
<tr>
<td>Leopard cat</td>
<td>1</td>
</tr>
<tr>
<td>Soft shell Turtle</td>
<td>5</td>
</tr>
<tr>
<td>Malayan Box Turtle</td>
<td>2</td>
</tr>
<tr>
<td>Reticulate Python</td>
<td>5</td>
</tr>
<tr>
<td>Cobra</td>
<td>4</td>
</tr>
<tr>
<td><strong>Crocodile</strong></td>
<td>41</td>
</tr>
<tr>
<td>Owl</td>
<td>2</td>
</tr>
<tr>
<td>Monitor Lizard</td>
<td>3</td>
</tr>
<tr>
<td>Gibbon</td>
<td>1</td>
</tr>
<tr>
<td>Flying fox</td>
<td>1</td>
</tr>
<tr>
<td>Malayan Brown Snake</td>
<td>1</td>
</tr>
<tr>
<td>Green Turtle</td>
<td>1</td>
</tr>
<tr>
<td>Pegion (domesticated)</td>
<td>1</td>
</tr>
<tr>
<td>Clauded Leopard</td>
<td>1</td>
</tr>
<tr>
<td>False Gharial</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>103</strong></td>
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</tbody>
</table>
### Summary for two species

#### Crocodile

<table>
<thead>
<tr>
<th>2013-2015</th>
<th>Total Attack</th>
<th>Dead</th>
<th>Alive with severed injuries or permanent disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 cases</td>
<td>28</td>
<td>15</td>
<td>13</td>
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</tbody>
</table>

#### Macaque

<table>
<thead>
<tr>
<th>2013-2015</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 cases</td>
<td>31 individuals are now being kept at Matang WC and waiting to be released or relocated to natural habitat by June 2016</td>
</tr>
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</table>
# Human-Crocodile Conflicts

## Number of Attacks 2005 - 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Death</th>
<th>Survive</th>
<th>Total</th>
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<tbody>
<tr>
<td>2005</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2006</td>
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<tr>
<td>2007</td>
<td>4</td>
<td>2</td>
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</tr>
<tr>
<td>2008</td>
<td>3</td>
<td>2</td>
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</tr>
<tr>
<td>2009</td>
<td>2</td>
<td>9</td>
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<td>2010</td>
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<td>2011</td>
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<td>2012</td>
<td>4</td>
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</tr>
<tr>
<td>2013</td>
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<tr>
<td>2014</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>2015</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>2016 (May)</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>
Mitigation Measures

(A) Macaques
• lethal control,
• translocation, and
• regulation of population size (e.g. neuter Alfa male)

(B) Crocodile
• Implementation of CRZ (Crocodile removal zone)
• Culling to reduce the population (e.g. river system with high population of aggressive crocodile)
• Awareness to local community living within crocodile zone (3M Buaya)
Mitigation Measures
Crocodile Removal Zones
Macaque
Management Strategies

Established SWAT (Swift Wildlife Action Team)

• to mitigate Human-Wildlife Conflicts

• to take immediate action on human and wildlife conflicts especially those involving human fatality
Management Strategies
Corridor and Connectivity

Legend
- River
- Contour 50m
- Sediu NP
- Ulu Sebuyau NP
- Maludam NP
- Orang Utan Nest

1:200,000
Management Strategies
Corridor and Connectivity
Management Strategies
HCVA
Innovative Tropical Rainforest Conservation

Thank you