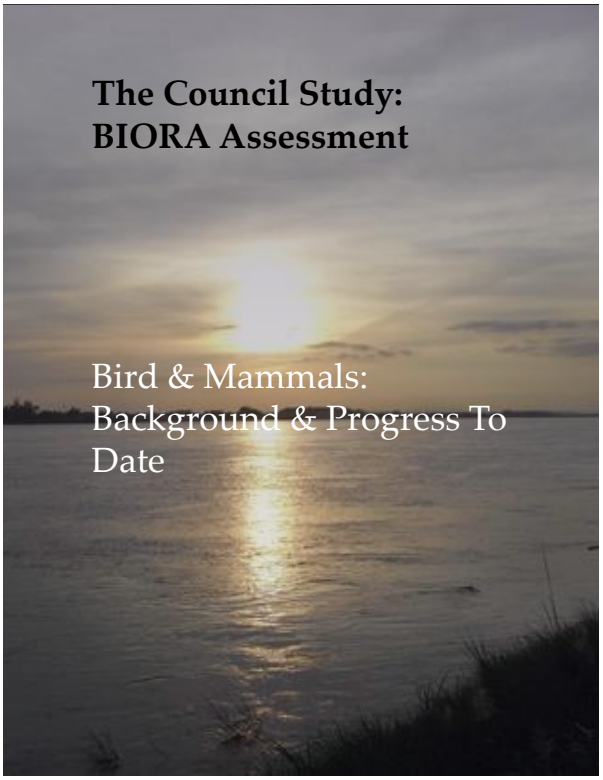

The Council Study: BIORA Assessment

Bird & Mammals: Background & Progress To Date

BIORA Assessment

Initial Objective:

To identify bird and mammal indicator 'groups / guilds' of species, or individual species indicative of ecology of Lower Mekong Basin to support the DRIFT process.

Requirement:

Groups / guilds of species must be representative of a healthy functioning ecosystem.

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Selection of Indicator Groups:

Considerations:-

- Abundance
- Biomass
- Species Diversity – 'hotspots' (Protected Areas)
- Species of conservation concern
- Presence / Absence – character of a river stretch
- Habitat type

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Selection of Indicator Groups:

Challenges:-

1. Limited baseline data:

- Laos PDR - subject to high quality surveys for PA gazettement in 1990s,
- Thailand – reasonable knowledge of species distribution
- Cambodia – no recent history of biological surveys until late 1990s
- Vietnam – little recent available survey data from the delta

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Challenges:-

2. Reliability of data:

- Certain data anecdotal only

- Much data non-quantitative, therefore interpretation more difficult

- Data gaps on distributions

3. Interpretation of data
- Complex ecology and life histories of species

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Habitats

There is a wide range of habitat types to consider within the LMB, from river channel to flooded forest. Each habitat type has its own indicator species.

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Methodology

1. Select 'indicator groups' representative of Lower Mekong Basin ecology

E.g. channel-nesting species, such as River Tern

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Methodology

E.g. bank-nesting species associated with the channel, such as Lesser Fish Eagle

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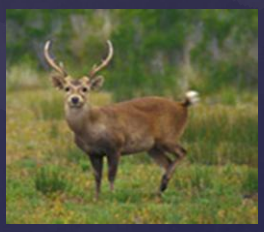
Methodology

E.g. mammal species associated with wetland grasslands (wetland ungulate), such as Hog deer



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2. Indicator groups selected by:

- Reference to literature
- Understanding of the historic ecology of the LMB
- Discussion / consultation with regional experts (national counterparts, NGO representatives, academics, authors of specialist papers on taxa)

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3. Draw up long list of species indicator groups, identifying individual indicator species within groups.

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Initial Bird Guilds

- Medium / large ground-nesting channel species
- Channel bushland passerine species
- Tree-nesting large waterbird
- Bank / hole nesting species
- Flocking seed-eating species of tall graminoid beds
- Large ground-nesting species of floodplain wetlands
- Channel-using large species which require bank side forest
- Natural rocky crevice nester in channels
- Scrub / water interface - masked finfoot
- Palearctic migrant waders

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Initial Mammal Guilds

- Fish eating species, channel dependent (Irrawaddy dolphin / otters)
- Small carnivores
- Primates
- Rats
- Wetland ungulates
- Bats
- Small herbivores

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4. Refine list to omit species groups which will not be measurable change as a result of impacts from changes of sedimentation / flow regimes (e.g. bats and rats)

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5. Select single species from within each group based upon the likelihood of response to change / ability to describe trend

6. Certain groups / guilds needed more than one species to represent the full study area (e.g. due to species' range linked to habitats)

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E.g. large ground-nesting species of floodplain wetlands

Sarus crane (Mekong Delta ; lesser extent Tonle Sap floodplain)

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Bengal florican (Tonle Sap floodplain; near extirpated Mekong delta)

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Current Indicator List:

- 13 bird species
- 3 mammal species
- Review literature / consult for information on trends in population, threats and current status
- Draft 'Status and Trends' Assessment text / tables for this phase of the project

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Main Linkages with Flow and Sediments:

1. Habitat exposure / inundation
2. Vegetation change
3. Food availability
4. Habitat fragmentation ?
5. Dilution of pollutants (Irrawaddy dolphin) ?
6. Fragmentation of populations

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Main Threats:

- Killing by people including hunting, egg collection (birds), random killing
- Habitat loss, e.g. channel trees, conversion of pools to paddies and aquaculture ponds.
- Disturbance by people and domestic animals
- Predation by domestic animals and crows
- Habitat change as a result of livestock usage

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I will now hand over to my colleague, Dr Phaivanh Phiaphalath to describe the indicator trends and status.

Thank you.

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