

BioRA Preparation Meeting PART 2  
 Angkor Paradise Hotel, Siem Reap  
 27 – 28 March 2015



## BioRA: Indicators and links



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### Indicator links



- Compiled at Part 1 of preparation meeting and during field trip
- Assess what indicators are needed from
  - external models
  - each other's disciplines
- First draft – iterations to come
  - 3:00 pm
  - mid-April – for progress report
- Revise over the next three months

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**.xlsx**

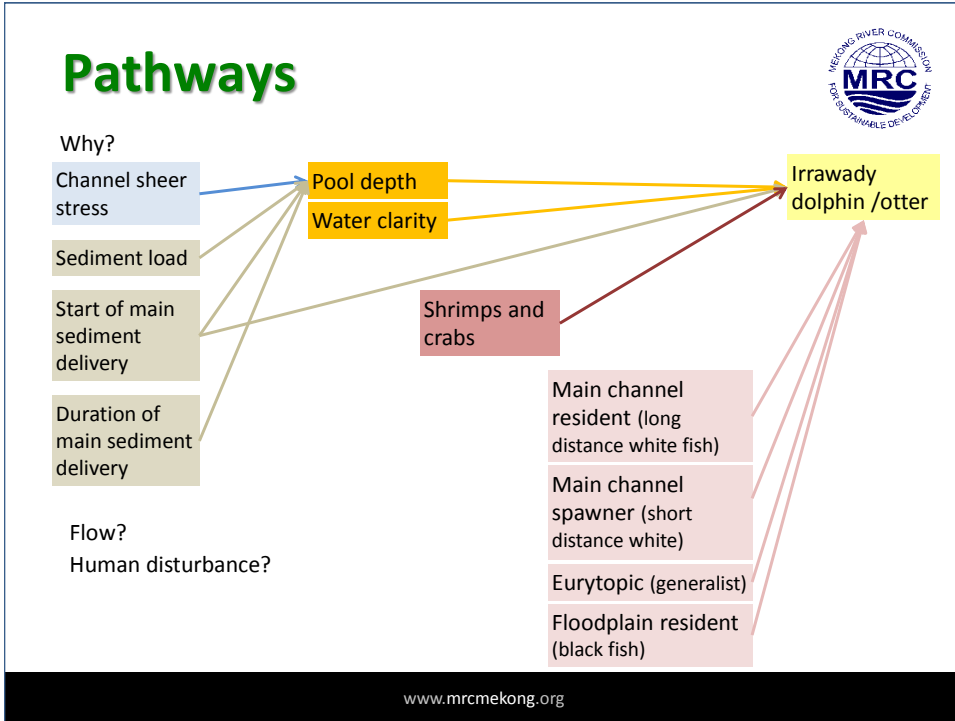
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## Pathways



Mammals:		Irrawaddy dolphin / otters					
Sediment	Geomorph		Macro-inverts	Fish			
Start of main sediment delivery	Pool depth	Water clarity	Shrimps and crabs	Main channel resident (long distant white)	Main channel spawner (short distance white)	Eurytopic (generalist)	Floodplain resident (black fish)

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## Pathways

Herpetofauna:		Aquatic Turtles				
Hydrology	Hydraulics	WQ	Geomorph	Vegetation	MacroInverts	Fish
Wet season duration	Channel minimum depth	Salinity	Erosion (bank / bed incision)	River: extent herbaceous marsh vegetation (submerged, floating & emergent)	Snail abundance	Main channel spawner (short distance white)
T2 recession slope			Exposure of sandy bars, islands, insets	Floodplain: extent flooded forest cover	Diversity of snails	Eurytopic (generalist)
Dry season max rate of change			Submerged		Bivalve abundance	
					Shrimps and crabs	

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## Changes to indicator lists



- Some indicators changed during process
- Links are to original indicators
  - Geomorphology
  - Vegetation

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## Changes to indicator lists: knock on effects



### Geomorphology

- **Sediment fining / coarsening**
  - All macroinvertebrates
  - Three fish

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## Changes to indicator lists: knock on effects



### Vegetation

- Blue-green algae .. linked to:
  - Three fish
- Green algae .. linked to:
  - One fish
  - One herpetofauna
- Submerged, • Emergent, • Floating leaved, • Riparian (reeds, etc) ... linked to
  - Geomorphology
  - Vegetation
  - Herpetofauna
  - Birds
  - Mammals

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## Changes to indicator lists: knock on effects



### Vegetation contd.

- Extent riparian gardens/agriculture .. linked to:
  - Geomorphology
  - Vegetation
  - Herpetofauna
  - Birds
  - Mammals

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## Next steps: Review



- Reorganise:
  - Indicators
  - Links
- Review and discuss
  - × definitions
  - × double accounting
  - × leap frogging
  - × omissions
- Confirm modelling outputs
  - alternatives
- Define direction of change
  - increase/decrease
  - degree
  - motivations

April – June 2015

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## Next steps: Review



- Expand
  - Impoundments
  - Human disturbances –Status and Trends
- Rationalise
  - × Currently 924 links
  - × 924 response curves
  - × Additional links, e.g., salinity
  - × Redundant links
  - × 80:20 rule

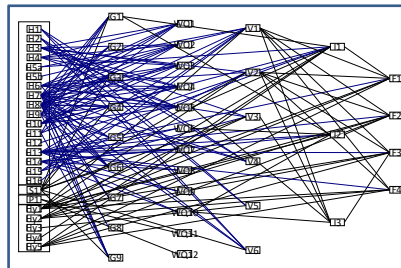
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## Next steps: Analysis framework



- Construct a flow chart with all links
- Summarise



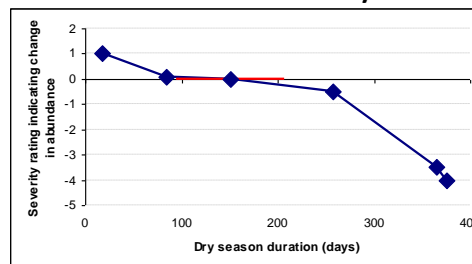
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## Next steps: Knowledge capture



- Response curves for every link



July – October 2015

- Calibrate

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## Communications



- Email
- Meetings
- Skype/equivalent between team members
- Part 2 of field visits
- KCW

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**Thank you**

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