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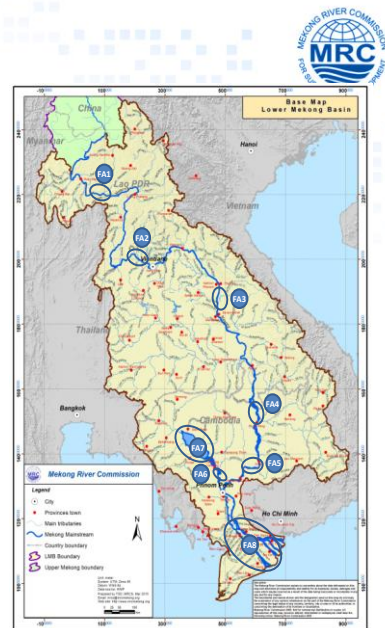
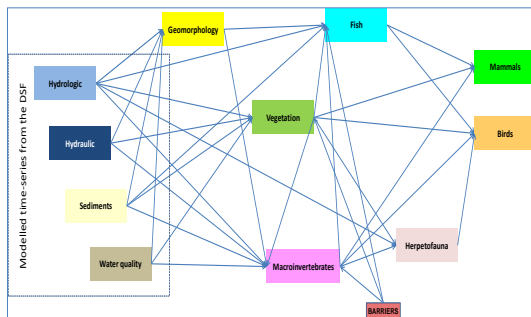
Council Study

Council Study BioRA – Modelling Coordination



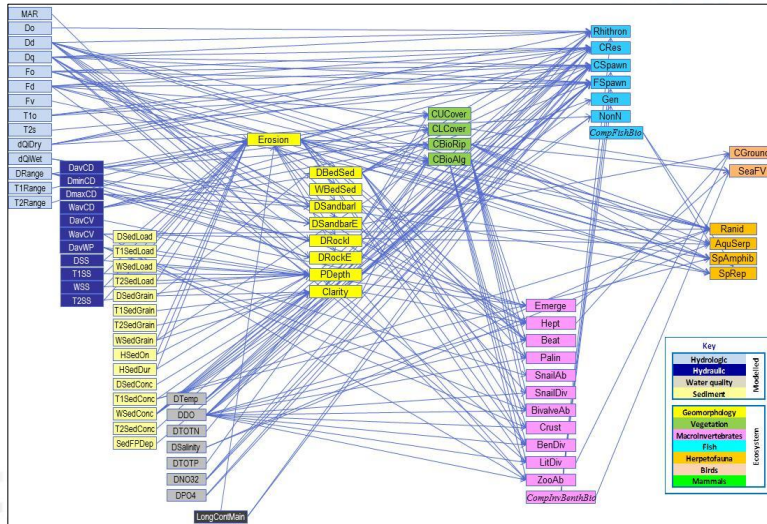
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Ecosystem Model



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Ecosystem Model – Linked Indicators



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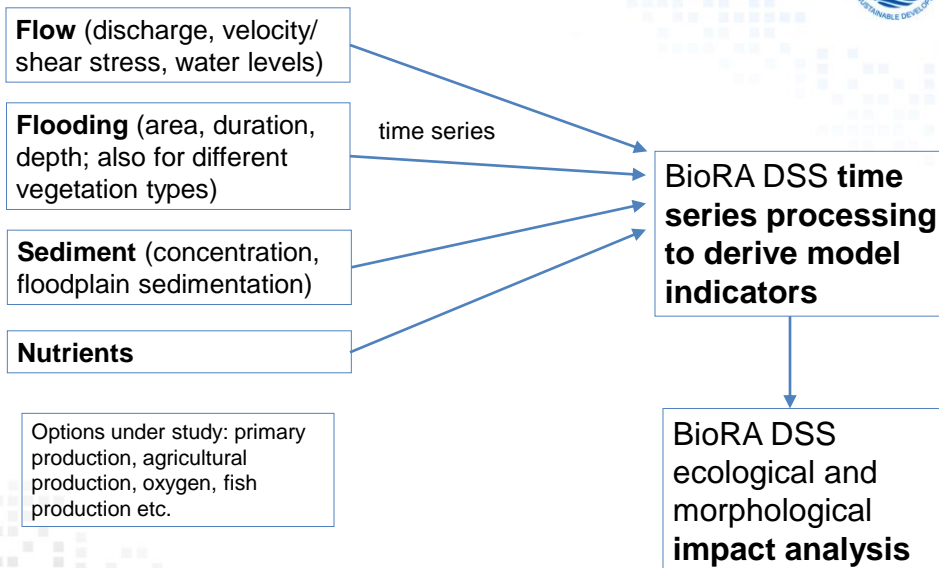
Code	Indicator	
Hydrology		
MAR	All	Mean annual runoff
Do	Dry season	Onset
Dd		Duration
Dq		Minimum 5-day discharge
Ddv		Average daily volume
DRange		Within-day range in discharge

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Code	Indicator					
T1dv		Average daily volume				
QmxiT1	Transition season 1	Maximum instantaneous discharge				
qQIT1		Maximum rate of change in discharge				
T1Range		Within-day range in discharge				
Fo	Wet/flood season	Onset				
Fd		Duration				
Fq		Maximum 5-day discharge				
Fdv		Average daily volume				
Fv		Flood volume				
WRRange		Within-day range in discharge				
T2dv	Transition season 2	Average daily volume				
T2Range		Within-day range in discharge				
Hydraulics						
		Season				
		Dry T1 Wet T2				
avCV	Channel	Average velocity	X	X	X	X
maxCD		Maximum depth	X	X	X	X
minCD		Minimum depth	X	X	X	X
avCD		Average depth	X	X	X	X
SS		Shear stress	X	X	X	X
avWP		Wetted Perimeter	X	X	X	X
FpO	Floodplain ¹	Onset of inundation				
FpD		Duration of inundation				
FFArea		Inundated area				
avFPV		Average velocity				
maxFPV		Maximum velocity				
avFPD		Average depth				
maxFPD		Maximum depth				
minFPD		Minimum depth				
Sediment						
SedConc	Sediment concentration					
SedGrain	Sediment grain-size distribution					
SedFpD	Floodplain deposition					
HSedOn	Onset of high sediment delivery at the beginning of the wet season					
HSedDur	Duration of high sediment delivery					
Water quality						
Salinity	Salinity/conductivity (extent of salinity intrusion)					
Temp	Temperature					
DO	Dissolved oxygen					
TOTN	Nitrogen species (Total Nitrogen, Nitrate + Nitrite, Ammonia)					
NO32	Nitrate + Nitrite					
TOTP	Phosphorus species (Total Phosphorus, Dissolved reactive phosphorus)					
PO4	Phosphate					
Si	Silica					
Pesti	Pesticides					

Modelling inputs to BioRA



Past and on-going modelling for BioRA



1. Provision of 1985 – 2008 data in 7 focal areas for BioRA DSS setup (not including Zone 5!)
2. Provision of synthetic scenario data for BioRA DSS calibration (tuning of DSS to provide expected results)
3. Provision of different TS flooding indicators for BioRA; iterative process still on-going

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Test Scenarios



- Test Scenarios are defined for BioRA DSS validation
- Test Scenarios will show how well BioRA DSS performs in comparison with natural system behaviour
- Definition process on-going

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Next steps

1. Finalize approach for Tonle Sap
2. Define indicators for Cambodian Floodplains and Vietnamese Delta modelling
3. Run the impact model and provide time series and possibly GIS layers



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Thank You



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