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# Council Study

## Summary Content of Interim Reports

6th RTWG Meeting
Phnom Penh, Cambodia
17-18 December 2015

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## BioRA Interim Technical Report

1. Specialist Report: 7 disciplines, with 67 indicators
2. Results of preliminary calibration
3. Technical Specifications and User's Guide of BioRA DRIFT DSS of the LMB

# Contents: Specialist Report

- Background information on Council Study and BioRA
- BioRA Zones and Focus Areas
- For geomorphology, vegetation, macroinvertebrates, fish, herpetofauna, birds and mammals:
  - assumption and limitations;
  - literature review;
  - the selection of indicators and linked indicators;
  - the status and trends assessment underlying the assumptions used;

  -- response curves and supporting evidence and reasoning for each response curve developed



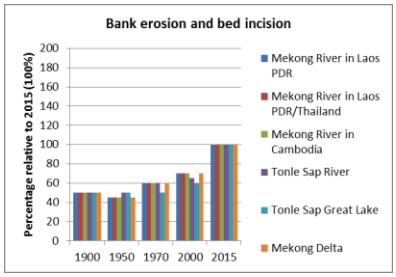
# Detailed explanations for status and trends of each indicator


2008

Feb 2013


2012

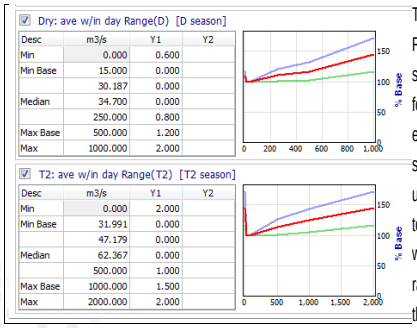
Nov 2013

# Every RC for every linked indicator has an evidence-based explanation

Indicator: **Bank erosion and bed incision**

**Response Curve**




**Explanation**

This indicator captures several processes associated with frequent (daily) water level changes Rapid changes in water level can affect erosion due to the increase in water depth and wate surface slope increasing the shear stress of the river, and due to the instability of saturated bank following a rapid decline in water levels. This second process is considered to be of relevanc especially during the T2 season when river banks and floodplains are saturated following the we season. This parameter is not considered to exert a large influence during the wet season becaus unregulated inflows dominate the flow during this period so in day water level fluctuations are likel to be small. Increasing the in-day range from the present range to ranges >250 or 500 m3 per da would be expected to increase the occurrence of erosion by ~25% or more. Decreasing the in-da range is considered to have no effect, unless the in-day variability decreases to near zero. Unde these conditions, erosion would be expected to increase due to the focussed action of flow at th same level of the bank.



# Contents: Results of preliminary calibration

- Background information on Council Study and BioRA
- BioRA Zones and Focus Areas
- Preliminary reference time-series used in the DSS
- Results of DSS for 9 hypothetical calibration scenarios for use in testing the DSS

## 9 Hypothetical calibration scenarios

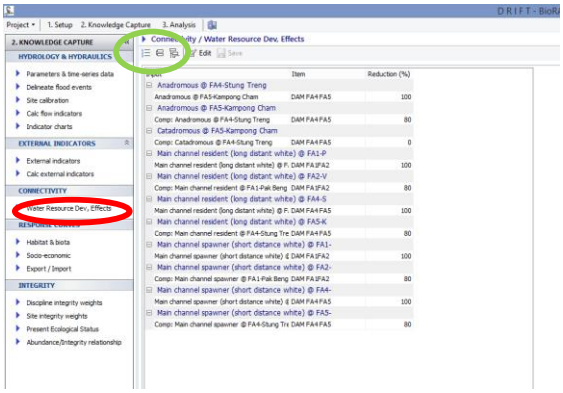
- CS 1: High dry season flow, low wet season flow
- CS 2: 6 dry years, followed by 6 wet years, etc.
- CS 3: A shortened wet season
- CS 4: Sediment supply at 75% of preliminary reference
- CS 5: Migration blocked between FA1 and FA2 ONLY
- CS 6: n/a
- CS 7: Extreme dry year (1992 – 10%) repeated for whole sequence
- CS 8: Migration blocked between FA4 and 5 ONLY
- CS 9: Migration blocked between FA1 and 2 AND between FA4 and 5
- CS 10: Sediment supply at 25% of preliminary reference



## Contents: Technical Specifications and User's Guide of BioRA DRIFT DSS in the LMB

- Background information on Council Study and BioRA
- BioRA Zones and Focus Areas
- Layout and organisation of the BioRA DRIFT DSS
- Step-by-step instructions to using the BioRA DRIFT DSS:
  - Viewing
  - Adjusting

# Detailed guide to every section of the DSS




In KNOWLEDGE CAPTURE: Connectivity:

- To view full list of indicators affected by connectivity issues, click on *Water Resource Dev, Effects*. The list can be expanded and contracted using the buttons circled in green in figure to show the water resource developments affecting the change and the percentage change in conncectivity as a result of each for one or more scenarios.



# The RTWG is requested to:

- Take note of the progress knowing that details are in the Technical Reports
- Provide overall feedback and guidance at this time when necessary

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# Thank You

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