

Exploring Futures of the Ayeyarwady River System:

Dynamics of knowledge &
storyline production

IAIA19, 30 April 2019

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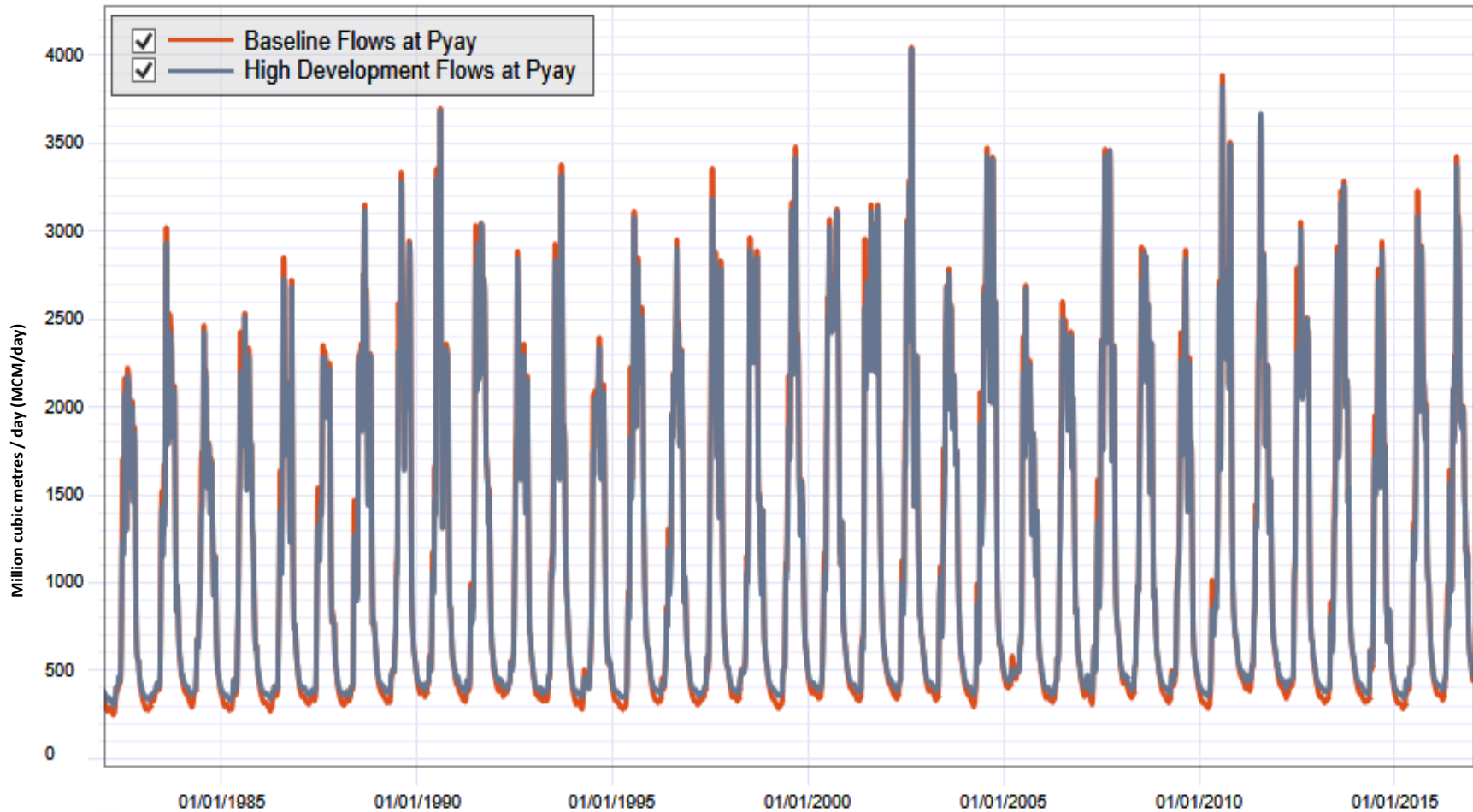
Motivations

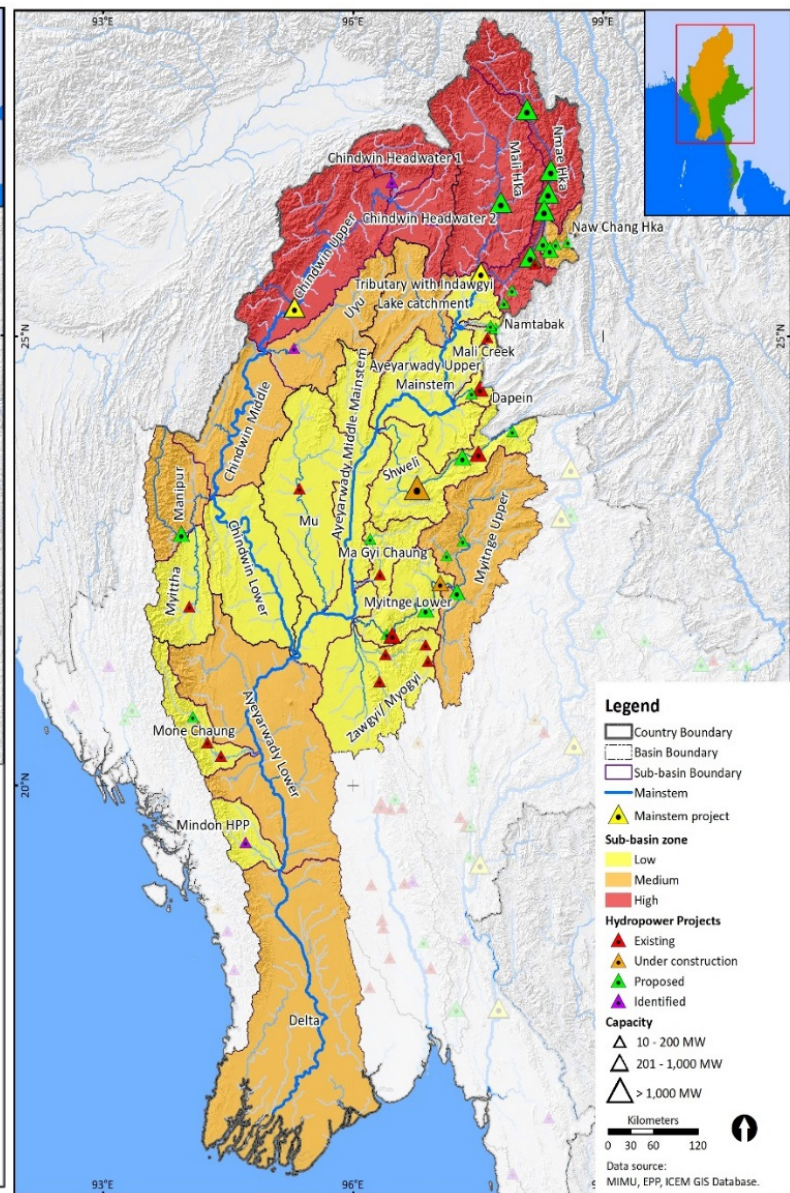
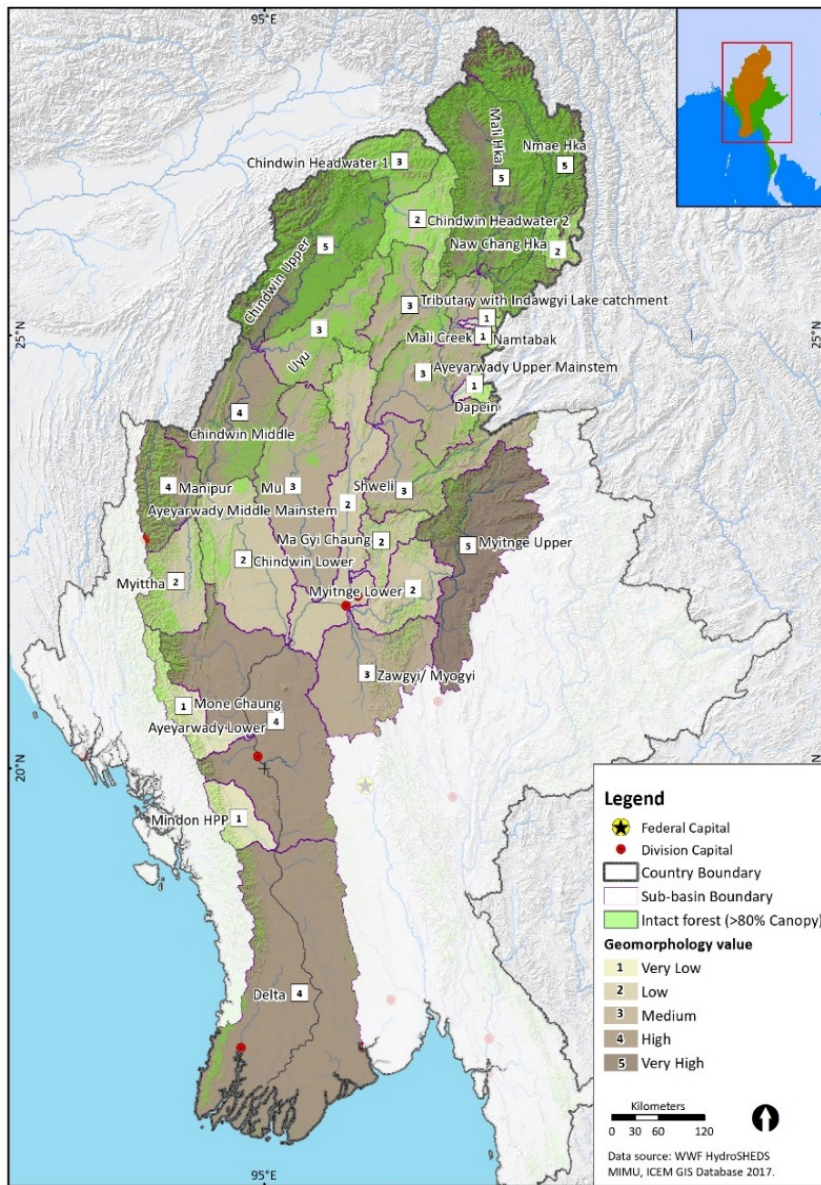
- Politics of knowledge production
- Storylines / narratives
 - Development opportunities and trade-offs
- Conceptualizations of how expert knowledge relate to work of policy actors
 - Disciplinary vs. interdisciplinary methods
 - Expertise: relevant methodology & experts
 - Linear vs. co-productive models

This talk

- Compare methodology underlying two contrasting storylines about the Ayeyarwady River Basin
 - Blackmore 2018
 - BESS (Basin Exploratory Scoping Study) 2019
- Same hydrological model
- Similar hydrological scenarios
- Common origins in Australian assistance to water sector in SE Asia

Net effect of Development Scenario on Flows to the Delta (excluding Myitsone Dam)





Source: BESS (2019), based on IFC (2018)

Context

- Myanmar's partial & contested democratisation (2011-present)
- Technical assistance (TA) -> expansion of knowledge
 - SOBA – State of the Ayeyarwady Basin Assessment (2018)
 - SEA of hydropower sector in Myanmar (2018)
 - IADS – Integrated Ayeyarwady Delta Study (2018)
 - BESS – Basin Exploratory Scoping Study (2019)
 - Norway and China – initiatives in hydropower planning
 - Japan – electricity master planning (2015)
- Major investment in evidence-based strategic planning for Ayeyarwady
 - DSS/BMP Project – Decision support system & Basin Master Plan project (2018-2021) (World Bank loan)
- Competition among knowledge providers to interpret Myanmar's development risks and opportunities

Ayeyarwady Basin Exploratory Scoping Study (BESS)

**Ayeyarwady State of the
Basin Assessment
(SOBA)
2017**

**Environmental, social,
and economic status &
trends assessment**

**BESS
2018**
*Original scenario
formulation
Hydrological modelling
Participatory process
Multi-disciplinary
science*

**DSS/ Basin Master Plan
2020**
Stakeholder-agreed basin
development strategy

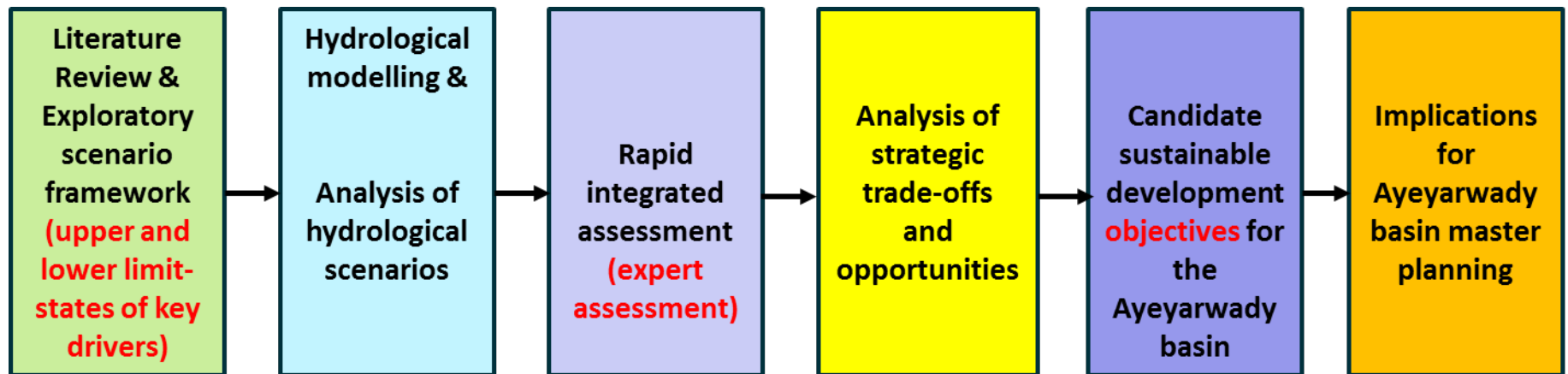
Informed by multi-
disciplinary decision
support system (DSS)

*“BESS bridges between the SOBA and the Basin Master Plan . . .
contributing to this first multi-stakeholder long-term planning initiative”*



Motivation for BESS design

- Offer an understanding of basin as a hydro-ecological system
- Understand how hydro-physical changes -> change in ecological functioning (exploratory scenarios)
 - Change to LULC (forest conversion / restoration)
 - Change to flow regime (water storage for hydropower, irrigation)
- Impacting on:
 - sediment dynamics, fisheries, flooding/navigation (& other eco services)



Challenges of conceptual design

BROAD SCOPE

- broad: 'synthesis of development trade-offs and opportunities'

LIMITED TIMEFRAME

- 12 months

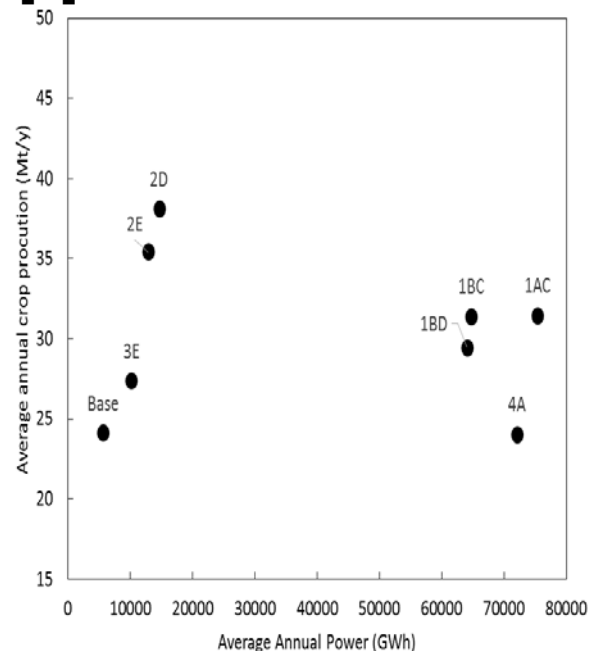
METHODS EMPHASIZED

- Hydrological modelling
 - specifically, Ayeyarwady eWater Source model
- Expert knowledge (specifically from the SOBA technical experts)
- Expert stakeholder engagement

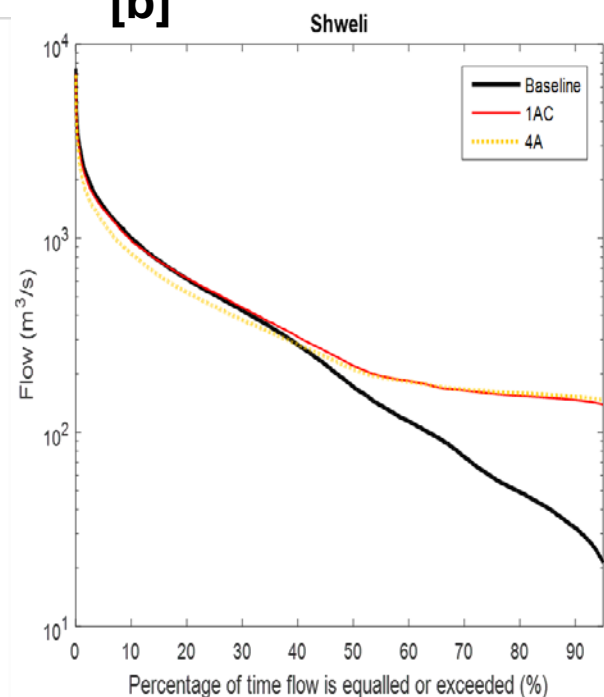
Some key findings

- Basin-wide, water is available to expand both hydropower and crop production [a]
- But river ecosystems, may experience significant negative impacts [b]
- Net development gains require reforming 'dynamics-as-usual' development [c]

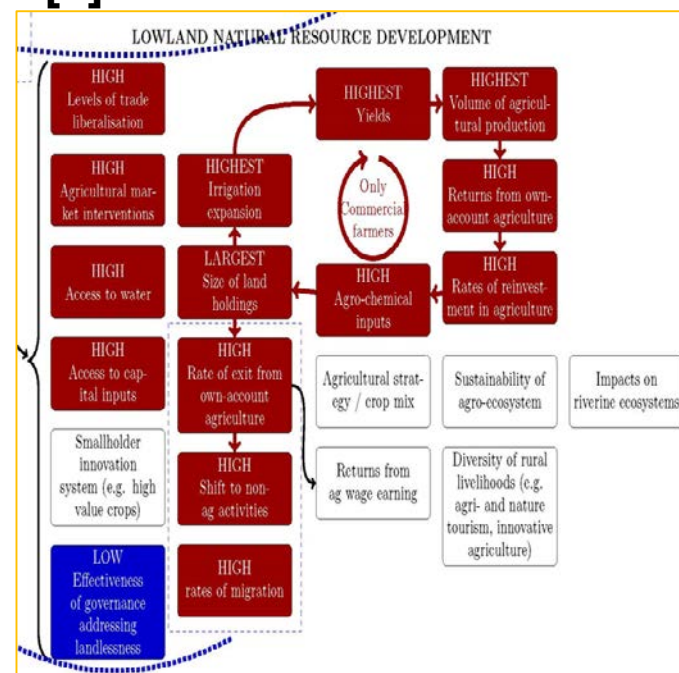
[a]



[b]



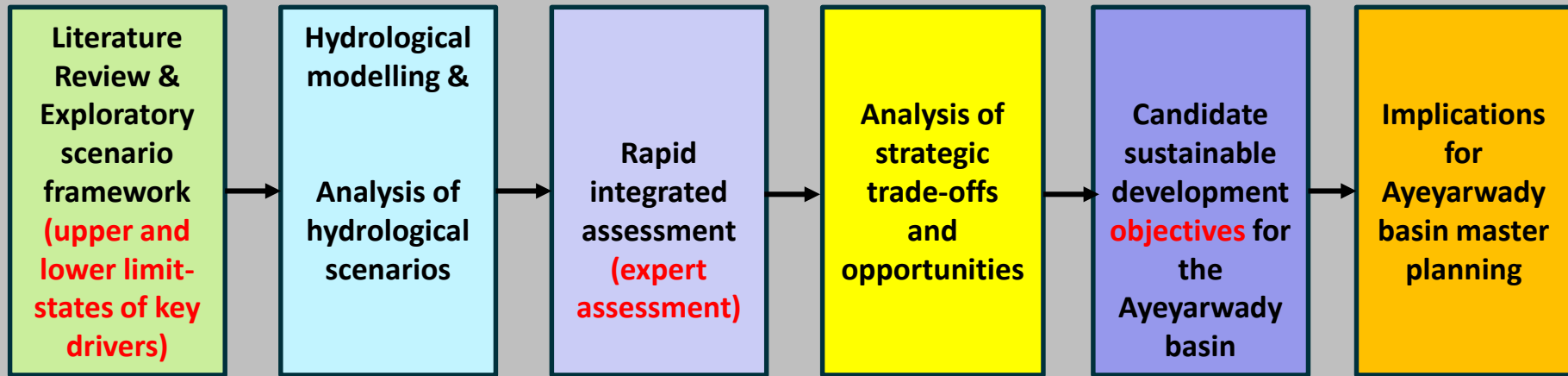
[c]



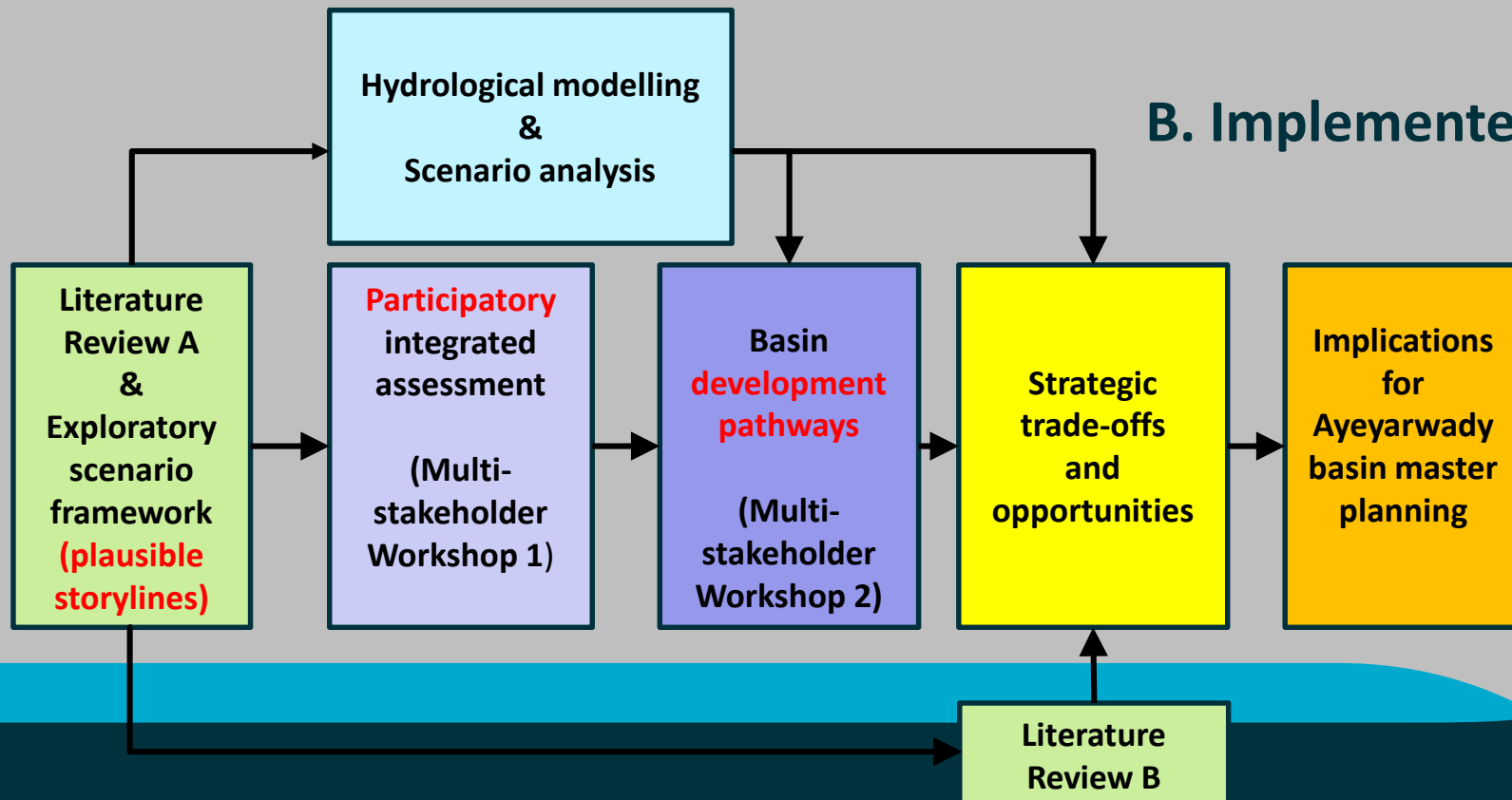
Goal 5 - Improved river water quality (draft development pathway)

Goal	By 2028, river water quality sustains biodiversity, protects human health, and allows for green growth		
Objectives	(1) Provide human and technical capacity for monitoring & awareness	(2) Improved regulatory system (including increased recognition of community based approaches)	(3) Sustainable financing
Actions		Create river basin organisations Create State / Region Water Resource Councils	
	Adapt existing community-based (and authorised) 'team' approach to management to water quality monitoring; use pilot projects (three examples in Ayeyarwady and Salween); increase media coverage		Improve compliance with existing polluter pays principle (2012 Environmental Conservation Law). Require major [regulated] users to pay specified charges, with revenues collected by different ministries
	Create / strengthen networks of institutes (research & university) twinned with international partners	Develop river water quality standards appropriate to specific locations Create / strengthen networks of water quality stations	
	In large sub-basins, create multi-stakeholder forum to allow peoples' organisations to work together for information and knowledge sharing. Convened by NWRC.		
	Use biological indicators	Establish a rural municipal and household solid waste collection system (difficult to manage) supported by appropriate financial mechanism	
		Review existing legislation	

A. Original design



B. Implemented design



Conclusion

- River basin planning deserve to take ‘coproduction’ more seriously, i.e.
 - collaborative knowledge production &
 - critical reflection on how certain forms of knowledge production, in turn give rise to certain forms of governance
- And if so, our conceptualization of linkages between expertise and governance will change
 - Decentering of hydrological expert knowledge
 - Suspicion of storylines founded on hydrophysical or natural resource potentials
 - from: ‘Who owns the basin narrative’ (Blackmore 2018; emphasis added)
 - to: ‘Who produces what basin narratives, with what means, for what effects?’

Thank you

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AT THE HEART OF MYANMAR: EXPLORING FUTURES OF THE AYEYARWADY RIVER SYSTEM

AYEYARWADY BASIN EXPLORATORY SCOPING STUDY (BESS)

Status: Pending

Last updated: November 2018

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Disclaimer

"The Ayeeyarwady Basin Exploratory Scoping Study (BESS) is conducted within the political boundary of Myanmar, where more than 93% of the Basin is situated."