Review of MRC Council Study: An assessment of the results and conclusions of selected reports

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1. Background
Background

- LMB faces significant headwinds over the coming two decades – high degree of uncertainty and risk.
- Managing the LMB requires dealing with uncertainty and shifting values in an inclusive and comprehensive manner – this is not a trivial undertaking.
- Flexibility and nimbleness will be critical for the Member Countries in managing uncertainty and associated risk.
2. Limitations of SEI’s Review
Limitation of SEI/SUMERNET Review

• **Reports reviewed**: Only 7 reports accessible through the MRC website were reviewed from a total of 16 reports:
  1. Socio-economic
  2. Domestic water use
  3. Irrigation
  4. Rainfed and land use
  5. Flow and sediments
  6. Climate change
  7. Cumulative impact assessment

• **Time**: Limited time to undertake the assessment of reports.

• **Approach**: About 10 experts are involved in the reviewing process. They reviewed different reports within their expertise.
3. Strengths of the Study
Strengths of the Study (1/2)

- MRC Council Study was conducted with **three objectives:**
  - **Scientific evidence**
  - Knowledge based
  - Capacity building

- The studies provide a **compendium of the current state of knowledge and implications** for the future based on available data – this is a substantial achievement despite known gaps in timely and available data.

- **Studies reflect the different types of development** (i.e. HP, agriculture and domestic water etc.) in the basin, reflecting the inherent complexity of the scope.
Strengths of the Study (2/2)

- Study aims to **fill knowledge and policy gaps**. This has to some degree been achieved.
- It highlights the challenges of consistent, accurate and coordinated **data collection to enable integrated assessments**.
- **Public engagement and consultation** was extensive and is welcomed. It is a precedent.
- **There are numerous recommendations** that the studies make – many of which could support policy recommendations if made explicit in each report. This is a significant achievement.
4. Limitations and Recommendation
Limitations and Recommendations (1/7)

- In the design of future studies there may be value in considering the following:
  - Hydropower should be discussed in conjunction with total energy demand and alternative energy options
  - Water quality and demand scenarios assume absence of technological improvements
- Scenario setting is a key issue in all reports – suggest each report has summary of scenario justifications.
- Ambitious modeling scope requires comprehensive data.
- Model results should be compared both with current theory and other relevant studies to validate and enhance uptake.
- It would be informative if each report includes a synthesis of all relevant dimensions.
Limitations and Recommendations (2/7)

- **Extended capability of the IWR modelling welcomed** – quality of data needs to be assured, particular on planned HP projects.

- New finding highlights the significant impact of large infrastructure on **sediment delivery** (97% trapped in 2040 planned) to the Delta and a decline in capture fisheries.

- **Modeled dry season flows (2020 scenario)** is considerably lower than observed changes data (2014 – 2017) – suggest for further study on this major difference.

- **Suggestions for further reviews and studies:**
  - Nutrient release from sediments
  - Extension of hydrological time series data to date to capture significant changes of flow regimes on the mainstream in recent years.
Limitations and Recommendations (3/7)

- Vulnerable communities are affected by water development – suggest for a **socially disaggregated view of vulnerabilities** and how they are affected by future trends.
- **The achievement of gender equity** is currently assessed in terms of gendered-disaggregated incomes only – suggest further disaggregation by water, food, representation and health security, as well extent to which water and food programs are gender mainstreamed.
Limitations and Recommendations (4/7)

• Need to re-examine **our assumptions on food security** – how will demand change (quantity and quality) in conjunction with population dynamics and geographical shifts.

• **Energy security goes beyond electrification** – future studies should consider access and affordability of electricity.

• **Employment and jobs** will change drastically with digitalization and the service economy and this needs to be reflected in future scenario planning and needs.
Limitations and Recommendations (5/7)

- **Rice** is the current dominant crop in the region and focus in rainfed and irrigation reports – **suggest to look at alternative crops** i.e. maize, sugarcane, pasture production etc. that are increasing in the basin.

- The dynamic role of livestock production systems and diversification of on-farm agri-food systems is a key strategy for governments in the region – suggest the inclusion in future assessments.

- Future studies should assess **impacts beyond SIMVA**.

- Future irrigation development plans may be overly optimistic based on costs of new infrastructure and the move to **groundwater based ‘individualistic’ irrigation** – this may be an area to consider in the future.

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The cumulative impact assessment provides information of current and future status of the health and well-being of the region in the context of development.

The analysis of transboundary impacts needs further discussion. How can we improve our understanding of cumulative impacts across borders?

The suggestion on benefit sharing in the form of a levy on countries receiving hydropower revenues is a notable development.
Limitations and Recommendations (7/7)

- A human centric development agenda is of great importance to reflect the aspirations of the people of the LMB – through wider consultation with stakeholders.

- Migration is considered as a social “stressor” – when considered from a livelihoods strategy it could be an important adaptation strategy.
5. Concluding Remarks
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• The key challenge for Council is to translate recommendations into sustainable development action across the LMB.

• Opportunities for the MRC to engage with the wider research community and regional cooperative frameworks (i.e. LMC) to assist in gap filling as highlighted in the reports.

• SEI can assist in mainstreaming gender and associated indicators in future assessments.

• SUMERNET is planning to undertake integrated regional assessments on water insecurity in the Mekong Region – we see significant opportunities in collaborating with MRC.
Thank You