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Council Study

Social and Economic Impact Assessment methodology



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Background



- The approach and methodology builds on:
 - Earlier basin-wide assessment work under the **IBFM** and **BDP**;
 - More recent work in developing the **MRC Indicator Framework** and **Regional Benefit Sharing Assessment**; and
 - Ongoing activities under the **MRC Council Study**.
- The assessment approach has also been improved by factoring in the historic **development trends** and **exogenous development**, together with greater opportunities to employ spatial (GIS) analysis.
- Developed approach and methodology will be used for the social and economic assessment of both **thematic** and **cumulative assessment**.

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Scope



- **Drivers**
 - **Water resources development** within the considered scenarios
 - **Exogenous developments** and their estimated impact on social and economic conditions in **2007**, **2020** and **2040**
- **Spatial**

The assessments will be conducted basin-wide on all areas within the LMB impacted by water resources development, with a particular focus on those areas directly impacted by changes in **mainstream hydrology**, **sediment**, **water quality** and **bio-resource** conditions.

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Social impact assessment

Objective

To determine the impacts of the considered scenarios on **social conditions** within the LMB, over and above the impact of exogenous development on social conditions

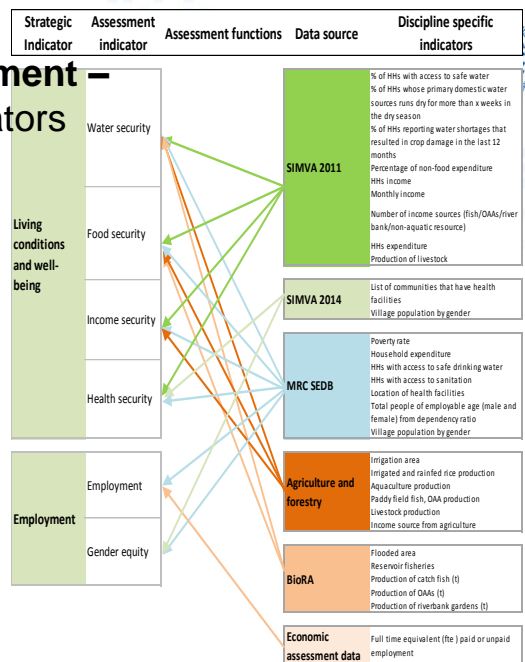
The social impact of the considered scenarios and the exogenous development will be assessed against the social assessment indicators in the MRC Indicator Framework.

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Social impact assessment

Linkage between indicators

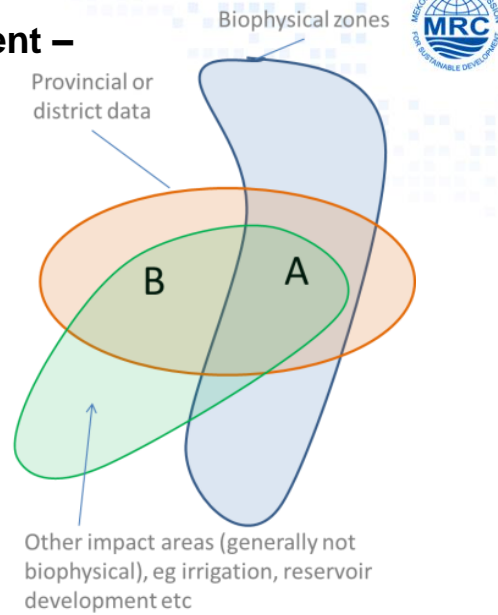
- **Discipline specific indicators** are selected, which relate to the **assessment indicators** and which are influenced by exogenous and/or water resources development.
- The degree to which discipline specific indicator values are changed by these developments is determined through **impact analysis**.
- **Assessment functions** will be used to value the assessment indicators based on the quantified discipline



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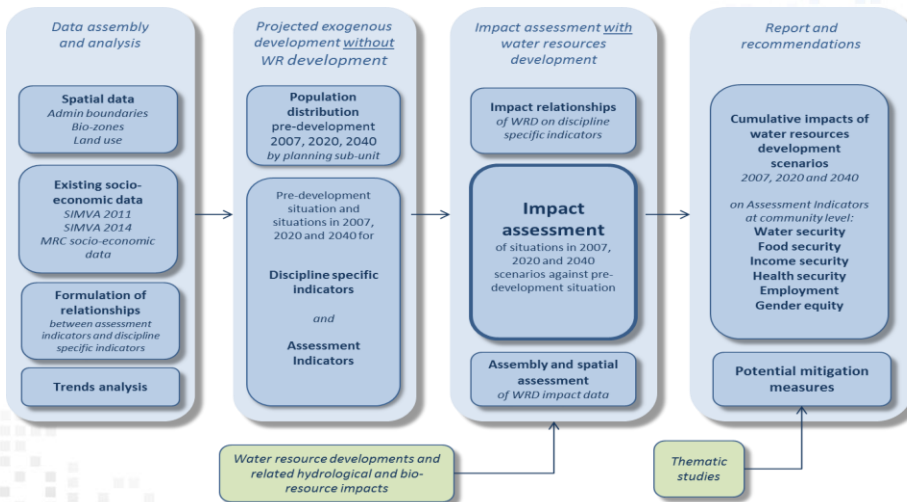
Social impact assessment – Assessment sub-unit

Geographic Information System (GIS) functionality and impact relationships will be used to quantify the impact of changes in water resources development on social discipline specific indicators in each sub-unit.



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Social impact assessment – Methodology



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Economic impact assessment

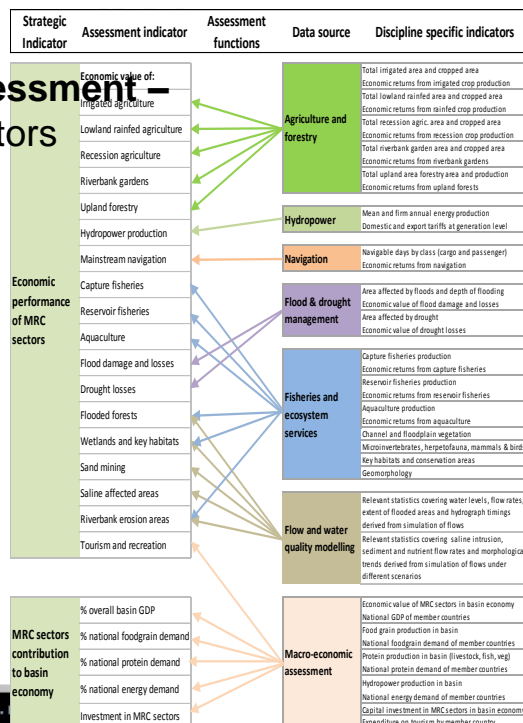
Objective

- To estimate the **economic benefits** and **costs** of existing and planned water resource developments
- To evaluate the **economic impacts of interventions** (both positive and negative)
- To determine the **distribution of economic benefits and costs**, as well as economic losses, between LMB countries
- To estimate the impact on **employment** and **living conditions**

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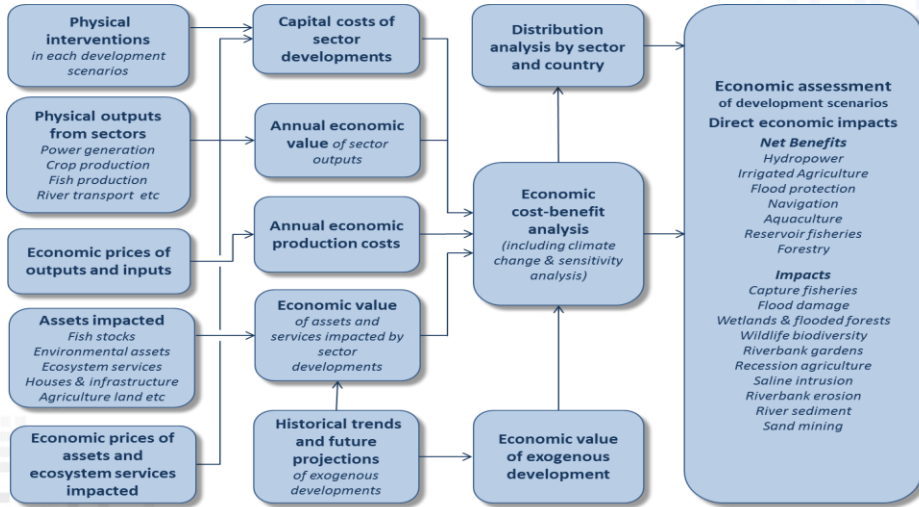
Economic impact assessment – Linkage between indicators

First, the **discipline specific indicators** will be quantified by other Council Study Teams through **impact analysis**, and then the **assessment indicators** will be **monetized** through the economic assessment.



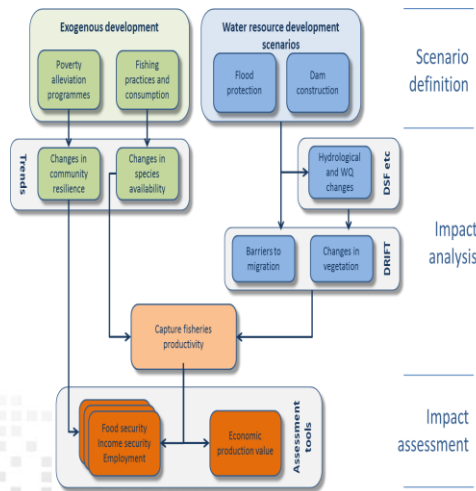


Economic impact assessment – Methodology



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Illustration of impact analysis and assessment process



For example, if fisheries production in a particular area was 100 tons/year pre-development, exogenous development trends might be that by 2007 it was 90 tons and, if past trends continue, by 2040 it would be down to 80 tons without any further water resources development. With the water resources developments in the considered scenarios, the analyses may predict a 10% fall in 2020 and 20% by 2040. Thus the assessments of socio-economic impacts in that particular area for illustrative purposes only would be:

Capture fisheries, tons/year	Pre-dev	2007	2020	2040
Exogenous development	100.0	90.0	85.0	80.0
Exogenous plus water resources development	100.0	90.0	76.5	64.0
Water resources development impact	0.0	0.0	-8.5	-16.0

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Summary of data and tool



Data source

- SIMVA 2011 and 2014
- MRC Socio-economic Database
- New data from Thematic and Discipline Teams

Tool

- GIS functionality
- Spreadsheet functionality

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Challenges



- Some missing social data in the MRC Socio-Economic Database
- Social impact assessment with GIS and Spreadsheet functionality
- Integration of social and economic impact assessment between thematic and cumulative teams

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The RTWG is requested to:



- Take note of the progress;
- Consider the proposed scope, approach and methodology of the social and economic impact assessment; and
- Provide overall feedback and guidance.

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Thank You



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