Workshop on project preparation process with reference to EU and WBIF requirements

Approach to the preparation of Pre-feasibility Studies and Feasibility Studies

Assen Antov, JASPERS
12 October 2022, Belgrade
Topics to be discussed

• **Approach to the preparation** of Pre-feasibility Studies (PFS) and Feasibility Studies (FS)

• Scoping of PFS and FS – typical contents and requirements regarding:
  • Relevance of planning documents
  • Terrain studies (investigation works)
  • **Identification and comparison of alternatives**
  • Climate change vulnerability and risk assessment
  • Qualitative risk assessment
  • **Demand analysis**
  • Environmental analyses
  • CBA (and cost-effectiveness)
  • Design work
  • Cost estimates
Contents of today’s presentations

• **Session 2:**
  • Approach to the preparation of Pre-feasibility Studies (PFS) and Feasibility Studies (FS)
  • Qualitative risk assessment

• **Session 3:**
  • Climate change vulnerability and risk assessment

• **Session 4:**
  • Identification and comparison of alternatives
  • Demand analysis
Stages of project preparation

• Pre-feasibility studies
• Feasibility studies (often with preliminary design)
• Detailed design
• Environmental and Social Impact Assessment (ESIA)
• Other administrative activities
Pre-feasibility Study

- Project context and study scoping
- Definition of objectives
- Study of the constraints
- Definition of alternatives
- Comparison of alternatives

Problems: limited time and resources devoted to this stage; poorly defined objectives; poorly performed comparison of alternatives
Feasibility Study (1/2)

- Definition of objectives and study scoping
- Terrain studies
- Environmental study
- Climate change vulnerability and risk assessment
- Road safety impact assessment
- Qualitative risk analysis
- Design of alignment options
- Cost estimates
Feasibility Study (2/2)

- Demand forecast
- Option analysis
- Preliminary design of preferred option
- Road safety audit
- Cost-benefit analysis (preferred option)
- Environmental procedures

Problems: limited time and resources devoted to the stage (hence poor terrain studies); poorly defined project objectives; poorly performed comparison of alternatives
# PFS and FS – a comparison

<table>
<thead>
<tr>
<th></th>
<th>Prefeasibility Study (PFS)</th>
<th>Feasibility Study (FS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>An overview study aimed at studying the objectives</td>
<td>Detailed analyses of economic and technical feasibility of options</td>
</tr>
<tr>
<td><strong>Policy Analysis</strong></td>
<td>Examination of macro aspects of the project</td>
<td>Not applicable in most cases</td>
</tr>
<tr>
<td><strong>Economic Analysis</strong></td>
<td>Simplified analysis to determine the scope of detailed FS</td>
<td>Precise and detailed analysis of two or more options; demonstrates the feasibility of the preferred option</td>
</tr>
<tr>
<td><strong>Technical feasibility analysis</strong></td>
<td>Mostly based on existing literature and studies</td>
<td>Detailed technical analyses, e.g. topographical, geotechnical, hydro-geological, hydraulic; costs estimation; environmental impacts</td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td>Fundamentally different; should be possible to differentiate between them using mostly qualitative criteria.</td>
<td>The options should be similar enough to allow comparison using quantitative criteria</td>
</tr>
</tbody>
</table>
Pre-feasibility Study Workflow

Workflow:
- PFS-1 Project Identification
- PFS-2 Data Collection; Alternatives
- PFS-3 Involvement of Stakeholders
- PFS-4 Preliminary EIA
- PFS-5 Traffic Studies
- PFS-6 Technical Studies
- PFS-7 Simplified Economic Analysis
- PFS-8 Corridor Selection

Deliverables:
- Inception Report
- Proposal for MCA Evaluation Framework
- Preliminary EIA Report
- Traffic Study Report
- Corridor Selection Report
Feasibility Study Workflow (1/2)
Feasibility Study Workflow (2/2)