Fish Friendly Dam Operation

Project background
Conflicts: stakeholders & their demands
Decision maker & operation measures
Conclusion & recommendation

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Project background-location
Pak Mun Dam
Tana Rapid
Fish Migration = f(Q, q, t)

The reason of fish migration is to seek abundant spawning ground.
$Water \; Require = f(t)$

Time table of upstream farmers and rain index of the impacted area
Upstream water level was controlled, which benefit to farmers’ occupation.
Stakeholders-upstream farmers
Average energy produced from Pak Mun Hydropower Plant in Normal operation

Power Demand = f(t)
Decision maker & operation measure: Development of decision maker

- **1994-2003**: authorized agency
  EGAT, project developer, was authorized to operate the dam and maximize the power.

- **2003-2007**: an all-stakeholder committee
  It worked under the guide of central government-open gate for 4 months.

- **2008**: local committee
  Consisted of all stakeholder representative, its duty is to define the operation measure that survive all concerns.
### Stakeholder & Demand Analysis

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<th>Stakeholder</th>
<th>Demands</th>
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<tbody>
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<td>Folk fishermen</td>
<td>Gate opened</td>
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<td>Upstream farmers</td>
<td>Constant US water level</td>
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<td>EGAT</td>
<td>Max US water level</td>
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**General demand**

**Critical demand**
Decision maker & operation measure: first acceptable measures

- The spill gates shall be opened 4 months a year-started when the inflow $\geq 500$ cms.
- If there is unexpected even resulting the severe impacts on any group of stakeholder during gate opening, the committee shall urgently revised the measure.
- Members of committee have to listen in the impacts of measure from the local people to collect the valuable information for measure improvement.
Conclusion & recommendation: conclusion

- For multi-purpose project, which concerns many aspects of natural resources, it’s impossible to maximize whosoever demands.
- Decision making shall be done by an organized body consisted of all stakeholder representatives.
- Operation measure shall allow all stake holders to survive their living condition in new environment.
- The operation measurement should be flexible to the change of environmental condition.
Conclusion & recommendation: recommendation

- For existing project, sharing is a strategy to overcome the conflicts among the stakeholders.
- For future project, the developer has to take the risk of conflicts into project evaluation. There should be some risk management on conflicts of natural resources utilization.
- Public participation at the project initiation might be the wise and save strategy to project design.