# Implementing transboundary water resources management - lessons learnt from the Mekong

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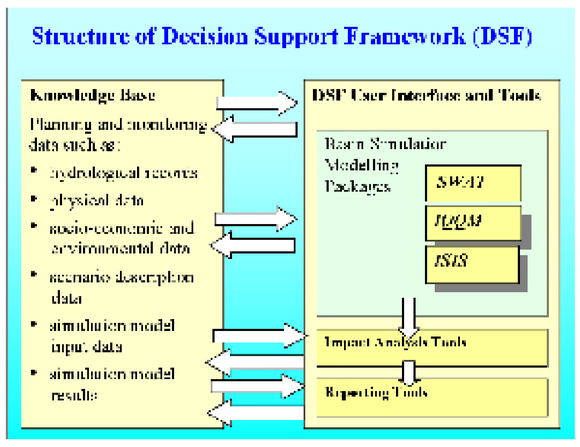
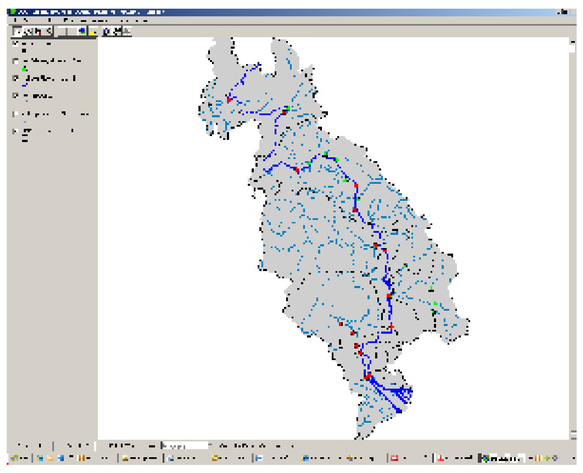
## Introduction

Since 2004 the Mekong River Commission (MRC) has been using the Halcrow developed Decision Support Framework (DSF) to support the delivery of integrated water resources management for the Mekong River Basin in Cambodia, Lao PDR, Thailand and Vietnam.

The DSF consists of a knowledge base, suite of simulation models and a set of impact analysis tools all accessed from a single GIS based user interface. The DSF is seen as a significant advancement for integrated water resources management planning in the Lower Mekong River Basin.



## DSF application

The DSF is designed to facilitate assessment of the transboundary impacts of changes in climate, water demands, land use, management practices and infrastructure upon the water resource system of the Lower Mekong Basin, and the consequent impacts upon associated environmental and socio-economic conditions (Jirayoot and Trung 2005). Key factors learnt during the project for the successful application of the DSF include:

- Active participation by member states in data and model selection, validation and application within an open and transparent assessment framework.
- The Knowledge Base central repository of key data with open access for all MRC member countries.
- Use of tools which are appropriate at the strategic level, e.g. broad-scale simulation models covering the entire basin.
- Riparian countries can formulate management proposals in the knowledge of how these may impact others, and can examine those of other countries and the Secretariat in a manner that promotes mutual trust, open and constructive dialogue and collective endorsement of the decisions made.
- Common understanding that the DSF provides ‘decision support’ and not ‘decision making’. Planners and decision makers need to allow for many factors not included within the DSF - achieving consensus on the subset of factors provided by the DSF removes one area of possible contention.

## Capacity building

Halcrow complemented the technological advances provided by the DSF toolkit with the provision of an extensive programme of capacity building. The objective was to ensure that the DSF could be operated by riparian modellers and that results would be understood and accepted by MRC member countries. A significant hurdle to achieving a sustainable skilled DSF user base is the fixed term nature of many of the appointments.

Formal DSF operational procedures were therefore agreed between the MRC Secretariat and the four national committees to define clear institutional arrangements, as well as procedures for operating, updating and upgrading the DSF. Such formal and open procedures are considered essential to help maintain trust and help address some of the staff continuity issues.

However, staff continuity issues remain a major barrier to full success, and to help further address this a series of ‘case studies’ have been developed which can be used by new users to gain experience through application of the DSF to solve real problems.

## Conclusion

- We feel it is better to use a broad-scale systems model that can be used and understood by many, rather than complex processes models that will be used by only a few experts
- The ongoing use of the system must be balanced with the need to continually improve the capacities of the Secretariat and national committees who use it
- This conclusion (promoting broad-scale systems ‘cloud to coast’ modelling) also applies to many of the water scarcity problems which are increasingly facing many regions around the world.