



Implementation of the Water Resources Classification System and Determination of the Resource Quality Objectives for Significant Water Resources in the Letaba Catchment

Item 6.2a: Water Resources

Project Steering Committee

12 March 2013



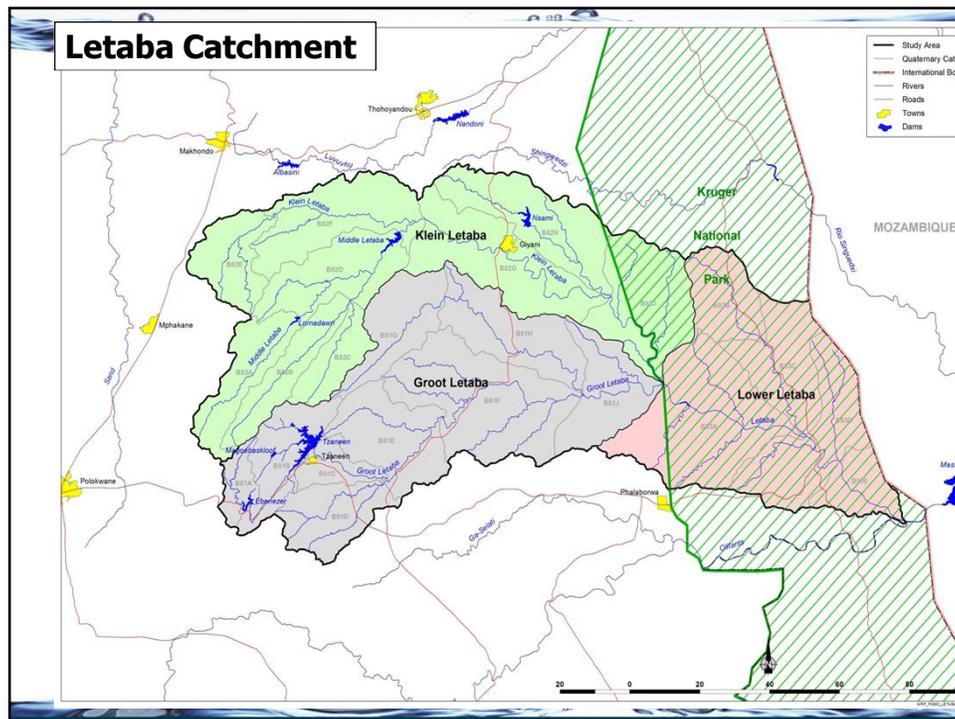
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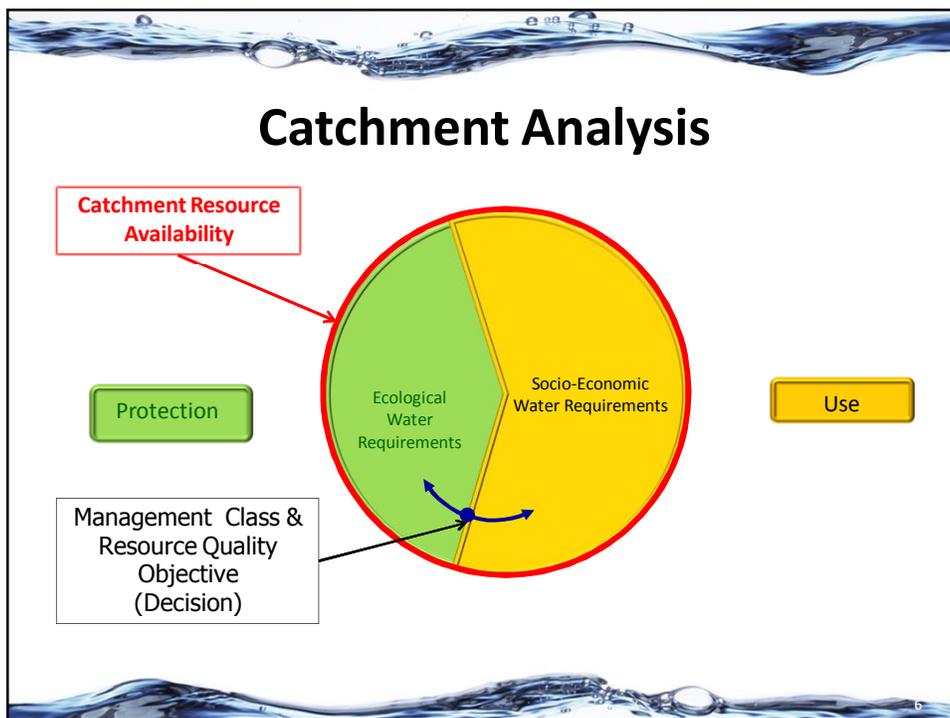
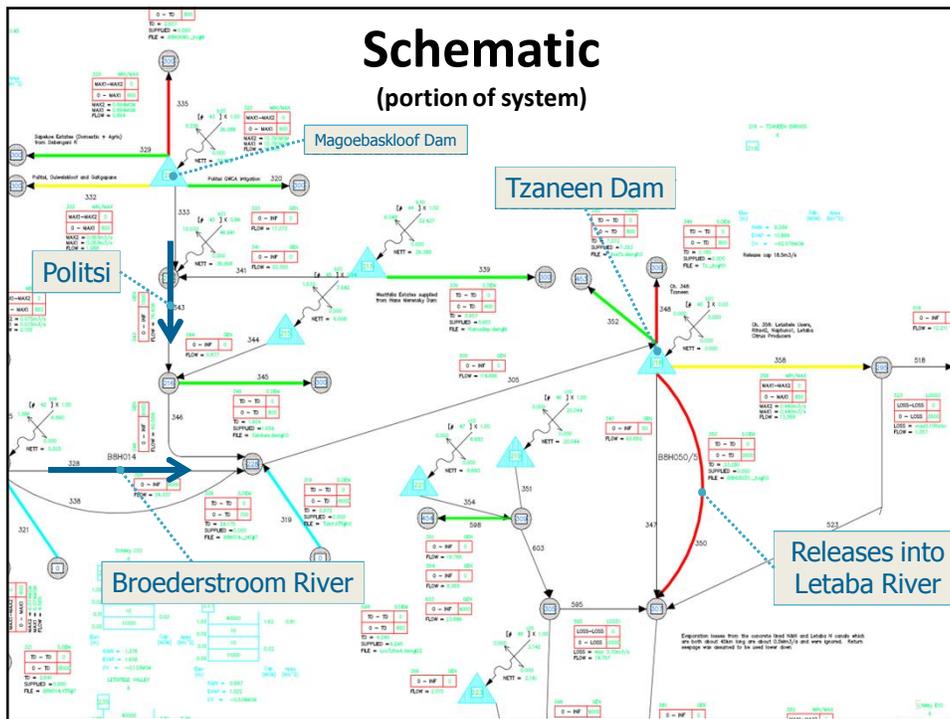
Layout

- “ Status Quo assessment approach
 - “ Water Resource numerical modelling - approach
 - “ Integrated Resource Management
 - “ Integrated Units of Analysis (IUAs)
 - “ Water Resource Overview per IUA
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Approach

- “ Identify decision support systems & data
 - . Data quality assessment
 - . Surface and groundwater
 - . Land use affecting water balance
- “ Augmented by inspecting satellite imagery
- “ Record information per Sub Quaternary Reaches
- “ Classify water use importance
- “ Prepare resource perspectives for IUA delineation
- “ Collate data and models for numerical analysis





Integrated Resource Management

- “ Source for water resource management scenarios
 - . Intervention planning and reconciliation strategies
 - . Current and future water requirements
- “ Alignment by formulating coherent scenario for evaluation
- “ Implications of classification scenarios:
 - . Reduced supply – implications on irrigation urban assurance of supply
 - . Example of a scenario: Implementation of Tzaneen Dam Raising and proposed Nwamitwa Dam



Luvuvhu and Letaba Reconciliation Strategy

Potential intervention options (under investigation):

- “ Water conservation and demand management
- “ Groundwater development
- “ Re-use treated sewage effluent
- “ Infrastructural development options and schemes i.e. Raising of Tzaneen Dam, proposed Nwamitwa Dam etc.

Integrated Unit of Analysis (IUA)

Definition:

An IUA is a broad scale unit (or catchment area) that contains several biophysical nodes. These nodes define at a detail scale specific desirable attributes which together describe the catchment configuration of the IUA.

Application:

Scenarios are assessed within the IUA and relevant implications in terms of the Management Classes are provided for each IUA.

