Classification, Reserve & RQO determination of water resources in the Inkomati Water Management Area

PROJECT PLAN AND STUDY TASKS

Project Steering Committee

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water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

PROJECT PLAN AND STUDY TASKS

The study has a duration of two years ending March 2015.

There are two processes involved, each with steps:

- Classification
- Resource Quality Objectives

The steps overlap, and an integrated set of steps have been designed to be used in this study. Each step represents a task with various subtasks.

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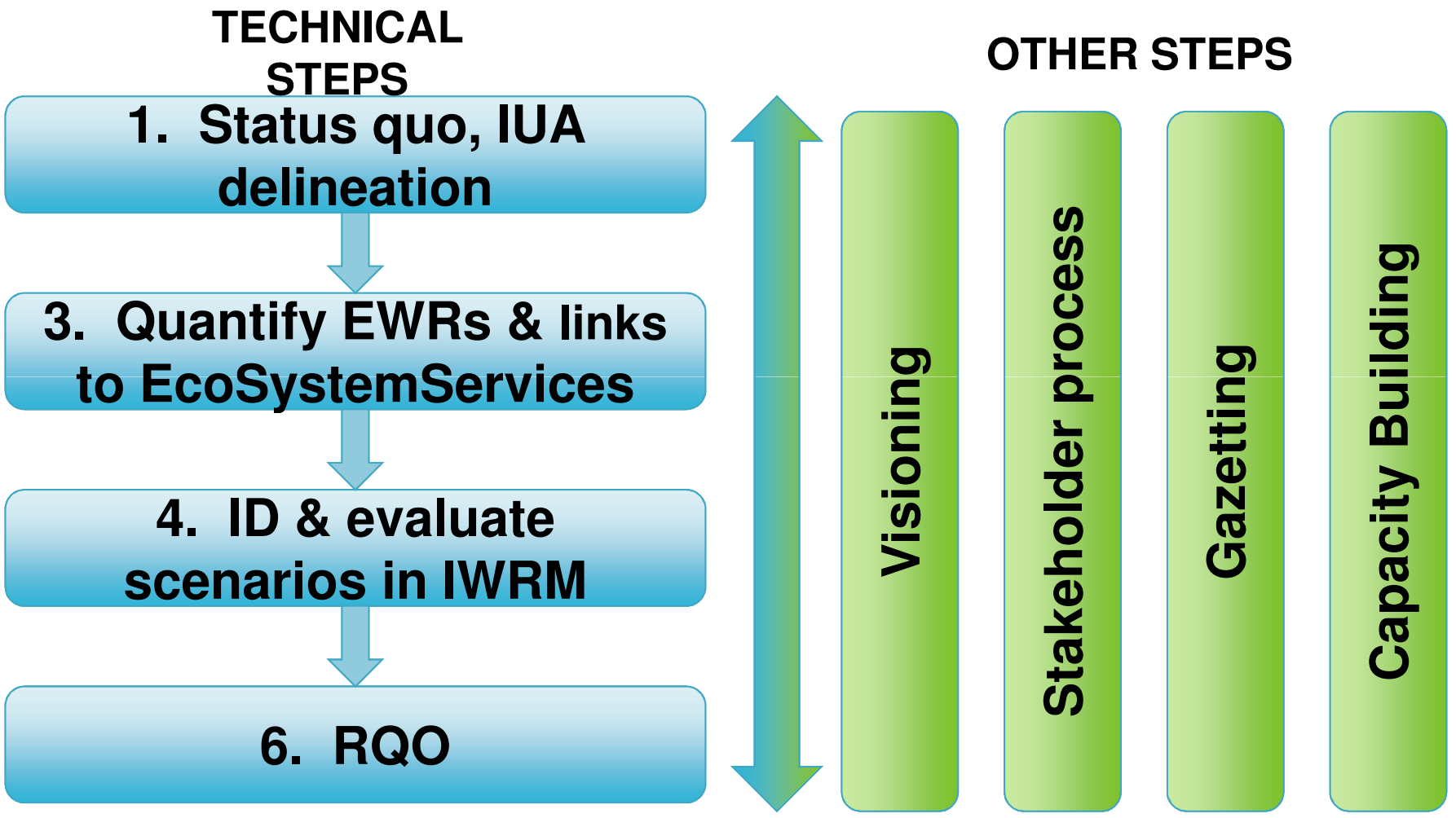

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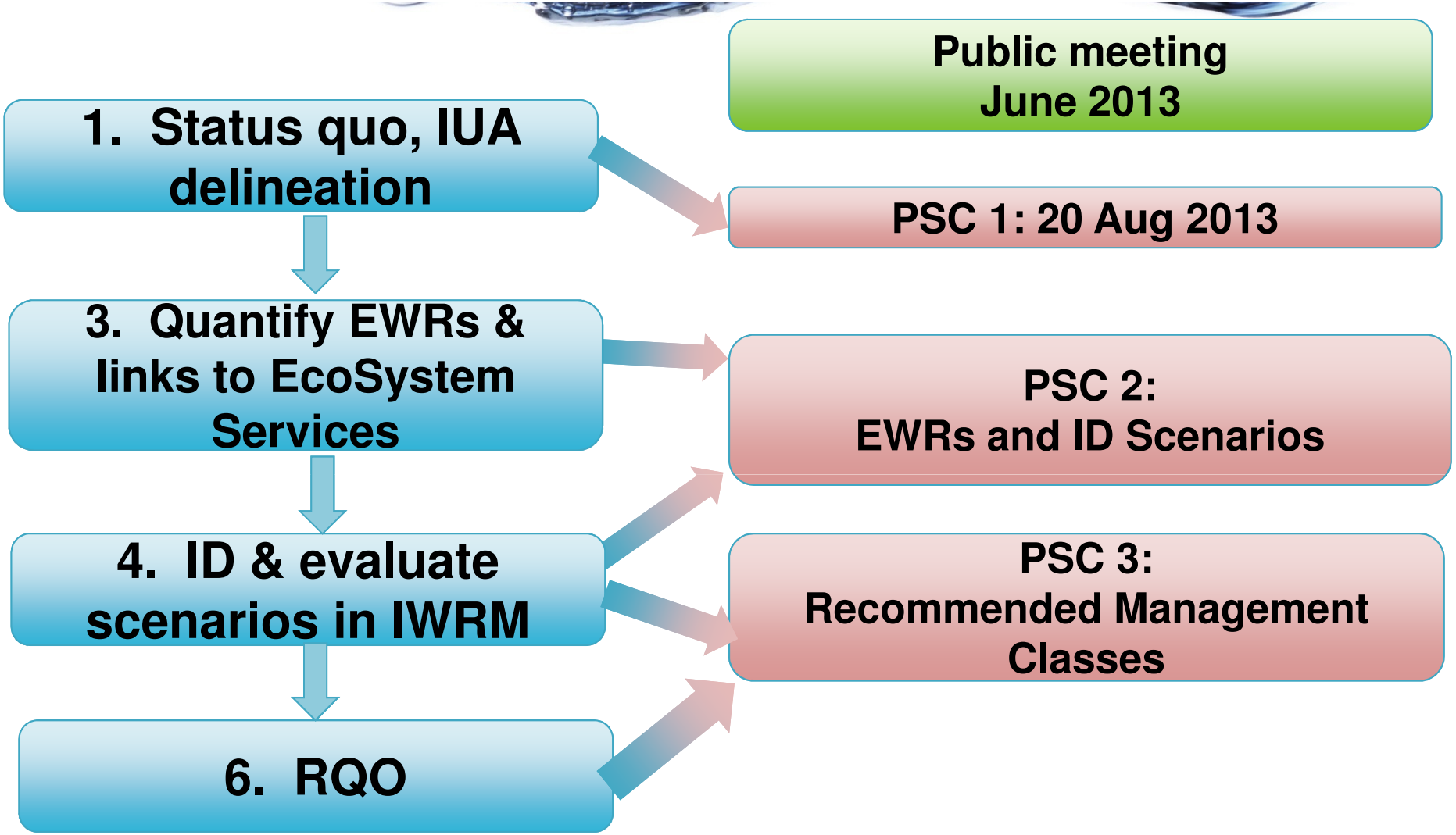
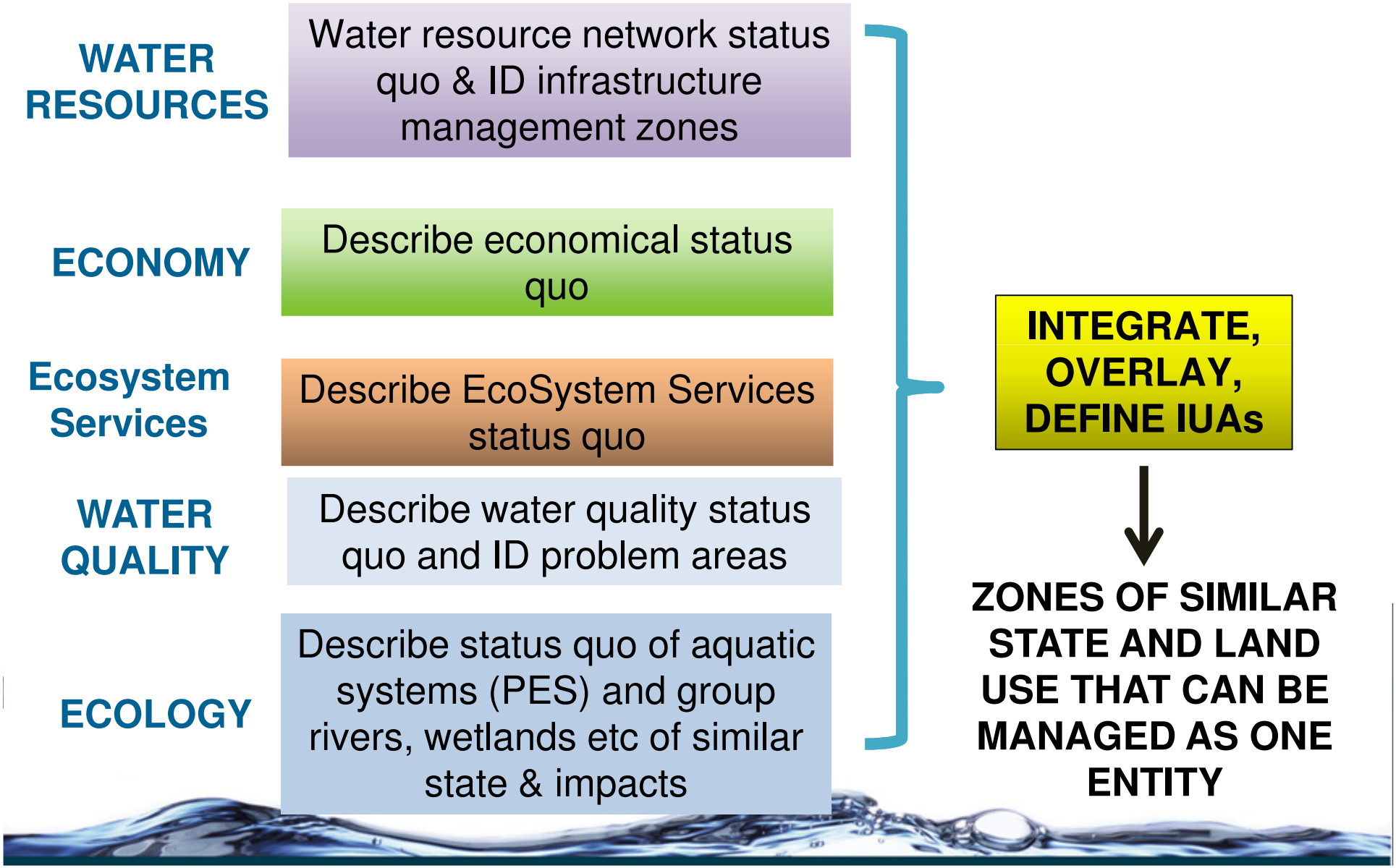
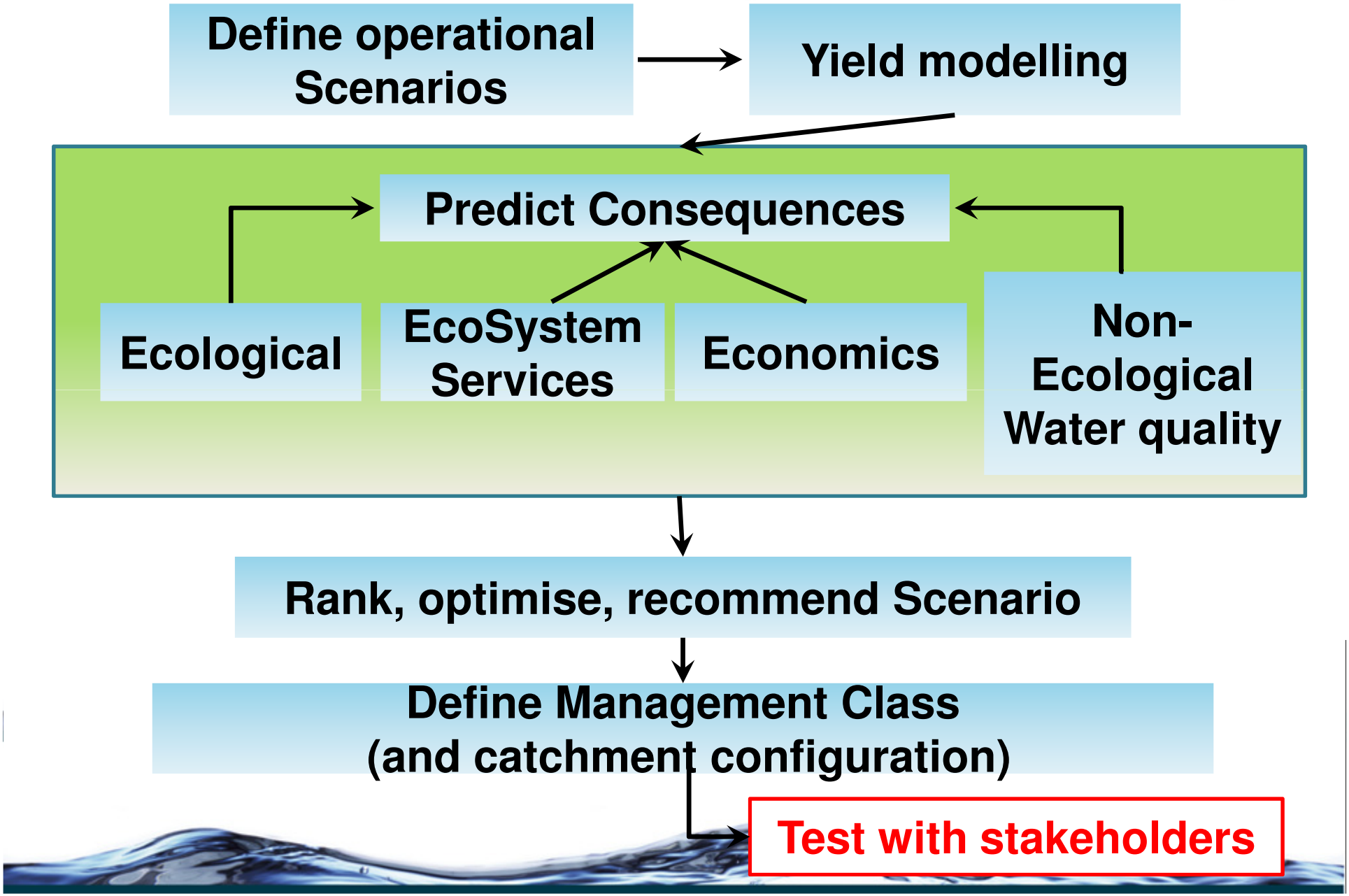


STATUS QUO COMPONENTS CONSIDERED IN IUA DETERMINATION



CONSEQUENCES OF OPERATIONAL SCENARIOS



Trade-offs

- Classification is about trade-offs in allocating water to various beneficial uses, including water for ecosystem services (Ginsburg, et al).
- The NWRS …'aims to strike a balance between the use of resources for livelihoods and conservation of the resource to sustain its functions for future generations…'.
- 'Trade offs are therefore between resource quality on the one hand and beneficial water use on the other' (Ginsburg, et al).
- Two types of analysis will be carried out as part of this classification:
  - 'Traditional Economics' to value the water used for livelihoods
  - 'EcoSystem Services' to describe the impact of scenarios on the goods and services delivered by the river

Economic analysis

- Beneficial use will be determined through an economic analysis which quantifies the value of water (as GDP or GVA).
  - Information is provided by StatsSA in terms of GDP
- Other parameters such as jobs associated with the beneficial use are also typically captured and reported.
  - This is useful to consider the political pressure to create jobs

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Ecosystem Services

- Ecosystem Services are the goods and services provided by the river (and associated ecological systems) that result in a value being produced for consumers.
- Provisioning services are the most familiar category of benefit, often referred to as ecosystem ‘goods’, such as foods, fuels, fibres, medicine, etc., that are in many cases directly consumed;
- Other services include cultural, regulating services (e.g water quality inputs), and supporting services (e.g. nutrient formation).

- Given the nature of the work that is done and the importance for decision making, the focus will be on provisioning services (although the others are not ignored)
- The ecosystem services component is primarily concerned with the services that will change under operational scenarios and the magnitude of change as it relates to significant users.
- This is a risk-based approach that informs decision makers rather than an attempt to quantify in rands and cents the value of the changes