



**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.



PROJECT PLAN AND STUDY TASKS

TECHNICAL STEPS

1. Status quo, IUA
delineation

3. Quantify EWRs & links
to EcoSystemServices

4. ID & evaluate
scenarios in IWRM

6. RQO

OTHER STEPS

Visioning

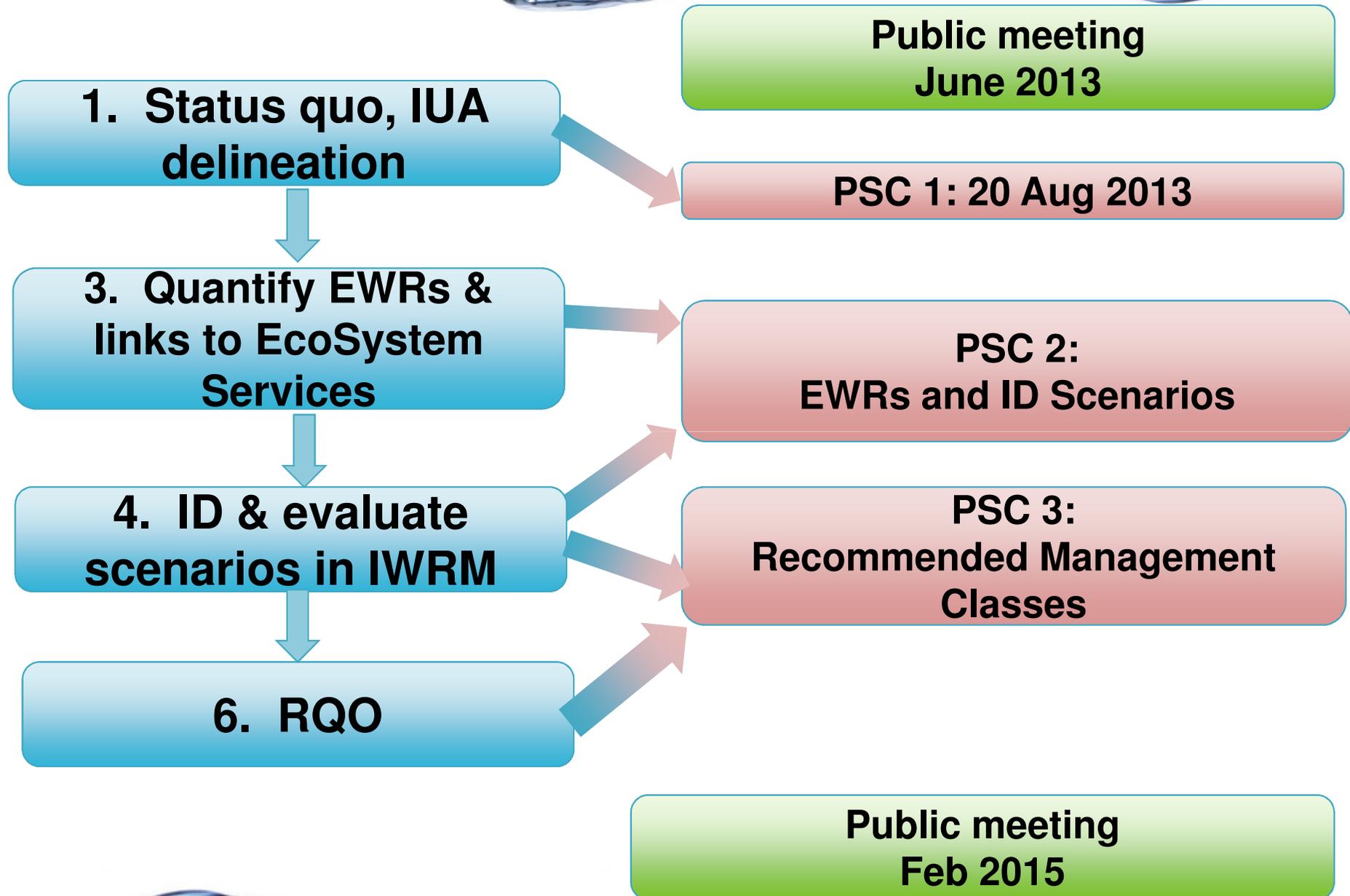
Stakeholder process

Gazetting

Capacity Building



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STATUS QUO COMPONENTS CONSIDERED IN IUA DETERMINATION

WATER RESOURCES

Water resource network status quo & ID infrastructure management zones

ECONOMY

Describe economical status quo

Ecosystem Services

Describe EcoSystem Services status quo

WATER QUALITY

Describe water quality status quo and ID problem areas

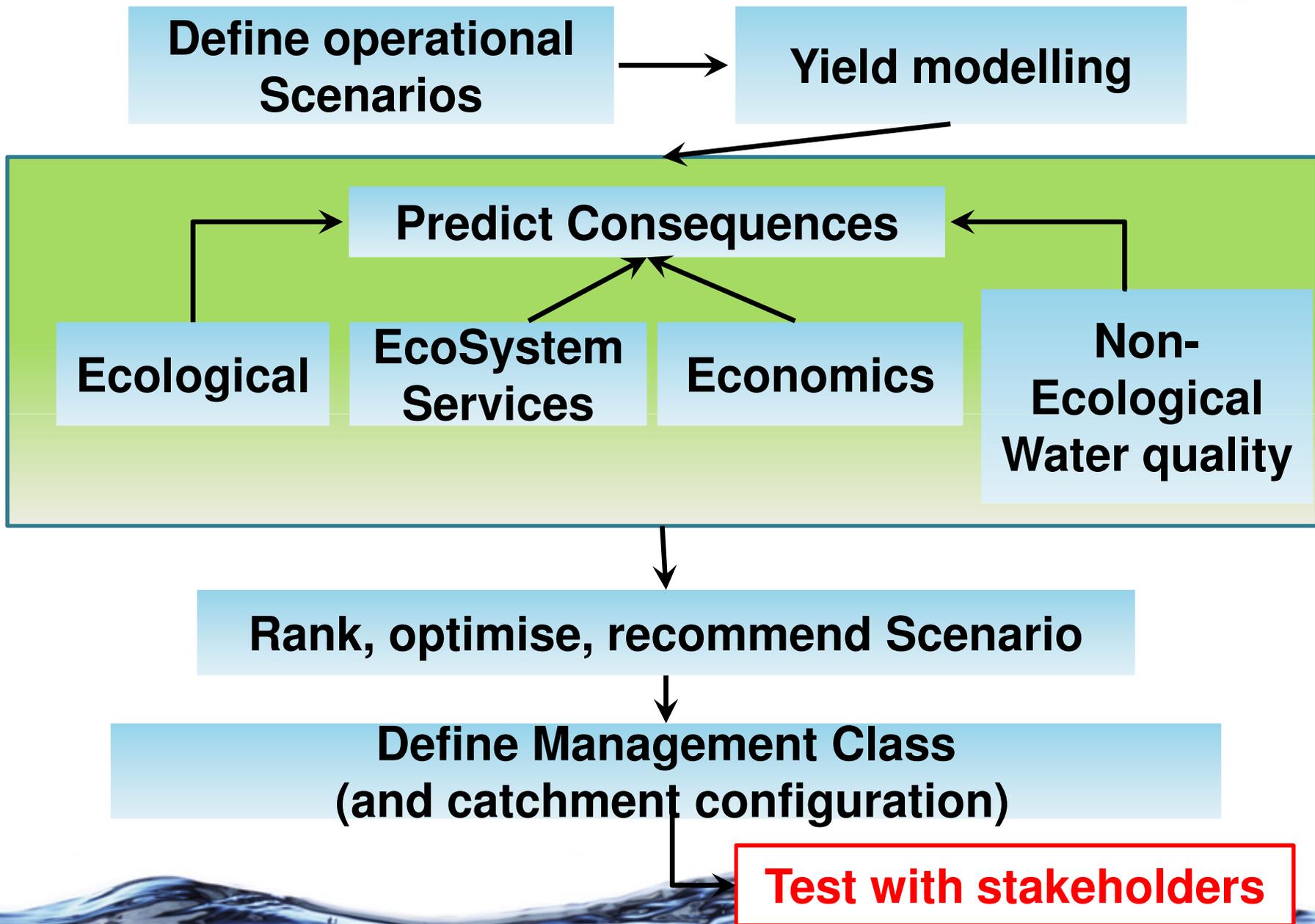
ECOLOGY

Describe status quo of aquatic systems (PES) and group rivers, wetlands etc of similar state & impacts

**INTEGRATE,
OVERLAY,
DEFINE IUAs**

**ZONES OF SIMILAR
STATE AND LAND
USE THAT CAN BE
MANAGED AS ONE
ENTITY**

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



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

