water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

DETERMINATION OF WATER RESOURCE CLASSES AND RESOURCE QUALITY OBJECTIVES IN THE MZIMVUBU CATCHMENT

Mzimvubu Partnership Forum Meeting

Department of Water and Sanitation

Wednesday, 23 September 2015

PRESENTATION OUTLINE

- Introduction
- RQO Determination Process
- Implications
- Stakeholder engagement processes

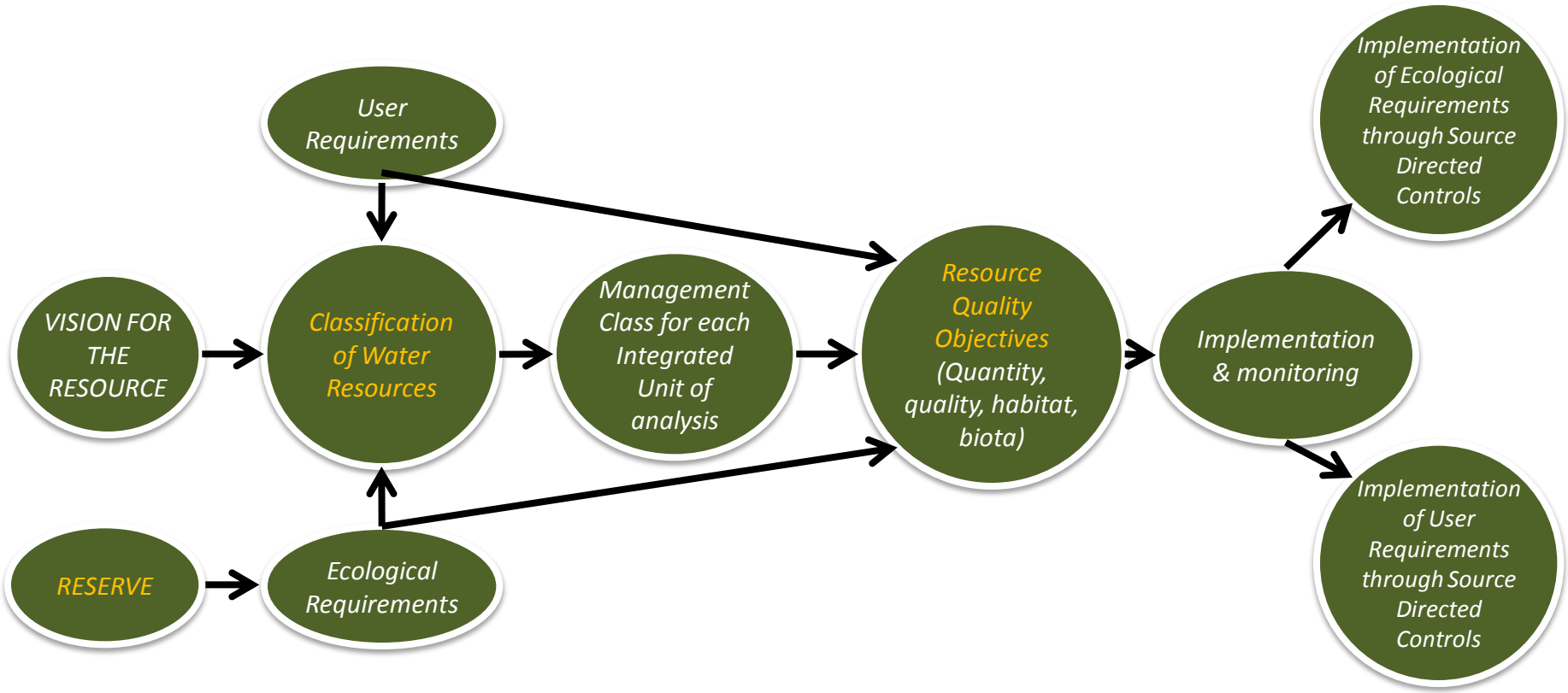
THE PURPOSE

- To inform stakeholders about the classification of water resources and Resource Quality Objectives
- Indicate how the Department will implement the project.

INTRODUCTION

- **The National Water Act (NWA) (No. 36 of 1998) aims to ensure the sustainable use of water resources for the benefit of all users.**
- **To achieve this, the Act prescribes a number of measures:**
  - **Significant water resources have to be classified *i.e.* the Vision for the water resources and the Management Classes have to be set**
  - **Ecological Reserve which provides for the ecological requirements has to be determined**
  - **Resource Quality Objectives which give effect to the Management Classes, have to be determined**

RELATIONSHIP BETWEEN CLASSIFICATION, RESOURCE QUALITY OBJECTIVES AND RESERVE



WATER RESOURCES CLASSES

Classes	Description of use	Ecological Category	Description of water resource
Class I	Minimally used	A-B	Minimally altered
Class II	Moderately used	C	Moderately altered
Class III	Heavily used	D	Heavily altered

Ecological Category (EC) - the assigned ecological condition of a water resource in terms of the deviation of its biophysical components from a pre-development condition

RESOURCE QUALITY OBJECTIVES (RQOS)

- **Purpose → "establish clear goals relating to the quality of the relevant water resources"**
- **In determining RQOs, "a balance must be sought between the need to protect and sustain water resources and the need to use them"**
- **Numerical and/or descriptive statements and may relate to quantity, quality, habitat and biota.**
- **Must take account of user requirements and the class of the resource**
- **Binding on all authorities and institutions**

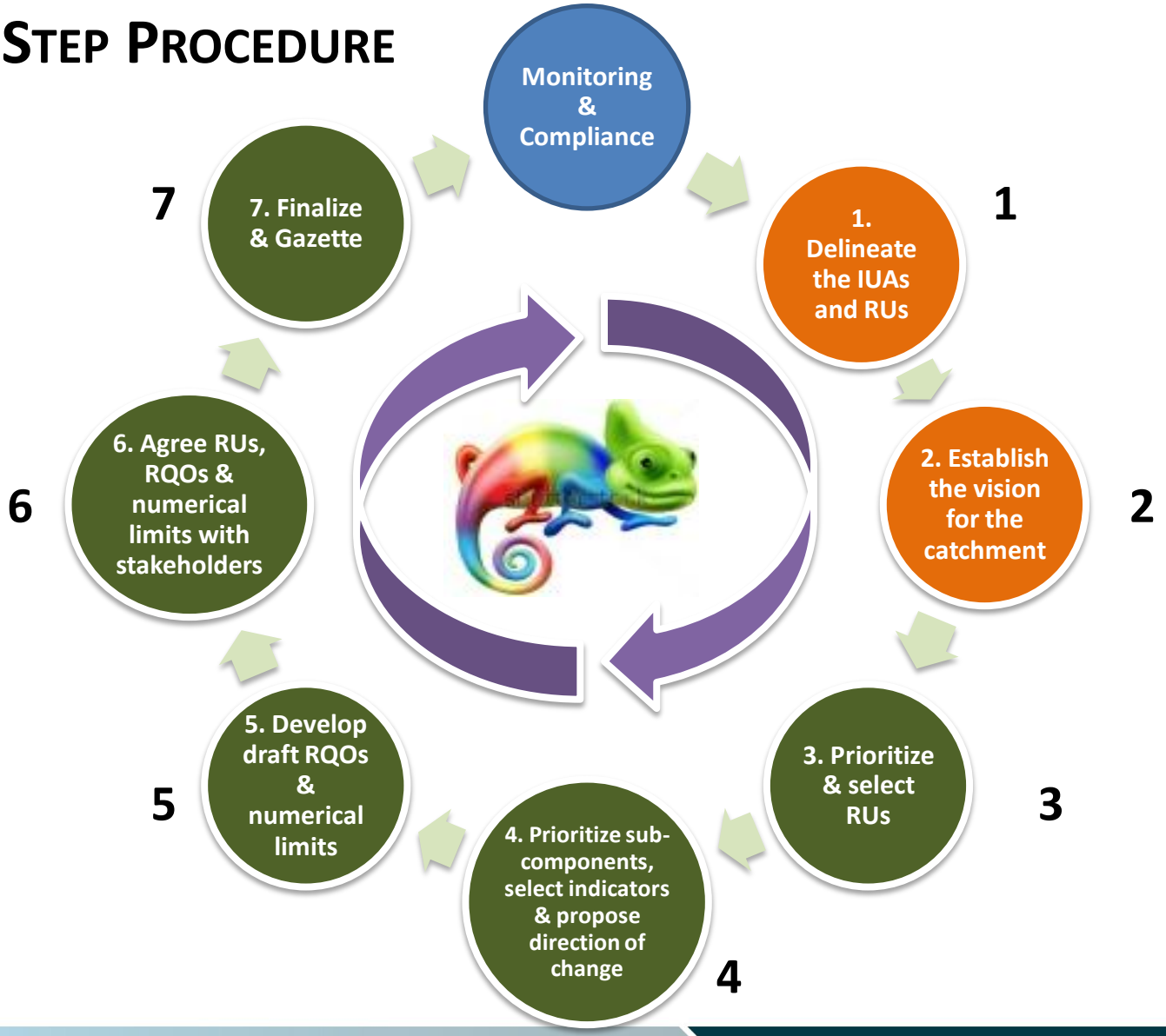
RQOs Cannot:

- Be applied to an individual licence
- Replace the need for other monitoring programmes
- Include every available indicator of resource quality
- Be considered as absolute “truths”

RQO DETERMINATION PROCESS

RQOs 7-STEP PROCESS

RQOs 7-Step Procedure



DELINEATION OF RESOURCE UNITS

Integrated Units of Analysis - IUAs

- **Each integrated unit of analysis (IUAs) represents a homogenous catchment area of similar impacts which must be considered in the determination of RQOs.**

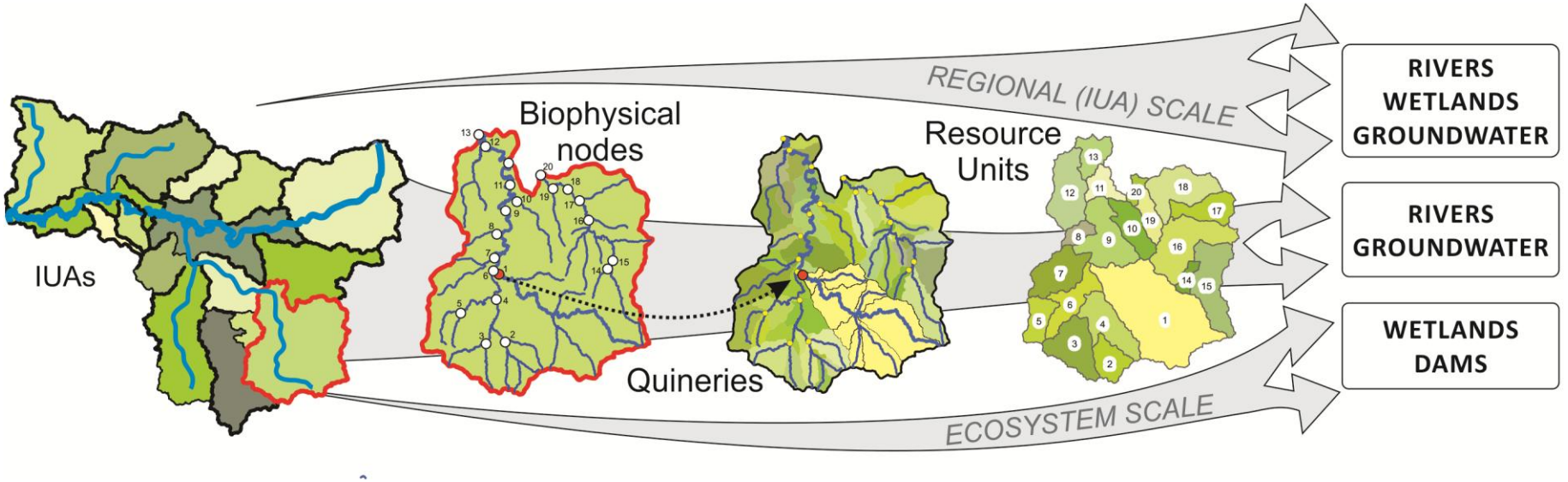
Resource Units - RUs

- **A RU is a section of a water resource within an IUA that is sufficiently ecologically distinct to warrant its own specification of RQOs.**

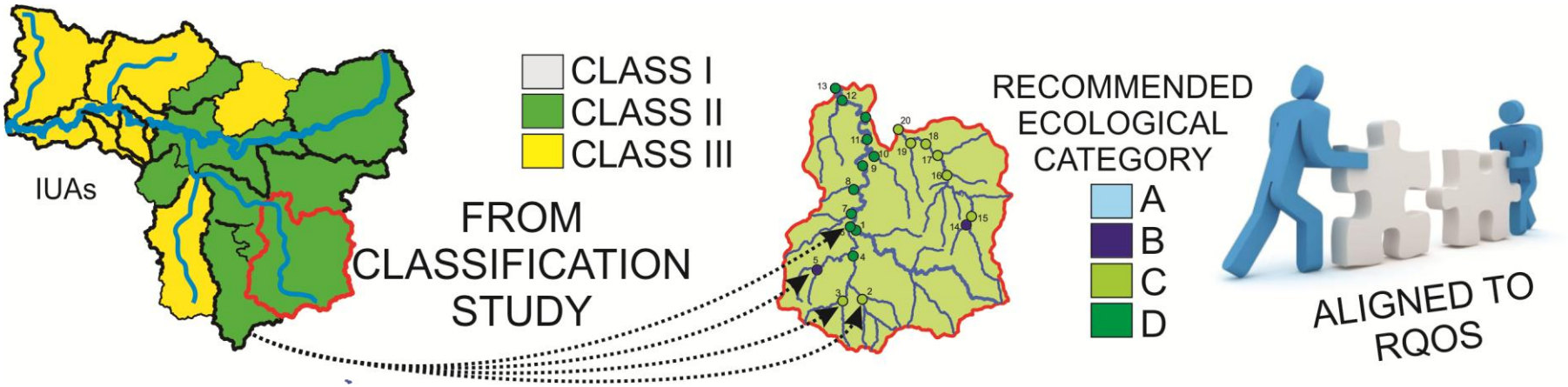
IUA, RU & ECOSYSTEM DELINEATION

STEP 1: RESOURCE UNIT DELINEATION

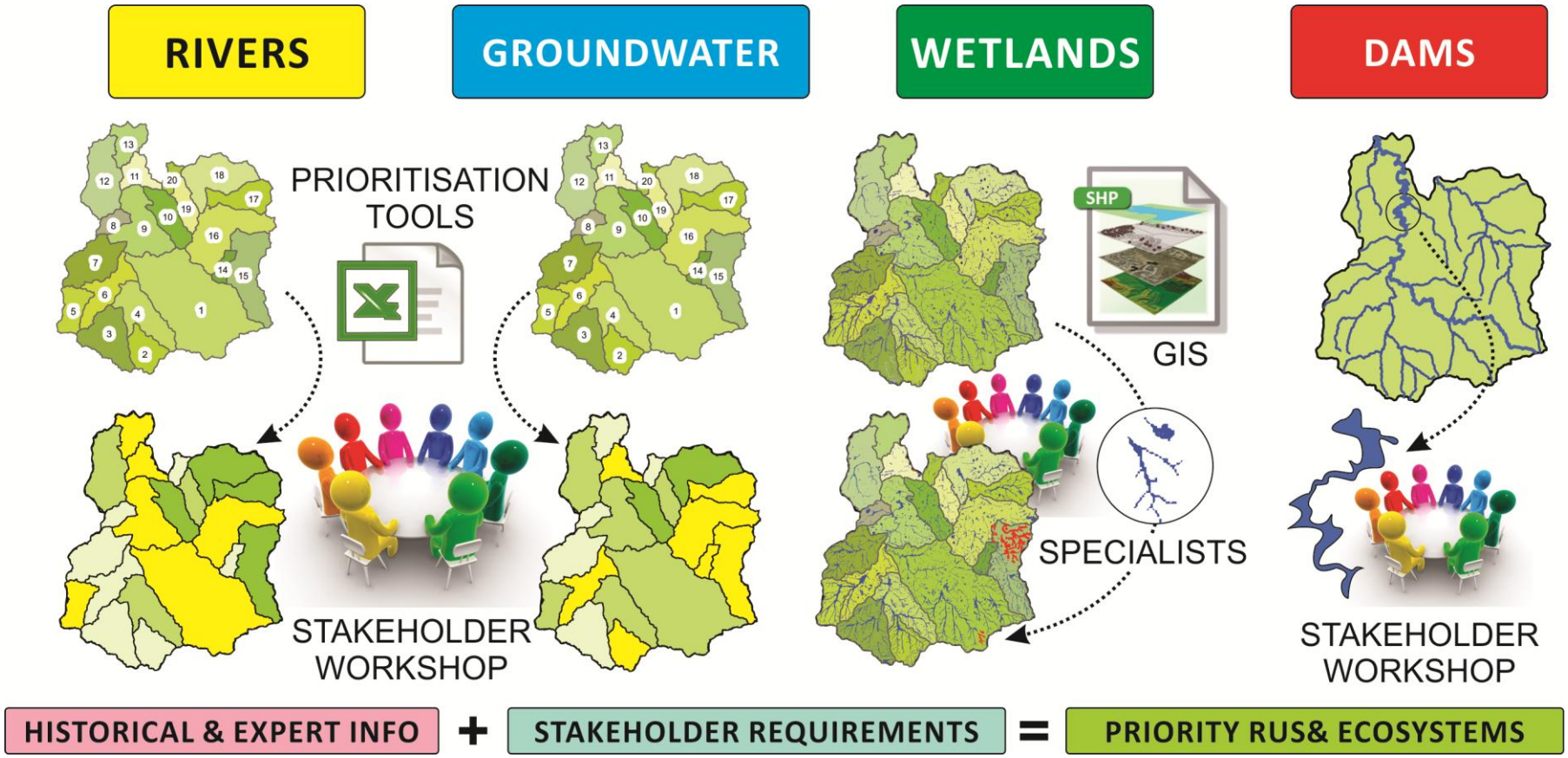
- Resource components → Rivers, Wetlands, Groundwater and Dams



STEP 2: VISION



STEP 3: PRIORITISE AND SELECT RUs FOR RQOS



PRIORITISATION OF RESOURCE UNITS

Criterion	Sub-criteria rating (0: low, 0.5: moderate or 1:high) per criterion per RU
Position of RU within IUA	• Resource Units located on large main stem river at the downstream end of the IUA (IUA outlet node)
Assessment of the importance of each Resource Unit to users	• Resource units which provide important cultural services to society • Resource units which are important in supporting livelihoods of significant vulnerable communities • Resource units which are important in meeting strategic requirements and international obligations • Resource units that provide supporting and regulating services • Resource units most important in supporting activities contributing to the economy (GDP & job creation) in the catchment (e.g. commercial agriculture, industrial abstractions and bulk abstractions by water authorities)
Level of threat posed to the water resource quality for users	• Level of threat posed to users
Ecological importance	• Ecological Importance and Sensitivity Categories (EIS) • Present Ecological State (PES) and Nested Ecological category (NEC) • National Freshwater Ecosystem Priority Areas • Priority habitats/species identified in provincial conservation plans
Threat posed to the water resource quality for the environment	• Level of threat posed to the ecological components of the resource unit
Management considerations	• Resource Units with PES lower than a D category or lower than the accepted category (NEC)
Practical considerations	• Availability of EWR site data or other monitoring data (RHP, DWA gauging weirs) located within reach • Accessibility of resource units for monitoring • Safety risk associated with monitoring resource unit

STEP 4: PRIORITISE SUB-COMPONENTS & SELECT INDICATORS

SPECIALIST WORKSHOP

QUANTITY	LOW FLOWS	HIGH FLOWS		
QUALITY	SALTS	NUTRIENTS	SYS. VARIABLES	TOXICS
HABITAT	INSTREAM	RIPARIAN		
BIOTA	FISH	PLANTS	REPTILES	INVERTS

RESOURCE UNIT EVALUATION TOOL:

- **Used to determine level of threat posed to each of the components by impacting activities in the catchment**
- **Used to identify sub-components that should be protected – to support activities, maintain integrity and ecological functioning**


5.
Develop draft RQOs and Numerical Lim
DRAFT GAZETTE RQOS & NLs
6.
Agree RUs, RQOs and NLs with stakeholders.
PUBLIC MEETINGS
7.
Finalise and gazette.
NATIONAL GAZETTE
BINDING ON ALL INSTITUTIONS/AUTHORITIES

IMPLICATIONS

- Once RQOs are set, they will be binding on all authorities/institutions when exercising any power or performing any duty under the NWA
- Users are **NOT** required to meet the RQOs
- Users are required to meet license conditions
- Catchment Manager will be required to meet RQOs

STAKEHOLDER ENGAGEMENT PROCESSES

PROJECT STEERING COMMITTEE

TECHNICAL TASK TEAM

PROJECT STEERING COMMITTEE (PSC)

Stakeholders will be identified from relevant government departments on national and provincial level:

- Department of Environmental Affairs,
- Department of Mineral Resources
- Department of Agriculture, Forestry and Fisheries;
- Municipalities;
- Mining and industry;
- Conservation organisations; relevant
- Parastatals (e.g. Eskom);
- Community representatives; and
- Civil society.

THE ROLE OF PSC

- Non-statutory, voluntary body.
- Oversight body for water resource management within Cachment

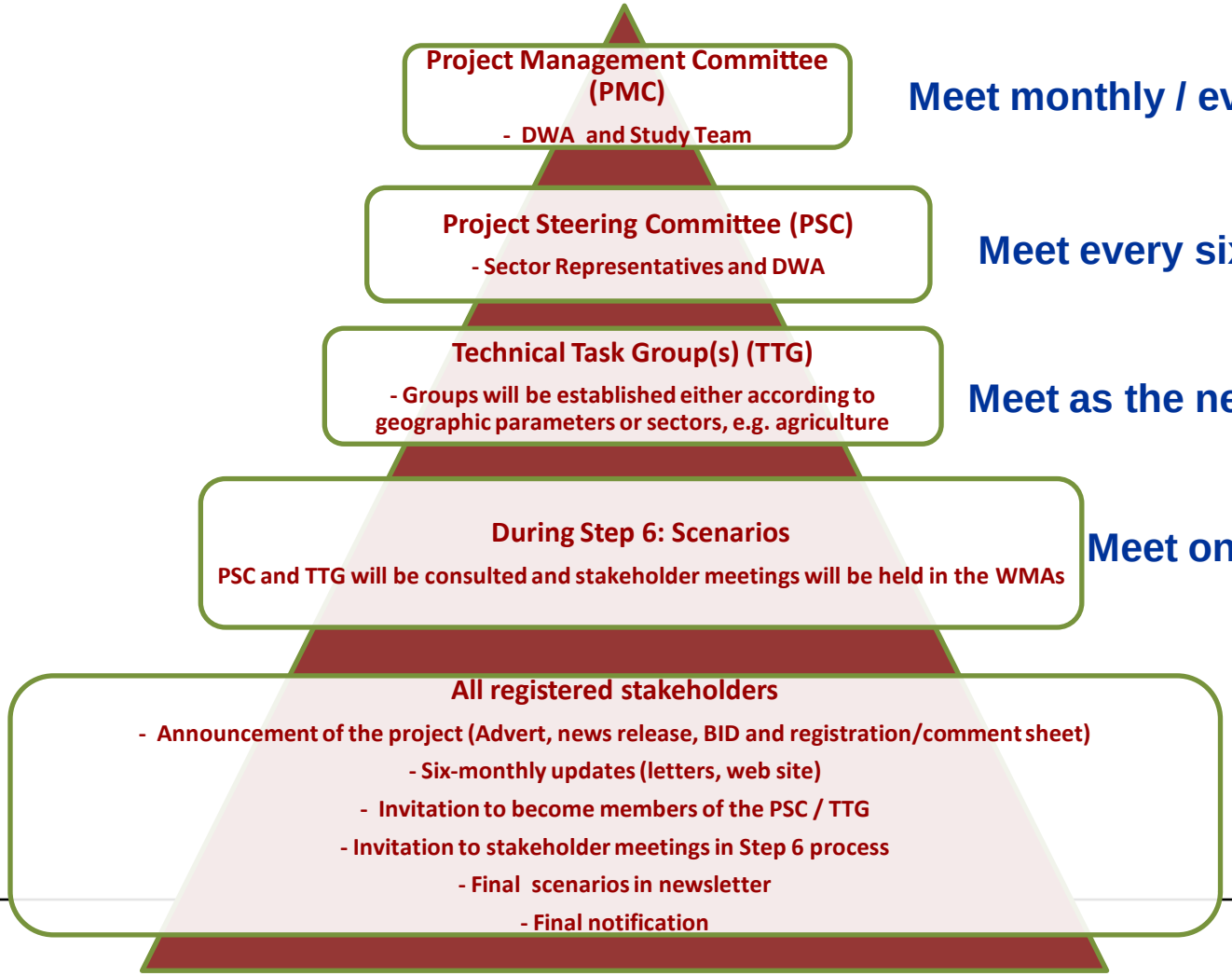
THE OBJECTIVES

- Provide strategic direction and guidance on the study process and tasks;
- Guide the study team on the desired state of water resources within the Catchment;
- Provide technical input and support information to the process where available.

TECHNICAL TASK TEAM (TTT)

- TTT addresses issues of a technical nature
- To give advice to the project team when required.
- These issues can range from data, methodology and development of water resource management scenarios.

PUBLIC PARTICIPATION PROCESS



Meet monthly / every 6 weeks

Meet every six months

Meet as the need arises

Meet once off to discuss scenarios

Communication to the larger group at least once in six months

Thank You