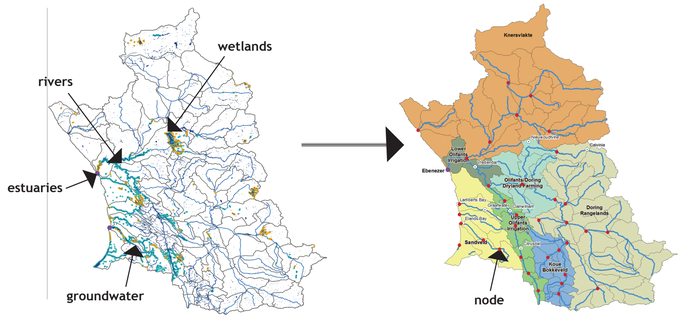
STEP 1. DELINEATE THE CATCHMENT AND DESCRIBE THE STATUS QUO

Outcome: Integrated Units of Analysis with nested sub-units (Nodes)



Significant water resources

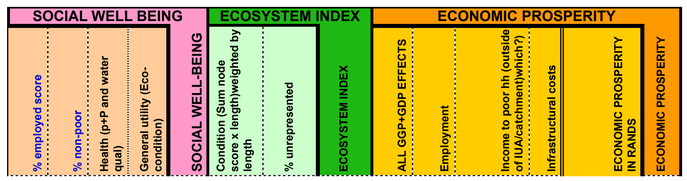
Integrated Units of Analysis

STEP 2. LINK ECONOMIC AND SOCIAL VALUE TO ECOSYSTEM CONDITION AND WATER USE

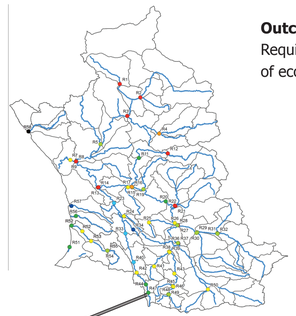
Outcome: a set of qualitative relationships that specify how the **different levels** of:

- Water use;
- ecosytem condition; and
- Ecosystem goods and services

affect **economic value** and **social wellbeing**.



STEP 3. QUANTIFY THE ECOLOGICAL WATER REQUIREMENTS AT EACH NODE



Outcome: Table of Environmental Water Requirements for each node at various levels of ecological integrity

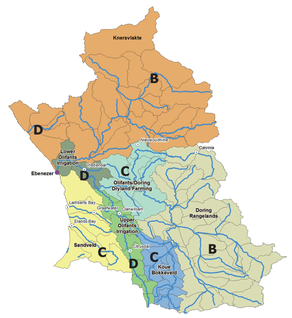
Node/ Catchment	Natural	ERC	Reserve	Annual Mean	ERC	Reserve	Annual Mean	ERC	Reserve	Annual Mean	ERC	Reserve	Annual Mean
	MAR(MCM)		MCM	%Nat.MAR		MCM	%Nat.MAR		MCM	%Nat.MAR		MCM	%Nat.MAR
R47 / E10A	61.373	A	26.257	42.78	B	18.618	30.34	C	14.147	23.05	D	11.548	18.82
R44 / E10B	131.157	A	55.89	42.61	B	39.645	30.23	C	30.11	22.96	D	24.529	18.7
R42 / E10C	180.907	A	77.451	42.81	B	54.902	30.35	C	41.687	23.04	D	33.933	18.76
R40 / E10D	229.932	A	98.318	42.76	B	69.703	30.31	C	52.919	23.02	D	43.043	18.72
R33 / E10F	334.9	A	145.046	43.31	B	102.595	30.63	C	77.905	23.26	D	63.448	18.95
R24 / E10H	33.507	A	12.893	38.48	B	9.128	27.24	C	6.697	19.99	D	5.095	15.2
R23 / E10J	467.349	A	201.98	43.22	B	142.777	30.55	C	107.99	23.11	D	87.464	18.71
R13 / E10K	472.046	A	203.717	43.16	B	144.008	30.51	C	108.888	23.07	D	88.112	18.67

STEP 4. SET A BASELINE CONFIGURATION FOR ECOLOGICAL SUSTAINABILLITY

Outcome: A scenario that gives the **lowest feasible level of protection** required for the **sustainable use** of the **entire catchment**

STEP 5. EVALUATE SCENARIOS IN TERMS OF THEIR IMPLICATIONS

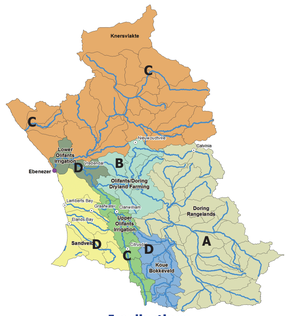
Scenario 1:



Implications:

- Economic;
- Social; and
- Ecological

Scenario n:



Implications:

- Economic;
- Social; and
- Ecological

Outcome: Various scenarios of possible ecosystem condition configurations for the entire catchment together with the economical, social and ecological implications

Steps 5 and 6 and iterative process

STEP 6. HOLD STAKEHOLDER WORKSHOPS

Outcome: Evaluated scenarios with stakeholders and an agreed upon configuration short-list

STEP 7. SELECT PREFERRED CONFIGURATION

Outcome: A Gazetted class configuration for the entire catchment which becomes legally binding

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

SOUTH AFRICAN WATER RESOURCE CLASSIFICATION PROCEDURE