

Inkomati Catchment Management Strategy  
Visioning Exercise  
Komati River Sub-catchment  
10 March 2010

Facilitator: Prof Kevin Rogers

The facilitator introduced the customised Adaptive Planning Process and explained how this process would provide the insight on stakeholders' perspectives of a desired future state for the Komati sub-catchment. In so doing stakeholders were providing guidance to the technical team that would draft the catchment management strategy (CMS). This team will comprise ICMA and DWA staff, as well as a range of external experts. The first draft CMS would be circulated to stakeholders and again workshopped with them on 24 March 2010. The plan would then be submitted to the Minister DWA for approval.

This document represents the outcome of the first stakeholder (public participation) meeting for the Crocodile River Sub-catchment of the Inkomati Catchment.

**Key issues raised by stakeholders**

Water Services Issues: (Not under ICMA mandate)

1. 24hr water supply to communities
2. Water allocation to communities and rainwater harvesting (JoJo tanks)
3. Provision of materials for rainwater harvesting

Integrated Water Resource Management: (Under the ICMA mandate)

4. Need to correctly interface water services issues and water resource management issues especially the integration between Water Services Development Plans and the CMS
5. Decentralise water licensing from DWA Head Office to the ICMA and complete verification and validation of users
6. Sustainability of the resource
7. Communicate the outcome of today's visioning process to communities
8. Building of dams and sinking boreholes
9. Importance of collaboration – using diversity positively
10. Deal with illegal water users
11. What is the current state, and are we happy with it?
12. Assisting emerging farmers to apply for water rights
13. Using water economically/efficiently
14. Inputs for the finance strategy – to sustain the ICMA and realise the vision of water for all in the Inkomati
15. Alien plant invasions
16. Pollution – sewage works, mines, illegal dumping

17. Equity of access to water. Improve water supply for emerging farmers
18. Improve the quality of data
19. How research in SA can help improve these processes
20. Unplanned settlements and the pot pourri of rural development
21. Need a coherent plan for droughts
22. Increase surety of supply by construction of dams on tributaries and interbasin transfers
23. Continued lack of action. When will we stop talking and start doing?!
24. Protection, management, and control of water resource
25. Motivation for international stakeholders to interact about WRM
26. Suitable locations for new dams and repairing of current infrastructure (earth dams and boreholes)
27. Ecological water requirements, quantifying and implementing the Reserve. Linking the Reserve to the International Obligations
28. Writing the CMS!!
29. Implementation of International Obligations
30. Protection of wetlands
31. Formal cooperative governance arrangements between institutions, for dealing with pollution
32. How the CMS links with the Provincial/municipal spatial plans
33. Absence of the mining sector – How do act as a collective to get them on board with this process
34. Concern about water licences being issued via other routes, specifically the Development Facilitation Act (DFA)
35. How are we going to plan for socio-economic growth?
36. People getting a chance to experience the river system in its ‘natural state’

### **Vision**

*A vision is a concise statement describing the shared desire for the future conditions of the sub-catchment.*

The Inkomati CMA has all the powers (delegated functions) it needs in order to share with stakeholders the responsibility for achieving a more equitable, efficient and sustainable future

### **Values**

*Our values are the principles we use to evaluate the consequences of actions (or inaction), to propose and chose between alternative options and decisions. The sub-catchment value set reflects the values shared by the stakeholders of the sub-catchment.*

- Catchment management is aimed at equity and sustainability, is corruption free and is cognizant of existing agreements.
- Management is flexible, open to critique and outcomes driven, with solutions being practical, achievable and implemented.
- Decision making must be participatory, transparent and consensus based to build trust and compliance amongst stakeholders.
- Decisions must be well informed with reliable data to ensure they are credible and legitimate.
- Decisions, actions and outcomes are subject to performance evaluation against measurable goals and timeframes.

### **Context**

*The range of social, technical, economic, environmental and political facts, conditions, causes and surroundings that define the circumstances relevant to a problem, provide the context within which decisions are made. The context is therefore a fundamental element of any decision making environment.*

### **Vital Attributes**

*The few most important characteristics/properties of the system to be managed are its vital attributes. They may be technical, ecological, legal, historic, social or economic.*

1. The catchment straddles political boundaries (South Africa, Swaziland, Mozambique) creating two distinct river sections within South Africa, each with their own management issues. Overall the catchment is characterised by a water-dependent economy based largely on tourism, irrigation agriculture, forestry and mining.
2. Many important cultural heritage sites, high biodiversity and a scenic landscape mosaic provide a diversity of water-use opportunities.
3. The upper catchment is relatively undeveloped and delivers good quality water, some of which is strategically transferred out of the catchment to support the national power generation system. Vast, intact wetland systems are very important in groundwater – surface water interactions.
4. The lower reaches of the Komati has a sub-tropical climate with an agricultural potential that exceeds that which the water supply can realise.
5. Well regulated water supply: storage facilities; well functioning water resource management institutions; well organised agricultural water allocation system. Irrigation Boards represent diverse agricultural users.

## **Threats**

*Threats are factors within, or outside, a partnership that undermine its values and inhibit the pursuit of the vision. Threats are also factors or processes that inhibit ecosystem determinants or vital attributes.*

Given the international nature of the Komati river, all of these threats have the potential to be transferred to our international neighbours.

- Uncontrolled mining in the upper catchment is a major threat to water quality and thus national energy production
- Lack of delegation of functions and finances to ICMA and continued lack of enforcement.
- A lack of economic development will lead to an increase in the huge disparities between the haves and the have-nots
- Within 3 years, 90% of the urban centres in the Komati will have insufficient capacity to deal with waste water treatment. A consequence of both poor infrastructure maintenance and limited expansion.
- Lack of cooperative governance (critically, between Department of Water Affairs, Department of Agriculture, Department of Minerals and Energy, Departments of Environment)
- Extensive alien plant invasions; illegal fishing, hunting, harvesting of plants for medicinal purposes; land use within wetlands and riparian zones; illegal river regulation
- Uncontrolled forestry in the wettest part of the catchment
- Operating rules (agricultural diversions) do not consider ecological processes
- Lack of skilled human resources for water resource management

## **Objectives**

*Objectives should be aimed at overcoming threats to ensure the persistence of vital attributes and/or their determinants, under the guidance of the vision statement.*

The primary objective must be to achieve full delegation of authority to ICMA so that they can complete compulsory licensing and water allocation reform and develop a time frame for implementation of the CMS. Other critical tasks include;

- Implement a system of incentives, disincentives, and benchmarks e.g. the waste discharge charge system;
- Enforce current legislation with visible policing;
- Develop an effective communication strategy
- Complete metering for the Upper Komati
- Promote conjunctive uses of water, water conservation and water demand management

- Water quality monitoring, auditing the data, and making the data public
- Implement the Reserve
- Quantify climate change effects on water availability
- Develop a formal system for cooperative governance and stakeholder engagement that includes
  - Water services/supply
  - Incorporating the National Freshwater Priority Conservation Areas framework
  - Get mining and tourism on board
  - Participation in international programmes
  - Strengthening stakeholder participation and engagement in decision making

## WORKSHOP NOTES

### VISION

- Equity
- Efficiency
- Sustainability: ecologically;
- Accessibility (rights to access, but no entitlements)
- Economic growth optimised, within the constraints of equity, efficiency and sustainability
- Affordability
- Assurance of supply
- Fitness for legitimate use
- Well managed water resources: balancing requirements of local use with international obligations
- Protected aquatic ecosystems
- Shared responsibility
- The Inkomati CMA has all the powers (delegated functions) it needs

### VALUES

- Transparent
- Equitable and reasonable
- No corruption
- Accountable
- Based on reliable data, with accurate figures – well informed by sound knowledge (monitoring, “value for money”)
- Participation; inclusion
- People driven
- Constant communication
- Consensus-driven
- Fair agreement
- Recognition of existing agreements
- \*\*Political support
- Constitutional
- Sustainability
- Trust and compliance
- Credibility and legitimacy
- Commitment to the decision; outcomes based
- Customer satisfaction
- “Equality in arms” – fairness before the law
- Openness to critique, and flexibility
- Evaluation of decisions

- Practical and achievable
- Justifiable – against what and to whom?
- Measurable goals and time frames
- Implementation

### **VITAL ATTRIBUTES OF THE KOMATI SUB-CATCHMENT**

1. Upper catchment has vast, intact wetland systems (important groundwater – surface water interactions)
2. High biodiversity
3. Good quality water (upper catchment relatively undeveloped)
4. Straddles political boundaries (South Africa, Swaziland, Mozambique) – creates distinct river sections
5. Water-dependent economy
6. Sub-tropical climate in the lower areas with huge agricultural potential – water not necessarily available to realise all potential
7. Scenic mosaic – diversity of water use opportunities
8. Resilient communities (high ‘human potential’)
9. Many important heritage sites
10. Strategic transfers out of the catchment
11. Well regulated water supply: storage facilities; well functioning water resource management institutions; well organised agricultural water allocation system
12. Irrigation Boards represent diverse agricultural users

### **THREATS TO VITAL ATTRIBUTES**

Given the international nature of the Komati river, all of these threats have the potential to be transferred to our international neighbours.

- Uncontrolled mining in the upper catchment (threat to water quality and national energy production)
- Adverse human interventions e.g.
  - Illegal fishing, hunting, harvesting of plants for medicinal purposes;
  - land use within wetlands and riparian zones;
  - river regulation;
- Regional climate change
- Despite all the positive attributes, the huge disparities between the haves and the have-nots lead to particular water resource challenges
- Within 3 years, 90% of the urban centres in the Komati will have insufficient capacity to deal with waste water treatment
- Factory chemical dumping; agricultural chemical runoff
- Lack of cooperative governance (critically, between Department of Water Affairs, Department of Agriculture, Department of Minerals and Energy, Departments of Environment)

- Lack of delegation of functions to regional levels (ICMA critically)
- Alien plants
- Forestry
- Erosion, on the escarpment
- The “pot pourri” of rural development
- Insufficient funds for water resource management (for Cynthia)
- Lack of infrastructure maintenance e.g. sewage works, irrigation canals
- Operating rules (agricultural diversion) do not consider ecological processes
- Poor regulation of water users
- Lack of appropriate guidelines for maintaining the catchment area
- Inappropriate attitudes from some sectors towards water resource management
- Lack of skills for water resource management
- Lack of enforcement

### **OBJECTIVES**

- Formal system of rules
- Enforce current legislation e.g. visible policing
- Get the ICMA its delegations!
- Compulsory licensing
- Cooperative governance
  - Water supply
  - Incorporating the National Freshwater Priority Conservation Areas framework
  - Get mining on board
- Metering for the Upper Komati
- Implement the waste discharge charge system
- Promotion of water conservation/water demand management e.g. grey water recycling
- Water quality monitoring, auditing the data, and making the data public
- Participation in international programmes
- Implementation of the Reserve
- Conjunctive uses of water
- Strengthening stakeholder participation and engagement in decision making
- Quantification of climate change effects on water availability
- System of incentives, disincentives, and benchmarks
- Effective communication strategy
- Water re-allocation
- Setting time frames