

Inkomati Catchment Management Strategy
Visioning Exercise
Sabie/Sand River Sub-catchment
12 March 2010

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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 Sabie/Sand 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

- How will the CMS solve the issue of equity? (the poor)
- Funding strategy for the implementation of the CMS
- Water quality
- How to get mining sector involved
- Alien plants
- Maintaining a healthy river
- Helping rural development
- Local level water resource management
- Continued collaborative spirit
- Involvement of existing water boards
- Ecological integrity, including the Reserve
- Full use of existing capacity (infrastructure)
- Flow rate (environmental flows)
- Improving infrastructure to prevent water loss
- Sharing the water resource (unpolluted) between all stakeholders
- Population increase
- Pollution from sewage discharges
- Water use as an economic development tool
- Appropriate monitoring of the Reserve
- Management structure of the ICMA
- Structuring water resource management to ensure better service provision
- Interbasin transfer from the Sabie to the Sand – managing for domestic water use
- Financial resources for farming
- Infrastructure!! (development and upgrading)
- Alternative energy sources for drawing water from rivers

- Land rights don't come with water entitlements
- Alien trees that use more water (invasives and planted)
- Linking issues of water access and power failures – cooperative governance
- Wetland protection
- Communication of information, skills, knowledge to communities, particularly through traditional leadership – the role traditional leaders can play in protecting the resource
- Diverse catchment – high quality of life for residents, good tourism potential
- Enforcement, and compliance monitoring
- We can rise to the challenge! Pioneering CMA, CMS in particularly stressed catchments
- Over-allocation, and international water requirements
- Encouraging appropriate water and land use in the catchment
- Mis-match of municipal and catchment boundaries
- How the agricultural sector will adapt to climate change
- Implementation of operating rules for the Sabie-Sand system
- Raising of the Corumana Dam wall
- Sabie and Sand catchments have very different water characteristics
- Catering for future emerging farmers
- Degradation of rivers, through siltation from poor agricultural practices and urban development
- International relations with Mozambique, particularly to address issues of uncertainty of climate change and adaptation (sea water desalination)
- Accountability
- Cooperation
- Local government capabilities to deal with domestic water use and education

Vision

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

As Sabie/Sand stakeholders we do not forget that we are sharing this water resource amongst ourselves and with our neighbours. We strive to maintain a decision making environment that enables collaborative action towards sustainability in a continually evolving socio-economic system.

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.

- Stakeholders share the responsibility for caring for the resource and there is explicit recognition of what each individual/group contributes to promoting equity, efficiency and sustainability.
- We strive for a trusting, transparent and corruption-free system of catchment management that promotes fairness before the law and economic development.
- Decision making is participatory, inclusive and proactive. It is based on the best available local and scientific knowledge to ensure integrity and credibility.
- We appreciate the range and dynamics of cultural and environmental diversity that characterise our catchment.

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 may be technical, ecological, legal, historic, social or economic.

- The catchment is a critical element of a prime internationally renowned conservation area, and international tourist hot-spot. As well as ecotourism downstream, there is much adventure tourism upstream, all of which is river and scenic mosaic dependent.
- The rivers, riparian zones and other wetlands have a high biodiversity. The Sabie river in the Kruger Park has a particularly high geomorphological and biological diversity, and thus high tourism potential
- There is a large dependence on the rivers, which still have a relatively good water quality, for livelihoods across all economic sectors (rural poor to very high end tourism ventures).
- Most rainfall is generated in a small area of the upper catchment but demand is primarily in the lower reaches where there are high levels of poverty. Rain is very variable, in both space and time, but flow is regulated by dolomite cavities, especially in the Sabie catchment, which store and steadily release water over the dry period.
- The Sand has some of the highest density rural areas anywhere in South Africa, and the smallest water resource in the Inkomati. Current water allocations are not meeting the domestic and economic needs of many in the catchment.

- The first ever government endorsed land use change of forestry to conservation would have improved water yield but is currently being reversed.
- Stakeholders are generally eager to collaborate, and are aware of the value of their rich cultural diversity and large human potential.
- The catchment has a very good research profile/data set.
- There is potential for more water storage facilities, and for using current facilities more efficiently.

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.

- Despite the commitment of many stakeholders, there is still a high degree of public apathy towards water resource management issues. This is probably exacerbated by continued non-provision of water to communities and a lack of commitment to implementing the Reserve.
- Corruption (particularly in government), crime (including illegal water abstraction) and continued lack of law enforcement is hampering development.
- Climate change, and our uncertain understanding thereof.
- Inappropriate land and water use practices and poor planning are leading to: uncontrolled population growth; uncontrolled forestry development; invasion by alien plants; degradation of the scenic mosaic; and pollution from poorly maintained infrastructure, uncontrolled dumping, sewage systems, farming, and industry.
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- A continued lack of small dams in the lower reaches of the catchment increases the gap between haves and have-nots.
- Continued lack of delegation of functions to ICMA and of delegations down the line

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 develop pragmatic, workable decision-making structures and processes, develop a solid financial strategy, establish Water User Associations, and actively participate in co-operative governance, planning, enforcement/policing, fire prevention and training.

- Mobilise sufficient political will and support to hear the voice of the crying masses for water, and to follow through with the strategy

- A clear plan to engage with service providers about infrastructure maintenance and the polluter pays principle implemented
- Careful quantification of goals for progressive realisation of improved water flow, water quality and the Reserve
- Good and implementable strategy for information collection, and use, in Integrated Water Resources Management, evaluation and monitoring. We need a better quantified water balance

WORKSHOP NOTES

VISION

- Sustainable
- Ecologically in tact
- Continually evolving (socio-economic)
- The Sand River flowing
- Better infrastructure/ better use of current infrastructure
- Beneficial for all
- Better water quality
- Biodiverse and adaptable
- Polluter pays principle implemented
- Enabling environment
- Accessible and affordable water
- Intergovernmental cooperation
- Well balanced – ecological and developmental needs
- Collaborative action to solve problems
- More effective allocation system
- Mustn't forget we are sharing this water
- Cross-level decision-making
- Enforcement for Integrated Water Resources Management

VALUES

- Equity (particular emphasis on previously disadvantaged)
- Efficiency
- Sustainability
- Commitment from everyone
- Accountability
- Knowledge-based decisions – sound knowledge base; best available data; local knowledge as well as 'scientific'; shared knowledge
- Corruption-free; effective use of funding
- Transparency
- Justice – dealing with those who do not follow the law
- Sharing of responsibility
- Recognition of diversity and change in the system
- Participatory, inclusive, people driven engagement
- Not based on emotion alone
- Economic development and jobs
- Maintenance of environmental diversity
- Caring for the resource
- Trust
- Integrity and credibility
- Flexible processes

- Explicit and transparent recognition of what each individual/group contributes to this catchment
- Structured division of roles and responsibilities
- Pro-active (maintenance of infrastructure etc)
- Non-racial

VITAL ATTRIBUTES

1. Prime conservation area of the country, and internationally
2. Rivers and riparian zones are biodiverse; lower Sabie in particular has high geomorphological diversity, biological diversity, and thus high tourism potential
3. Has a good research profile/ data set
4. Many wetlands
5. Much adventure tourism upstream, which is river and scenic mosaic dependent
6. Rainfall primarily in upper catchment, demand primarily in lower >> flows must be managed
7. Rainfall is very variable, in both space and time
8. There is a small area in the upper catchment where the majority of the runoff is generated
9. Potential for more water storage
10. Stakeholders generally willing to collaborate
11. Rich cultural diversity; large human potential
12. The Sand has some of the highest density rural areas anywhere in South Africa, and the smallest water resource in the Inkomati
13. Large dependence on the rivers for livelihoods across all sectors
14. International tourist hot-spot
15. Current water allocations are not reaching the domestic and economic needs of many in the catchment
16. Current water quality status is relatively good
17. First ever government endorsed land use change (forestry to conservation) – being reversed currently

THREATS TO VITAL ATTRIBUTES

- Public apathy towards water issues
- Corruption (particularly government)
- Uncontrolled population growth
- Inappropriate development (affects water quality; scenic)
- Crime
- Lack of commitment to implementing the Reserve
- Uncontrolled dumping
- Pollution, from e.g. sewage systems, farming, industry
- Uncontrolled growth in forestry
- Climate change, and uncertain understanding
- Alien invasive plants

- Inappropriate land use practices and planning
- Continued non-provision of water to communities
- Continued poor water use practices
- Small dams
- Continued lack of law enforcement
- Continued lack of delegation of functions
- Continued lack of delegations down the line
- Lack of infrastructure maintenance
- Not understanding the linkages between water resource management and the provision of water services
- Continued illegal water abstraction
- HIV/AIDS
- High evapo-transpiration rates
- Financial constraints - Integrated Water Resource Management costs money
- Lack of consideration of water availability by e.g. municipal water services plans, provincial agricultural department
- Not maintaining tributaries in good condition
- Lack of real consideration of sustainability (mindsets)
- Poor monitoring for sustainability
- Continued poverty
- Erosion
- Lack of implementation of operating rules
- Wild fires in the upper catchment, leading to massive erosion and sedimentation
- Damaging of wetlands

OBJECTIVES

- Need better water balance data
- Training
- Implementation and enforcement of operating rules
- Get functions delegated to the ICMA!
- Create pragmatic, workable decision-making structures and processes
- Development of cooperative programmes with other local institutions for enforcement and policing
- Develop a solid financial strategy
- Evaluation and monitoring
- Hear the voice of the crying masses for water
- Mobilise sufficient political will and support to follow through with the strategy
- Better fire prevention strategy (ICMA to join regional fire protection association)
- Proper awareness campaign
- Ensure there is proper planning (cooperative governance)
- A clear plan to engage with service providers about infrastructure maintenance
- Careful quantification of progressive realisation, in terms of implementing water flow and quality

- Establish Water User Associations
- Get proper legal backup
- Frequent and effective feedback to stakeholders from the ICMA governing board
- Uncontrolled harvesting of aquatic biota
- ICMA must actively participate in other water-related processes
- Good and implementable strategy for information collection, and use, in Integrated Water Resources Management