

Local Government Climate Change Response Workshop

Mt Fletcher Municipal Hall

21st January 2020



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Department of Geography
Rhodes University



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



RHODES UNIVERSITY

Where leaders learn



DISCLAIMER

The capacity building, implementation and research has been funded by the Department of Environment, Forestry and Fisheries (DEFF), Chief Directorate: Natural Resource Management Programmes (NRM), Directorate: Operational Support and Planning

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Local Government Climate Change Response Workshop





List of Acronyms

CLO	Community Liaison Officer
CM	Community Monitor
CT	Community Technician
COGTA	Cooperative Governance and Traditional Affairs
DEDEAT	(Provincial) Department of Economic Development, Environment Affairs and Tourism
DEFF	Department of Environment, Forestry and Fisheries
DRDAR	Department of Rural Development and Agrarian Reform
ECPTA	East Cape Parks and Tourism Agency Limited
EbA	Ecosystem-based Adaptation
ESKOM	Electricity Supply Commission
IDP	Integrated Development Plan
JQDM	Joe Gqabi District Municipality
SANRAL	South African National Roads Agency
WWF	World Wildlife Fund

1. Purpose

The purpose of the workshop was to highlight the urgency of acting to mitigate and adapt to climate change at the local government level and to explore how the Tsitsa Project can assist in doing this.

Objectives

1. To inform the participants about climate change trends and future predictions with special reference to the local region (Tsitsa River catchment).
2. To map ways in which climate change is likely to impact on local government responsibilities and responses.
3. To explore how the municipal IDPs can better position local government to address climate change adaptation and disaster risk response.
4. To discuss the way forward in terms of future collaboration with the Tsitsa Project.

2. Agenda

9h30 Welcome and introductions

10h00 Purpose

10h20 Icebreaker exercise

10h40 Background to climate change: global, regional and local prognosis - presentation

11h00 Responding to climate change - group exercise

11h30 Landscape based adaptation pathways – Ecosystem based Adaptation, Conservation Agriculture, Climate Smart Agriculture.

12h00 LUNCH

12h45 Climate change response in the local and district municipal planning

14h00 Way forward in collaboration with Tsitsa Project

15h00 Closure

The workshop was arranged by Mr Mveleli Mgewu, DEFF, Joe Gqabi, who is to be thanked for arranging the venue and sending out invitations at short notice. The invitation letter can be found in Appendix A. Ms Nosi Mtati organized the attendance of the Tsitsa Project Community Liaison Officers (CLOs). The workshop was attended by 33 participants who included representatives from the DEFF, DEDEAT, COGTA, DRDAR, Joe Gqabi and Elundini District and Local Municipalities. Together they covered disaster management, environmental and waste management, environmental education, Natural Resource Management, community development and agriculture. The Tsitsa Project was represented by Prof Rowntree (convener), Bennie van der Waal (integrated planning), Nosi Mtati (Catchment Coordinator), LIMA and five CLOs. Two local organizations were also represented: Reya Hola recycling and Dindela Trading. The attendance list is given in Appendix B.

The workshop used three different formats. Firstly formal presentations were used to convey information about climate change forecasts and possible mitigation and adaptation pathways (Appendix C). Photographs were used to encourage small group discussion around climate related topics (Appendix D) and, lastly, open group discussions were held around a specified topic. The photo-based discussions were used firstly as an icebreaker and secondly to break up the formal presentation. The points for discussion after lunch were based on points raised during morning sessions and information given on cards filled in by participants relating to their affiliation and interest. The morning conversations were in four groups of approximately eight people. In the afternoon there were three groups of between 6 and 13, depending on professional interest in topic.

3. Introduction and icebreaker

The workshop was opened by Mr Sidney Witbooi from DEFF on behalf of Mr Michael Kawa who was unable to be present and sent his apology. Mr Witbooi welcomed the participants and gave a brief background to the Tsitsa Project. Prof Kate Rowntree explained the aim and objectives of the workshop, as given in the Invitation letter (Appendix A). She then asked participants to form four groups of about seven people, encouraging people from the same organization to distribute themselves among the groups. Each group was given a set of ten



Figure 1. Icebreaker exercise: Sharing weather information

cards depicting different weather-related events. (These cards were used previously in the Qulungashe village workshops). Each person in the group selected a card and, in turn, introduced themselves to the group and described what the card meant to them in terms of weather (Figure 1). This exercise was designed to get participants talking to each other in a relaxed way and to start thinking about how weather, and therefore climate, affects them individually. There was no feedback to the larger group. This exercise was used successfully in the two previous village workshops held in Qulungashe in September and November 2019.

4. The presentation (Appendix C) and group exercise

Climate change projections were presented in the first part of the presentation. These were a summary of key points as it was assumed that most people in the room would be familiar with general concepts of climate change, as appeared to be the case from later discussions. The urgency of responding to the climate change threat was emphasized (Slide 2). Output from models in the form of maps, graphs and tables were made relevant to South Africa and, more specifically, to the area of the Tsitsa catchment and Elundini Local Municipality (Slides 3-10). Impacts of climate change on water availability, soil erosion and flooding were presented as examples (Slide 11). It was stressed that while it is challenging to mitigate climate change itself, the impact of climate change can be exacerbated by other anthropogenic factors. These indicate points where intervention to reduce the impacts is possible.

Mitigation pathways were discussed briefly but given the fact that 84% of greenhouse gas emissions are produced by the energy sector there is limited potential for local government to make an impact (Slide 13). The importance of wetlands as a carbon store was stressed as there are extensive wetlands in the upper Tsitsa catchment and Elundini Local Municipality. Wetland protection and rehabilitation therefore contribute to mitigation. One participant from JGDM did make some suggestions of what could be done in later discussions. Adaptation, as obligated by the Paris Agreement of 2015, is more feasible at the local level. The remainder of the presentation and related activities were therefore given over to adaptation.

A group exercise was used before the section of the formal presentation on adaptation so as to allow participants to engage better with the ideas that were to be presented. An audience loses concentration if faced with a succession of too many slides. Working in the previous icebreaker groups, participants were given a set of five cards, each card having four photographs that depicted a certain aspect of climate change adaptation (Appendix D): rehabilitation activities that promote soil and water retention (a); grazing management to promote improved grass cover (b); climate awareness raising through workshops, field demonstrations and school engagements (c); monitoring weather, veld management, stream flow and river sediment using technologies ranging in sophistication (d), and, lastly, four pictures that were not adaptation methods and could be seen as having a negative affect: cultivation up and down slope, wetland burning, alien trees along a water course and burning firewood as an energy source (e). A sixth set of pictures is included in Appendix D(f) which illustrates different soil and water conservation methods that have been adopted at the home garden scale. Unfortunately this card was not printed so could not be used in this workshop. Following discussion of the cards within the groups, one person from each group gave feedback on one card to the whole group (Figure

2). It was clear from the responses that the intended message for each set of pictures had been understood by the groups.



Figure 2. Feedback from climate change adaptation exercise

The adaptation group exercise led into the last section of the formal presentation. Slide 15 illustrated the wide range of adaptation options that could be adopted by the Tsitsa Project and the Local or District Municipalities. Livestock management, Ecosystem-based Adaptation (EbA), agroforestry and climate smart or conservation agriculture can all contribute to carbon storage, drought resilience and increased sustainable food production. Health services, local knowledge, education and climate services all support adaptation. DEFF and DRDAR have both developed climate change adaptation policies (Slide 16). DEFF promotes EbA while DRDAR policy supports Conservation Agriculture and Climate Smart Agriculture. These policies need to be put into more extensive practice on the ground.

The last slide (Slide 18) presented a summary of key aspects of the District or Local Municipal IDPs that relate to climate change response. The lack of integration in the latest IDP documents between the different sector activities, such as disaster management, environment and rural development and climate change response was highlighted.

In the discussion following the presentation the following points were raised by participants:

- There are actions at the municipal level that can contribute to mitigation; a number of these are already happening
- Disaster risk management is an important role for local government
- Need to develop policy relevant to local context (e.g. importance of tornadoes and severe storms)
- Importance of community engagement and spreading awareness
- Need for integration between sectors.

5. The way forward: climate change response in local and district municipal planning

One main activity occupied the afternoon session. The participants were split into three groups according to their affiliation and interest in order to map out current activities and think about the way forward (Figure 3). The first group included representatives from a range of government sectors. Their task was to identify ways that the IDP could be made more relevant to climate change response. The second group represented environment interests. Their task was to identify what was already happening that could be considered to be a climate change adaptation, who was doing it and what more could be done. The third group represented community engagement and capacity building. Again they were tasked to identify ongoing activities and suggest possible future actions. Each group recorded their discussion on a white board (back of a laminated A1 poster) and presented back to the meeting.

The IDP group made a number of important points as summarized below and listed in Figure 4a:

- The climate change bill must be adopted by the President; this would enforce action at the municipal level
- Capacity building is important
- Sector plans should be reviewed before they go into the IDP to see if they can incorporate climate change
- Capital projects should be screened to see if they are climate change resilient and, if not, give advice
- The IDP tool kit must include a stand-alone chapter relevant to local conditions
- A champion for climate change action at Local and District Municipality level should be nominated
- Government officials should participate in all the biannual IDP indabas to ensure that climate change projects are incorporated
- The District must have a climate change strategy; the Tsitsa project can be asked to assist
- All strategies must be coordinated and consolidated for the entire region



Figure 3. Group exercise engaging with the way forward.

The environment group identified a number of ongoing projects as illustrated in Figure 4b. These were grouped under the headings Alien Clearing, Wetlands, Rehab, Conservation Agriculture, Fire, Springs, Biodiversity and Protected areas. It is clear from Figure 4b that there are many different players involved. The DEFF plays a leading role through its Working for programmes and the Joe Gqabi District Municipality plays a role in most areas of concern. The DRDAR contribute to conservation agriculture and rehabilitation through Land Care projects. SANRAL and ESKOM are both responsible for clearing aliens, from roads and beneath power lines respectively. WWF and ECPTA are responsible for biodiversity and protected areas. Local players include PG Bison and the Farmers Association.

The Community Engagement discussion is summarized in Figure 4c. The central concept behind community engagement is awareness raising, education and sharing ideas. There have been many activities that have already taken place in the Tsitsa catchment that are not always directly relevant to climate change but have a component that could be developed to further climate change adaptation. Important actions that have already taken place are the employment of Community Liaison Officers (CLOs), Community Monitors (CMs) and Community Technicians (CTs), engagement with the Traditional Leadership, engagement with Municipal officials, a Road Show through the catchment to promote the project, capacity building workshops, including a soil assessment course run by the University of Fort Hare and University of the Free State, and the development of a grazing strategy with livestock owners in the communal areas. School eco-awards were suggested as a way to encourage environmental activities among school groups. Proposals included an Environmental Information Centre, possibly in a local library, and input to community radio. Village level

cooperatives could be established. The project needs to work with the municipal environmental officer and it was noted that government needs to be more accessible.

From the report back by the three groups (Figure 4) it was obvious that much that is relevant to climate change response is already happening in the area but it is not working together. Mr Mgewu from DEFF, Joe Gqabi, stressed the need for a follow up workshop involving all relevant departments from all Joe Gqabi municipalities at which the district strategy could be presented and discussed. The CLOs were recognized as important locally based champions and should attend the workshop along with other members from the Tsitsa Project. It was agreed that the DEFF would organise and fund the second workshop.

6. Conclusion

The underlying aim of the workshop was to provide a meeting place for members of the Tsitsa Project and Municipal officials as well as to start a dialogue around climate change. In both these it was successful. It laid the ground for further interaction between the Tsitsa Project and the Local and District Municipalities and contributed to trust building not only between the two groups but also within the government group. It became clear that an effective climate change response requires real integration between sectors and the political will to work together.

It is encouraging to note that, although the government officials had attended previous climate change meetings, the Mt Fletcher workshop was of value because “it spoke to us” and talked to the participants’ space. The mixing of formal presentations with group discussion, the use of local examples and a focus on what was already happening in the local area should have helped to promote the feeling of a personal connection to the climate change problem.

Because climate change impacts and elicited response cuts across so many spheres, climate change can become a catalyst for the integration that is implicit in the concept of an Integrated Development Plan and Integrated Catchment Management. Investment in climate change response is therefore not only important for our future but can also reap dividends

through its promotion of integrated action. It will be interesting to see how this plays out over the next year or two.



Figure 4. Feedback from Way forward exercise: (a) IDP group, (b) environment group (c) community engagement group



7. Appendices

- Appendix A: Invitation letter, including agenda
- Appendix B: Attendance register
- Appendix C: PowerPoint presentation
- Appendix D: Climate Change Adaptation cards used in the workshop

Appendix A. Invitation letter, including agenda



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Reference:
Enquiries: M Kawa
Telephone: 043 722 0685

Re: INVITATION TO CLIMATE CHANGE WORKSHOP

Dear Sir / Madam,

The Natural Resources Management (NRM) which is a sub-program within the Department of Environmental Affairs. The main operations of NRM is to implement land restoration projects under the Extended Public Works Program (EPWP). The EPWP work involves the employment of large numbers of people, most of which come from rural communities.

Purpose

The purpose of the workshop is to highlight the urgency of acting to mitigate and adapt to climate change at the local government level and to explore how the Tsitsa Project can assist in doing this.

Objectives

1. To inform the participants about climate change trends and future predictions with special reference to the local region (Tsitsa River catchment).
2. To map ways in which climate change is likely to impact on local government responsibilities and responses.
3. To explore how the municipal IDPs can better position local government to address climate change adaptation and disaster risk response.
4. To discuss the way forward in terms of future collaboration with the Tsitsa Project.

Targeted participants

Municipal officials, especially those responsible for environmental policies and climate change response.

Representatives from provincial, local and traditional government, especially those responsible for the environment, agriculture, water, infrastructure, traditional leadership; local representatives from the Tsitsa Project.

AGENDA (provisional)

- 9h30 Welcome and introductions
- 10h00 Purpose of the workshop
- 10h20 Icebreaker exercise
- 10h40 Background to climate change: the global, regional and local prognosis - presentation
- 11h00 Responding to climate change - group exercise
- 11h30 Landscape based adaptation pathways – Ecosystem based Adaptation, Conservation Agriculture, Climate Smart Agriculture.
- 12h00 LUNCH
- 12h45 Climate change response in the local and district municipal planning
- 14h00 Way forward in collaboration with Tsitsa Project
- 15h00 Closure

Venue

Maclear

Date

21 January 2020

We will sincerely appreciate your attendance to this meeting.

Many regards

.....
Mr M. Kawa (Regional Manager: Eastern Cape)

Appendix B: Attendance

Attendance Register

Meeting: Mount Fletcher Rural Municipal hall

Date: 21 January 2020

Place: Climate change workshop

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(FORMERLY KNOWN AS THE NLEIP)

Attendance Register

Meeting: Mt Fletcher Local Municipal hall

Date: 21 January 2020

Place: Elundshazi municipal hall

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(FORMERLY KNOWN AS THE NLEIP)

Attendance Register

Meeting: Mt Fletcher Climate change workshop

Date: 21 January 2020

Place: Enochiwe municipal hall



**TSITSA
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(FORMERLY KNOWN AS THE NLEIP)

Appendix C. Presentation

Climate Change Response & Local Government

Kate Rowntree

Climate Change Response Workshop
Mount Fletcher
21 January 2020

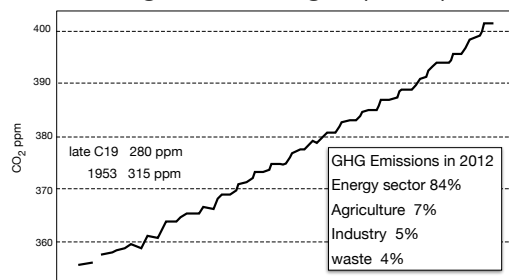


Key messages

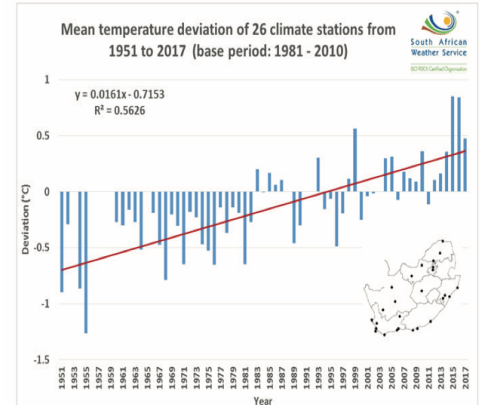
- Climate change, globally and in South Africa, is a reality
- Temperatures are rising and there is strong consensus that they will continue to rise; this affects both means and extremes
- The precipitation response is regionally variable and future response is uncertain but there is a strong likelihood of more variability, more intense storms and longer dry periods i.e flooding and droughts more common
- Mitigation to keep global temperature rise below 2°C is essential for long term sustainability of ecosystems and human wellbeing; heading for 2°C increase by 2050
- The DEFF is responsible for developing & enacting South Africa's climate change policy
- The DEFF has clear proposals and there has been some success in achieving Desired Outcomes but much more is needed
- How can local government respond to the threat to climate change?



South African greenhouse gas (GHG) emissions



Measured CO₂ concentrations at Cape Point. Source: redrawn from WeatherSmart August 2018



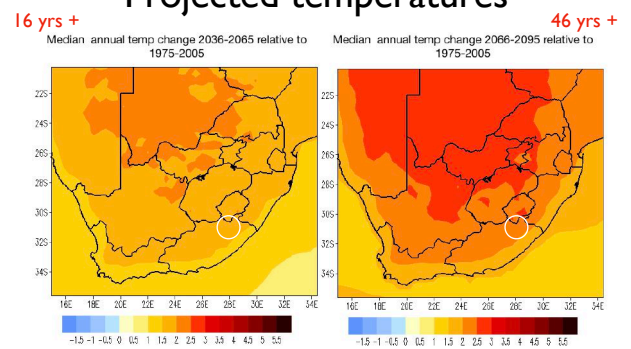
Temperature

- Global mean temperature had already increased by 1°C by 2017 relative to pre-industrial conditions; increase is greatest over land and for extremes (up to 2-3°C)
- A temperature increase of 1.5°C will have significant impacts on ecosystems, health and economy
- A temperature increase of 2°C will have severe and probably irreversible impacts on ecosystems, health and economy
- A less than 2°C increase is the global target (Paris Agreement 2015)

IPPC report 2018



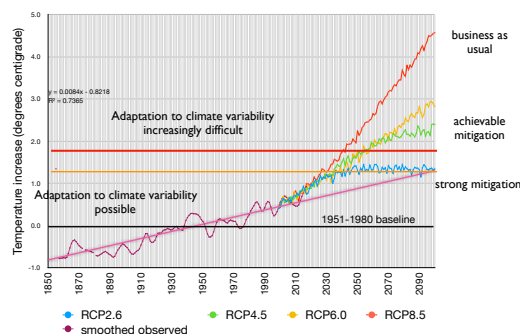
Projected temperatures



Integrated output from 9 different models - RCP 4.5

source: SABS CC reference atlas





Regional 'observed' and modelled temperature trends in the Tsitsa river catchment
(Data source: Pearce & Housefather 2018, Carbon Brief online February 2019)

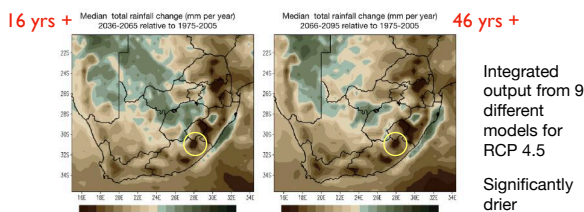


Precipitation

- Predicted global precipitation changes are regionally variable and uncertain
- Indication that storms will be more severe and drought more frequent (also linked to increased evaporation)

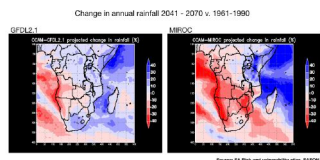


Projected precipitation



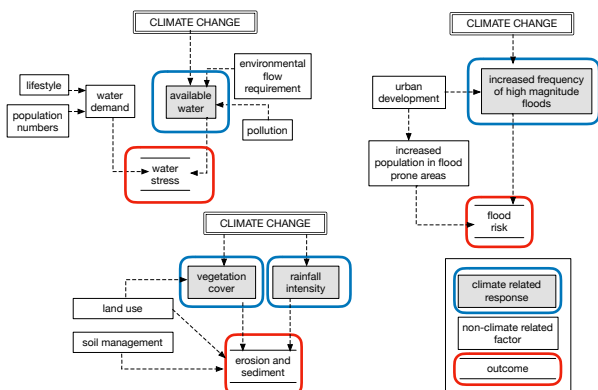
BUT

Output from different models give different patterns



Projected changes to the climate of the Tsitsa river catchment (IPCC 2018)

Tsitsa catchment (Eastern Escarpment)	1.5°C global increase	2°C global increase	direction of change
mean temperature (°C change)	1.5 - 2.0	2.0 - 3.0	increase
Annual Max. temp (°C change)	2.0 - 3.0	3.0 - 4.0	increase
Annual Min temp (°C change)	2.0	2.0 - 3.0	increase
Mean precipitation (% change)	0% - -5%	0% - -5%	decrease
Precipitation extremes (annual max. 5-day rainfall)	0 - 5%	5 (-10)%	increase



Mitigation and adaptation



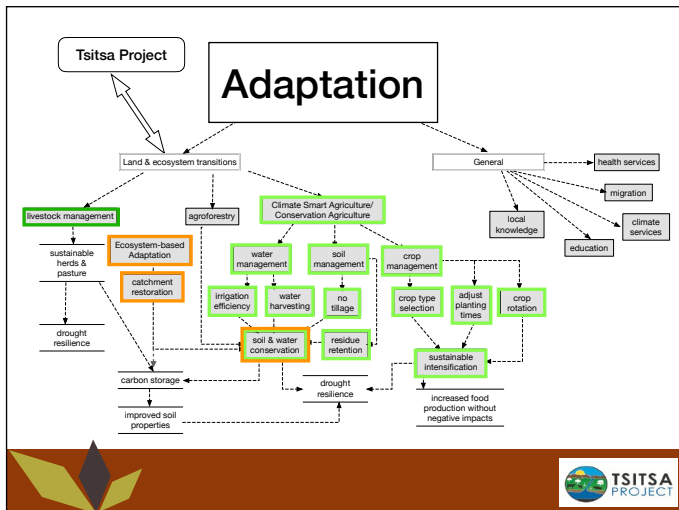
Mitigation

- Main source of GHGs in South Africa is energy production (84%)
- Agriculture contributes 7%
- In the Tsitsa catchment fire, poor waste management and agriculture contribute GHGs
- Storage of carbon in soils and wetlands
- **Can local government make a significant contribution to mitigation?**



Adaptation

- Paris agreement (2015) recognised that there must be an obligation to put adaptation policies in place.
- **How can local government contribute to adaptation?**



SA Policy Response

- DEFF (DEA) Ecosystem-based adaptation
- DALR&RD (DAFF) Conservation Agriculture
- DALR&RD (DAFF) Climate Smart Agriculture



Group Activity: adaptation cards



Tsitsa Project objective:

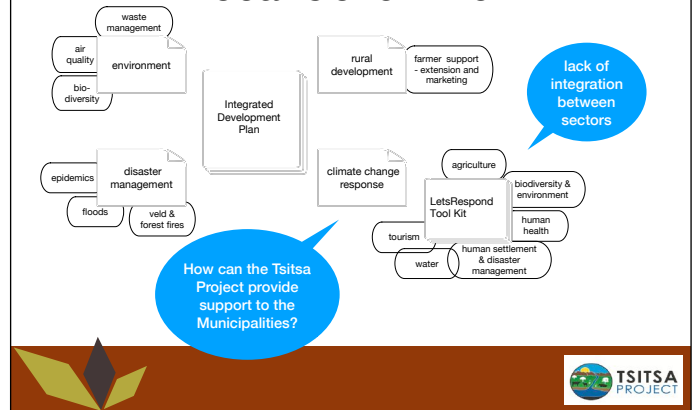
How can we embed climate change adaptation into livelihood strategies and restoration planning?



Desired Adaptation Outcomes for the water sector (DEA 2017 - Strategic Adaption Strategy)

DAO	Description
G1	Robust / integrated plans, policies and actions for climate change adaptation, together with resources and capacity (e.g. financial, human, legal and regulatory) for effective delivery (with monitoring, evaluation and review over the short, medium and longer-term).
G2	Appropriate processes and mechanisms for coordinating climate change adaptation (i.e. institutional and governance structures).
G3	Reliable climate information, including seasonal predictions and future projections, and effective early warning systems for extreme weather and other climate-related events (i.e. to inform adaptation planning and disaster risk reduction / management).
G4	Capacity development, education and awareness programmes (formal and informal) for climate change adaptation (e.g. informed by adaptation research and with tools to utilise data / outputs).
G5	New and adapted technologies / knowledge and other cost-effective measures (e.g. nature-based solutions) used in climate change adaptation.
G6	Systems, infrastructure, communities and sectors less vulnerable to climate change impacts (e.g. through effectiveness of adaptation interventions / response measures).
G7	Non-climate pressures and threats to human and natural systems reduced (particularly where these compound climate change impacts).
G8	Secure food, water and energy supplies for all citizens (within the context of sustainable development).

Climate change adaptation in Local Government

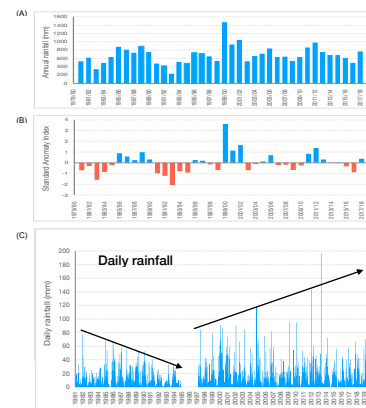


Climate graphs of the Tsitsa.

Data for Mtata Dam,
downloaded from the DWS
website

These graphs were not
presented at the workshop but
are included for interest.

Precipitation



no
apparent
trend in
historic data

increase in
max. daily
rainfall since
1997

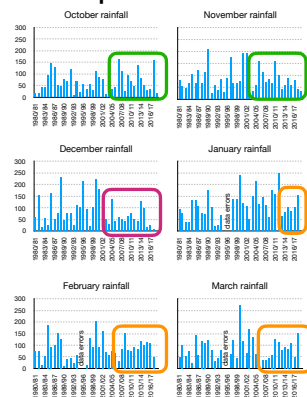


Seasonality of Precipitation

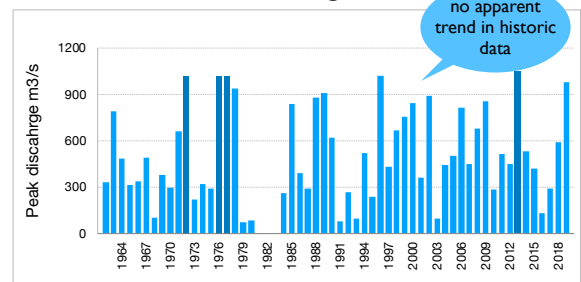
Time series of monthly rainfall
at Mtata Dam.
Dates indicate water years,
starting in October.

Data source DWS online February
2019

Trends:
general decrease in spring rainfall since
2000
general increase in autumn rainfall since
2006



Flooding



Annual flood series for the Tsitsa at Xonkonxa (N2 road bridge)
1962-2018. Darker columns indicate years when the gauge was
overtopped.

Data source DWS online July 2019



Appendix D: Climate Change Adaptation cards used in the workshop

(a) Examples of rehabilitation methods that promote soil and water conservation



(b) Grazing management through auctions aimed at improving grass cover, increase soil organic matter and retain soil and water.



(c) Approaches to raising climate change awareness using workshops, field demonstrations and school engagements



(d) Monitoring weather, veld condition, river flow and river sediment



- (e) Activities that do not promote climate change adaptation: cultivation up and down a slope, burning fuelwood, burning on a wetland, alien trees along a channel



- (f) Soil and water conservation activities in a garden: watering, mixed cropping, mulching, swales and vetiver propagation. This card was not used but is included for completeness



Climate change adaptation and learning exchange workshop, Sinxaku, 12 November 2019

KM Rowntree

Department of Geography

Introduction

A learning exchange workshop was held in Lower Sinxaku to foster information sharing between members of the GEF funded restoration project in Machubeni and Tsitsa Project participants from two villages in Lower Sinxaku. The Machubeni group came from five villages and included people engaged in catchment restoration work and others primarily engaged in conservation agriculture. The Lower Sinxaku group included members of the vetiver SMME as well as other interested people. The focus of exchange was to introduce the Machubeni participants to vetiver: its use, how to grow and marketing opportunities. There was also opportunity to visit restoration sites and share knowledge of restoration practices.

The learning exchange was organised by Laura Conde Aller from the Tsitsa Project and Monde Duma from the Machubeni Project. The workshop was ably facilitated by Sithoko Yala.

Climate change adaptation was used as an ice breaker and to encourage the participants to share ideas about how their present activities can be related to climate change adaptation. This proved to be a successful way of leading into the focus on vetiver. For the Lower Sinxaku participants it also provided a follow up to the climate change workshop held in August 2019.

Climate change adaptation activities

1. The first activity was designed to get participants to think about different weather events and their negative and positive impacts. It also served as an ice breaker as participants were put into small groups of six or seven people from both projects. Each member of the group was asked to pick a card from twelve photographs placed face down between them. In turn, they introduced themselves to the group and explained what the photograph meant to them in terms of weather. Figure 1(a & b) shows this activity in progress. This activity took about 15 minutes to complete and generated much discussion. As a follow up the group was asked to use all the twelve photographs and group them according to their association with heavy rainfall or with clear skies. The photos were stuck onto the back of an A1 poster using Prestick (Figure 1(c)). This activity was designed to help participants see the relationship between weather and related impacts. Clear skies were associated with fire and drought, stormy weather with surface runoff, erosion, flooding and broken bridges as well as good plant growth and a green landscape. The two activities were designed primarily to encourage the group to exchange ideas and work together. There was no general feedback to larger group as it was not thought that the additional benefit would justify the time taken.

2. The second activity involved the larger group of 25 participants. After a brief explanation of what climate change was likely to entail: higher temperatures, more erratic rainfall and longer dry periods, the two groups (Machubeni and Lower Sinxaku) were asked to give examples of what they had already done that could be considered to be climate change adaptation. The importance of water conservation was stressed by way of introduction. Both groups came up with a similar list of activities that were mostly related to the catchment restoration work they were involved in. The lists were written on the back of an A0 poster that served as a white board (Figure 1(d)).
3. The climate change activities were followed by a short fruit break before continuing into the next theme: home garden vetiver nurseries.

Visit to Elundini Municipality

The original date proposed for the Municipal climate change workshop was the 13th November 2019. The workshop had to be postponed due to unavailability of key officials. In order to clarify procedures and find a contact in the municipality I visited the Elundini Municipal offices on 13 November. I was directed to the Waste Management and Environment manager, Noluvo, who would be the person responsible for making arrangements such as the venue. She gave me the contact details of Mr Mveleli Mgevu, from the Local Government Support Directorate, DEFF, Jo Gqabi District Municipality, who is the person from DEFF responsible for organising the workshop. I contacted Mr Mgevu later that morning and we agreed that a suitable date for the workshop would be in the week of 20-24th January. Subsequent email correspondence with Michael Kawa confirmed that either the 20th or 24th would be suitable dates as they would be immediately before or after the Wisdom Trust meeting to be held in the Tsitsa catchment.

Other activities

Monday 11 November. We travelled to the catchment from Chintsa, arriving at around 11:00. We met up with the Lower Sinxaku monitors in Maclear and proceeded to the Hlankomo/Batlokoa and Lower Tsitsana areas where we met with the vetiver monitors from those areas and were shown around the home garden vetiver nurseries. Fifteen gardens were visited and rated.

Tuesday 12 November. Following the learning exchange workshop the Machubeni group were taken to see the ongoing restoration work by GIB in Upper Sinxaku (re-sloping, blankets and fibre rolls) and earlier work in Komkulu (silt fences and ponding). These were not restoration activities familiar to the Machubeni group. We then went to Qulungashe to see the stone packing work that is being done on the hillslope above the village. The Machubeni group were able to share their experience and skills in stone packing as this is the main activity in their area. We also visited one of the most successful home garden vetiver nurseries to demonstrate what is possible.

Wednesday 13 November

Early Wednesday morning (6:00 - 8:00) I joined Laura Conde Aller and SithokoYala to visit and rate all eight vetiver nurseries in Maxisebeni. We then proceeded to Maclear to collect the vetiver monitors from Lower Tsitsana and Hlankomo and bring them to Lower Sinxaku where we met up with the Lower Sinxaku monitors. After visiting the stone packing sites above Qulungashe, as a group we rated the vetiver nurseries in Qulungashe. We returned to our accommodation at 1H00 for lunch and a meeting with the vetiver monitors. We left Maxesibeni at 14h15, returning to Chintsa by 18H30.

Overview

This was an action packed three days in which I was able to contribute to the workshop through the climate change adaptation activities as well as get a good feeling for how the home garden vetiver nurseries were progressing in the three areas and see the progress in the restoration activities. The success of the vetiver nurseries depends very much on a reliable access to water as well as the commitment of the gardener. Given the prolonged dry conditions the near 100% survival rate in a number of the nurseries is commendable. A few of the longer established gardens are ready to sell. Others are struggling and have a very low survival rate. The GIB teams are making good progress with the re-sloping in lower Sinxaku. The team was enthusiastic to talk to our group about the work they were doing.

Sithoko Yala must be commended for her excellent workshop facilitation as well as her commitment to working with community members to champion and oversee the restoration work in Qulungashe.

It is anticipated that the work with the home garden vetiver nurseries will result in a paper submitted to a journal that will be a follow up to the paper presented by myself and Laura C-A to the SER conference.



Figure 1. (a & b) Small group activity looking at weather related photographs. (c) Photographs arranged according to stormy and dry weather (d) Climate change adaptation activities already carried out in the two project areas.