APPENDIX E

RECORD OF UPPER KOMATI CATCHMENT MANAGEMENT FORUM (UKCMF) DIALOGUES

This Appendix contains minutes of the following meetings: 21 October 2015; 24 November 2015; 19 January 2016; 9 June 2016; 1 Sept 2016. Attendance registers appear at the end of this report. Report backs at regular UKCMF meetings during this period are not recorded as they are captured in the IUCMA minutes.

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1 PROCEEDINGS OF 21 OCTOBER 2015

Minutes of short workshop on Water Research Commission Project K5/2355: “Aligning and integrating biodiversity and environmental water quality into the mining development life cycle” as part of Upper Komati forum

No separate attendance register was taken for this meeting, as the attendance is reflected in the IUCMA minutes of the UKCMF meeting of 21 Oct 2015.

Question 1: Comments on the current mining decision making process

1. It’s made to protect the resource, when you get license you show how you will do that. But there is no follow up, no man power, to check “are they still complying to the license?” Only review it once in a while, do have some measures to protect the resource, only problem is you don’t get to follow up.
2. Gap (offset) in middle, DWS doesn’t want any impact, mines know there will be impact, so needs to be area in middle as in don’t mine here, but mine there.
3. During course of decision making, no integration of all facets of government's responsibilities, eg social, environmental, etc. I believe decisions are made for economic gain only.
4. Mine licenses still go through when applications have lots of complaints. Mining is short term, farming is for life
5. Coal mining is a business, so mining companies want to mine where it is most profitable for them. The sweet areas are next to streams and wetlands. There is no integration between departments. DMR approves all applications and DWS comes in too late. Mines are granted EMPs etc before DWS even gets involved. They can be mining for 8 years, but still trying to get water licenses, because DMR approved it. There is an issue of political influence, because some shareholders are big politicians. The Department may say no it won’t approve the license, but in the end it gets approved as it NEEDS to be approved.
6. If you are working on the mining side, if you don't deliver on key performance indicators, you get fired. Of the various departments that are involved in process, each has own mandate, DWS – protect the resource. DMR – Promote mining (responsible). If no mining happens, minister gets fired. So all parties have to compromise, no one will get what they want.
7. Different mandates have to be looked at, else mining applications without consultation results in mining with degradation.
8. Integration of decision making process under way: NEMA and MPRDA.

Question 2: What is or can be the role of a Catchment Forum in the decision making process?

1. We want to see catchment management strategy to include consultation in areas, where as a result, certain areas are automatically excluded from mining possibilities.
2. No better decision making without all stakeholders on board. To do that, forum needs to encourage all key stakeholders. It would need memorandum of understanding with them, so certain departments can send decision making members to forums so that they can change things, not just normal.

3. Forum members need to be empowered, consultant shows technical report to everybody, but farmers, for example, may not understand what it says. We need to empower members, need to enforce something.
4. Forums can borrow power from other institutions.
5. Mine manager challenge: I am not of the view that forum should have powers. We have enough bodies that are taking such positions. Participants come to forum meetings with different agendas and viewpoints. Members are not as interested in as area 200km away, but because the neighbour is producing issues for them, they want it to be dealt with. I don't see the forum being able to move to decisions. The forum would not be accountable, and would not be able to sign off on anything.

2 PROCEEDINGS OF 24 NOV 2015.

Water Research Commission workshop in Carolina, on 24 November 2015, from 09:00 to 14:00.

1. Background and agenda

The meeting was held by the Water Research Commission Project K5/2355: "Aligning and integrating biodiversity and environmental water quality into the mining development life cycle" invites you to a workshop on 24 November, to explore the development of an "Integrated monitoring plan able to align biodiversity and mining development, accompanied by an appropriate Decision Support System" for the Carolina quaternary catchment.

This research was introduced to the Upper Komati Forum during its meeting on 21 October 2015. The Carolina area was chosen for the research for the following two reasons: (1) the 2012 Acid Mine Drainage event that left the town without water for seven months, and subsequent responses; and (2) the existence of the Upper Komati Catchment Management Forum supported by the Inkomati Usuthu Catchment Management Agency.

This is the first of three dedicated workshops and an economics research project planned for this research project. The workshops will look at:

1. Current decision making, balancing coal mining and the protection of water resources (starting from where we left off on 21 October).
2. Exploring the possibilities of supporting regional decision making about coal mining and alternative development (land use) options, from within the emerging catchment management system.
3. Exploring what bodies of knowledge – including local knowledge – would be needed to enable such monitoring and participation in decision making.
4. Participation in an ecological economics case study into the value of coal mining compared with other land uses.

This research is based on local knowledge and experience, and the interests and agendas of people who live and work in the quaternary catchment.

2. Proceedings:

During preliminary discussions, prof Kevin Rogers of Wits University warned against putting a value on wetlands, arguing that they are already protected by law, and that some wetlands

may be assigned such small values that they will not be protected. Others argued that the project should give equal attention to mining and agriculture, which is also destructive of wetlands and other water resources. Dr Munnik argued that valuing wetlands will not necessarily be in financial terms.

The meeting then dealt with the following questions:

1. Current decision making balancing coal mining and the protection of water resources (starting where we left off on 21 October).

2. Exploring the possibilities of supporting regional decision making about coal mining and alternative development (land use) options from within the emerging catchment management system.

3. Exploring what bodies of knowledge – including local knowledge – would be needed to enable such monitoring and participation in decision making.

4. Participation in this study, including an ecological economics case study into the valuation of coal mining compared to other land uses.

Question 1: What do you think of current decision making balancing coal mining and protection of water resources?

Group 1

1. The current decision making process is ill informed. Communication is lacking within the department of Mineral Resources and within the ranks of stakeholders. Decisions taken should be reported back to the community that will be affected by the activity.
2. There are imbalances in the results of coal mining decisions, in terms of value and economics. These issues are not clearly explained to the community (during EIAs and other decision making processes). The proponents come and only tell them how many people will be employed, and how much they can make, but don't speak about wetlands and water and enviro issues, and how these will be negatively affected.
3. Political influence distorts compliance. Non-compliance is due to a political person who is a shareholder in that company and makes sure that the company is protected from compliance pressures. Qualification of EAP is swept under the table. Even though it will negatively impact. Most political leaders are involved with industry that makes money
4. There is concern about assessing wetlands integrity. It is difficult to assess impacts of mining on wetlands, especially water quality. In order to show what impact a mine has had on a wetland, it is necessary to do tests to show what the initial condition of the wetland is.
5. More attention is needed on illegal and non performing mines. Illegal miners are really impacting on economy, wetlands, and other water resources. Many mines do comply, but difficult companies need to be combated. They don't have environmental assessments. Non performance goes back to political connection.
6. Kevin: in 99% of cases of wetlands mine will impact on wetlands, but the

individual value of the wetland may be miniscule. By valuing wetlands, it devalues the wetland as mine can pay their worth easily. We need to be careful of valuing it. Victor: certain decisions cannot be done in monitoring terms.

Group 2

7. DMR Dominates the scene. It dominates decision making, and the inputs of other departments don't make a difference.
8. Mines do need water licenses, but in practice this never means that DWS can stop the mine. DWS can only impose conditions on the water use.
9. The impacts of mining are cumulative. We need to look at more than 20 years of the mine's life, and then need to look at 80 years after and what happens then.
10. There is an inflexibility of decision makers in water. There may be a wetland in a maize field was already destroyed by farm, now mine wants to build mine there, decision maker says they need to rehabilitate it even though its already destroyed.
11. Acknowledge the multiplier effect mine has on a town. For example, when miners in Rustenburg went on strike, business in town went down.
12. DMR is not releasing guarantee, the rehabilitation money isn't released by DMR as they don't issue mine closure certificates. DMR just refuses to give the money. The closure approach has failed. What is the next best thing? Once mines are finished mining in area, they need the rehabilitation work to be done, then move on. We need an annual mining audit. Identify what needs to measured. Mines that prove themselves and do what needs to be done should be acknowledged, but illegal or bad mines that are not adhering need to be focussed on.

Question 2: supporting regional decision making about coal mining and alternative land uses within catchment management.

Group 1

13. There is poor communication among decision makers. Officials in one section in one department can't come to the same decision as their colleagues in the same department, so how can we get different government departments to come to a decision.? It is very difficult to come to conclusions.
14. DMR dominates. Eg water affairs says bad idea to grant mining right to DMR, DMR still grants mining right
15. Requisite simplicity: we need to simplify licensing requirements to get users to comply. We need to make it easier (simpler) to comply, no one reads the (excessive) documentation at regulator level in any case. We don't talk enough. Officials and others involved need to talk nonsense for an hour before a meeting, so I can get to know you better and how you think. This is not about decision making, informal talk. The future system does need requisite simplicity. We need to get past the paranoia of omission, so submit excessive amounts of documents just in case.

Group 2

16. We need something like the Green Drop scheme, which would be a public acknowledgement of companies doing well.
17. We need regional solutions, such as protected areas. We need to identify water producing areas and keep coal mines out of them.
18. We need integrated legislation. In terms of NEMA, MPRDA and NWA, the DWS should define no-go areas based on water producing areas. They should submit (the maps of these areas) all to one place and one department, and land use planning, including permissions to mine coal, should be based on that..
19. Regional people should be involved in decision making, and monitoring and managing impacts.
20. A word of doubt: we already have proclaimed protected areas, based on scientific proof, but will that stop mining?
21. We need national campaigns/forums/seminars, to build awareness of wetlands and their value.
22. Empower people, so that there are numbers of people able to influence political decisions using media (world Wetlands day etc)

Question 4: participation in this study, including an ecological economics case study into the valuation of coal mining compared to other land uses.

23. What is the mandate of forums? There are just a couple of people here today, what impact can we actually make? The answer was that forums are evolving, as the institutional rearrangement through the roll-out of Catchment Management Agencies and Catchment Management Forums revitalisation is happening. Those who are active in forums now can shape the future.
24. One thing isn't happening here, is that some forums invite local media. They struggle to retain attendance. When appropriate there should be press releases. Start with things that are topical, eg drought. Level of dams etc. restrictions etc. Expand this, because different meetings have different focus, for example water quality and wetlands. Give the journalists a few paragraphs. They can reach out to a larger audience, and get a better feedback from them.
25. These are important things to look at, comparing alternative land uses. Break the comparison down into money, and then into local, national, international benefits. Another priority is job creation. However, people underestimate job creation by farms, and the family members that are taken care of on farms, including schooling etc. Local Carolina newspaper will be interested in publishing.
26. Knowledge is mostly invisible to the user. The current tone of info on the Upper Komati which is available, is hard to understand. We need to make it easy to access information, such as a website for the forum. The first thing we would want to see is a map, then populating information on it. Mapping key wetlands. We are living in a new age of information technology. It is even possible to develop an app that notifies people of meetings, events and forum activities. But be careful with the quality of the information, which must be accessible to people. Put information, not data, in other words, present the

information in such a way that we EMPOWER people with information that is relevant for Carolina people, including basic information. We can use Google Earth as a basis.

The final question was about planning, and the proposal was to meet again on 19th January 2016, a Tuesday.

3 PROCEEDINGS 19 JANUARY 2016

AGENDA

09h00	Welcome, language and introductions
09h30	Exercise: How am I connected to Water in Carolina?
10h00	Group discussion on decision-making system
11h30	Reportback and discussion
12h30	Next steps
13h00	Lunch

WELCOME AND BACKGROUND

Victor welcomed all participants to the Workshop and offered that discussions could take place in languages other than English, with help from a translator.
Participants introduced themselves, gave their affiliations and explained their interests in participating in the Workshop.
Victor explained the background to this project (the Golfview legal case) and explained that these Workshops abide by the Chatham House rule (i.e. all discussions are treated as confidential and all documents are anonymous) to encourage open and honest participation.

This workshop mirrors back the findings of a number of discussions in the forum (24 Nov, 18 Oct), as well as a series of interviews with mine managers etc, including some work that we reported back on before. On the basis of research into legal provisions and experiences with them, the current process of streamlining legislation, the research team has designed the outlines of an alternative decision making process to balance the future of coal mining in the area with the protection of water resources, specifically wetlands.

We are inviting you to work through and comment on this design. The design works on two levels. In terms of the overall decision making process, we are aware that it may take time, further discussions, contestations etc, to arrive at this decision making process with agreement from everybody involved. So therefore we see this as research that indicates what may be possible.

On the level of the Upper Komati Catchment Forum, the research looks at what role the forum can play in improving the decision making process – by playing its own role better, with more resources, information and social capital. This is also research – action research that improves the ability of the Forum to play its role. We hope that we can repeat this work in other forums dealing with coal mining.

The proposed decision making process responds to issues raised:
- that decision making is not inclusive enough at present, not of government departments other than DMR, and not of affected people

- that decision making is not transparent, that it is unnecessarily complicated and demanding (e.g. in terms of paper work, including very thick reports)
- that decision making does not take into account and protect wetlands and water resources, and that this may limit future economic and land use options in the area
- that mining impacts are unfairly singled out, while agriculture and local government are not so strongly regulated
- that the current decision making process does not protect people from water quality threats.

But first there is an exercise social hydro-connectivity in Carolina.

1. EXERCISE: Communicating by means of a picture, please answer these three questions:

1. How are you connected to water in Carolina?
2. Does water in Carolina divide or unite us?
3. How did you experience the 2012 AMD event?

REPORT BACK

1. DWs said it is the custodian of all water and is concerned if there is any pollution, anywhere.
2. IUCMA explained that they are concerned about all the water users, that they should have clean water and should not pollute.
3. The Community reported brown water from taps this week. They think it is contaminated by sewage coming from ground water into their boreholes.
4. New mines are trying to be greener, more environmentally friendly. As consultants we can advise but mine management decides. This was echoed by an Environmental Manager with a mine in the area: they too can advise but not take decisions.
5. General discussion remarked on the absence of the DMR and which mines are abandoned.
   Problems are brought to us, as private practitioners, to test boreholes, test water, every month
   Do you have power to make decisions?
   As consultants and environmental managers within the mines, we continuously advise management, they can take it or leave it
   We submitted the information in annual reports, how to pick up the pollution.Reports on all mines go to DWS.
   When is it advice, when is it action, and who has authority?
   Monitoring starts only just before mining operations begin. We use data only for a certain period. But impact on water quality cannot be seen because there are no records for the ten years previous. All our stuff goes to DWS.
6. We want to see a reversal of this into process, to address leaking AMD. The problem is that upstream there is already pollution. Another problem is that some mines do not have ownership.
   Where is the policy document that defines when a mine is ownerless or abandoned?
   It exists within the DMR.

But they won't give it to us.

Abandoned is usually defined by how long it has not been operating.

How hard do we look for an owner; how much we invest in looking for owner.

Its a complex legal process, case by case, to deal with abandoned or ownerless. There are all kinds of agreements, prior to 1956, another date is the Fanie Botha Accord of 1975?, which is due for a revamp.

7. A local resident who is a geologist explained that water connects all the activities and if the water is polluted it affects all the activities, whether from rivers or underground water.

Overflow from mine water gets into the streams then the rivers, and is carried further down.

John There are four areas: conservation, agriculture, mining and forestry. They are all integrated and connected by water, through rivers and streams. How does the DMR know which areas to exclude from mining., or which hold high grade quality coal?

Victor There is water connectivity and social connectivity. It is very difficult for DMR to make decisions from the outside. What if decisions were made by local citizens with local knowledge?

John Local knowledge will need some sort of authority to be effective.

Lourens We will also need the ability to check the mines, who operate without any supervision.

Victor We hope that the system of Catchment Management Agencies will provide the knowledge and authority, and support, to local communities.

8. Participant explained his image. I have lots of questions and it feels as if I am flying over the landscape in a helicopter.
9. Participant explained his image (1 small yellow), balanced, crystal ball, interested in the future.
10. Participant (1 small yellow) identify pollution, consumer, dirty water from municipality, have a borehold and does monthly test of the water. Knows what is in it. Municipality and Mines are looking down on we who use they water they are contaminating. Mine managers don't care, they just give an order. We need to change that. Need an example.

Q: What does the test of your borehole water show?

That things are normal. We once found ecoli in it and informed the medical personnel.

We have found heavy metals also, which is not good for your system.

Q: What do you mean by 'normal'?

Complying with the SABS standard. The borehole is at my home, and I work at Droogvallei, where we have found ecoli at the siding, in the tap drinking water.

Q: So you are saying that Municipal water is dirty?

At the time the test was done.

The water for the community is dirty. The ground and tap water.

INVITATION TO COMMENT ON A PROPOSED FUTURE DECISION MAKING SYSTEM BALANCING COAL AND PROTECTION OF WETLANDS

Facilitator: We look at this proposed decision making process from two points of view. The first one is long-term, towards a Green Economy due to climate change. Such an economy will be light on resources and dense on information. The change is coming. Fossil fuels and coal will be seen as part of an older economy. CC will push the coal market back.
The second view is more immediate. How can forums like this (and there are many others) influence decisions? We are responding to a number of issues. In general, to complaints that after AMD crisis in 2012 there was no decisive change. Decisions are dominated by DMR, other land uses like agriculture complain they are ignored.
Mining interests complain they are unfairly singled out – why is all attention on mining and not, say, agriculture. Need to have balance. Authorisations demanding complicated. Because red tape some things are hidden in voluminous, complicated documentation. A way of withholding info. The current system does not allow for proper arguments, discussion and decisions. Leads to conflict.

Poster: What do you think of this Future Decision making?

TEN PRINCIPLES:

It is arranged in ten principles, which are:

1. The decision making process should leave the future open – so that there are ample choices of how the natural capital of the area is used (mining should not damage the natural capital, like wetlands, rivers and underground water)

2. The future should be decided on the basis of, and with knowledge of what Carolina's natural capital is and what it can be used, including it water resources and biodiversity (based on information from all relevant government departments and other information holders)

3. Decisions about coal mining should be made in full knowledge of current and future land use options, including IDPs, land reform plans and national development plans

4. Against this background, coal mining decisions should be made in terms of benefits to national and local economies, its impacts on water resources, preserving other land use options into the future, and the costs of restoring any damage.

5. Coal mining decisions should be the outcome of a fully informed process of dialogue that take all these factors into account.

6. These decisions form the basis of a monitoring system that is fully informed by open access to all legal instruments, such as water use licences, mining authorisations, social and labour plans.

7. Documents and discussions are streamlined, in accessible language, reasonable length, honest and sincere, with publicly funded support for participants to check data.

8. Relevant departments support this process through specialist knowledge, which is part of the Key Performance Indicators in their jobs.

9. The process is co-ordinated by Catchment Management Agencies as custodians of water resources.

10. The Catchment Management Forum develops a knowledge network of information at hand, local knowledge and experts to call on, to support making decisions, monitoring and acting on compliance.

Facilitator invited participants to divide into groups to discuss these questions. The ten points for the future system are on the printed hand-out, and was e-mailed to participants before the meeting.

There was some negotiation about how to form the groups, but agreement in that interests and voices from each group would be different. The division was:
community group (4)
consultants group (4)
regulators group (9) – including IUCMA, DWS, DAFF Mpumalanga and Human Rights Lawyers.

Questions for small group discussion:

What do you think of this system in terms of:
1. Is it desirable? What do you like about it and what do you dislike?
2. Can it work? What can work and what can't? What may take a long time to work?
3. What would you change about the proposed decision making system?
4. What would need to change in the present system for this decision making system to work?

Report back from Community:
Q1: Desirability No question the new system is desirable.
Q2 Went some distance but not far enough re community involvement.
Q3. Not far enough should go even further.
Q4. We are not sure that it is not strongly enough enforceable. Still open to abuse. Any system could be open to abuse if the wrong people run it.
From community point of view involvement is costly. Others are sent here by emplyers, but community participants pay for their participation (time and transport) themselves.
Workability: Yes its workable, but it will depend on the commitment of those involved, their serousness and honesty. The track records are not positive.
Timing: People's attitudes and mind sets must change, will take long.
Process should be dynamic, we should review and change it whenever necessary (in the light of experience).

Comment: To be included in system. Feedback about community concerns is not taken seriously enough. These are minuted but no action follows. Would like to see a real Action Plan with a Timeline and the Names of responsible people. Report back in the next meeting. If no action, what next – Plan B?

Report back from Consultants:

Q1. Yes, desirable.

Like: The fact that there will be local input from local communities, people close to home. But conflict of interests. Important that it is driven by local knowledge. But capacity building and explanations for local participants will be needed.

Work: Yes, with some difficulty. What will work: Implementation of these principles in one environmental system, with adequate support and education of local community, and support.

Could be too complex. Takes time for a paradigm shift, change the mindsets of all involved, needs a variety of economic benefits per sector.

Change: One decision-maker, deal with one department. Can have sub-sets, but basically one body that decides so no conflict of interest.

Change the present system. Ditto – implementation of one enviro system.

Facilitator: Adequate support & capacity building. What does the community think, what does the IUCMA think?

What will adequate support look like?

Local body is local people, not researchers, but local and important knowledge. But supported by people with appropriate expertise, inc. financial expertise. But wh will pay for this?

Get the community to make informed decisions, they do understand simple things like impacts from mining, but how to rectify it.

What support will work best?

Workshops to train community.

IUCMA:` It is sometimes difficult for us to identify leadership in communities. We need people with whom we can work to build leadership in the long term, and who can can report back to communities. We identify HDIs, women, youth, but next time it is completely different people. No consistency. The custodians of info are not there.

Facilitator: Yes this is a challenge but there is a solution to it. VEJA created a Water Task Team. They go to the training, to the CM Forums, to build continuity and to develop knowledge. But of course this assumes the existence of organisations of activists in the community.

Departments currently trying to streamline into one decision/authorisation system. Maybe not one department but one decision making Co-ordinating role.

Report back from Regulators:

1. Regional overview of existing eco infrastructure
    - Good to start off with situation assessment, good to have knowledge of point of departure. Problem with details – different groups/areas. Need to make that available to everyone (licence issues, confidentiality). Need a baseline.
    - Region to region level – discrepancies between different areas. Oversight of regional bodies for complying with standards for baseline study.
    - Some people interested in different levels (scope). Can't have info for every borehole. What is minimum scale that we need?
    - Would like to see it expanded: also land use info as well, infrastructure, org/people that deal with it. Different district/local boundaries. Info needed about the people.
        - Who represents each group – is forum representative of stakeholders?
        - Who will speak on behalf of the environment?
    - Accountability and completeness.

2. Overview of LU options
    - Fully ventilate different ideas, not just mines drowning out other voices. Mines tend to dominate these discussions (economic interest).
    - No sustainability – social issues, benefits, other issues, water resources
    - Need to put people first. Industry being given water security over people.
    - Need to look at long term options – mining is short term. Necessary and need to know this.

3. Long term trajectory – green, low-carbon economy (the future)
    - Not letting one role dominate conversation. Idea of green economy as a goal that we all work towards.
    - Lack of political will to curtail mining (seen as economic saviour). Other stakeholders (municipality, community) not working together.
    - Need to commit to reducing carbon emissions – this will have impact on coal mining.
    - Green economy is very vast topic.
    - Need to be aware of the future. E.g., river may not be here in 10 years.

4. and 5. Coal mining – benefits to economy, eco-infrastructure etc.

- Alternative uses of the land
- Don't agree with what is said here – would work later on. But need to fully ventilate on point 3 before that.
- What if point 3 was fully discussed? Have conversations going on – then point 4 could, work. Need to elevate other stakeholders to the same level. Financial interests can't be the only interests. Those who are not decision-makers should not be disregarded. Who will give these people power? Role of ISA (?)
- **There should be a step where there is an empowering stage early on** – stakeholders need to make informed decisions. Should occur before Point 4.
- Noted in pt. 8 – empowerment. The steps don't have to be taken in the order that they appear (not linear)??
- Issues here are to do with trust. The mines will say anything. How to build trust? Mines will put forward a very strong case.

5. (above)

6. Forum is basis of a monitoring system enabled by legal instruments

- Mines are claiming that SLPs are private documents. PAIA requests – mine have no reason to withhold information. Need better legal infrastructure to get access to info. Delineate what's in the public interest (define it quite narrowly) and put this info on a website. Asking for it doesn't mean that you get it. Some officials are completely refusing.
- General public – don't give them data, but knowledge. Simplify to: resources quality, narrative reports, graphs, status of impacts, compliance. Certain info is not relevant. Write this out in plain language.
- Green drop and blue drop system. Individual waste water systems?
- Issues of access vs. dissemination. Should be more easily accessible. How do you channel information? Municipalities do not want to give out information.
- SLPs – communities affected by mine should form part of SLP. Difficulty with who picks that person (does the mine, community?).

7. Decision making and monitoring is streamlined. Docs are concise, accessible and honest.

- Regulators: can decide what is/isn't relevant, but this should be very liberal.
- Corrective action – creating a summary/annual report that indicates the status and what's being done, what's happened in previous years.
- Two-way stream? Report from regulators and also one to regulators. Difficulties would be: complexity/things are too technical (financial constraints). Could have an executive summary that helps laypeople understand as part of the report. E.g., colour coded maps (red = bad, blue/green = good) – don't have to understand how it's done, just that they get the info.
- Need community empowerment. They are resourceful, enable them to create forums and allow them to communicate and produce a report that accesses performance (what they were promised vs. what is

happening on the ground).

8. Capacity building
    - Should be done earlier on. DMR should have a chat and engage with concerns of other stakeholders.
    - Need more details – what does this mean. E.g., outreach to schools, for communities to enable them to make decisions.
    - Who to identify in community? Hard to just go to community and give training. Challenge is choosing people? Asking community to nominate? Self-identification? Try to ID leadership (e.g., in NGOs). Trouble relaying/disseminating information back to community.
    - Forum needs to continue to reach communities and have community members attend forums. E.g., put things in the paper, radio, soapy. National exercise to reach grassroots. Multi-layered approach.
    - Tried in past to invite newspapers? Why doesn't forum do a write-up to summarize – write about AMD, dam levels, status of water restrictions other topics, etc. Problem is newspapers want a scoop. Write a press statement?

9. Catchment Management Agency
    - Need cooperative governance with dialogue and strong accountability. Need to know who is doing what in each role.

10. Decision Support System – knowledge network process
    - Internal source of knowledge – would require a lot of resources.
    - Good idea! Doesn't have to be developed over night. Centralized system populated by different inputs.

Could the CMA and Forums act as the driver of this process?

IUCMA: Try to involve all, which is going well. So, yes.

Facilitator: Point 10 is a deliverable of this project to develop knowledge network process and system.

NEXT STEPS

Facilitator: Results of this Workshop will be handed in to WRC as Deliverable No. 6, by the end of this month. We are planning economic case studies comparing coal mining and cattle rearing, and a return to the Golfview, assess restoration and its cost. Looking at how we value natural capital. This group was cautioned by Prof Kevin Rogers not to assign monetary values.

Future Workshops. Next Forum meeting is on 17 February. Another two workshops, put together a booklet for capacity building and reference, about the Carolina catchment, specifically.

4 PROCEEDINGS OF 9 JUNE 2016.

Victor introduction gives an overview (powerpoint presentation)

Remark: It is great that the importance of the sandstone layer is recognised, we have been trying to tell you about this.
Question: Were you able to the costs of rehabilitation per hectare?
Answer: Unfortunately not yet.

Prof Palmer introduction:
Real value of having a product that is embedded in actions. That is work that we are co-producing today.

To take an example, in your body, you have vital systems and you don't die until one of those systems fail completely. If one fails completely, its over… When we talk about vital systems, it's nice but not necessary to get a knee replacement. The vital organ of this catchment is that water and rock and sediment are layered, and the way in which water behaves in that connected system, in relation to the surface water at the top – so those of you who need surface water – if you puncture this layer, if you interrupt that flow, you seriously interrupt the life supporting system of this catchment. We need to protect the hydrological connectivity of the system.

The second level driver, is the water quality. So what we are talking about here, is a complex set of interactions, we need to think about primary drivers what we need to keep the catchment healthy.

You produced a framework for decision making and monitoring on coal mining and protection of water resources. I made an analysis of it, looking at how it could be used in the forum as a "decision support system", in other words, a system that provides the knowledge that is needed to make decisions and monitor as a forum.

These are 6 points that are embedded in this framework. I am suggesting, I have done as a first draft, what if you turned this framework into a template, that you added info to at regular interval you decide. Lets say you do a state of the catchment report every year. Or when a WUL application, or discharge license, or EIA comes for the development of a new mine, that you can evaluate it with the knowledge you need, and you can hold those responsible for the decision, to account. One of purposes of the forum as people who live in the catchment, is to be able to judge "this is a really good idea" or "hang on, this development will poke a hole in my cup".

You might form working groups to maintain and use this framework.

1. You are comfortable working at this scale, in this space, in the quarternary catchment, Carolina, or in the municipality, Gert Sibande.
2. How often, we would like to keep this contextual assessment, check how often you want to keep this up to date?
3. You will need, on one side, a lot of information coming from the IUCMA, we are lucky to have well developed and able CMA. They provide information on flow, quality, even looking at habitat and biota. You might want to look at what are the main social drivers in your system. You may find that in you forum, community members, miners, government officials, people

who live in this catchment. And if you think people are missing…For example, the Droogvalley wetland (which we assessed), did not seem well connected to people living there. In our short exchange with the mines, they have more knowledge that many of us… keep track in your forum on what kind of local knowledge you have. I understand you have issues with your WWTWs – it's a systemic problem that we work on throughout the country. It is a very important process, you will be interested in municipal procurement processes. The municipality often takes most of the shots in a forum, and mining also takes most of the shots. The huge shift in social environment is where we say, we actually all live here, and have different roles and knowledges, and when we can put them on the table and talk, we can look at alternatives. The blame game: "we know we are bad but they are worse". To get out of apartheid, we had to get better ourselves. We need to understand that it can be tremendously frustrating to be in the municipality, to get a MIG grant… So this conceptual assessment is "where are we".

One of the things we need to know, is about land ownership and land use. Who owns which land, in which way, for which purpose.

You want to be able to assess options. What if… then I have contingency plans. (E.g finding a projector this morning). You need to do that in a much more complex space. Your knowledge bank, that we have three months to intensively help you build, underpinning each framework option. What do you have to do, in all of the phases of coal mining, and if there is a co-operative spirit, Greg will be able to talk honestly and frankly about what his realities are.

Principled pragmatism. If your principle for this catchment is to return it to pristine condition, I am sorry, but this is not practical, not reasonable. I am an ecologist, I deeply believe we cannot live on this planet if we don't look after it. Our generation's primary challenge is to deal with a planet that is struggling. But I live in South Africa with a history of unfairness, so redress is a primary goal. Principled pragmatism only works when we talk – what if your principles conflict with my principles. How do we assess what sustainable infrastructure is?

Greenies like myself too often say "if you do that it will be destroyed", we should say "if you destroy so many of this, you will take away something that is really important".

What are the coming changes in land use?

Hold people accountable for giving you documentation that you can understand – or go to a specialist who can translate. So that documents you receive and produce, need to be understandable, well illustrated documents.

You can develop in the forum the capacity for oversight. You do not need to make it happen, you know enough to make sure that it is happening. You can check about enforcement, which directives are given and how they are enforced. We can say "its difficult to speak to the DMR", that "they are never there", but you can find out who is talking to who, how to build these connections.

You need an economic future, and coal will be part of it for some time. Agriculture has potential to be part of that future indefinitely, you need to know whether you want tourism, or wind energy etc. Are these options aligned to what you see as your sustainable economic future.

You will find all these points in your framework. What we are suggesting is that you relook what we are suggesting, and talk about the practicalities, as a group, of building up a knowledge

base, and capturing this in a framework… a framework to support forum action, in ensuring accountability in their catchment governance.

Develop a knowledge framework, so that when applications come up for licensing, you have a good enough understanding, good relationship with a CMA, you can go to your knowledge base and principles, so you can evaluate these proposals. And then you can challenge them. This is not a book on a shelf, that we can just say "deliverable 8", this is us asking you if you are prepared to be a guinea pig, Geert, we are hoping that other forums dealing with coal mining, might take this up and practice it, in the form of a dialogic training with the Acid Mine Drainage Task Team.

Its principled, but is it pragmatic? Can we do it?

Then the guidelines that we produce, would be how does a person who comes into this forum, how do they participate, how do they use the knowledge base, how to work with agencies, how to hold each other mutually accountable?

Group discussion followed on what would be their requirements for the Decision Support System

The meeting decided not to break into small groups as planned, but to do this in one group. The following approach was agreed upon for the knowledge support system:

There should be guidelines for each group of land users, and the forum is where everything comes together.

Do it at an appropriate scale, let's not focus just on Carolina, although our info must be for Carolina, but report should be at a bigger scale…

We need to look at other things that are happening in forum area; but how do these things fit into the structure of existing protection, how does it fit into an agenda. When forum gets together they have an agenda. Talk about resource quality. About waste water treatment compliance. So we would like to get an integrated framework for reporting. This framework is about integrated water resource.

The short document about Carolina and coal (the booklet) is a different knowledge network, a sort of an introduction.

Language needs to accessible, on the level where this information is needed.

A vehicle to take us through the points faster, e.g. "now there is a new application"…

point 2 is where the start… what is the existing situation. This needs to be put together.

Point 4, is what are your alternatives, if you say no to mining, what are the alternatives? What are the positives or negatives of mining, or not, including after mining, what are the positives or negatives after mining has stopped?

Point 1 (referring to the poster) Where am I in the landscape… where is my area, what is my mandate?

The question of scale, is which boundaries must you be careful of. This is an active forum, this remains the relevant forum.

Municipality is important, we have Albert Luthuli and Emakhazeni, they have different IDPs, part of different district muniicpalities.

You must think in a GIS method, what are the different maps you may need. The forum includes the municipalities.

What else do we need to add?
Land ownership is important, because you start with the farm portions – 3 must become number 2.

Land use is available in each municipality's Spatial Development Framework. Local municipality SDF has to comply with district SDF, and comply with the provincial SDF. All the levels must work together… IDPs are in place.

You need to keep your information to the essential minimum. We need to distinguish what is easy to get from what is difficult.

3. Contextual assessment: The biophysical, social and technical infrastructure. Already we know, at Upper Komati, there is regular reporting on the information. There is info on water quality reports, but reports focusing on coal mining, we don't have yet. We know where mines are, its easy to identify where the relevant monitoring points are.

IUCMA can provide the history since 2012 – when around 30 monitoring stations were set up.

If you have a classification, and have RQOs, those will be what (DWS? IUCMA?) are reporting against.

Relevance goes by risk assessments. What do you want to be informed about? We don't want 106 results, in the meeting have very specific reporting.

Red flags can be quality change, for example.

4. Assessment of options

How do we do this? : Assess options – development project, coal mining, sustainable; sustainable ecological infrastructure, changing land use?

Risk is combination of hazard (how dangerous it is) how likely is it to happen.

This is where the knowledge is most difficult to access. Primary risk factors are “how does mining interrupt the hydrology” and “how does this affect the water quality”?

There is mitigation possible. There is a big difference between a mine that mines responsibly, vs. one that mines, declares bankruptcy and then runs away.

If there is a need for coal, it will be mined. E.g. Eskom runs our electricity on coal. There is a

need to expert coal. But then, the question is, should that mine happen at this place, at this time? Should we be mining high potential soil, or where biodiversity is high. Is coal mining desirable (in this place)?

We have roughly 200 years of coal, we will need it for 10 or 20 years. Then question is which 10% are we going to extract, and which 90% to leave. Accurate mapping becomes a really important tool.

Hydrology is a specialist layer that applies in this area. If you look at conservation maps, what they are saying about critical biodiversity areas, if you want to encroach on that, the onus is on you to show that you will not cause damage.

We are going to cut off hydro-connectivity somewhere if we mine in this area. But the problem is, the mining company holds a right in a specific area, and wants to mine specifically there.

It is now easier to access documents than it used to be. But the problem remains: We look at documents, we report, but then nothing happens.

Number 6: oversight, (checking on)

Maybe booklet is not the way to go, everything is there, in new NEMA regulations, how you must do your EIA, there is a need and desirability. The big thing is enforcement.
Wietsche said yesterday they are expanding monitoring and compliance capacity.
You must do planning and action, but then it is checking compliance. It is essential.

Agency. The power to act and change. We are not going to have huge influence in cabinet, but we can raise issues in our catchment. Section 6 draws on all the other sections, this is quite hard work. People should understand what should be assessed, and what is really assessed. It is important that people understand what the real requirements are.

The problem is, for example, as in this case where there is mining within a wetland. We have satellite pictures, IUCMA goes out and submit it. Then they send it to to DWS, but IUCMA does not have access to state attorney's office. If it takes anybody on, this action will be for its own legal account. (At the time of the meeting the delegations from DWS to IUCMA had not yet been completed.) DWS goes to state attorney, they act for them. IUCMA has its own legal account, so the mines sue them for directives, and these things run into millions of Rands. The regulator is DWS, and they act if there is a violation of any sort. Our part as the forum, is an issue, we are here to say, whoever must act on something, please must act on it. Minister has withdrawn delegations from CMA, and significantly reduced its powers to act. So there is an institutional relation, so there is a difficulty in the power relations.

A ground rule of complexity is that you don't stop because there is a difficulty, you find a way to go around.

Nobody has the capacity to drive this activity. My question, do we really need a set of guidelines? The forum has a problem, somebody has to spend time and effort to drive a forum, or do you create a structure to facilitate this…

Resourcing CMF questions come up everywhere. Our WMA has put money aside for forum organisation…

Would you go to other coal forums, and say Upper Komati has started an interesting approach? This is one of most active forums, some are not active at all. What do we need to do, we are not going to get the Rolls Royce, but if we can start off with a model T4.

We know have a more formal structure, some good work has been done. But we can always unpack the others a bit more.

You need somebody that can spend two days a week, to keep this going… to keep track of the applications. What if CMA is connecting this for their annual report?

This info should be somewhere already…

So, is this a sensible reinterpretation of this document: how do we now take it forward?

Step 1: We need to get the following people, CMA as lead agent, how will they start unpacking this. We have Acid Mine Drainage technical task team. They can at least say what is the current status quo. Those are the people who produce the status quo on the mining… Who will do the social, where will they get the information…

Currently IUCMA supports the forum, the work is done by forum committee. It can work when you have a very active CEO.

If local government (Gumede) becomes the resource, we could run it like the IDP. It is IUCMA responsibility to support participation. There are contradictions in resourcing of CMFs. CMFs are independent, where IUCMA is not seen as big brother, you also have to sustain the CMF. At some point there will be decisions against the IUCMA officials. The reason why we give chairperson etc powers, the implementation of those decisions have to be seen to be independent. CMFs are not the fundamental KPI for performance assessment. And then it comes to the issue for CMFs, we were told not to budget for CMFs. We then said to stakeholders, assist us to support CMFs. 60% of costs are supported by stakeholders.

In DWS there is still a debate about the importance of CMFs. It may be government should be funding the independent participatory body.

The quickest way to raise that level, is a crisis.

If we can show, there is something that has emerged, confirmed as useful, it is possible generally, but there are specific barriers.

Can you create a basic map, and get it consolidated?

Yes, it does not sound impossible to do some of the actual maps. An active framework starter pack is a product we can do.

And we do have to do some training – maybe going to other forums. Here is an implementation starter pack. A DWS official reported that he plotted a map of Carolina. It clarified the situation immediately. Not everybody can access info easily. It does not mean that because the info is there, somebody needs to put all of that together.

Do we need a private consultant? We can ask DWS for maps… ask municipality to "bring us what you have".

This starter pack may be a clear example of what is possible. So that people can see what is possible. A "proof of concept".

So there will be 2 products…
(1) starter pack knowledge system
(2) 30 pages booklet that is an introduction for a person in a catchment forum that is dealing with coal mines
(3) why wetlands are important is well known and not necessary now.

Koos: I started working on these issues in 2001. There have been massive changes in policy and government over that period of time. Dept of Agric is now refusing mines on basis of food security and high potential soils. There has been a significant change in the regulatory process. I am not sure that there is willingness to address it immediately, but the movement is in the right direction…

Geert: a summarised 4 A4 pages. We have produced newsletters in our projects, e.g. on water quality. We should have a website for the project.

Thank you to all the participants. This is what co-learning is, this is the contribution of everybody.

5 MINUTES OF 1 SEPTEMBER 2016.

Minutes of the Upper Komati Catchment Management Forum Meeting Featherbed Lodge, Carolina.

Draft Agenda

1. Introduction and welcome.
2. Presentation of booklet "HOW TO balance coal mining and water protection in a CMF"
3. Presentation of Decision Support and Knowledge System.
4. Using the Decision Support and Knowledge System to analyse the Verkeerdepan mine.
5. Evaluating the training materials.

The workshop was presented by the developers of the training materials, namely prof Tally Palmer and Dr Victor Munnik of the Institute for Water Research at Rhodes University, and Mr Ben Cobbing of Conservation Support Services Geographical Information Systems (CSSGIS). (Please see chapter 6, 6.4 for detail on the Decision Support or Knowledge System).
Discussion:
I would like to see a layer which gives the location of mines.
I would like to see where all the prospecting applications are.
The strategicy water partnership, appointed a person to plot the location of excisting mines, including Carolina, as well as prospecting. There is nearly nothing in the Mpumalanga area that is not put up for prospecting.
Jo Burgess is busy with WRC to create a mine water atlas. We should get hold of that. It superimposes the mines and the water.
Create on GIS buffer zones around water resources, what areas are not available for mining.
I have been busting my head against data sets on where the mines are… Geosciences I tell them data is incomplete, the mines do not add up.
You could find out from IUCMA staff where that layer is.
What is the possibility of developing an app. for google earth? The problem is that it is very data intense. Oryx map is free application.
Hugo Retief and AWARD – are introducing different monitoring tools (for Upper Olifants).
Oxpecker has developed a tool called "Mine Alert". We could inivite Oxpeckers to join us in a UKF meeting.
Koos Pretorius has a list of mines "this along".
This project can alert this group to the possibilities.
It takes the energy of a group in a catchment, possibly the dividing up of task, to scan the environment and see what is going on. Our job in this project is to alert people to the existence of data.
If we could use tools to empower people, we can move into the right direction, like Oxpecker would complement the current work. We could synergise our efforts to maximise the resources we have.
How does DMR decide when there are enough coal mines in an area?
It is not how much water mines use, but what their impact is.
We don't have a national plan, and not an abstraction licence related to water quality data. Voice of outrage has to come from people… so you can be as much of an informed voice as you can be. We live in a developmental state, we have to be able to motivate looking after resources in terms of long term jobs and opportunities.. who is going to have which jobs and incomes in 10 or 30 years,
Then you must go to all landowners ... on my farm they have taken my water. If you compile a list, mines have already taken away this and this much water… these must be no go mining areas.
That will be big job.

Yes one of our research jobs could be to look at NDP, motivate we have best first steps to put a locally developed future plan on the table… maybe turn that into a job creation project… (maybe working with IDP?)
DWS is updating record of water uses. They are running regional workshops, if that happens here, it could be a vehicle here… then you have a way of attracting water users to come in… validation and verification, mainly looking at quantity (its opportunity for people to walk into a room, questionnaire based on this).
Prof Palmer: What we want to know is what training would you need for other people to be able to use these maps? How can we make it real for people to be able to participate and understand?
Mervyn Lotter has drawn up a Mpumalanga biodiversity plan – not yet legal but not gazetted. There is a handbook on the biodiversity sector plan.
Verkeerdepan example – follow 11 steps (Tally)
Our first student went through steps… what a mine has to do to get permission to mine… Then I made a summary, and related it to what Ben was doing, so this is my guess of what you could do..
Step 1, also contains privileged information, its on a system, and it won't be available (there is a list of things that you must put on the system)
Step 2, notification from DMR that application was accepted. (you should receive acceptance letter)
Step 3, Social and Labour plan, draft mine works programme, environmental authorisation (SLP is not part of public scrutiny).
Mine works programme is initial programme, what you want to do, how, for how long. You are making a business case for the mine. It is handed in as part of step 1(on the system)
NEMA law does not tell you have definitions for consultation… I&Aps register, must declare their registration, who will be sent out the scoping report (look at 2012 DEA participation guidelines,
https://www.environment.gov.za/sites/default/files/legislations/nema107of1998_publicparticipationguideline.pdf)
Method of consultation is dependent on nature of impacts, nature of affected parties etc.
In checklist, differentiate between what is happening behind the scenes (confidential) and when people can act – and what information is publically available.
Oral submissions are treated as less important than written submissions. Most of oral submissions are not properly picked up. (is it necessary to exit the system and have a parallel civil society process of recording objections etc)
Can you set a limit for blasts?
"Every blast gets recorded by a seismograph" and must be within legal limits.
In an EMP if blast modeller picks up there are … they must take pictures of all the possible impacted structures, depending on how close you are to the mine.
There are ways of blasting that can limit the amount of dust. There could be a discussion with our modeller about the ins and outs of blasting.
There are serious impacts on people living close to mining area, we have problems with blasting. The mining company finds farmer, they identify a box they want to cut, they remove the people to a 2 km. Explosion amount is so excessive it reaches other people. Too much space taken to discard the coal.
Water gets contaminated, it gets into the springs. In terms of jobs, monitoring mining activities, forums might establish a funded project to do monitoring… because people who are living there, they know the area, and they know what the impacts are. They know how much the dust is affecting the vegetation around the mine. This could employ people, to check wetlands etc, houses that are affected etc. Those reports will help the companies and the forums.
Answer: yes this is complicated. We will record that this project has uncovered that there are many more questions than we originally imagined, and we will write them down (and think of ways to deal with them). WE have given you a record of points at which you can comment… those are the reports that are pushed out…

In rural areas, the impacts in rural and urban areas are not the same. It should not be a once off process, it should be one of the tools (the knowledge system) that we use routinely, the tool should complement the other work. The maps are very important to understand

1. Maps are useful to know exactly where the mine is going to be.
2. In an operational mine, we would like to understand the area around the mine, for example what are the wetlands around Kusile (we could have used maps before ground truthing).

This information is useful to us, without a map you can't go anywhere. Its just that these maps need to be supported.
IUCMA = I would recommend that we keep in contact, so IUCMA can review document and make contributions.
It is potentially sueful, but I am not sure about way forward, people I am working with have access to data systems, we can do that on our own. WRC should send reports of this project to the working group, and these should be distributed further and wide.
There is a possiblitiy of a training and capacity building, for example to take a new mine to consider how will you apply this. Different groups have different needs, in a forum there are too many diverse interests.
These products are very good for I&AP, to comment on water and biodiversity, but not necessary for mining managers and consultants When I start a project, I will also start with all those maps.
Will it help for monitoring? I am not sure. Maybe in broader in IUCMA way, but for a specific mine, that is much more local. As a consultant, that will be determined in my EIA process. Different environmental specialists will tell me where I must monitor what.
Farmer: it is very good, that we know this. But my problem comes at the end. If you have a problem with the mine, you discuss it, but you cannot resolve it. I am very pleased that you are here etc… but in the end, to solve the question, there must be someone responsible, first the mine, and who else is on top of them? Often one needs a name of a specific person in the department.
Each mine is supposed to have a complaints register in their office. They must have someone who looks at the complaint register. It must be reported to DMR (what the complaints are). Sometimes we can't agree, and I don't want to go to court. Sometimes issue is not so big. So in the end, you just ignore it, you suffer, but not that much, but it poisons the relationship.
One thing we are lacking, is an arbitration process before you go to court.
The materials were given to the Omgewingsgroep and the IUCMA for local safekeeping.

6 PARTICIPATION LISTS, REGISTERS

PARTICIPANTS 19 January 2016

1. Nomvuso Mjadu	DAFF
2. Edwin Manibu	DAFF
3. Adele Delport	DRSC
4. Geert Grobler	DWS – Planner
5. Derrick Cholo	DWS – Usutu River regulator
6. Lourens Greyling	Geo Consulting Company
7. Riana Bate	Geovicon Consulting
8. Leon Dormehl	Hebron GeoServe, local enviro group, churches,
9. Diketso Khaile	IUCMA
10. Gugu Motha	IUCMA

11. Tony Sibiya	IUCMA – Upper Komati
12. John Geary	Jaco K Consulting
13. Kelly Kropman	Legal Resources Centre (LRC)
14. Claire Yick	Legal Resources Centre (LRC
15. Joan Cameron	Rhodes University and Munnik Research
16. Victor Munnik	Rhodes University and the WRC
17. Hendriena Sibanyoni	Silobela Community
18. Maria Mkathswa	Silobela Community
19. David Masito	South32

PARTICIPANTS 9 June 2016

1. Tally Palmer	Rhodes University
2. Riana Bate	Geovicon Environmental
3. Leon Dormehl	Carolina Omgewingsgroep
4. Koos Pretorius	FSE
5. Geert Grobler	DWS, WRSP
6. Ramabulana Ndwamato	DAFF
7. Granny Mahlare	DWS
8. Bethuel Khosa	DWS
9. John Geary	Jaco-K Consulting
10. Greg Middup	Northern Coal
11. David Mosito	South32
12. Mxolisi Gumede	Albert Luthuli LM
13. Gugu Motha	IUCMA
14. Liketso Khaile	IUCMA
15. Tony Sibiya	IUCMA
16. Victor Munnik	Rhodes University

PARTICIPANTS 24 November 2016

1. Annalise van Zyl	Shanduka
2. Lucky Mashuta	Shanduka
3. Riana Bate	Geovicon Environmental
4. Kevin Rogers	Wits/ Farmer
5. Gareth Thomson	Rhodes University
6. Victor Munnik	Rhodes University
7. Tia Keighley	Rhodes University
8. Granny Mahlare	DWS, Vygeboom
9. Geert Grobler	DWS, WRSP
10. Subiso Mhlanga	Gert Sibande Municipality
11. Maria Mkathswa	HEJN
12. Thwala Thwala	HEJN
13. N. Ncongwane	HEJN

Social hydro-connectivity in Carolina and a new decision-making framework. UKCMF workshop 19 January 2016

7 SOCIAL HYDRO-CONNECTIVITY IN CAROLINA: PARTICIPANTS' VIEW

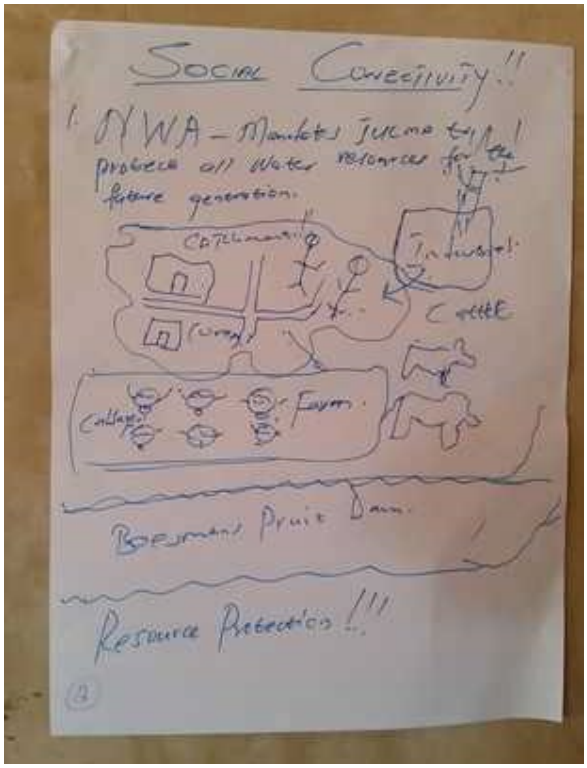
The 19 January workshop started with an exercise in social hydro-connectivity.
Hydro-connectivity recognises that water resources are connected on the surface, through wetland systems that encompass surface and underground water. The term has been defined by the United State Environmental Protection Agency as follows: *"Watersheds are integrated at multiple spatial and temporal scales by flows of surface water and ground water, transport and transformation of physical and chemical materials, and movements of organisms. Although all parts of a watershed are connected to some degree — by the hydrologic cycle or dispersal of organisms, for example — the degree, and downstream effects, of these connections vary spatially and temporally, and are determined by characteristics of the physical, chemical, and biological environments and by human activities*" (US EPA, 2015).

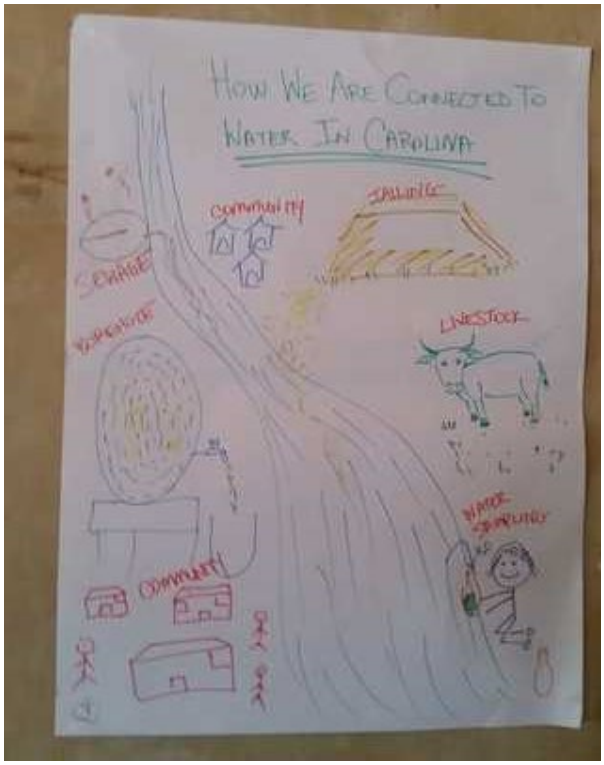
Social hydro-connectivity emphasises that the social and hydrological sides are closely integrated."

In this WRC project, we reached for a workable understanding of social-ecological hydro-connectivity, to develop a decision-making support system specifically for Carolina, but also as an input to a broader understanding of the relationships between host communities and the "social license" to mine (see Morrison, 2014). This work proceeds as part of social action research, based on a self-understanding of participants in the UKF. As a first step in this direction, the social connectivity in the group was explored by means of asking the following questions:

1. How are you connected to water in Carolina?
2. Does water in Carolina unite us or divide us?
3. How did you experience the 2012 AMD event?

Participants drew pictures, in groups of two or more, to express their answers to these questions. The pictures were displayed on a wall, and participants invited to explain, and then engage with each other.

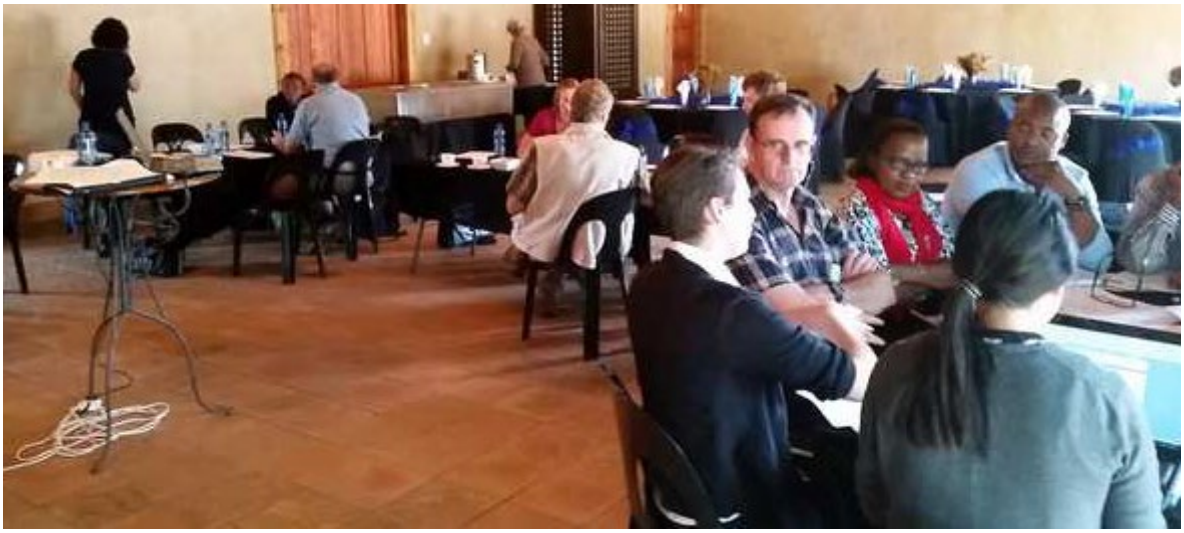




Apart from serving as an ice-breaker (accessing non-verbal expression and creating entry points for discussion between participants and starting to build familiarity), the exercise also revealed interesting aspects of social hydro-connectivity in Carolina. One resident, a trained geologist, saw the landscape as composed of geological layers, which physically determined hydro-connectivity, and graphically explained why contamination from coal mines threatened Carolina's water resources.

Others focused on their role of taking care of water resources and water users (IUCMA). Their picture featured the Komati river, streams, a dam and trees, Community members from Silobela reported that, in the week of the workshop, tap water that they received from a borehole, had a brown colour. They explained the cause as Wastewater Works (WWTW) pollution of the stream that they see as connected to the aquifer that feeds the borehole, thus illustrating that people spontaneously look for connectivity among water resources, or assume it.

Display 2: Small group discussions



Regulators, consultants, researchers and lawyers are in some sense outsiders who are, from a national/professional perspective, involved in the water issues of Carolina. They showed a more schematic view of the situation, and included specific activities, like water sampling and analysis. However, since many live in the area, they also shared concerns about water quality.

The animated discussions, which ranged from intentions of immediate follow-up on water quality issues to discussions of systemic relationships, showed an interest in, and existing understanding of, social hydro-connectivity, which this project intends to build on as the UKF-centred knowledge system is further developed. For the purposes of discussion, the participants self-divided into three groups, related to the roles that participants played, as discussed in the previous social connectivity exercise. The result was three composite voice, described below.

The **community group** included two participants from Silobela, connected to the Highveld Environmental Justice Network, who are involved in coal-related issues because of local pollution impacts. This is a Mpumalanga wide network and part of the broader South African Environmental Justice movement (for more on this see Deliverable 4, on contestation). Another two members came from the previously-mentioned Carolina *Omgewingsgroep*, an environmental study and action group centred on the Dutch Reformed Church, which had been a prime actor in the response to the 2012 Acid Mine Drainage event.

It should be noted that other participants also regarded themselves as community members, including some working for mines as environmental managers and/or consultants.

Consultants formed the second group. Members explained that, during the social hydro-connectivity exercise that consultants and environmental managers within mining companies played the role of advisors rather than decision makers, i.e. they did not have the decision-making power that other participants thought they did. The consultant group had a view of the system as a whole, were serious about environmental sustainability (based on their professional background) and had close experience of current decision-making processes by DRM, DWS and mining companies. They lived in Carolina, or nearby, and were arguably geographically closer to the community than the next group, loosely called regulators.

Regulators formed the biggest grouping – IUCMA, DWS (Acid mine water task team), Mpumalanga Department of Agriculture, Forestry and Fisheries (DAFF) – whose members shared their concern about AMD impacts on agriculture and forestry. Civil society appeared at the meeting as a regulator, in the form of staff of the Legal Resources Centre, who are pursuing the outcomes from 2012 court cases.

Other participants in the UKCMF organised farmers with serious concerns about coal mining impacts and often in direct conflicts (including court cases) with coal mines. Previous discussions included participation from local government representatives. DMR, as noted above, has consistently been absent. Participants viewed a PowerPoint presentation, which summarised the proposed IMP and DSS, as well as a more detailed DSS and IMP in hard copy. The presentation outlined a number of important issues, outlined below.

1. The decision-making process which should leave the future open. Mining should not, therefore, damage the natural capital, like wetlands, rivers and underground water.
2. The future should be decided on the basis of, and with knowledge of what Carolina's natural capital is and what it can be used for water resources and biodiversity.
3. Decisions about coal mining should be made in full knowledge of current and future land use options, including IDPs, land reform plans and national development plans.
4. Against this background, coal mining decisions should be made in terms of benefits to national and local economies, its impacts on water resources, preserving other land use options into the future, and the costs of restoring any damage.
5. Coal mining decisions should be the outcome of a fully informed process of dialogue that take all these factors into account.
6. These decisions form the basis of a monitoring system that is fully informed by open access to all legal instruments, such as water use licences, mining authorisations, social and labour plans.
7. Documents and discussions are streamlined, in accessible language, reasonable length, honest and sincere, with publicly-funded support for those who checked data.
8. Relevant departments support this process through specialist knowledge (part of the Key Performance Indicators in their jobs).
9. The process is co-ordinated by Catchment Management Agencies as custodians of water resources.
10. The Catchment Management Forum develops a knowledge network of information at hand, local knowledge and experts to call on, to support making decisions, monitoring and acting on compliance.

After the presentation, participants were asked to respond to the following questions, as outlined below.

Explain what you think of this system, in terms of the following questions.

1. Is it desirable? What do you like about it and what do you dislike?
2. Can it work? What can work and what can't? What may take a long time to work?

3. What would you change about the proposed decision-making system?
4. What would need to change in the present system for this decision-making system to work?

The first two groups responded to the questions in general, while the regulators gave point-by-point responses. The detailed responses from all three groups are recorded in Appendix E, the minutes of the meeting.

All three groups agreed that the new system was desirable and necessary, although many doubted how long it would take to achieve. Some were clear that power struggles would block the way. In particular, people's mind-sets, attitudes, and ways of doing things would have to change. In summary, a big and broad transformation would be needed. The analysis below draws together the various inputs into the ten themes that attracted most comment. (These 10 points are not directly related to the 10 points in the IMP and DSS).

7.1 Comments and concerns about a new decision-making system

7.1.1 Community participation

Participants commented that there is not enough community involvement foreseen in the plan. Community involvement became a serious discussion, including the following issues: who in the community should participate; achieving continuity through organised civil society; the costs to community in money and time lost; bridging knowledge gaps where these exist, and relationships with government officials.

During the discussions, it emerged that the group saw the community as ‘the broader public’, that can be reached through media, website, newsletter, and that can influence decision-making about coal mines and water resources.

From the community point of view, some commented that their involvement (participation) was costly, while participants were sent to the meetings by employers, but many paid for their participation (in terms of time and transport) themselves. As a result, the catchment management system needed to be simple and sincere. It must not be time-consuming and confusing because people's time is a scarce resource. That very morning, only two out of four confirmed Silobela participants could attend, because the other two were looking for work, i.e. income. Another community participant was in and out of the meeting as he had to meet people for work.

Community concerns are currently not taken seriously, argued community participants. There is little feedback, concerns are minuted, but no action follows. An interesting aspect, coming from the community voice, is that the decision-making process should be dynamic, should be constantly reviewed, and changed when necessary. This is an explicit expression of support for adaptive management, to avoid a situation where mining companies achieve a “once-off for ever” permission through a process that may misrepresent or miscalculate both benefits and risks.

The issue of how community participation can have continuity is also a serious one. The IUCMA reported that continuity can be a challenge. The answer seems to lie in (1) organised structures in civil society who commit to participation; and (2) are then supported with information, capacity building workshops; and (3) logistical and financial support, e.g. for travel. The discussion came around to the conclusion that capacity should be built and supported by officials from various departments, as part of their work as public servants. This requirement goes beyond transparency into the realm of “putting people first” (Batho Pele) and serving the people. Thus, the requirement is not just that the community must be included and consulted, but that the right circumstances should be created for this scarce volunteered resource.

The consultant group said they “like the fact that there will be local input from local communities, from people close to home.” It is important that this process is driven by local knowledge, but capacity building and explanations for local participants will be needed.

The consultants however expressed concern that there may be a conflict of interests between different participants. How would this be resolved? (This important issue is pursued further, below.)

7.1.2 Dialogue and conflicts of interest

An important concern was the **nature of the dialogue** that is foreseen. Participants argued that all voices should be heard in a balanced way. The information about land use planning, different options, benefits, costs and risks should be openly and fairly shared. To the analyst's ear this resonates with the idea of a dialogue aiming at cognitive justice, a “parliament of different but equal knowledges” (Visvanathan, 2009). This links back to a question underlying community participation – and in general catchment forum participation: Who speaks for who? How do we achieve cognitive justice in these spaces?

A particular concern was with mines “selling” their projects in such a process. There was a nagging concern about **conflicts of interest** – how and by whom are decisions made? There is a potentially difficult question of conflicting agendas. However, one may remember that the main point of this system is seeing that coal mining permissions do not undermine ecological infrastructure. It is therefore not a total decision-making system; rather one that protects water resources, and future options, within the catchment management framework. However, the point of a fair and inclusive dialogue is very important. This brings us to questions about the nature of the dialogue: it should be inclusive, well informed, in the public interest, and how it should be facilitated. (Forums project works with similar concerns and questions.)

7.1.3 Knowledge and power

These considerations link closely to the theme of knowledge and power: how decision making and monitoring is enabled or disabled by keeping away knowledge. There were many discussions in the meeting of 19 January about knowledge. One discussion focused on how data needs to be refined into information and then knowledge, that there is a specific function of publicly paid officials to refine this data and make it available. There is great power in this process, so this process needs to be undertaken in a principled, transparent way, in the public interest.

There was a strong suspicion in the discussions that the inscrutability and unaccountability of decisions about coal mining and their impact on water resources serve some interests well. This question needs further research.

7.1.4 Plain language, capacity building and communication

There is strong support for clear, sincere communication, plain language, access to information etc. as part of a monitoring system. With less paper work (there were strong objections to lengthy technical submissions “that never get read”) there are better chances for participants familiarising themselves with the content (as argued above, volunteer time is limited). With a plain-language approach, proposers and regulators are forced to explain themselves clearly. Moreover, capacity building should aim at levelling the playing field and giving participants the ability to really participate in discussions.

7.1.5 What does the transition to green economy mean?

The proposed decision-making process is ultimately **framed in a transition** from a fossil fuel to a low carbon or **green economy**, which gives rise to the underlying concern of protecting

the “ecological infrastructure” on which this new economy will depend. Currently, some land uses other than mining already rely on this eco-infrastructure.
During discussions on 19 January, concerns were expressed that the “green economy” framing is “vast” and difficult. It also does not command support from everybody. There are many who believe in traditional growth economy and coal mining as a driver of it.

The framing itself needs to be debated to build up understanding. In particular, how is South Africa positioned in this worldwide contested transition? The pressures for an economy with a lower carbon budget seem huge and unavoidable. Also, there is clear support for it in national policy, including the National Development Plan.

7.1.6 Is this a decision-making process?

There remains a clear concern with the decision-making process, including what the actual arenas of decision making are. It is this aspect that cautions us to look at two levels of ambition:

(1) It intends to catalyse awareness and set directions of, and mechanisms to support, change (2) more immediately, it is aimed at developing the capacity and demonstrating the potential of the UKF, and similar catchment management forums, to meaningfully participate in decision making involving coal mining, wetlands, water resources and ecological infrastructure in the area. The development of the monitoring and decision support systems contemplated in this project therefore needs to be seen as initial steps in a long-term process that may provide some immediate relief, and will work to strengthen the emergent catchment management system It also explores pathways in the transition to a green, sustainable, low carbon economy.

What power would this process have? How would it negotiate with DRM? Would it be trying to reform DMR? Is it looking for dialogue with DMR? It seems that it would be limited by a catchment management perspective – but that still involves the fundamental forum constellation question:

1. Who should be participating in the forum?
2. What powers should they lend the forum,
3. What obligations do they have, e.g. as government departments, to include participants in decisions, to provide or share knowledge, to build capacity?

7.1.7 Catchment Management Agency co-ordinates the process

The leading role of the Catchment Management Agency (CMA) has been an assumption in this project from the start. The participants in the meeting of 19 January agreed with this, viewing it as basically unremarkable. However, there were two preconditions: this leadership role would need cooperative governance with dialogue and strong accountability. And it would need to know who is doing what in each role.

This, in fact, is the role of the CMA: taking responsibility for water resources, authorising, monitoring and regulating their use. The UKCMF fits within this process. However, it is an emerging one that is slowly receiving mandates, budgets, and staff to do this. For example, the process in South Africa has been delayed by at least ten years, and at times – e.g. West Coast – a nearly complete process was demobilised. Thus, it is not a straightforward assumption but would be an achievement. Important here is the assumption of a supportive relationship between the CMA (IUCMA is a good example) and the forums.

7.1.8 The need for a single, streamlined system

The need for a single, streamlined environmental system has been continually expressed. The one argument is to overcome a process that is currently fragmented and riddled with duplication, making it difficult for many actors to follow the decision-making process. The other

argument is the need for integration of all considerations and inputs. The fear is that the latter system may be captured by a single, dominant player and not lead to any substantial improvements, instead of being characterised by true co-operative governance and participation. [See Chapter 3 discussion on the history and current features of a single, streamlined system for coal mining decision making.]

7.1.9 Develop a Decision Support System in the form of a knowledge network

Participants supported the idea of an internal (to the forum), localised source of knowledge, but cautioned that it may need a lot of resources to create and update. They cautioned that this step, like capacity building, should not wait until the end of the project, but be an early activity.