

Rural Fisheries Unit response to Ms Anina Peens questions that were posed 20 Aug 2020, regarding the Vanderkloof Dam Fishery project. The questions appear in parenthesis:

Preamble;

Renosterbeg Municipality is a priority focus for the Northern Cape Government, due to its high levels of poverty and unemployment. It is on this basis that the NC Department of Agriculture, Land Reform and Rural Development (DALRRD) requested Rhodes University to undertake the technical aspects to determine the potential of a small-scale community fishery based on Vanderkloof Dam. To achieve this purpose, Rhodes University was contracted to conduct an experimental fishery on the dam, with two broad objectives. Firstly, to understand some of the biological considerations around such a fishery (e.g. determine what type of gear would be appropriate, selectivity, and environmental considerations). Secondly, to look at some of the economic aspects of a potential community owned small-scale fishery (e.g. potential markets, preferences, price structures and ownership of the project). Based on the results of the experimental fishery, DALRRD would then determine the next step.

Rhodes University fully recognised that this would be an emotive issue with many different stakeholder opinions and differing agendas. Therefore, it was necessary to include all key stakeholders to be involved in the planning from the outset. An Experimental Fisheries Management Plan was developed through the establishment of a formal Advisory Committee comprised of all key stakeholders. It was important to have local fishers, government, recreational fishers and scientists involved. This was a fully inclusive and exhaustive process, involving debate and compromise by all stakeholders, taking some 2 years to finalise.

The Advisory Committee was responsible for the development of the experimental process. This took many months and many iterations of the plan. Finally, the Experimental Fisheries Management Plan was finalised and adopted by the committee and it is this plan currently being implemented by Rhodes University, under the direct direction of the Advisory Committee and DALRRD. As with any such plan, changes to the plan are inevitable, and these are discussed by the committee and officially agreed on through both the committee and DALRRD before implementation.

The project follows international best practise and the Ecosystem Approach to Fisheries (EAF) as set out by the Food and Agricultural Organisation of the United Nations (FAO). There are numerous international documents available on EAF. The previous Director of Fisheries at the FAO, Dr Kevern Cochrane, is resident in Cape Town and may be approached should you wish further information on this approach.

Answers to specific questions:

- “ 1. The Rhodes rural fisheries project aimed at experimenting with various fishing methods including the use of the highly controversial gill nets. Since the inception of the project in 2018, various methods were to be explored to collect data in order to advise government on workable options for the establishment of a small scale commercial fisheries. For the past two years gill nets have been used. Why are gill net still used given vehement objections? Also, what has the data regarding the methods used for this experiment proved thus far?”

This is a question best addressed to the Chair of the Advisory Committee. This committee comprises the key stakeholders, including managers and scientists from National Government, Provincial Government, the recreational fishery, local ratepayers association, etc. For this project the Rural Fisheries Unit of Rhodes University carries out the technical aspects of the project under their direction, and is not responsible for which gears are used.

The use of gill nets was extensively discussed and debated in the Advisory Committee.

Also, as far as we are aware there were only official objections from some recreational fishers – these recreational fishers were repeatedly advised to contact their official representative on the Advisory Committee to obtain information on the deliberations around this method. They were also invited to present their concerns to the Advisory Committee directly in person or through correspondence but repeatedly failed to do so. You will appreciate the necessity to work through the Advisory Committee for full transparency.

We have included here some general information on gill nets:

Gill nets:

As with most fishing gears, gillnets can be misused and can be a concern, particularly in developing countries. Any commercial introduction should be done only after careful consideration and with appropriate regulation.

I would suggest you look at the FAO website for gill net information and the use of gill nets as advocated by this international body. www.fao.org. This gear when used responsibly can be an effective management measure.

Gill nets are but one of the catching methods investigated and the goal of this experiment is to test a number of gears without undue impact on the ecology, taking into account all species caught, and any ecological damage. Hence, a precautionary approach is used. When a catching method is assessed, we look at

- 1. The catch of the target species**
- 2. Any bycatch (i.e. catch of species other than the target species)**
- 3. Any damage to the environment**

Gill nets do result in some mortality prior to collection so it is often not possible to release fish back into the environment, which is taken into account in the precautionary approach used.

While it is therefore not possible to set precise size limits on fish that may be caught, gillnets are very size selective depending on the mesh size used and the way in which we manage the size of fish to be caught therefore is the selection of mesh sizes to be used in the experiment. The mesh sizes finally agreed on by the Advisory Group to be tested took the large mouth yellow fish into account, with a clear restriction on numbers that could be landed by all gears during one month.

“ 2. The project was suspended by Rhodes University itself in 2019. This was after the Dean of Science, Prof Tony Booth, confirmed the violation of permit conditions. Booth confirmed that over 50% of the data presented for the first six months of the project was undersized with all fish caught in the 60mm gill net were 100% undersized and 80% of the fish in the 75mm gill nets were indeed undersized. Yet, a new permit was granted after the suspension. How did Rhodes manage to secure a renewed permit given these violations?”

- This question is best addressed to DENC, and we trust you have met with them to address this**

question. We also provide a summary of the process below:

- We fully accept that fishing took place for 5 months in 2018, that was not in strict compliance of the permit conditions. This was because there was an error on the permit and this discrepancy was not picked up by ourselves, DENC or the Advisory Committee, as the experimental fishery was in accordance with the Experimental Fisheries Management Plan.
- There was no fishing taking place at the time that this error was discovered, because permit renewals were already underway. All other non-fishing aspects of the project continued.
- This issue of concern was raised at the Advisory Committee and DENC explained that it was their intention for the permit to follow the Experimental Fisheries Management Plan, with no size limits for gill nets, as mesh size restrictions serve this purpose for this gear. It is not possible to use this gear without significant mortality of fish caught; which is why it was erroneous to include size limits in the original permit and which is why size limits were removed from the permit by the DENC when the permits were renewed.
- Note the alternative would have implied dumping dead fish at the point of capture, which would be unethical, and serve no useful purpose.
- At the meeting, the DENC gave their intention to alter the wording on the permit to make it clear that gill nets are exempt from size limits, as per the intention of the permit.
- The removal of the size limits was agreed to by the Advisory Committee. The following excerpt comes from the minutes from the 23 April 2019:

“It was accepted that the wording on the current exemption should include the words – not applicable to gill nets – as originally set out in the EFMP. It was noted that minimum sizes are not applicable to the use of gill nets, and are not used in this regard, but this should be stated clearly on the permit. The legal representative agreed to have this changed and a new permit finalised as soon as possible, reflecting all changes suggested by the AG.”

“3. In the 2019/2020 report it appears that some fish are still undersized, is Rhodes University aware of this and how is it being managed?”

The project is being carried out according to the Experimental Fisheries Management Plan under the direction of the Advisory Committee. Please see the attached permit.

“ 4. Further to this, point 13 of the original exemption of the permit granted by the DENC (Environmental and nature conservation) states that the penalties for non compliance of permit conditions as well as any stipulation as per fisheries management plan, will result in the cancelation of the exemption. This means that while the project was suspended, the exemption should have been cancelled. Was a new exemption granted? If so, kindly forward this documentation.”

Please refer to the above. The permit used in 2018 was no longer valid, it had expired; therefore, there was a period of no fishing while awaiting the new permit.

“ 5. How do you ensure the protection of the Large Mouth Yellow fish when using gill nets? Please explain the day to day control over this”

There is a clear restriction on the number of large mouth yellow fish that may be caught per month - please refer to the Experimental Fisheries Management Plan. Once this number is reached, these gears are removed for the duration of the month.

“ 6. What research was done prior to the start of the project to determine the size of the Large Mouth Yellow fish population in the dam and are these numbers monitored to determine the current size of the population?”

The project terms of reference do not include estimating the size of the Large Mouth Yellow fish population in the dam. Hence the precautionary approach is used in ensuring that numbers caught do not impact the population – as per international best practice - hence the deliberation of the Advisory Committee to ensure this.

“7. Was any environmental or socio-economic impact study done before the project started?”

This was not requested by the Northern Cape Government. We are also unclear here why an environmental impact study should be required to undertake such an experiment. Any environmental effects of the capture gear is taken into account in the experimental process.

We would certainly encourage socio-economic studies, but this does not have to preclude the current study. This question should be raised with the Northern Cape Government.

“8. Masifundisi and local fishermen allege that no training or upliftment programs have been executed for the local fishing community given that this was promised to them. Since the project is made possible with state funding, why has this not happened?”

- This is not correct and can be confirmed by the Advisory Committee. Below we list some of the interventions -
- When the project first started we contracted Masifundise (for one year) to provide capacity building and support to local fishers, and they undertook extensive work in the area.
- After this Mr Apiwe Vali has been employed to continue what Masifundise had started. Apiwe, who has experience in business development, lives in the same community as those of the fishers in Petrusville.
- In collaboration with the Graphics Design Department of the University of Johannesburg, we have developed a business skills resource in the format of a “comic”. The

primary objective of the comic is to develop the entrepreneurship levels of local fishers.

- The crew of the research vessel is completely manned by residents of Keurrjiskloof (the township of VDK). The skipper of the boat was trained through the project in Port Alfred. The crew also received first aid training.
- We have had two formal training courses for the local fishers in Asset Based Community Development (ABCD) by an NGO who specialises in these activities.

“9. How many local fishermen are benefiting from the project and how?”
Please refer to the above.

“10. In order to determine the commercial viability of the project, the project planned to sell fish to the local fishermen at a very low rate. However, the project is selling directly to the market, depriving the fishermen of their income. The project employees also have access to resources such as ice machines and transport which allow them to arrive at the market before the fishermen, who have to walk or hitch hike. Please explain how this could benefit the local fishermen?”

The project investigates different economic factors in terms of markets. The local fishers have first priority to purchase, and sell the fish locally, after which other options are tested, for example, sales further afield such as De Aar and other potential markets. It must be noted that there are a number of options that will be considered for the introduction of a small scale fishery; this allows Government to have a rational approach to any interventions in this regard. This manner of operating was approved through the Advisory Committee.

“11. Since the project is selling directly to the market, where does the money go and who audits the account?”

At point of sale a receipt is completed by the fisheries officer for each fish sale. These are summarised into the project cash book by the project administrator and analysed by species, weight, price per kilo, and geographic region of fish sale.

All cash received from fish sales is reconciled to the receipts by the project administrator and stored in a locked container at the project offices. Once sufficient funds have accumulated they are banked into the Rhodes University

bank account, using a banking code of the Rhodes University project fish sales general ledger subaccount. Rhodes University administration allocates the deposit using the banking reference to the project research accounts. After banking the project record of all funds banked are reconciled to the Rhodes University project fish sales general ledger account.

“12. Considering that this is a research project, why were there no data collections sheets when the project commenced? We are aware that these data collection sheets were only designed a couple of months after the project started?”

Data sheets were compiled. However, data were not fully recorded (Catch per unit of effort for example) for research purposes while staff were being trained. Training involved deployment of gear with initial data not considered representative due to the learning process of gear deployment and retrieval.

“13. Why was ethical clearance from Rhodes university only obtained two years after the project went into full operation? Is this standard university procedure?”

Please see the previously sent correspondence. It is in fact not required to complete the ethics form at the University if the selection of sites and the establishment of a working relationship with interest groups (e.g. government departments and NGOs) prior to commencing with a specific project is carried out (instructions attached). In terms of best practice, using an Ecosystem Approach to Fisheries (EAF, fao.org), such an undertaking is also advocated, so as to involve all stakeholders in the project from the outset to ensure a completely transparent process and get the expertise from stakeholders during the design phase.

An Advisory Committee with all stakeholders was therefore formed and jointly planned the experiment including national government, the provincial government, subsistence/Kraal fisher’s representatives, and a national recreational fisheries NGO. This was a very lengthy and extremely rigorous process, which took around 2 years as far as I recall. During this period, every aspect of the project was examined and discussed (repeatedly during numerous meetings), including the use of gill nets, which are not illegal, as explained below.

After the project commenced, after 5 months of fishing and after receiving complaints from members of the fishing public related to the use of gill nets and the general experimental process, Rhodes University decided, as

an added independent measure and to allay any fears over the experimental process, to also go through the local Rhodes ethics committee before commencing fishing under the revised permit. We hoped this would then serve to further underpin and reinforce the responsible, conservative approach being followed.

- “ 14. Since its inception, how has the project benefited Rhodes as a tertiary institution? Are any students involved in the analysis of data? Are there any peer reviews or academic articles?”**

Student involvement is not necessary to make a project applicable to the mandate of the university. As a teaching institution, our mandate goes well beyond (1) teaching of students; it also includes (2) research, (3) service provision and (4) community engagement. University departments are expected to deliver on all four of these pillars, and this project delivers on three of the four mandates: research, service provision and community engagement.

We have numerous staff involved in the project (including a full time young academic, and technical and financial staff) who will be involved in the write up of the report, which will inform government decision making (service provision) as well as two scientific publications (research). These are prepared from the full results of the experiment and can only be completed after all data are collected. In addition to this, the training/education of the local community that has taken place corresponds to the University’s commitment to community engagement.

- “ 15. Since the project is funded by tax payers money, how much was the original budget and how have the funds been allocated? Can you kindly provide us with the budgets?”**

Such queries need to be addressed to the NC Government

- “ 16. Have any of the Rhodes research staff personally benefited financially from the project? ”**

Contractual arrangements are between the N Cape Government and Rhodes University. Rhodes University

has contracted academic and technical staff on full time (but limited duration) contracts, as well as part time, and all payments are via the Rhodes University financial system. These include members of the local community around the dam.