

REVIEW REPORT ON:

THE MOOI-MGENI TRANSFER SCHEME PHASE TWO: SPRING GROVE DAM

Preliminary Planning of Wetland Rehabilitation and Biodiversity Offsets Report – January 2015

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MOOI-MGENI TRANSFER SCHEME PROJECT DESCRIPTION

“Phase two of the Mooi-Mgeni Transfer Scheme (MMTS-2) involved the construction of Spring Grove Dam (SGD), a transfer system (pumping station and pipeline) and associated infrastructure. The SGD dam wall is located on the Mooi River approximately 2km upstream of the Village of Rosetta. The dam wall is 37.7m high and at full supply the water body will inundate an area of approximately 1 022ha. Inundation commenced in March 2013 and the dam is currently approximately 80% full. The transfer system portion of the project was subject to a separate application for Environmental Authorisation (EA).

Feasibility studies on the proposed MMTS-2 project started in 2000 culminating in the biophysical impact assessment. The specialist studies during this phase of investigation identified the loss of wetlands as a significant issue warranting mitigation through off-site rehabilitation of wetlands. This recommendation prompted a bridging study in 2004 to identify wetland sites for rehabilitation and associated rehabilitation planning.

The project came back on line in the late 2000s, when the application for EA was submitted. The final Environmental Impact Report (EIR) was dated January 2009 and the Record of Decision (RoD) was issued on 15 June 2009. The need to compensate for residual negative impacts on biodiversity was expanded from a wetland focus only to include the loss of all biodiversity...” *Quote from the Main Report.*

PURPOSE OF THIS REVIEW

The consultant for this review is charged with reviewing all of the information in the report referenced on the cover of this document. The work for the study under review was carried out by the Institute of Natural Resources. Subsequent to the initial draft various comments were received and responses to those comments were made. That document is also a subject of this review. The consultant is to assess the adequacy of the report and the recommendations contained therein, considering the requirements of the Record of Decision and the provincial and national guidelines (national guidelines are in draft form at this time) relating to biodiversity offsets.

DOCUMENTS REVIEWED

The following documents were read for background information and for the review itself.

Background Documents:

Mooi-Mgeni Transfer Scheme Phase II: Spring Grove Dam: Summary of Residual Biodiversity Loss in the Dam Basin and Baseline Offset Targets, Sept, 2013.

Record of Decision for Project Reference 12/12/20/220 Mooi-Mgeni Transfer Scheme (Phase 2): Spring Grove Dam and Appurtenant Works, Near Nottingham Road in the Kwazulu Natal Province.

Mooi-Mgeni Transfer Scheme Phase 2. Environmental Impact Assessment. Ecological Impact Assessment, 2006.

Mooi-Mgeni Transfer Scheme Phase 2, Spring Grove Dam: Implementing ecological Reserve flows in the upper Mooi River catchment with reference to flow management of the Spring Grove Dam Phase 2 Report: Implementation of Operating Rules Final, February 2014 (Brief review).

Towards a best-practice guideline for wetland offsets in South Africa, 2012

Main Documents for the Review:

Mooi-Mgeni Transfer Scheme – Phase Two: Spring Grove Dam: Preliminary Planning of Wetland Rehabilitation and Biodiversity Offsets, January 2015: Main report and 8 Appendices and;

Mooi-Mgeni Transfer Scheme – Phase Two (MMTS-2): Spring Grove Dam: Preliminary Planning of Wetland Rehabilitation and Biodiversity Offsets, January 2015, Comments and Response Document, January 2015.

BIODIVERSITY OFFSETS

Biodiversity Offsets, while not a new concept, are operational in but a few countries. In this regard South Africa is being quite progressive in adopting the concept and developing guidelines. However, offsets are quite controversial among ecologists, conservationists and the like. Many regard offsets as a mechanism to “let developers off the hook” or to “legitimize projects that should not go forward”. But, with carefully designed guidelines and strict adherence to policies and guidelines the concept may well be effective.

Two of the main principles used in guidelines are “like for like” and “no net loss”. Again, there is controversy, mostly around the “no net loss” principle, which is a bit nebulous in definition. Like for like is a much more realistic proposition. In many ecosystems it is highly unlikely that all species will be identified. For examples: a huge number of insect species are not even classified; sampling generally must take place over the various seasons in order to pick up migratory species and this is often not done because of lack of funding or other constraints; rare plant species may not be noticed in sampling situations where many hectares need to be sampled – sampling size and intensity required to pick up “all” species is unlikely to exist, again due to financial and other constraints. This makes “like for like” a bit tenuous and makes “no net loss” quite unlikely. Nevertheless, offsets should seek to replace impacted elements as closely as possible while realizing that there are definite limitations.

CONSTRAINTS TO THE STUDY

This study had to operate under a number of constraints, not the least of which was the fact that it was to identify offset sites long after the impacts on the inundated area were affected. Offset areas should be identified at the EIA stage. Ideally they should also be secured before any construction/development activities. In the best case scenario they should be rehabilitated if needed and a management planning should be in place prior to development. This, however, was an example of a worst case scenario, primarily due to the fact that the offset concept and guidelines were in the infant stage in the country.

Though KwaZulu/Natal has provincial guidelines in place the national level guidelines are in draft stage and could change. The Consultant, therefore, had to assume that the draft guidelines would largely be the final guidelines.

The Consultant also had only secondhand data on what was lost. This came from the EIA, some NGOs that had worked in the area and some government departments. Offsets need to be based on the habitats, species and other factors that would be lost. Ideally sampling should be the same for the loss areas as for the offsets. This would mean assessing both sets of sites at the same times during a year, with the same methods and to the same intensity. This could not be done in the case of this study. The Consultant had to make some assumptions on the exact state of the impacted (lost) area – and some of these assumptions may have been wrong. This would not be the fault of the Consultant but because of the fact that much time had passed. During that time, had there been no development, the impacted sites may have been in a different state today than they were then – either more like or less like the offset sites studied for the report.

Data sets for ecosystem factors in the impacted areas and the offset areas should, as mentioned, be comparable and this could not be the case for this study.

Sampling occurred in the winter months, a constraint on species identification (eg plants). In addition, some seasonal migrants (fauna) were likely not present and some species may have been in hibernation (eg reptiles) and not visible on the surface. Again, this is a constraint that was not the fault of the sampling team.

Despite a criticism in the comments on the report that “No Net Loss”, apparently a lender requirement, was not used, there was already one non-offsetable loss in any case, the Inchbrakie Falls environment. The EIA suggested that the vegetation there be transplanted to Riekie Lynn Falls but there is no indication that this ever happened. In any case the “No Net Loss” principle is problematic at best.

When sampling large areas it is very easy to miss uncommon and/or rare species. If one cannot sample at optimum times of the year species can be missed. And, as mentioned, some species (insects) are not even classified. These factors make “No Net Loss” nearly impossible to insure. The “Like for Like” principle is better and certainly more achievable.

GENERAL COMMENTS ON THE REPORT

The report content and presentation, particularly given the serious constraints mentioned above, was of very good quality over all. The work was carried out to excellent standards, the assumptions made were correct and reality-based, the judgments or decisions were well thought out and detailed and any decisions were generally made to conservative standards. In addition, often both “worst case” and “reasonable” case situations were analyzed and set forth in the report (eg the budgets for having to move beyond the main selected sites as opposed to rehabilitating and managing the recommended best sites). The report, except for a couple of criticisms to follow, sets a good standard for this type of study.

The Consultant mostly satisfied the “Like for Like” principle and tried to work on the “No Net Loss” principle but this was difficult in any case and particularly due to the fact that construction was completed before the offset process began. This meant, among other things, that the Inchbrakie Falls were non-offsetable.

The Report is very thorough. A conservative approach is used throughout, including the financing recommendations. Example: where it was uncertain from the level of analysis whether weirs would be required or gabions would suffice, the weir option was included. Thus, actual costs may be lower rather than higher once detailed planning is complete. This is a far better scenario than the opposite, where additional funding might have to be requested.

Multipliers are problematic at best and the Consultant generally chose to go with the most reasonable ones (mostly the provincial vs the suggested national). The development of habitat condition scores was also approached carefully and conservatively. The report offered both worst and best case scenarios for securing offsets and rehabilitation. The Consultant did a very good job at the identification of key problems (financing, governance framework, potential competition with the MIP, etc).

The Consultant made use of habitat and key indicators rather than attempting an “all species” approach. Given the constraints listed above, this was a very sensible approach. One simply cannot (given financial and time constraints on most projects) measure everything. As mentioned, it is unlikely in most ecosystems that all species present (for all or part of a year) will be encountered in the sample. The use of habitat types, key indicators, levels of ecosystem health, etc are the best one can do in these circumstances.

The Consultant found extra offset sites beyond the very good quality sites recommended, but by acting quickly it is likely that the recommended best sites could be secured, leading to a more environmentally cohesive physical area of offsets and likely reducing costs.

Stakeholder engagement included most of the key players and the level of engagement was appropriate for this kind of study. Cooperation among the key players was quite good.

The recommendation of financing via water tariffs is probably the most reasonable as well as “doable” option.

The governance framework is both well thought out and inclusive and addresses the most likely potential conflicts as well as the most likely cooperation arrangements.

One of the most critical elements, cohesive site selection, was dealt with by recommending sites that were in close proximity and contained all three ecosystem types (wetlands, grasslands, and river) on very few properties and generally under the same ownership. If these sites can be secured this will be the best possible scenario.

CRITICISMS AND RECOMMENDATIONS

The documents (main report and appendices) contain many typographical errors as well as missing words. A thorough edit must be done for the final version.

There is no mention of offsets for other project impacts such as the downstream area, pipeline, etc. A query elicited a very reasonable response explaining why no offsets were necessary in these cases. Other people are likely to query this seeming omission as well. Therefore, it is recommended that a paragraph be inserted early in the report explaining why there will be no further mention in the report about such offsets.

In the discussion of financing, including the appendices, while it is necessary to set forth the positions of the various players in DEA and DWS, it is not necessary and possibly counterproductive to name individuals who express various opinions (the Appendices). It is enough to explain the different positions and then to recommend the way forward for resolving the issues.

Fencing of wetlands is advocated in some instances. Care should be taken that such fences don't interfere with movements of wildlife such as the Oribi and perhaps other species. The movement of species and use of corridors does not seem to have been fully addressed. In Phase 3, species movements should be closely studied as it may be that other sites, removed from the “core group” of largely contiguous sites, will be required for offsets.

The river study relied on “accessibility” as one of the main criteria for site selection. This is understood but unfortunate as experience elsewhere has shown that it is the inaccessible or less accessible areas that often house rare and/or endangered species, simply because of the inaccessibility. Phase 3 should visit a representative sampling of such sites to determine whether or not this is the case.

The one serious criticism is that there appears to have been a lack of consultation with the farm labor community. It is assumed that there is a substantial farm labor community in the area. As is found elsewhere, it is likely that this stakeholder group engages in substantial use of

ecosystem services. It is likely that people harvest, among other things, food and medical species (both flora and fauna) for use. This use may or may not be sustainable in all cases. In addition, people from the local towns and villages may make use of various species. The farm labor community is, in fact, a key stakeholder as they were likely impacted fairly seriously by the dam and, as a result, they may rely heavily on the ecosystem services of the offsets. Discussions should be held with this group on: species and habitats utilized, amount and frequency of use, purpose of use, etc. It is also likely that members of this community (as well as some landowners) could identify preferred species used by livestock and other animals as well as those species that are avoided. This would be useful for future planning. The entire offset concept should be explained and the need to rehabilitate offset areas should be addressed with the farm worker community (particularly the need for labor). Discussions should also be held on the importance of sustainable use of the offsets. Members should also be asked about losses from the inundated area as they may have important information on both the types of losses and amount of losses. It is critical that this group be brought into the process as soon as possible.

NEEDS IDENTIFIED

Financing: Financing of the remainder of the offset process (detailed planning, implementation, management and monitoring) must be in place as soon as possible or momentum will be lost and it is possible that the best offset sites will not be available (through landowner reluctance, change in ownership, etc). As mentioned, this particular offset process has been delayed for years, no further delays can be tolerated. It is clear from the report that the decisions around financing must be made at very high levels within government. All parties should exert pressure for this to happen. Delays may, in fact, lead to higher costs if the best offset sites become unavailable.

The governance framework: The governance framework needs to be implemented as soon as possible as well. With financing and governance issues settled the project will be set to move forward quickly. Any delays will jeopardize the likelihood of securing the best recommended sites and may increase costs.

Continued stakeholder (especially landowner) liaison: Meanwhile there must be continued liaison with stakeholders, especially landowners and the farm labor community. Landowners must be kept up to date to ensure their continued willingness to participate and develop offsets. The farm labor community must be brought into the process as stated above. Very good offset sites have been identified and it is these that must be secured as soon as possible.

The MIP: It will be critical to continue to liaise with the MIP as it and this project could, in the future, be in conflict over offset sites desired by both projects.

Implementation needs to proceed as soon as possible: Again, because this process has been delayed it needs to proceed in order to comply with the provincial guidelines and the final national guidelines. Accordingly, the Phase 3 consultant should be brought onboard as soon as

possible. It must be kept in mind by the Phase 3 consultant that the rehabilitation of wetlands is problematic and a watershed approach should be adopted as recommended.

CONCLUSIONS

The Report by the INR is, by and large, a very well thought out and inclusive document that has been prepared with a good deal of analysis, good decision-making, the use of conservative judgment, etc. Aside of the few criticisms stated above, the report should be accepted without further major changes. It is now incumbent on the key players to move the process forward in a timely manner, particularly the financing. The report is a good model for other offset reporting.