

## **The status of Impact Assessment**

The establishment of TFCAs in southern Africa was facilitated by post-apartheid political, socio-economic and historical circumstances (Ramutsindela, 2004). In South Africa, the state and NGO's seek to establish TFCAs for a variety of popularised political reasons, such as 'promoting peace in the region', 'pooling resources to improve economies of scale', and the ecological principles of reserve design (for example, the single, large or several small – SLOSS – principle, which suggests that the prospects for biodiversity conservation are improved if reserves are large) (Magome & Murombedzi, 2003). The agenda is towards large reserves, with no limit of how large the system of protected areas should be (Magome & Murombedzi, 2003). However, even the 'larger reserves' concept has received criticism, as some conservationists feel that better run reserves are more needed than larger reserves (Ellis, 1994).

Some feel that while proponents of TFCAs show their supposedly genuine concern for the protection of biodiversity (Ramutsindela, 2004), there is mounting evidence of the multiple agendas that have been pushed through in the pretext of nature conservation (Beinart, 2000). While the supposed benefits of TFCAs are large and wide spread, very little work has been done assessing the environmental, economic, social or political impacts these are having (Reyers, 2003). For example, communities are not certain how single, large reserves will benefit them, and they demand that the benefits be quantified – a difficult task when the number of stakeholders involved in TFCA initiatives is so great (Magome & Murombedzi, 2003). Jones (2005) presents results that indicate the Mbangweni community in KwaZulu-Natal bordering the Lubombo TFCA (South Africa, Swaziland, Mozambique) could experience decreased access to social, natural and economic resources as a result of the Peace Park. The few studies that have been done on the effects of TFCAs appear to illustrate that the potential benefits are not being realised (Reyers, 2003). Most of the studies thus far have focused on the socio-economic and political benefits; even less work has been done on assessing the biodiversity conservation benefits of these TFCAs (Reyers, 2003).

There is a tendency amongst the conservation community to look for a 'one size fits all' solution to conservation management, especially in a formulaic response to the transboundary conservation challenge. Creation of a TFCA does not automatically imply or guarantee a conservation success

(Bakarr, 2003) and contemporary guidance indicates that there is a need to polish the tools in the transboundary conservation toolbox to accommodate the specific needs of particular circumstances. In general, there is a need to adopt an adaptive management approach, guided by a clear rationale for the transboundary programme, and by the adoption of measurable targets for achieving impact in terms of that rationale (Sandwith, 2003). In TFCA programmes, this impact must be regarded as primarily biological, but large-scale conservation initiatives also carry significant social, economic, institutional and political implications. At this stage it could be stated that transboundary conservation initiatives will always have value, but that this value can be enhanced when the rationale and purpose of the programme is clearly stated and supported by the monitoring and evaluation of progress against explicit targets (Sandwith, 2003).

Through initial research, I found that every TFCA is unique facing different issues and problems. Therefore there is no single recipe as to how they are implemented and developed. The time constraints of a three month project made it impossible to look into all of the TFCAs in southern Africa in enough depth, therefore the Limpopo-Shashe TFCA (LS-TFCA) was chosen as a case study to enable more in depth study and focus of one TFCA. Even so, as each TFCA is so different, the LS-TFCA cannot be seen as a representation of all TFCAs, but must be seen as an entity on its own. Issues, concerns, benefits and opportunities highlighted can be seen as examples of what can happen with TFCAs.

As an example of these differences, the Kgalagadi TFCA between South Africa and Botswana was in all essence a single nature reserve prior to the formation of the TFCA. The TFCA made the concept official; however the areas on both sides of the border were already protected. In this instance, the impacts of the TFCA on biodiversity might be minimal compared to a TFCA such as the LS-TFCA, which includes both protected and non-protected lands.

The LS-TFCA was chosen for this project as it is very new and still in development. Therefore, in terms of impact assessment, it would be interesting to identify to what extent impact assessment has been used before and during the planning phases of this TFCA and to what extent it is envisaged that impact assessment will be used going forward.

I found that for the LS-TFCA, there seems to be no co-ordinated effort for conducting impact assessment before the planning phase of the project. All stakeholders seem to do their own thing. For example, boundary delineation of the actual TFCA seems to be controversial. The boundaries of the LS-TFCA were not jointly agreed upon by all stakeholders, but were something that was decided by The Peace Parks Foundation, SANParks and NOTUGRE. In fact, some stakeholders were not even aware that their lands were to be included in the LS-TFCA! The Predator Research Group, made up of various researchers and scientists in all three countries of the LS-TFCA, feels that the boundaries are not adequate to achieve positive impacts on many of the large predator species in the LS-TFCA. For example, predator researchers have said that the boundaries are not sufficient to support viable home ranges of wild dog populations. The predator research group would like to guard themselves as independent of the whole TFCA process. However, the group was hoping that as large carnivores are fairly iconic, the LS-TFCA decision makers would base some of the decisions they made on the suggestions of the research group. To make decisions on purely political boundaries without any regard to ecological boundaries does not make sense when conserving biodiversity and ecological processes should be the upper most issue that they should be setting as objectives.<sup>1</sup>

The basis for boundary delineation of the LS-TFCA is not clear. The Peace Parks Foundation, SANParks and NOTUGRE just seem to have identified areas which they feel would be possible to include in the LS-TFCA. Rigorous impact assessment studies as well as biodiversity inclusive impact assessments have not been carried out for this. Rather, impacts are merely inferred and assumed.

The conservation of biodiversity is one of the main assumed positive impacts of TFCAs. This rests on the ecological idea of 'bigger areas being better for conservation'. However, very few studies have been done to assess the actual impacts that the TFCAs are having on biodiversity. Reyers (2003) carried out a study which looked at the gains in terms of avian and vegetation species when extending across borders for four TFCAs in southern Africa (including the LS-TFCA). She found that the gains in terms of the numbers of species protected when crossing borders was not great. The conclusion Reyers derived from this study was that no more biodiversity in terms of the diversity of species was protected when crossing

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<sup>1</sup> Interview 12: Dr Paul Funston, Pretoria Technikon, Predator Research Group, 11 July 2006

borders. However, the study did not look at the possible improvement to the protection of ecological processes to do with larger areas.

To highlight this issue better for the LS-TFCA, the impacts to biodiversity are assumed to be positive once the TFCA is in place. As mentioned above, this largely rests on the ecological theory (the SLOSS debate) that bigger reserves are thought to be better to protect biodiversity and ecological processes. Reserve design is also an important factor in the SLOSS debate. For example, a circle shaped reserve is thought to be better than a long thin reserve for the reason that edge effects are reduced in the circle design. However there have also been studies that have shown that certain species survive better on the edges of reserves than in the middle; therefore, increased edges would benefit these species. On the whole however, it is believed that most species are negatively affected by an increase in edges. The design of the LS-TFCA has raised criticism. As highlighted above, the Predator Research Group feels that the boundaries are not sufficient to conserve viable populations of many of the large carnivores in the TFCA. This has more to do with the shape of the TFCA and the areas where the predators can expand their ranges into will bring them into increased conflict with humans.

If impact assessment studies were carried out prior to the design of the LS-TFCA, issues such as these could be dealt with and an optimum shape and size could be decided upon. However, impact assessment studies such as these were not conducted prior to the design and boundary delineation of the LS-TFCA.

The issue of impacts to biodiversity also brings up the elephant debate. There is currently much thinking in SANParks that either elephants are conserved or biodiversity is conserved.<sup>2</sup> Elephants are blamed for much of the damage that occurs in nature reserves. However, it is probably not fair to blame elephants for the destruction of vegetation. Humans do not like to see destruction and feel that it is 'unnatural'. But who is to say that it is not natural? In an area like the LS-TFCA (the South African side), the area has been kept free of elephants for hundreds of years. Therefore an environment, free of elephants, has developed over the years. Plant species which elephants would normally target for food would thrive in this environment. It could almost be said that a 'false' and elephant free ecosystem has been created in

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<sup>2</sup> Interview 1: B. Reyers, CSIR, 28 June 2006

an area where elephants used to exist. Therefore, by bringing elephants back to the area, who is to say that this will not be returning to a more natural state?

However, many people are concerned that elephants will cause a decrease in the biodiversity of the LS-TFCA. The scientists in Mapungubwe National Park are experimenting with elephant exclusion zones and assessing which plant species are most heavily impacted by elephants and at what rate. These scientists have already noticed a lot of damage to vegetation due to the elephants.<sup>3</sup> Furthermore, scientists at Venetia Nature Reserve (De Beers) have implemented a monitoring programme to assess the impacts of elephants on the tree species in the reserve. It has been predicted that at least 3-4 tree species will be lost in Venetia due to elephants in the next 3 years.<sup>4</sup> The border fences between Botswana and South Africa have not yet been dropped and elephants have not been allowed into Mapungubwe National Park in large numbers due to these reasons. The elephant debate is the ideal scenario to use to highlight the lack of impact assessments, including biodiversity inclusive impact assessments, prior to the design and implementation of the LS-TFCA and it would seem most TFCAs in southern Africa. Positive biodiversity impacts are assumed without enough research into these and once the project is implemented, problems and issues crop up at scales that become very difficult to manage. The issue of the elephant debate as well as the optimum reserve shape for large carnivores is something that should have been rigorously researched before any kind of implementation of the LS-TFCA. Without impact assessment studies that look into these kinds of issues, it is not known what benefits will accrue from the TFCA and this brings up the whole issue of accountability. Donors want to know that their money is being put to good use. With so much money being donated towards the TFCAs, positive socio-economic and ecological impacts have to be achieved; otherwise the money would have been wasted.

There is almost an attitude of implement the TFCA where possible and then assess potential impacts afterwards. I feel that it would be so much more beneficial to assess potential impacts prior to implementation. So much money is spent on TFCAs that in order to be accountable and to make the projects worth it, it is absolutely vital that impact assessment studies are conducted prior to the design of TFCAs. This 'implement where possible now and assess impacts later' approach is also evident from a

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<sup>3</sup> Interview 18: Johan Verhoef, SANParks, 18 July 2006

<sup>4</sup> Interview 17: Warwick Mostert Davies, De Beers, 17 July 2006

project that the Peace Parks Foundation (PPF) is now implementing. Staff in the GIS laboratories at PPF are in the process of designing programmes to assess the ecological and socio-economic impacts that the TFCAs are having. From a GIS point of view, PPF is trying to spatially monitor socio-economic factors, tourism factors, biodiversity, disease, land suitability of areas, etc., and is putting these together into spatial models to identify how the current TFCAs are performing and to identify suitable areas for new TFCAs. They are designing a model to incorporate all of this, including the need for indicators to assess these impacts. I feel this is excellent research and much needed; however, the big criticism that I have is why now and why this was not done prior to the design and implementation of many of the TFCAs? The reasons PPF are doing this now is more an accountability exercise for their donors. However, this type of research including proper impact assessment studies needs to be done BEFORE the design of TFCAs. Many feel that TFCAs are implemented more for political reasons than for anything else and the actual biodiversity and socio-economic impacts are poorly studied.

As highlighted in the main report, it is absolutely vital that a desired state is decided on prior to the planning of TFCAs. BEFORE and not AFTER. Once a desired state has been mutually agreed upon, it can be managed for. In fact, if the desired state is agreed upon before the TFCA is designed, the actual design of the TFCA can be agreed upon to optimise this desired state. For example, if the desired state of the LS-TFCA includes conserving viable populations of all large carnivores, the design of the TFCA should rest on what size and shape would maximise the successful survival of these populations (i.e. an impact assessment study on large carnivores).

TFCAs in southern Africa attract huge donor funding – funding which would probably not otherwise have made it to the region. Therefore, for this reason, many feel that TFCAs are excellent initiatives, as they have the potential for enormous socio-economic upliftment as well as conservation benefits. I do feel that the LS-TFCA and all TFCAs are fantastic opportunities because of these reasons. However, something needs to change. The process by which the TFCAs are designed and implemented is too top down. Political expediency does seem to play a huge role in the implementation of the TFCAs and decisions that will affect many are made by so few people.

I suggest that rigorous impact assessment studies should be conducted prior to the design and development of TFCAs. For example, before boundaries are decided upon, IAs need to be carried out to assess the ideal delineation of boundaries for maximum positive impact to, for example, large carnivores. Many decisions are rushed without sufficient impact studies and a lot of assumptions are made. For example, there are plans to translocate wild dogs into the Northern Tuli Game Reserve. Dr Funston of the Predator Research Group feels these types of decisions are not sufficiently backed by research. There is not yet enough area in the Northern Tuli for wild dogs and the dogs are unlikely to stay without coming into conflict with humans. Many people have the attitude of 'we'll just see what happens' and this is not good enough for projects of this scale that affect not only biodiversity conservation, but many people as well.

In terms of environmental impact assessment, I found it incredibly difficult to tease out the answers I was looking for. The problem with the LS-TFCA is that it includes so many different stakeholders, all doing different things, from hunting lodges, to ecotourism ventures, to communities. When I asked questions about impact assessment, I would mostly get very blank and confused looks. When I explained what impact assessment was I would get even more confusion or very muddled answers. Most of the lands to be included in this TFCA are private, so people have been doing their own thing, which has not really included impact assessment. At present if done at all, EIAs are carried out on a very small and local scale. For example, SANParks is required to conduct EIAs before building any kind of construction. NOTUGRE have implemented a policy for development and IA whereby before anyone can develop, they must get approval from their neighbours.<sup>5</sup> This approval includes issues such as the project not impacting a neighbour's views, sound, smell, etc, so not really an EIA as such!

In terms of impact assessment as a whole for the entire LS-TFCA, this is not something that appears to have been done, but impacts (be they ecological, environmental, socio-economic or political) seem to be assumed and no rigorous or professional studies are undertaken to fully identify these impacts. I did not come across any impact assessment documents or studies for the LS-TFCA, people would just refer to what they thought the impacts would be. Once the MoUs for TFCAs are signed, joint management boards (JMB) are created and decisions are then made about what course of action needs to be taken

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<sup>5</sup> Interview 9: David Evans, Mashatu Lodge, 10 July 2006

regarding issues such as monitoring and evaluation. It is also the role of the JMB to harmonise differing policies between the three countries. Going forward for the LS-TFCA, I was informed by the Department of Environmental Affairs and Tourism, South Africa (DEAT) that a monitoring framework will be included in the management plan to assess impacts and the JMB will be responsible for harmonising differing policies on impact assessment.

Impact assessment studies and particularly biodiversity inclusive impact assessments for the LS-TFCA as a whole have not been conducted thus far and it is not clear how impact assessment studies will be included in the management plan for the LS-TFCA as even the decision makers are not yet sure about this!

Every TFCA is different and therefore varying approaches are taken to develop and implement each project. I cannot say to what extent impact assessment has or will be used for each TFCA in southern Africa, as the time constraints of my project meant I could not speak to stakeholders from all of the TFCAs. However, from what I concluded from the reading and research I did, very little attention is paid to IAs for TFCAs in southern Africa. It seems that only after the JMBs are created are policies harmonised and decisions taken to monitor impacts – this is the process for all TFCAs. IA is not used as a tool to select areas for TFCAs; rather TFCAs are selected by mapping potential areas for inclusion into TFCAs with no rigorous impact studies into ecological and social factors.

I feel that IA as a tool is absolutely vital to TFCAs. Impact assessments need to be conducted prior to the creation of TFCAs and should be a tool used in the actual selection of the areas that are included into TFCA initiatives. It might not be fair to judge the selection of TFCAs on purely biodiversity grounds as this is not the only reason they are created, but if positive social and economic impacts are also not felt, then the selection process for TFCAs needs to be refined. This selection process has to include IAs, not only for biodiversity, but for social and economic factors as well.