

FINDING NEMA: THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, THE DE HOOP DAM, CONFLICT RESOLUTION AND ALTERNATIVE DISPUTE RESOLUTION IN ENVIRONMENTAL DISPUTES

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1 Introduction

This article considers the proposed De Hoop Dam on the Olifants River, Water Management Agencies, conflict between government departments and other organs of state, the involvement of NGOs and conflict-breaching mechanisms.

The point of this article is not to debate the rights and wrongs of the project or to weigh in on behalf of either side in the dispute, but to show that there is a genuine dispute about the course which should be followed as well as interests which were not taken into account properly in the initial impact assessment and decision-making processes. Consequently, that this was (and is) an appropriate case for conciliation and dispute resolution mechanisms, which are key – and underutilised – features of the *National Environmental Management Act 107 of 1998* and of the *National Water Act 36 of 1998*. If this case could be settled by means of alternative dispute resolution techniques, others might follow and future environmental disputes be settled with accommodation of a greater number of interests. The matter discussed in this article is not hypothetical, but a real and urgent legal and environmental problem.

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2 The facts of the dispute

The Department of Water Affairs and Forestry (DWAF) plans, possibly even as soon as late 2006, to begin the construction of a dam – the De Hoop dam – on the Olifants River, Mpumalanga.¹ DWAF made the decision to build the dam; with a Record of Decision (RoD) providing subsequent authorisation by the Department of Environmental Affairs and Tourism (DEAT).² The RoD was handed down on 21 November 2005, despite there having been six objections against the development lodged with DEAT – these being from South African National Parks (SANParks, which is an organ of state) and from five NGOs and private individuals.³ The RoD gave DWAF the right to proceed with the building of the dam. However, all of the six objectors lodged appeals against the RoD.⁴ The Minister's Decision on the Appeals will be discussed in this article below, under section 7: The Minister's Decision on the Appeals; and the Revised Record of Decision.

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- 1 The applicable Catchment Management Area is the Olifants CMA.
 - 2 In terms of the environmental impact assessment (EIA) regulations promulgated under the *Environment Conservation Act 73 of 1989* (which regulations and Act govern this project either because application for authorisation was made before the commencement of regulations under the *National Environmental Management Act 107 of 1998* ('NEMA'); or that, where application had not been made before such commencement, mining activities have been exempted from compliance with the regulations under NEMA until 1 April 2007), the construction of a dam affecting the flow of a river is an activity which is subject to an EIA and requires an environmental authorisation. DEAT 2006 <http://www.environment.gov.za/> 17 Oct.
 - 3 These objections (lodged as part of the public participation process phase of the EIA) being by SANParks; the Endangered Wildlife Trust (EWT); Geosphere, a Mozambican environmental organisation; the National Parks Support Group Trust; the South African Water Caucus (SAWC); and by a private individual. See, for example, Wray sa 2006 (1) KPTON <http://www.krugerpark.co.za/> 17 May; and Wray sa 2006 (2) KPTON <http://www.krugerpark.co.za/> 17 May.
 - 4 See, for instance, Macleod 2006 *M&G* 4 Aug 11, where it is commented that "[Minister of Environmental Affairs and Tourism] Van Schalkwyk has sent the appeals for independent review and was unable to say this week when the outcome would be known." According to DEAT, five appeals against the RoD were received from various parties both in their personal and representative capacities; these being: Mr E Pietersen, in his personal capacity; Mr P Owen, Steering Committee Member, on behalf of the SAWC; Mr R Lorimer, Chairman of the National Parks Support Group Trust on behalf of the Trust; Dr D Mabunda, Chief Executive of SANParks, on behalf of SANParks; and Dr N King, Executive Director of the EWT, on behalf of the Trust. An appeal from Geosphere raising similar issues to the other appellants was received after closure of the deadline for submission of appeals. DEAT 2006 <http://www.environment.gov.za/> 17 Oct.
The appeals, according to the Minister's Statement of 29 September 2006, concerned essentially three grounds:
 - a) Ecological sustainability: concerns around the adequacy of the ecological reserve of the Steelpoort and Olifants Rivers, and associated potential impacts on the Kruger

SANParks took a firm stand against the dam, suggesting that:

... if the dam is allowed to go ahead and take water out of the Olifants River system without Kruger [National Park] receiving its due share of water, known as the ecological reserve, SANParks "will have no alternative but to approach an appropriate court for relief" from the [DWAF]. Although a provision is made in the [R]ecord of [D]ecision for the implementation of the reserve of the Olifants River, SANParks describe it as "unclear, vague and embarrassing" as well as "meaningless and ineffective".⁵

It has been suggested that SANParks threatened such litigation not only against DWAF, but also against its own principal – DEAT, being the competent authority in respect of issuing RoDs for environmental authorisation.⁶

It is unclear why DWAF desires to construct the dam; nor why DEAT agreed, implied by handing down its RoD, with DWAF that the dam is needed and desirable. The contending beneficiaries appear to be the water (and general economic improvement) needs of the poor in the area, in the one corner; with undisclosed mining interests in the other.⁷

National Park (KNP); flooding of areas containing rare and endangered species, and inadequate consideration of threats to biodiversity; inadequate consideration of cumulative impacts; inadequate consideration of eco-sustainable alternatives; inadequate mitigation of risks to the ecosystems; and impacts on the biodiversity of the Sekhukhune Centre of Endemism and Steelpoort's Sub-Centre.

- b) Socio-economic adequacies: the need for the dam; the contention that the dam will benefit only mining and not necessarily provide potable water for communities; pollution impacts on the Olifants River System from mines and industries; negative impacts on tourism due to the viability of the KNP; the financial viability of the project (adequate funding for the development and implementation of management measures); and the need for a Strategic Environmental Assessment (SEA) that would allow for a broader view relating to the impacts of further development on the catchment and the KNP.
- c) Procedural aspects of the EIA process and the RoD: inadequate appeal period; general perceived inadequacies; unhappiness with the conditions attached to the RoD; inadequate public participation and consultation with regard to CBO's and international stakeholders. DEAT 2006 <http://www.environment.gov.za/> 17 Oct.

5 Wray sa 2006 (2) KPTON <http://www.krugerpark.co.za/> 17 May.

6 Macleod 2006 *M&G* 3 Feb 5.

7 Substantiation for this contention will appear generally from the arguments in this paper; see below in the present section (S 2). It is worth noting that according to a media report of October 2006, "Government will provide about R1,3 billion of the R4,9 billion required for the project, with mines using the dam water carrying a large part of the balance." Groenewald 2006 *M&G* 6 Oct 18.

According to *Business Day*:

Conservationists object to the project on the grounds that an interruption of the flow of the Olifants would endanger several game reserves downstream, including the Kruger Park, and would have a significant environmental and economic effect. They are in good company: internationally it has become accepted that the detrimental effects of large-dam projects outweigh the benefits. But the Steelpoort area, for which the dam is planned, is among the poorest in the country, where even subsistence farming is largely no longer possible. The land degradation due to poverty is already an environmental disaster; the effect on the people is an escalating tragedy. Government's failure to act would be as great a violation of the constitutional rights of the Steelpoort people to live in an environment that is not harmful as would be a rash decision to build a dam and be damned. Whether building a large dam is the appropriate action is another matter.⁸

There appears, however, to be a cynical view amongst interested and affected parties who have opposed the construction of the dam that it is not intended to serve the basic needs of the poorest of the poor; rather, that it is to serve the interests of undisclosed mining companies. According to Wray in the *Kruger Park Times*:

The De Hoop dam is intended to supply water primarily to help mining companies utilize the platinum reserves in the area, with a

8 Anon 2006 *Business Day* <http://www.businessday.co.za/> 17 May. On the question of international recognition of the detrimental effects of large dams, see, for example, Nilsson 2005 *Nature* in his review of Scudder *Future of Large Dams* suggests that: "...[d]uring the past 50 years the world has experienced an unprecedented increase in the number of large dams, from 5,700 in 1950 to approximately 50,000 today. ... Hundreds of millions of people are adversely affected by dams, but curiously no precise figures are available. At least 40-80 million people have been resettled from planned reservoir basins, and this evacuation also affects the populations who receive them. Additionally, the lifestyles of those living downstream of the dam are changed because the water flow is regulated. ... Scudder presents a new study on people whose parents were resettled, involving a total of nearly 1.5 million people affected by 50 different dams across the world. Their living standards improved in only 7% of cases but worsened in 70%, with the rest having no significant change. ... Sustainability should be a top priority, and the book is a valuable reminder of the dangers of destroying sustainable rural societies largely to support unsustainable cities or large industries." See also Bosshard 1999 *WCD* <http://www.dams.org/> 17 May.

lesser percentage of the stored water being earmarked for agriculture and primary human usage.⁹

Mainly, according to a media comment, the 'R4-billion' project is intended 'to feed mining interests'.¹⁰ This view is given credence when one goes back to what is apparently the first mention of the project – to be found in the February 2003 State of the Nation Address by the President of South Africa, Thabo Mbeki.¹¹ Support for this view comes from scrutiny of DWAF statements on the subject.¹² Further support for the mining interest contention appears from a media release by DWAF of June 2004, which refers to the above State of the Nation address and suggests that the project (the Olifants River Water Resource Development Project or 'ORWRDP') will –

...supply water for social and economic development in large parts of the Olifants and Mogalakwena/Sand Catchments of the Limpopo and Mpumalanga Provinces.¹³

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- 9 Wray sa 2006 *KPTON* (1) <http://www.krugerpark.co.za/> 17 May.
- 10 Macleod 2006 *M&G* 3 Feb. It appears that undisclosed mining companies will be funding, or partly funding, construction. Groenewald 2006 *M&G* 6 Oct. Construction will be partly funded through DWAF as part of ASGISA (Accelerated and Shared Growth Initiative for South Africa). See Govt Info 2006 (1) <http://www.info.gov.za/> 17 May, generally. On the De Hoop dam specifically, see Govt Info 2006 (2) <http://www.info.gov.za/> 17 May: "Massively Increase Public Investment: Develop Olifants River System - Response on environmental authorisation appeal solution from DEAT pending. Approval of environmental management plans due end Oct-06. Land valuation of rights and interaction with RLCC due Aug-06. De Hoop Dam tender design & documentation to complete Jul-06."
- 11 In that address, Mbeki stated that: "... [m]ore than R100 billion has been set aside for capital expenditure in the MTEF period, including, at the national level, R55 billion for infrastructure. Planned investment by the major state corporations for 2003 is at least R32 billion. This investment will include key economic infrastructure projects such as the construction in the coming period of the John Ross Highway to Richards Bay, a dam on the Olifants River in the Limpopo Province [the President's reference to 'Limpopo' ought probably to have been to 'Mpumalanga'. The quote is reproduced as it is given in the President's 2003 State of the Nation Address] to provide water for platinum mining and agriculture, the construction of Ngqura (Coega) port and concessioning of the Durban Container Terminal." Mbeki 2003 <http://www.info.gov.za/> 17 May.
- 12 According to a statement by DWAF in March 2004: "... [t]he project is driven by the social and economic circumstances of these areas, the urgent need for socio-economic upliftment and development, and planned mining expansion." See DWAF 2004 (1) <http://www.dwaf.gov.za/> 17 May.
- 13 DWAF 2004 <http://www.info.gov.za/> 17 May. According to the same release: "...[t]he Olifants and Mogalakwena/Sand Catchments include some of the poorest areas in South Africa," DWAF Minister Buyelwa Sonjica said. "People in these areas will benefit directly through employment opportunities in mining and associated developments, *and also* in the availability of water for domestic purposes. More water will enable considerable mining expansion and will bring about local employment, much needed economic growth and other benefits. *It will also* create the opportunity for water service providers such as

This mining interest rationale appears nowhere in the November 2005 Reason for Decision by DEAT (as the lead authority for the EIA), authorising DWAF to proceed with the project. The RoD does not mention mining in its explanation as to why the project is deemed necessary – although ‘economic development’ generally is referred to.¹⁴ The first rationale given in the RoD is that of –

...the need to provide the previously disadvantaged communities with potable water.¹⁵

It is not, in any case, certain to what extent people in need of domestic water will benefit from the project. According to Macleod:¹⁶

Water [A]ffairs said one reason it wants to build the dam is to supply three local municipalities with domestic water. But, asked the EWT¹⁷ in its appeal, “How will domestic supply be guaranteed? No evidence is provided that local communities will receive water, let alone be able to pay for it.” In its appeal, SANParks said the dam would

municipalities, to supply domestic water to many communities,” the Minister added. [Our emphases.] DWAF 2004 <http://www.info.gov.za/> 17 May.

As recently as mid-August 2006, it has been suggested that: "... [d]riving the De Hoop dam's construction along the Steelpoort River, a tributary of the Olifants River, is the fiscal lure of unlocking investment of up to R30-billion in new platinum mines in the province. ... The dam and related projects are predicted to cost some R8-billion. The dam is one of three core projects underpinning government's attempts at achieving a six percent economic growth rate, via the Accelerated and Shared Growth Initiative for South Africa [ASGISA]." Bloomberg 2006 *Creamer Media* <http://www.miningweekly.co.za/> 26 Aug. See n 10 above on the ASGISA issue.

14 RoD p 22. DEAT 2005 <http://www.dwaf.gov.za/> 17 May. It might be objected that as need and desirability should have been assessed in the EIA Scoping Report, they might have been so assessed; and that as DEAT should have considered these in considering the application, they might have been so considered. However, the Environmental Impact Report (EIR) essentially *is* the Environmental Impact Assessment. If needs and desirabilities existed at the time of the Scoping Report, and were considered by DEAT, then they ought at the very least to have been repeated in both the EIR and the RoD. It would be difficult to support an argument that posits the unknowable. The Scoping Report is not the final published document; the EIR is.

15 RoD p 2, 2. DEAT 2005 <http://www.dwaf.gov.za/> 17 May. This is despite the ORWRDP Environmental Impact Assessment Report of October 2005, which suggests that several previous investigations to identify options to supply water have been undertaken by DWAF, but that: "...[s]ince these earlier investigations were conducted, the water demand requirements in the area have changed significantly due to rapid expansion within the mining sector on the eastern limb of the Bushveld Igneous Complex. To secure the water necessary for their initial development needs, the mining sector has leased, for a five-year period, an under-utilised portion of water from the irrigation sector. ... beyond the short-term time horizon, it is deemed necessary to enable new allocations and the transfer or reallocation of water use rights ..." DWAF 2005 <http://www.dwaf.gov.za/> 17 May.

16 Macleod 2006 *M&G* 3 Feb.

17 The Endangered Wildlife Trust; an NGO, and one of the six objectors/appellants.

negatively affect tourism, wildlife and concession areas in the Kruger. "If our rivers dry up, the value of the tourism experience in Kruger will be diminished and tourism support for the area will cease." If the project went ahead without clear assurances that Kruger would continue to receive its share of downstream water – known as an "ecological reserve" – "SANParks will have no alternative but to approach an appropriate court for appropriate relief".

There is also concern about the relationship with Mozambique; in which regard Macleod¹⁸ quotes Vera Ribeiro, coordinator of the Mozambican environmental NGO Geosphere, as saying that:

...[t]he two governments must adhere to the Southern African Development Community's protocol on shared watercourses, with close cooperation to ensure the sustainable use of shared water bodies.¹⁹

It is not certain whether such international obligations were taken into account. From the available information, it would appear that they were not adequately considered. It has been suggested that an irony is that:

... [DEAT's] own research had identified the Sekhukhuneland region as one of nine national conservation priority areas because of its high biodiversity and ecosystems service value.²⁰

Feelings on the matter have been running so high that there have even been accusations of obstructive acts by DEAT.²¹ Such obstruction has been

18 This paper will not consider the question of international obligations and potential breaches thereof.

19 Macleod 2006 *M&G* 3 Feb.

20 Macleod 2006 *M&G* 3 Feb; quoting the EWT appeal, see n 4 and 17 supra. Bolstering this argument, according to Wray *sa* 2006 *KPTON* (3) <http://www.krugerpark.co.za/> 17 May: "...[t]he area where the dam is due to be constructed ... is known to contain at least 20 species of unique endemic plants. These species, including plants with medicinal properties, will be flooded if the dam is built. Some of the plant species have yet to be officially described by scientists. This is reported in the draft environmental impact assessment for the Olifants River Water Resources Development Project (ORWRDP). In mitigation of this, the summary report suggests that 'an area of Sekhukhune Mountain Bushveld, similar in size to the proposed development, be formally conserved.' Plant species could also be rescued before the flooding and relocated. The EI process found that at least 20 Red Data species that are already threatened with extinction occur in the area. One of these is the barred minnow, which will become locally extinct if the dam is built."

denied.²² DEAT aside, DWAF certainly appears to be determined to construct the dam – this appears strongly from public pronouncements from the latter ministry. Such public pronouncements tend to feature arguments in favour of mining interests strongly; the domestic water needs of the poor less so.²³

The proposed De Hoop dam is not the only issue of concern. In May 2006 it was reported that:

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- 21 According to Macleod 2006 *M&G* 3 Feb: "[o]pponents of the dam were furious when environmental affairs released its record of decision in late November, giving them 30 days over the holiday period to appeal. SANParks said it was given no official communication of the decision, but 'only received notification early in December 2005 through other means'." Obviously, this is a public participation and a procedural fairness issue. However, the allegation (or at least implication) would appear to be that DEAT abused procedural fairness in order to make meaningful public participation difficult. The reasons why this might be so go to the heart of the matter.
- 22 JP Louw, Head of Communications at the Department of Environmental Affairs, is quoted as saying that there was nothing malicious or intentional about the timing: "[t]he fact that both the Wild Coast [N2 tollroad] and De Hoop decisions were issued towards the end of the calendar year is purely coincidental, and there is certainly no deliberate intent by the department to issue decisions on big or controversial applications during this period." Macleod 2006 *M&G* 3 Feb.
"After the furore," comments Macleod, "over the Wild Coast decision in December 2004, Minister of Environmental Affairs and Tourism Marthinus van Schalkwyk extended the appeal period for 30 days. But no such concession has been made for the De Hoop dam." Macleod 2006 *M&G* 3 Feb 5.
- 23 Speaking in Mpumalanga in January 2006, the Minister of DWAF, Ms BP Sonjica, said: "We can ill afford any negative impacts on our consumers with systems that regularly fail due to poor planning and resources that are not able to yield sufficient water when we have below average rainfall. Having said that, you may well ask what are we in fact doing to ensure that you have access to sustainable resources. In this regard I would make reference to the excellent progress being made on the R3 billion Olifants River Water Resources Development Project (ORWRDP), with the raising of Flag Boshielo Dam near Marble Hall already under construction and a Record of Decision having been issued in November 2005 for the construction of the De Hoop Dam near Steelpoort. These projects are driven by the social and economic needs in both Limpopo and Mpumalanga, where there is an urgent need for socio-economic upliftment and development. More water at a reasonable level of assurance will enable considerable mining expansion and will bring about local employment, much needed economic growth and other benefits such as the much needed expansion of domestic water supply systems. I expect that if we are able to keep to our current schedule that the first water from the De Hoop Dam could be supplied as early as 2009/2010, with the full yield being available by 2011/2012." DWAF 2006 <http://www.dwaf.gov.za/> 17 May.
Curiously, in May 2006, President Mbeki announced a Cabinet reshuffle in which Minister Sonjica moved from Water Affairs and Forestry to Minerals and Energy Affairs. In a straight swap of portfolios, the new Minister of Water Affairs and Forestry is previous Minerals and Energy Affairs Minister Lindiwe Hendricks. See, for example, Govt Info 2006 *P&LON* <http://www.polity.org.za/> 24 May. This is ironic, in the context of the ORWRDP matter; in which there have been suggestions that DWAF has worked too much in the interest of mining interests.

...[t]he already pressurized Olifants River system is scheduled for more development, with another dam being intended to supply water for mining in the Olifants River catchment. Anglo Platinum is conducting an environmental impact assessment (EIA) for the planned Richmond dam, to be located in the Dwars River system, which feeds the Steelpoort River. ... The mining company wishes to build the dam to meet the needs of its projected mining operations in the area, as the Richmond dam would be able to supply water in 2008 as compared to the projected date of 2014 for water supply from the De Hoop dam.²⁴

The newly proposed dam may well have a significant impact on the biodiversity of the area. It appears that, according to the draft scoping report:

...the dam basin contains 29 plant species of conservation importance, of which 21 are endemic or have Red Data status, while a further eight are protected species. In the area which will be flooded, 11 of these 29 species with conservation importance are found. The report also says that the dam basin is in an archaeologically sensitive area. However, the scoping report also adds that "The implication of a 'no-go' situation will be one of immense economic impact. Not only will this impact on the production of much needed platinum reserves, it will also result in

24 Wray sa 2006 KPTON <http://www.krugerpark.co.za/> 30 May. According to the Bateleurs (an organisation of pilots interested in environmental protection, who fly stakeholders over areas under threat to give "decision-makers and other interested or vital parties an aerial perspective of the situation or problem they are assessing" Bateleurs 2006 *Newsletter* <http://www.bateleurs.co.za/> 26 Aug) on 4 June 2006 a reconnaissance was made of the site of the proposed De Hoop dam. According to the Bateleurs', "[h]aving heard so many conflicting reports on the Olifants River and its tributaries, and whether the De Hoop Dam was already in progress or not, and where the site of the intended Richmond Dam was, ... [o]ur objective was to ascertain if construction had begun on the controversial Richmond and De Hoop Dams. The Richmond Dam is planned on the Dwars/Klein Dwars River System, which flows into the Steelpoort River, which flows ultimately into the Olifants River System, north of Steelpoort. The De Hoop Dam is planned for further upstream on the Steelpoort River itself. We could see existing dams on both river systems, but found no new dams nor any signs of dams under construction in the area. We observed various weirs and pumping stations, and a tremendous amount of mining activity. There is a large mine located close to Steelpoort, and Anglo Plats is responsible for extensive mining activity on the top of mountains and on the side of mountains and mountain ridges. A number of slimes dams were clearly visible, but we could find no indication that work on the proposed De Hoop and Richmond dams had begun." See Bateleurs 2006 *Newsletter* <http://www.bateleurs.co.za/> 26 Aug. According to a notice (in terms of Reg 4(6) of the regulations published in GN R1183 of 1997 under s 26 of the *Environment Conservation Act* 73 of 1989; in terms of s 39(1) of the *Mineral and Petroleum Resources Development Act* 28 of 2002; and in terms of s 41(4)(a) of the *National Water Act* 36 of 1998) disseminated by Rustenburg Platinum Mines Ltd (Anglo Platinum), 'Interested and Affected Parties' are given the period 16 October - 25 November 2006 in which to register issues and concerns. *Notice: Environmental Impact Assessment: Richmond Dam – Amended Scoping Report* (undated).

stagnation of the local economy and an overall hampering of the development of a region already badly affected by unemployment.²⁵

Once again, therefore, the familiar cast of characters is gathering: mining interests, environmental conservation authorities, organs of state and, of course, the economically deprived people of the local area.

3 The Record of Decision (RoD)

The Department of Environmental Affairs released its RoD on 21 November 2005, authorising DWAF to undertake an activity described as:

...[t]he construction of a large storage dam (and associated spillway structure and pump station) on the Steelpoort River at the farm De Hoop ... The dam will have a full supply level of 915 masl, a wall length approximately 1 050 m and will inundate an area of about 1 690 ha. ... The removal and/or flooding of existing vegetation from the proposed dam inundation basin ... [R]oad realignment [which] will include three major bridges, two across the Steelpoort River at either end of the proposed dam and one across the Maseketi River. ... [and associated activities].²⁶

According to the RoD, in reaching its decision DEAT took into consideration the final environmental impact report (EIR) and environmental management plan (EMP) dated October 2005²⁷ and also comments received from the South African Heritage Resources Agency (SAHRA), and the Departments of Health and Social Services (Mpumalanga), Minerals and Energy (Limpopo), Economic Development, Environment and Tourism (Limpopo), and Agriculture and Land Administration (Mpumalanga).²⁸ It is significant that DEAT did not mention having taken SANParks' views into account, despite SANParks having objected

25 Wray sa 2006 *KPTON* <http://www.krugerpark.co.za/> 30 May.

26 RoD p 11. DEAT 2005 <http://www.dwaf.gov.za/> 17 May. In addition, a water licence must be applied for and obtained. This is a separate process and is not considered in this paper, which deals with shortcomings in the Environmental Impact Assessment and Record of Decision processes.

27 It is not apparent that DEAT took into account the objections from SANParks and the other objectors. At the least, mention could have reasonably been expected.

28 RoD p 22. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

to the project. Moreover, mining interests are not mentioned in the RoD. Per the RoD:

The proposed development came as a result of the need to provide the previously disadvantaged communities with potable water and to facilitate the economic development in the Greater Sekhukhune Municipality, the Capricorn Municipality and the Mogalakwena Municipality.²⁹

According to the RoD:

The mitigation measures proposed in the environmental impact report are appropriate and practical for implementation. It is envisaged that, should the conditions as stipulated in this record of decision be complied with, the negative impact of this activity will be minimized.³⁰

This last sentence, of course, says nothing about whether the impact will be significant or not. The RoD then continues:

The environmental impact assessment process followed complies with the requirements of the EIA Regulations. Information submitted by the independent environmental consultant is deemed to be sufficient and adequate to make an informed decision. No fatal flaws have been identified during the EIA process. Based on the above, DEAT's conclusion is that this activity will not lead to a substantial detrimental impact on the environment, that potential detrimental impacts resulting from this activity can be mitigated to acceptable levels and that the principles of section 2 of NEMA can be upheld.³¹

The authorisation was granted subject to certain conditions; *inter alia*, that, firstly, an Environmental Monitoring Committee (EMC) was to be established to report directly to the Director-General: DEAT.³² Members of the EMC were to reflect sectors such as affected residents, ward councilors, NGOs, community leaders, and farmers' associations. The purpose of the EMC was to monitor

29 RoD p 22. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

30 RoD p 32. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

31 RoD p 32. DEAT 2005 <http://www.dwaf.gov.za/> 17 May. As will appear from the extended discussion below, it is a highly dubious contention that the section 2 principles of *NEMA* were properly considered by DEAT.

32 It was not stated as to *what* the EMC was to report.

compliance with the RoD and to make recommendations to the Director-General: DEAT related to the monitoring of the project. Secondly, that DWAF was to appoint an independent environmental control officer (ECO) prior to construction for purpose of monitoring compliance with the RoD and with recommendations of the EMP; and of undertaking monthly environmental compliance audits. Thirdly, according to the RoD, due to the

...nature and extent of the proposed project and the proposed mitigation measures, a suite of environmental management plans (EMPs) [would] need to be produced – some, however, only ‘within a few years’ time ... as and when required.³³

All EMPs were to be submitted by DWAF to DEAT before commencement of any of the relevant activities; and each was to cover a number of required aspects, such as the mitigation measures recommended in the original EIA, protection of heritage sites ‘likely to be impacted’, and waste avoidance and minimisation.³⁴

As far as rehabilitation after construction is concerned, DWAF was required to:

... initiate an investigation into the conservation of an equivalent area of the Sekhukune Land Centre of Plant Endemism to replace that lost due to the construction of the dam and its impoundment area.³⁵

As a safeguard of biodiversity, this was extremely weak. DWAF was not required to conserve biodiversity, nor even to conserve an equivalent area of biodiversity, but merely to ‘initiate an investigation’ into conserving an equivalent area. What was meant by ‘equivalent area’ is not defined; and, therefore, could have been interpreted simply spatially. This ignores the uniqueness of endemic biodiversity.³⁶

33 RoD p 3, 3.2.3.1. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

34 RoD p 3-4, 3.2.1; 3.2.2; 3.2.3. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

35 RoD p 4, 3.2.4. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

36 In the *National Environmental Management: Biodiversity Act 10 of 2004*, ‘biological diversity’ or ‘biodiversity’ is defined in s 1 as meaning: “...the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems.”

DWAF was required also to implement measures to control invasive plants and weeds; to have a suitably qualified specialist conduct all removals of indigenous vegetation and to have a qualified Environmental Officer³⁷ on site to assist with pre-marked red data species sites.³⁸ Without positive ongoing conservation obligations in place, however, these conditions were vague and would have been extremely difficult to enforce.³⁹

The project/development was authorised on condition that DWAF acquire (in accordance with relevant legislation) the necessary land rights.⁴⁰ Authorisation was further dependent on compliance with other legislation, in particular heritage legislation; and prospecting and mining legislation.⁴¹ Again, the emphasis did not appear to be on environmental protection.⁴²

Importantly, the RoD required that certain operational conditions, relating to factors like sanitation, removal of man-made structures of consequence and

Something of the complexity of biological diversity can be seen from this definition; which mirrors the definition of biological diversity in a 2 of the *Convention on Biological Diversity* (see Biodiversity Convention 1992). Simply to 'initiate an investigation into the conservation' of 'an equivalent area' is clearly inadequate – the nature of 'endemism' is such that, inherently, no equivalent currently exists.

37 'Qualified Environmental Officer' was not defined.

38 RoD p 4, 3.2.4. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

39 It could be argued that a duty of care exists *ex lege*. According to s 54 of the *National Environmental Management: Biodiversity Act 10 of 2004*: "An organ of state that must prepare an environmental implementation or environmental management plan in terms of Chapter 3 of the *National Environmental Management Act* [107 of 1998] ... must take into account the need for the protection of listed ecosystems."

This section does provide a general duty of care; and it would be disingenuous to argue that a centre of species endemism need not be taken into account, merely because it had not yet been listed by the Minister by notice in the *Government Gazette*. However, the language of the RoD does not provide any concrete requirements for ongoing monitoring – and it can hardly be argued that the weaknesses in the requirements laid down by the RoD can be cured by the provisions of another act, which further act has not even been referred to in the RoD. This would be to leave too large an area (between what is required by the RoD; and what ought to be done) open to interpretation. In fact, that the concern for ecosystems shown in the *National Environmental Management: Biodiversity Act 10 of 2004* is not present in the RoD shows, again, that the RoD is an inadequate document.

40 RoD p 5, 3.2.5. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

41 RoD p 5-6, 3.2.6. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

42 While not all conditions have to relate to environmental conservation, and some may support legal compliance in other areas (such as cultural heritage, which is of course an important aspect of environmental conservation), it is the authors' contention that natural environmental conservation was neglected in the RoD.

removal/disposal of waste generated, be complied with.⁴³ The most important operational condition required that "...[t]he ecological reserve requirements of the downstream river must be maintained".⁴⁴ This could have represented something of a problem. DWAF might have argued that as no ecological reserve requirements have actually been determined, there are none to meet. However, this would not have been an argument to be taken seriously – as will be seen below, there are legal requirements to take the reserve into account and it is clear from the tenor of the legislation that to ignore the reserve would be to breach both the *National Water Act*⁴⁵ (*NWA*) and the principles of *NEMA*.⁴⁶

The RoD required, finally, that certain safety and security measures be taken; these relating largely to storage of hazardous substances and to worker safety.⁴⁷ Of interest, though, is the following clause:

DWAF should already have attempted to model and quantify the risks based on rainfall and flow data, with the design characteristics of the dam (possibility of failure, seismic data and criminal intelligence). DWAF must therefore maintain the early warning systems and disaster plans for severe floods and the very unlikely event of dam wall failure.⁴⁸

It is extremely vague to suggest that DWAF "...should already have attempted...". In fact, as a condition, it is virtually devoid of meaning. One might have expected that such a model and quantification would have been required as knowledge DEAT would need in deciding whether or not to grant the RoD.

43 RoD p 6, 3.2.7. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

44 RoD p 6, 3.2.72. DEAT 2005 <http://www.dwaf.gov.za/> 17 May. It might be pointed out that the key question is really whether provision of water from the dam could take place before the reserve had been determined. The danger is that exactly this may have happened. As discussed above, under s 1: The facts of the dispute, it is even being proposed that a new dam – the Richmond Dam – might be built in the area to supply water as early as 2008 – see s 2 and n 24 and 25 supra. There is as yet no indication as to when the reserve might be determined.

45 *National Water Act* 36 of 1998.

46 It is, in fact, staggering that the RoD could contain mention of the ecological reserve and yet contain no mention of the Kruger National Park and the role of its management authority (SANParks).

47 RoD p 7, 3.2.8. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

48 RoD p 7, 3.2.8.5. DEAT 2005 <http://www.dwaf.gov.za/> 17 May.

In conclusion, then, the RoD was an inadequate document; and one which was based on a fundamentally flawed EIR. Instead of being a set of reasonably drawn conclusions, based upon a process of proper research, debate and consideration of various interests, the RoD represented an inadequate imposition.

4 Legislative framework

4.1 *National Environmental Management Act 107 of 1998 (NEMA)*

NEMA is intended, besides setting principles in place for national environmental management, to provide for coordination, cooperation and conflict-breaching.⁴⁹ Chapter 4 is headed “Fair Decision-making and Conflict Management” and provides for conciliation and arbitration mechanisms where conflict arises in the environmental field.⁵⁰ Several options exist in this regard, but it does not appear that many have yet been used.

Crucial to *NEMA*, and the current issue, are the principles found in section 2; which, *inter alia*, apply alongside all other appropriate and relevant considerations,⁵¹ provide a general framework for environmental management,⁵² serve as guidelines in terms of which environmental decisions must be taken or any function exercised by an organ of state,⁵³ and serve as

49 ‘Co-operative governance’ (the Preamble; and ch 3) and ‘fair decision-making and conflict management’ (ch 4), in the language of the statute itself.

50 It is not stated that these mechanisms are reserved for disputes between proponents and DEAT, or between organs of state. The intention of the drafters appears to have been to be expansive. See discussion below in relation, eg, to s 17(2), which provides that ‘[a]nyone may request ...’. Legal standing would appear to be conferred by s 32(1) of *NEMA* (and of course by s 38 of the Constitution of the Republic of South Africa 1996, hereinafter ‘the Constitution’); and to be restricted only by the requirements of s 17(1) that the difference or disagreement concern the environment or laws concerned with environmental protection.

51 S 2(1)(a).

52 S 2(1)(b).

53 S 2(1)(c). S 1: ‘Organ of state’ means organ of state as defined in the Constitution. S 239 provides that:

principles by reference to which a conciliator appointed in terms of *NEMA* must make recommendations.⁵⁴ DEAT was required to take the *NEMA* principles into account in making its decision in the present matter, as was acknowledged in the RoD.⁵⁵ Unfortunately, DEAT phrased this simply as:

... [concluding that] ... the principles of section 2 of *NEMA* can be upheld [based on the EIA].⁵⁶

Again, this is extraordinarily vague. It is not clear what was meant by 'can be upheld'. Preferable would have been evidence that the decision-maker had indeed given consideration to all relevant *NEMA* principles and applied them to the particular matter; before concluding on reasonable grounds that the principles would be upheld.

While it is true that *NEMA*'s principles require that people and their needs be placed '...at the forefront of concern' in environmental management; it is also required that their physical, psychological, developmental, cultural and social interests must be served equitably.⁵⁷ It is further required that development must be socially, environmentally and economically sustainable.⁵⁸ Sustainable development, according to the principles, requires consideration of all relevant factors—including eight which are specifically listed.⁵⁹ In the instant matter, two of the eight are particularly relevant. It is required that a risk-averse and cautious approach be applied, which takes into account the limits of current knowledge about the consequences of decisions and actions,⁶⁰ and

-
- (a) any department of state or administration in the national, provincial or local sphere of government; or
 - (b) any other functionary or institution
 - i. exercising a power or performing a function in terms of the Constitution or a provincial constitution; or
 - ii. exercising a public power or performing a public function in terms of any legislation, but does not include a court or a judicial officer.

54 S 2(1)(d).

55 See n 25 above.

56 See n 25 above.

57 S 2(2). It is noteworthy that the word 'interests' is used; and not the word 'rights'.

58 S 2(3).

59 S 2(4)(a)(i)-(viii).

60 S 2(4)(a)(vii).

... that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimized and remedied.⁶¹

The first, namely the 'application of the risk-averse and cautious approach' echoes the precautionary principle of international law—in other words, that where the scientific consequences of a development are uncertain, the development ought not to proceed. In the highly complex arena of water-related decisions, it is vital continually to extend the limits of current knowledge. Predictions of harm are what are most often in dispute, generally these predictions are uncertain and this uncertainty should not be used as a rationale for proceeding. It would be very difficult in the present matter to argue that either the risk-averse and cautious approach or the prevention or avoidance of harm approach have been taken into account properly, as it ought to have been.

Further principles of *NEMA* which appear to have been insufficiently considered include the requirement that environmental management be integrated, taking into account the effects of decisions on all aspects of the environment and all people in the environment.⁶² The apparent lack of regard given to the needs of the environment (specifically, the needs of the Kruger National Park) infringe this principle and also the principle that decisions must take into account the interests, needs and values of all interested and affected parties.⁶³

It is likewise not apparent that sufficient weight was given to the principle that the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and

61 S 2(4)(a)(viii).

62 S 2(4)(b). The *NWA* contains similar wording and certainly the same concepts—the aquatic environment certainly falls under *NEMA*'s ambit.

63 S 2(4)(g). The institutional arrangements and processes through which people are able to express these needs, values and interests on an ongoing basis is key. It needs to be ongoing because the circumstances are continually changing.

assessment.⁶⁴ Further, the principle that decisions must be taken in an open and transparent manner and that access to information must be provided in accordance with the law,⁶⁵ was arguably infringed by the failure to provide proper details of what was considered in the making of the decision.⁶⁶

Both the EIA and the RoD appear to have been insufficiently detailed not to be considered in breach of the principle that sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.⁶⁷ It can hardly be argued that a centre of plant endemism is not a sensitive ecosystem and far more attention to this could have been expected than the somewhat glib assertions that there should be expert supervision when plants are moved and that protection of an area of similar size be considered.⁶⁸

Finally, importantly in this context, *NEMA's* principles require that there be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.⁶⁹ Where the management policies of SANParks in respect of the Kruger National Park were not taken into account, as appears to have been the case here, this principle has clearly been breached.⁷⁰ Further, one of the principles requires that actual or potential

64 S 2(4)(i). In spatial and temporal terms, impacts on the environment are often separated and accumulative; therefore, 'proving' them is extremely difficult in a world of multiple impacts and factors affecting the living situation.

65 S 2(4)(k). In the present case, SANParks' objections to the project appear to have been 'swept under the carpet' at DEAT. The information which would need to be used is full of assumptions and therefore easily trivialised and ignored when it is used in an inappropriate process.

66 According to the RoD, "[b]ased on the above, DEAT's conclusion is that this activity [the proposed dam] will not lead to a substantial detrimental impact on the environment ...". '[T]he above' did not include proper details. That DEAT might later have provided, or been compelled to provide, supporting information to an applicant, therefore, does not change the fact that the RoD was arguably inadequate as it stood.

67 S 2(4)(r).

68 See n 27 above.

69 S 2(4)(l).

70 It might be asked whether the project and the RoD did not support the principles of the National Water Resource Strategy and Water Use Objectives, September 2004 (see DWAF 2004 (2) <http://www.dwaf.gov.za/> 17 May). However, according to that Strategy

conflicts of interest between organs of state should be resolved through conflict resolution procedures.⁷¹ There is no suggestion that either DEAT or DWAF considered such conflict resolution.⁷²

Chapter 3 is headed 'Procedures for co-operative governance'. Given space considerations, this article will not discuss these. The authors will simply note that co-operative governance is perhaps a key element since co-operation needs practice and it is in the practicing that relationships, trust, understanding and wisdom are built and it is these qualities that combine to deal with uncertainties in a wise manner.⁷³ It appears that in the present matter co-operative governance has been observed more in the breach than in the observance.

Chapter 4 is headed 'Fair decision-making and conflict management' and provides for conciliation mechanisms to be used. It is provided that any Minister, MEC or Municipal Council may, before reaching a decision,⁷⁴ consider

"[t]he water law shall be subject to and consistent with the Constitution in all matters including the determination of the public interest and the rights and obligations of all parties, public and private, with regards to water. While taking cognisance of existing uses, the water law will actively promote the values enshrined in the Bill of Rights" (Principle 1). The argument in the present paper is that principles found in all of the Bill of Rights, the 1998 *NEMA*, and the 1998 *NWA*, were disregarded.

71 S 2(4)(m).

72 The State Departments responsible for *NEMA* and the *NWA* must collaborate, coordinate, cooperate and integrate. It is interesting to note that 8 years after the passing the *NWA* the key organisations that will give effect to it are not yet in place. It might not be coincidental that the RoD on the De Hoop dam was rushed through just before the CMA is formed for the Olifants River. DEAT checks dam matters in terms of *NEMA* and advises on whether *NEMA* has been complied with; but it is questionable who checks on DWAF to see that it has complied with its own legislation (the *NWA*). In the case of the De Hoop dam, it would seem that DWAF ignored the spirit (at least) of its own legislation, if not also the letter. Certainly, DWAF's duty to act as if it were the CMA (i.e., open, transparent, etc. has not happened. Perhaps one of the reasons it rushed the decision through is because it had the parallel process of the CMA formation looming; and it knew that the CMA would not have acted as DWAF did ... in fact, that if the CMA did act as DWAF has done, then it would be DWAF's duty to 'blow the whistle'!)

73 See, generally, Bray 1998 *SAJELP*. According to Bray 1998 *SAJELP* 2, "[o]ne of the most important structures prescribed by the State to achieve integrated and sustainable environmental management, is co-operative governance by all the stakeholders involved."

74 [W]here a difference or disagreement arises concerning the exercise of any of its functions which may significantly affect the environment; (s 17(1)(a)) or before whom an appeal arising from a difference or disagreement regarding the protection of the environment is brought under any law. (S 17(1)(b).)

the desirability of first referring the matter to conciliation.⁷⁵ It is provided⁷⁶ that, where such a decision-maker considers conciliation appropriate, he or she *must* (own emphasis) either refer the matter to the Director-General for conciliation under this Act;⁷⁷ or appoint a conciliator on the conditions, including time-limits that may be determined;⁷⁸ or where a conciliation or mediation process is provided for under any other relevant law administered by such Minister, MEC or Municipal Council, refer the matter for mediation or conciliation under such other law.⁷⁹ It is only where the decision-maker considers conciliation inappropriate or if conciliation has failed that it can make a decision.⁸⁰ The implications of this for the present matter are subtle but clear. Although the decision-maker (DEAT) was not compelled to refer the matter to conciliation, in order to make a decision without reference to conciliation (as happened here, with the release of the RoD in November 2005) the decision-maker by necessary implication had to consider conciliation inappropriate. This seems curious *in situ*, considering that there were six objectors to the proposed development – including an organ of state (SANParks). One could hardly think of a situation in which conciliation would have been more appropriate.

Another way in which conciliation might happen is that, per *NEMA*:

Anyone may request the Minister, a MEC or Municipal Council to appoint a facilitator to call and conduct meetings of interested and affected parties with the purpose of reaching agreement to refer a difference or disagreement to conciliation in terms of this Act, and the Minister, MEC or Municipal Council may, subject to section 22, appoint a facilitator and determine the manner in which the facilitator must carry out his or her tasks, including time limits.⁸¹

75 S 17(1).

76 S 17(1)(b)(i).

77 S 17(1)(b)(i)(aa).

78 S 17(1)(b)(i)(bb).

79 S 17(1)(b)(i)(cc).

80 S 17(1)(b)(ii).

81 S 17(2). *NEMA* directs also that: "A court or tribunal hearing a dispute regarding the protection of the environment may order the parties to submit the dispute to a conciliator appointed by the Director-general in terms of this Act and suspend the proceedings pending the outcome of the conciliation." (S 17(3).)

This might well have been an appropriate case for such a request to be made.⁸² Should the matter reach conciliation in one of the ways described above, the Director-General may, on the conditions, including time-limits, that he or she may determine, appoint a conciliator acceptable to the parties to assist in resolving a difference or disagreement.⁸³ Importantly, there is a reminder to appointed conciliators of the need to take into account the principles of *NEMA*:

In carrying out his or her functions, a conciliator appointed in terms of this Act must take into account the principles contained in section 2.⁸⁴

Where conciliation does not resolve the matter, a conciliator may enquire of the parties whether they wish to refer the matter to arbitration and may with their concurrence endeavour to draft terms of reference for such arbitration.⁸⁵

Encouragement is given to the decision-maker to make as informed a decision as possible. It is even provided that:

...the Minister may at any time appoint one or more persons to assist either him or her or, after consultation with a Municipal Council or MEC or another national Minister, to assist such a Municipal Council or MEC or another national Minister in the evaluation of a matter

82 In the *NWA*, the Minister, MEC, Local Councils and all interested and affected stakeholders are obliged to co-operate in permanent organisations (CMAs) to meeting continuously. They are permanently in dispute resolution mode as they bargain over the use and abuse (pollution) of water.

83 S 18(1). Provided that if the parties to the difference or disagreement do not reach agreement on the person to be appointed, the Director-General may appoint a person who has adequate experience in or knowledge of conciliation of environmental disputes. A conciliator appointed in terms of this Act must attempt to resolve the matter (s 18(2)) –

(a) by obtaining such information whether documentary or oral as is relevant to the resolution of the difference or disagreement; [It is the assumptions and insights that go into *generating* this information that are the key ... With water resources it is not a case of *obtaining* but a case of *generating* in an acceptable manner.]

(b) by mediating the difference or disagreement;

(c) by making recommendations to the parties to the difference or disagreement; or

(d) in any other manner that he or she considers appropriate.

84 S 18(3).

85 S 18(6). S19(1) provides that "a difference or disagreement regarding the protection of the environment may be referred to arbitration in terms of the *Arbitration Act*, 1965 (Act 42 of 1965)."

S 19(2) provides that "[w]here a dispute or disagreement referred to in subsection (1) is referred to arbitration the parties thereto may appoint as arbitrator a person from the panel of arbitrators established in terms of section 21."

relating to the protection of the environment by obtaining such information, whether documentary or oral, as is relevant to such evaluation.⁸⁶

In the present case, it appears that the decision-maker made the decision (as reflected in the RoD) based only on the EIA and on input from a limited number of stakeholders;⁸⁷ instead of making a decision based on a consideration of input from all relevant stakeholders.⁸⁸

Chapter 5 of *NEMA* is titled 'Integrated Environmental Management' and its purpose is described as being 'to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities.'⁸⁹ It is strongly arguable that in the matter under discussion, many of the general objectives of integrated environmental management (IEM) were paid only lip service, at best. It has already been argued that the section 2 principles of *NEMA* were not adequately considered; where IEM requires that these principles be integrated into the

86 S 20. In making a decision under *NEMA* concerning the reference of a difference or disagreement to conciliation, the appointment of a conciliator, the appointment of a facilitator, the appointment of persons to conduct investigations, and the conditions of such appointment, must be made taking into account (s 22) –

- (a) the desirability of resolving differences and disagreements speedily and cheaply; [Developing layers of trust in the assumptions (mentioned above) builds the base (the fixed costs) from which the variable costs (ie, costs of resolving each dispute) will be relatively small. However, if each dispute is seen as a once-off matter and the base of trust is never built, then it has to be re-established for each dispute and the parties have to keep going back to square one to build it all up again.]
- (b) the desirability of giving indigent persons access to conflict resolution measures in the interest of the protection of the environment;
- (c) the desirability of improving the quality of decision-making by giving interested and affected persons the opportunity to bring relevant information to the decision-making process; [If this is done in an ongoing manner, then relevance and trust get built in and the parties can move on to the nub of the dispute without continually questioning the basis of the information.]
- (d) any representations made by persons interested in the matter; and
- (e) such other considerations relating to the public interest as may be relevant. ...

87 See n 22.

88 The information can often be conflicting despite coming from ostensibly reputable sources, since it depends on the assumptions that are made in generating the information (through simulation models, generally).

89 S 23(1).

making of all decisions which may have a significant effect on the environment.⁹⁰ It can further be argued that not enough was done to:

...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits, and promoting compliance with the principles of environmental management set out in section 2.⁹¹

Nor was enough done to –

...ensure that the effects of activities on the environment receive[d] adequate consideration before actions [were] taken in connection with them.⁹²

Or to –

...ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment.⁹³

90 S 23(2)(a). Integration is much more than simply achieving representation equity (ie, seats at the table) – it needs knowledge equity as well.

91 S 23(2)(b). This requires that the stakeholders develop a holistic knowledge, and to do this requires a collective socio-scientific endeavour in an ongoing process.

92 S 23(2)(c). This would require the organizational instruments and processes to be in place to consider these issues on an ongoing basis.

93 S 23(2)(d). [It is worth noting that the *NWA* has stipulated permanent organisational structures and processes (CMAs, WUAs and CMFs) to *ensure* that all stakeholders are involved in ensuring that this happens. The *NWA* states that until such time as the CMA is fully constituted, DWAF must act in place of the CMA ... which presumably means that DWAF must obey its own laws, just as the CMA will have to.] Further, the decision-maker is required by the principles of IEM also to "ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment;" (s 23(2)(e)) and to "identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2." (S 23(2)(f).) [This requires ongoing engagement within the organisational structures and functions of the *NWA*.] Neither of these requirements appears to have been properly met in the matter under discussion. Another requirement which does not appear to have been met is that "[t]he Director-General must coordinate the activities of organs of state referred to in section 24(1) ..." (s 23(3)).

4.2 *National Environmental Management: Protected Areas Act 57 of 2003*

According to Chapter 5, titled 'South African National Parks', SANParks⁹⁴ is to continue to exist as a juristic person despite the repeal of the Act in terms of which it was originally constituted.⁹⁵ Not only is SANParks a juristic person, but it is also an organ of state.⁹⁶ Per the Act, the functions which SANParks must perform include "...managing the national parks and other protected areas assigned to it";⁹⁷ as well as –

...protect[ing], conserv[ing] and control[ling] those national parks and other protected areas, including their biological diversity.⁹⁸

If it is properly to perform this function, SANParks necessarily has a critical conservation interest in the rivers which flow into the Kruger National Park and other national parks. Its form of continuous appropriate dispute resolution is to engage the CMAs and other NWA related organisations in the catchments. Indeed, it is a major stakeholder and thus must be recognised as having a right to be a member of these organisations. In terms of the Act, SANParks may, for the purpose of performing its functions, perform legal acts, including acts in association with or on behalf of any other person or organ of state,⁹⁹ and may institute or defend any legal action.¹⁰⁰ It can hardly be disputed, therefore, that SANParks would have the right to litigate in a matter such as that presently under discussion — even against DWAF or against DEAT, its own principal.¹⁰¹ Bolstering this argument, in terms of the Act, SANParks is governed by a Board¹⁰²

94 As established by s 5 of the *National Parks Act 57 of 1976*.

95 S 54(1). The *National Parks Act 57 of 1976* was repealed by s 90 of the *National Environmental Management: Protected Areas Act 57 of 2003*. Since such repeal, SANParks now functions in terms of the latter Act. See also PENDLEX s 2(g) of the latter Act.

96 As defined in s 239 of the Constitution.

97 'In terms of Chapter 4 and section 92 in accordance with this Act': PENDLEX: s 55(1)(a).

98 PENDLEX: s 55(1)(b).

99 S 56(i).

100 S 56(j).

101 See the discussion below under s 5 of this article, n 123, in respect of s 41(3) of the Constitution.

102 S 57(1).

... which takes all decisions in the performance of the functions of South African National Parks, except — those decisions taken in consequence of a delegation in terms of section 71;¹⁰³ or where the *Public Finance Management Act*¹⁰⁴ provides otherwise.¹⁰⁵

The Minister¹⁰⁶ does have supervisory powers over SANParks. The Minister is required (the wording is 'must') to monitor the performance by South African National Parks of its functions.¹⁰⁷ The Minister also has the prerogative (the wording is 'may') to determine norms and standards for the performance by South African National Parks of its functions;¹⁰⁸ and to issue directives to SANParks on measures to achieve those norms and standards.¹⁰⁹ None of the above would appear to detract from the *locus standi* of SANParks to perform its statutorily imposed functions.¹¹⁰ It is stated that SANParks must perform its functions subject to the norms and standards, directives and determinations issued by the Minister.¹¹¹ The issuing of norms and standards, directives and determinations can hardly be seen as abrogating SANParks' legal standing; particularly where, as in the present case, no such issuing had occurred. In the present case, to argue otherwise would be to argue that SANParks has been prevented effectively from carrying out the duties (in respect of water flow and biodiversity) which its founding statute requires that it carry out.

103 S 57(1)(a).

104 *Public Finance Management Act* 1 of 1999.

105 S 57(1)(b).

106 Environmental Affairs and Tourism.

107 S 78(1)(a).

108 S 78(1)(b).

109 S 78(1)(c).

110 It is worth noting also that in terms of s 32(1) of *NEMA*, as amended, "[a]ny person or group of persons may seek appropriate relief in respect of any breach or threatened breach of this Act, including a principle contained in Chapter 1, or of any provision of a specific environmental management Act, or of any other statutory provision concerned with the protection of the environment or the use of natural resources — ... (d) in the public interest; and (e) in the interest of protecting the environment."

111 S 78(2).

4.3 *The National Water Act 36 of 1998 (NWA)*

One of the most significant failings of both the EIA and the RoD in the present matter is that the ecological reserve appears to have been insufficiently taken into account. Although it was mentioned,¹¹² there was no discussion of the consideration given to it. Therefore, it is not apparent that it was seriously considered, as it ought to have been.¹¹³

The reserve, according to the *NWA*, consists of two parts:

... the basic human needs reserve and the ecological reserve. The basic human needs reserve provides for the essential needs of individuals served by the water resource in question and includes water for drinking, for food preparation and for personal hygiene. The ecological reserve relates to the water required to protect the aquatic ecosystems of the water resource. The Reserve refers to both the quantity and quality of the water in the resource, and will vary depending on the class of the resource. The Minister is required to determine the Reserve for all or part of any significant water resource.¹¹⁴ If a resource has not yet been classified, a preliminary determination of the Reserve may be made and later superseded by a new one. Once the Reserve is determined for a water resource it is binding in the same way as the class and the resource quality objectives.¹¹⁵

112 See n 42 above.

113 An effect of a dam (particularly a large dam) is to alter both the amplitude and the frequency of flood flows downstream as well as the overall flow. All three of these are key elements of the ecological reserve determination. These are complex factors requiring substantial analysis; if the ecological reserve received only a cursory mention it is, therefore, logical to deduce that it was not considered seriously. In this matter, there was no evidence in either the EIR or the RoD of serious consideration. It appears rather that those conducting the EIA process merely considered, and reported on, impacts and potential impacts in the dam's basin and in its immediate surroundings.

114 It is understandable that not every portion of every river in South Africa can have its reserve determined overnight; priority scheduling is needed. However, one might have assumed that the case in point would have been one which should have been accorded a very high priority and hence have been determined by now. The period of eight years from 1998 to 2006 has arguably been adequate; and the De Hoop dam has been on the cards since at least late 2002/early 2003.

115 Part 3.

In respect of the reserve, the binding duty (the wording is 'must') which rests on the Minister,¹¹⁶ the Director-General,¹¹⁷ an organ of state and a water management institution, is to –

...give effect to the Reserve as determined in terms of this Part when exercising any power or performing any duty in terms of this Act.

It hardly can be argued seriously in the present matter that such effect was given when the arguments of important stakeholders apparently were not given due weight by the decision-maker. At least, even if such weight was given, it does not appear from either the RoD or the EIA on which the RoD was purportedly largely based.

5 The conflict

As has been seen above, there is great unhappiness within SANParks about the De Hoop Dam. Concerns have been raised publicly; and there is a possibility that DEAT/DWAF were not meeting their obligations in terms of *NEMA*'s principles by ignoring this and by not considering SANParks' objections. The matter was, therefore, appropriate for conflict resolution, as informed by the spirit of *NEMA*. It also would seem to have been an appropriate case, anyway, to refer to conciliation; and, per section 17 of *NEMA*, as discussed above, the Minister is encouraged to consider conciliation.

Further, according to the Constitution:¹¹⁸

...[a]ll spheres of government and all organs of state within each sphere must ... exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere,¹¹⁹ and co-

116 Water Affairs and Forestry; but with oversight by the Minister: DEAT.

117 Water Affairs and Forestry.

118 *Constitution of the Republic of South Africa* 1996.

119 S 41(1)g.

operate with one another in mutual trust and good faith by¹²⁰ ... informing one another of, and consulting one another on, matters of common interest,¹²¹ and by co-ordinating their actions and legislation with one another.¹²²

In the instant case, it would appear that at least the decision-makers are in breach of these constitutional obligations. The Constitution provides also that:

...[a]n organ of state involved in an intergovernmental dispute must make every reasonable effort to settle the dispute by means of mechanisms and procedures provided for that purpose, and must exhaust all other remedies before it approaches a court to resolve the dispute.¹²³

While this does mean that SANParks would need to exhaust all avenues before litigating, it implies also that the decision-makers, having become aware of a dispute, must endeavour to settle it using the mechanisms provided by *NEMA*. Nor must it be forgotten that this was not simply a dispute between organs of state, but one which also involved other interested and affected parties.¹²⁴ In a supreme irony, according to the Minister of Water Affairs and Forestry, in a media release of June 2004:

The Project is also an excellent example of cooperative governance ... The Department of Water Affairs and Forestry, together with the Limpopo and Mpumalanga Provincial Governments, and in consultation with a broad range of stakeholders ranging from local communities to large private sector companies, investigated numerous options for making more water available in the area, before recommending the dam at De Hoop. This project is an excellent manifestation of Government's commitment to invest in infrastructure to support economic development and service delivery.

The ORWRDP Project may be many things, but an 'excellent example of cooperative governance' it is clearly not – as is illustrated above.

120 S 41(1)h.

121 S 41(1)h.iii.

122 S 41(1)h.iv.

123 S 41(3).

124 In particular, the five appellants (other than SANParks) against the RoD.

6 Alternative dispute resolution (ADR)

In the views of the present writers, the foregoing presents a good case for the need for Alternative Dispute Resolution (ADR). The *NWA* makes provision for what amounts effectively to ongoing ADR in many ways;¹²⁵ for example, through the establishment of Catchment Management Agencies (CMAs) in which all water stakeholders are represented and have a meaningful say in water allocation matters. In order to give practical effect to these policy imperatives; a system that accommodates, stimulates and supports what effectively amounts to ongoing ADR is essential.¹²⁶

It is widely acknowledged that a primary conflict of interests that is unavoidable in the South African situation is conflict between the goods and services for people from a river in which there is unrestricted flow down its length; and those goods and services from a dam. The goods and services that people derive from the river, particularly those closely related to biodiversity, are critically dependent on the variability of flow. South African rivers have highly variable flow, driven by our highly variable rainfall. The goods and services from a dam, on the other hand, are dependant on reducing the risk of shortages by storing the flow and thereby greatly reducing the variability.¹²⁷

125 S 79(4) provides, for instance, that "[i]n performing its functions a catchment management agency must – ... (b) strive towards achieving co-operation and consensus in managing the water resources under its control; ...". S 80 provides that "... the initial functions of a catchment management agency are – ... (c) to co-ordinate the related activities of water users and of the water management institutions within its water management area; (d) to promote the co-ordination of its implementation with the implementation of any applicable development plan established in terms of the *Water Services Act*, 1997 (Act No 108 of 1997); and (e) to promote community participation in the protection, use, development, conservation, management and control of the water resources in its water management area."

126 Key elements of the *NWA* deal with this through, *inter alia*, institutional arrangements such as CMAs and their supporting organisations. However, eight years have now elapsed since the *NWA* was promulgated (the date of commencement was 1 October 1998) and the first institutions that will give effect to these aspects of the Act are not yet functioning.

127 See generally: *DWA Management of Water Resources*.

This is only one of the many conflicts of interest inherent in the sharing of a common water resource. The inherent conflict of interests between groups is acknowledged in *NEMA*, in the *NWA*, and in many other supporting acts. The *NWA* goes further than simply acknowledging this conflict of interests, and calls for co-operation. It is implicit in the Act that the allocation of water is a social process which will be forever ongoing. Accordingly, in addition to the entrenching of the basic right of all to a fair and reasonable share, organisational structures (for instance, catchment management agencies, ch 7: ss 77-90;

In the opinion of the present writers, alternate dispute resolution (ADR) is appropriate when: a number of stakeholder groups is involved; uncertainty is high; there is no clear right and wrong apparent; implicit (undeclared) assumptions form the basis of most stakeholder views on allocation and on needs; the process of allocation is essentially a social one; the process is ongoing; conditions are continually changing; and the retaining of sound relations between the contending parties is important.¹²⁸

To accommodate the ongoing ADR process,¹²⁹ the organisational structures and processes for CMAs and Water User Associations (WUAs) were drafted into the *NWA*. There are 19 CMAs that are due to be formed, one for each of the 19 Water Management Areas (WMAs) – of which the Olifants River Catchment is one. The drafters of the *NWA* apparently foresaw that the implementation of these structures, and the ADR process within them, could not be implemented overnight. The Act therefore makes provision for DWAF to act as the CMA in the interim.¹³⁰ As the *NWA* commenced on 1 October 1998, it has been a lengthy interim period – and certainly a period long enough for DWAF to act in accordance with its own law with regard to how a CMA should act. It must, at least, be presumed that DWAF is to perform this role in the spirit and the letter (where appropriate) required by the *NWA*.

Complex policy requirements are recognised in the *White Paper on Water Policy*.¹³¹ Some of these policy requirements relevant to the present discussion

and water user associations, ch 8: ss 91-98), and processes are legislated to give effect to the inevitable ongoing need to resolve disputes over what needs and interests are fair and reasonable. In essence, these institutions are the crucible in which stakeholder groups will bargain for their interests rather than to clog the courts with demands for their rights.

128 Arguably, too, the courts are not appropriate for resolving disputes where multiple conflicting interests are involved.

129 Although not labeled ADR in the legislation, this is essentially what is provided for.

130 In the Preamble to ch 7 of the *NWA* it is stated that: "...[w]hilst the ultimate aim is to establish catchment management agencies for all water management areas, the Minister acts as the catchment management agency where one has not been established."

131 *White Paper on National Water Policy* 1997; DWAF 1997 <http://www.dwaf.gov.za/> 1 Nov.

include cooperation with neighbours, in harmony with common goals;¹³² integrated economic, developmental and environmental goals;¹³³ cooperation and coordination by all spheres of government and all organs of state;¹³⁴ integration of water and other management¹³⁵ and the adoption of a complex and integrated approach to water management.¹³⁶ The present writers are of the view that a reasonable interpretation of these stated requirements is that a form of ADR is envisaged and that the institutional changes which are currently under way¹³⁷ are designed to provide an institutional basis for such ADR.

One of the key functions of the CMA will be to facilitate processes which enable stakeholders to visit the consequences of their past, present and future actions. World-wide, the standard practice to assist this process, of visiting consequences that are removed in space and time from the cause, is to run simulation models.¹³⁸ It has been suggested that models are useful for generating information about the water resource systems, so that options can be considered and decisions taken to manage the resource and resolve conflict.¹³⁹ This description of the issues was adequate for the eras of getting more water supplies and of using water more efficiently.¹⁴⁰ However, we are now in the era of equitable allocation. Allocation is a social process and, therefore, fundamental paradigm changes take place in the process and the

132 *Ibid* at 5: The objective in relation to our neighbours is the same as it is within our borders, to ensure that we adjust to the pressures and demands of the future through co-operation, not conflict, in harmony with the needs of our common development goals and the protection of the environment.

133 *Ibid* at 7: The Constitution moves us away from the old approach that pitted environmental goals against economic and development ones and requires, instead, that they be integrated.

134 *Ibid* at 7: The Constitution provides that all spheres of Government and all organs of State must co-operate with each other in mutual trust and good faith by co-ordinating their actions and legislation with each other. Co-operative governance and integration are not only policy matters - they are constitutionally mandated.

135 *Ibid* at 9: Water resources cannot be managed in isolation from other natural resources.

136 *Ibid* at 9: The complexity of all these interactions calls for a complex and integrated approach to water management.

137 Eg, in terms of the *NWA*, the introduction of CMAs (ch 7; ss 77-90); the introduction of water user associations (ch 8; ss 91-98); and the introduction of catchment management forums. Catchment management forums are not provided for in the Act; but are multi-stakeholder forums at local level, which DWAF is promoting and funding nationally.

138 Schulze and Pike "Agrohydrological modelling".

139 *Ibid*.

140 Turton "Water Scarcity".

modeling technology is affected directly. The words 'information', 'options', 'decisions' and 'resolution' now require qualification. For example, the information needs to be credible and trusted and the understanding of it needs to be shared by all parties. The options must be sensible and innovative. There need to be a shared understanding of the consequences of decisions which themselves need to be acceptable and wise. Moreover, the resolutions need to be equitable, timely and lasting.

A key question is that of how credibility, trust, shared understanding, sensibility, acceptability, wisdom, equity and peace are to be achieved? The processes which yield these types of information, options, decisions and resolutions are clearly not ones based on creating information through uni-disciplinary, uni-organisational models and unilaterally disseminating the information with little prospect of receiving and responding to feedback. They will instead be processes which offer regular, affordable and meaningful communication amongst all stakeholder representatives and their top level scientific consultants. The processes should be flexible, iterative and increasingly reveal more information on the system dynamics. The processes will also need to be open and transparent, and to enable implicit assumptions and mental models to be made explicit. There will be a need to incorporate and reflect the inputs of all stakeholders in the processes. In our opinion the processes will involve a form of integrated systems simulation modelling which can function in a data poor environment. Such processes would need to overcome barriers to communication between stakeholders; which barriers might arise from geographic, disciplinary and organisational separation.

Implicit in all of these processes is a requirement to develop skills and technology to enable the phenomena of inference, connectivity, credibility, trust, assumptions, perceptions, relationships and coordination to flourish. All of these desirable phenomena, and especially that of coordination between groups, require extensive practice to achieve and manage effectively.

In the De Hoop matter it seems that, as will follow below in the discussion of the Revised Record of Decision, ADR has been brought in late as a remedy to

resolve a political impasse — rather than from the beginning as a process to guide protagonists. It is important to understand that the stakeholders in CMAs will be required to live with the consequences of their decisions, of their environmental impact assessments and it will be to their detriment if these are flawed. The kind of ADR that is needed, therefore, is not a once-off process; the likelihood needs to be enhanced of wise decisions being taken where decisions are necessary.¹⁴¹

7 The Minister's decision on the appeals; and the revised RoD

At the end of September 2006, the Minister of Environmental Affairs and Tourism released his decision on the lodged appeals (DoA).¹⁴² In one sense, this brings the entire matter to a close — the De Hoop dam will almost certainly be constructed despite the objections made to it, and despite the inadequacies of the environmental impact assessment and approval processes.¹⁴³ On the other hand, the Minister effectively acknowledges in the DoA that the objections had merit and that the processes followed were flawed. The appeals have, therefore, according to the Minister, been partially upheld.¹⁴⁴ Importantly for the arguments made in this article, the solutions eventually proposed by the

141 See generally, Axelrod *Evolution of Cooperation*. Axelrod suggests that promoting good outcomes is more a matter of shaping the interaction between actors, so that cooperation can evolve, than it is about imposition of requirements.

142 DEAT 2006 <http://www.environment.gov.za/> 17 Oct.

143 Despite there being a possibility that the authorisation for the project could be withdrawn at some point in the future, following non-compliance with conditions laid down, this is extremely unlikely. Development has a momentum of its own which can make it difficult to halt. As an analogy, consider for example the words of Olivier JA in *Director, Mineral Development, Gauteng Region v Save the Vaal Environment* 1999 (2) SA 709 (SCA) at 718B-D: "The issue of a licence in terms of s 9 enables the holder to proceed with the preparation of an environmental programme, which, if approved, will enable him to commence mining operations. Without the s 9 licence he cannot seek such approval. The granting of the s 9 licence opens the door to the licensee and sets in motion a chain of events which can, and in the ordinary course of events might well, lead to the commencement of mining operations. It is settled law that a mere preliminary decision can have serious consequences in particular cases, *inter alia*, where it lays '... the necessary foundation for a possible decision ...' which may have grave results. In such a case the *audi* rule applies to the consideration of the preliminary decision ..."

144 *Ibid* at '3: Decision'.

Minister in the DoA, and in the Revised Record of Decision (RRoD), amount to a directive that an ADR process be entered into.¹⁴⁵

According to the DoA, the Minister appointed certain 'external experts' to –

...review the hydrological, ecological and procedural aspects of the EIA process and to advise [thereon].¹⁴⁶

The recommendations made by the experts vindicate in significant respects the objections made to the process and to the appeals against the RoD; as well as supporting many of the suggestions made by the writers of the present paper.¹⁴⁷

145 *Ibid.*

146 *Ibid* at '2.2: Expert Recommendations'.

147 The experts suggested, in essence "(a) that in future, DEAT should ensure that appeal periods do not run over December-January, or that registered interested and affected parties be warned if this is to happen; (b) that an amended RoD clearly indicate which "essential aspects" must be achieved and, further, that a written commitment from DWAF be obtained indicating acceptance of responsibility for all costs necessary to comply with all conditions; (c) that DWAF supply written agreement that it will ensure that the domestic saleable portion will indeed serve the disadvantaged communities as specified (by means of ensuring that the required Water Resources Development Plans and Water Services Development Plans are approved by the relevant local authorities); (d) that DWAF undertake additional strategic level investigations, including assessment of cumulative effects to ensure that cumulative impacts are identified, assessed and managed; an SEA study of the Lowveld/Kruger Park Ecosystem as a whole being urgently needed, to determine cumulative impacts of development on the area – with the Mozambican government being a party to this study; (e) that DWAF must obtain written confirmation from the Mozambican government that it has given clearance for the dam to be built; and that a renewed effort be made – as part of the EIA process – to solicit response from co-basin states, especially from Mozambique; (f) that an Operational Phase Management Plan (OPMP) be drawn up and implemented for the relevant area, with specific reference to meeting the environmental water requirements for relevant rivers as determined for current preliminary reserves; this OPMP being essential before the De Hoop dam is constructed and implementation of the OPMP requiring a written agreement from DWAF so that it is legal and will be implemented by DWAF (which has the accountability under the *National Water Act* for the implementation of the "reserve"); (g) that the SEA be urgently carried out with the 'Aquatic Reserve' being redetermined and fine-tuned, via the suggested Adaptive Management Strategy, as DWAF proceed to develop an operating strategy for the dam; DWAF having to take responsibility for the SEA and compliance being critical; (h) that DWAF identify replacement land, by means of specialist surveys, that can replace the ecosystem lost and which will be transferred to the relevant nature conservation authorities for management as a nature reserve; the deficit being unacceptable if there is a reasonable certainty that species could be lost and in such a case the impact of the "no development" option needing to be critically reassessed to indicate the way forward with the proposed De Hoop dam; (i) that, finally, the RoD specify the issues and commitments made by the government, as reported in the EIR in the section on corporate governance as well as the ability of government to meet its

The Minister concluded that the need for the dam had been demonstrated, with there being "...no viable alternative to a supply-side solution for the demands envisaged on the system";¹⁴⁸ that the construction and operation of the dam will, however, "...have definite and substantial detrimental impacts on the environment";¹⁴⁹ and that the substantial impacts...

...cannot therefore be avoided, but measures must be put in place to mitigate the potential impacts to acceptable levels.¹⁵⁰

The Minister further concluded that the...

...current RoD does not adequately mitigate and manage the detrimental impacts and the grounds of appeals related to certain of the conditions and certain substantive issues should be upheld;¹⁵¹ [that the dam] ...may have certain positive impacts, both in terms of socio-economic and ecological aspects, but the RoD fails to adequately highlight or address these potential positive impacts';¹⁵² [and that an] ...amendment of the RoD and certain conditions thereof would be required to address the identified inaccuracies.¹⁵³

It could hardly be made any clearer that both the EIR and the RoD have now been recognised as seriously, if not fundamentally, flawed documents. Ironically, the Minister has, in effect, overturned his own original RoD.

'I therefore...' concludes the Minister, in the DoA,

...direct the Department [of Environmental Affairs and Tourism, presumably] to initiate a process, in partnership with [the] Department of Water Affairs and Forestry and other major authorities, to conduct a Strategic Environmental Assessment or

commitments; this specification to include the commitments and ability to meet them by all stakeholders involved in cooperative governance aspects related to the proposed project. DEAT 2006 <http://www.environment.gov.za/> 17 Oct.

148 *Ibid* at 3.1.

149 *Ibid* at 3.2.

150 *Ibid* at 3.3.

151 *Ibid* at 3.4.

152 *Ibid* at 3.5.

153 *Ibid* at 3.6.

related process that would guide future development and inform levels of acceptable change for the area in question.¹⁵⁴

In other words, the Departments and other players are directed to enter into a process of consultation and, by implication, compromise; in a context where environmental considerations will be given due consideration.

The RRoD was released on 16 October 2006.¹⁵⁵ In the RRoD, the Minister concluded, in addition to the findings listed in Section 3 of the DoA, that the dam will have:

...positive impacts, both in terms of socio-economic and ecological aspects;¹⁵⁶ [that] ...the conditions enclosed in this RRoD are deemed adequate to mitigate the identified impacts to acceptable levels;¹⁵⁷ [and that taking] ...the mitigation measures enforced through this RRoD into consideration, the principles of section 2 of *NEMA* can be substantially upheld.¹⁵⁸

Specific conditions¹⁵⁹ laid down include that DWAF must maintain the ecological reserve requirements of the Steelpoort River downstream of the dam;¹⁶⁰ and that DWAF must:

...establish and maintain a conservation area of equal size and similar nature to the area of the Sekhukhune Land Centre of Endemism, to be flooded or otherwise transformed as result of the building of the dam, as mitigation for the loss of this land. This conservation area must be established at the time that the dam becomes operational. The process for identification and establishment of this conservation area must be discussed with and agreed to by the DEAT.¹⁶¹

The RRoD's specific conditions further stipulate that the development is authorised on condition that DWAF establish an Environmental Monitoring

154 *Ibid* at '3: Decision'.

155 DEAT 2006 <http://www.dwaf.gov.za/> 1 Nov.

156 *Ibid* at '2: Key factors informing the decision'.

157 *Ibid*.

158 *Ibid*.

159 *Ibid*: '3: Conditions; 3.2: Specific conditions'.

160 *Ibid* at 3.2.1.1.

161 *Ibid* at 3.2.1.13.

Committee (EMC) with clear terms of reference as described;¹⁶² such EMC to be established before commencement of any construction activities and to include – as far as is reasonably practicable – representative stakeholders as members.¹⁶³ All costs associated with the EMC are to be borne by the applicant – DWAF;¹⁶⁴ and the EMC must report to the Director-General: DEAT on a bi-monthly basis.¹⁶⁵ Upon completion of the construction phase of the project, the roles, responsibilities and constitution of the EMC are to be reconsidered and the EMC to be re-established with new terms of reference for the operational phase of the development.¹⁶⁶ Further conditions include that DWAF must set up an Authorities Coordinating Committee (ACC);¹⁶⁷ with members drawn, *inter alia*, from DEAT, SANParks and relevant affected municipalities.¹⁶⁸ The responsibilities of the ACC include, *inter alia*, overseeing that all commitments in the RoD (the RRoD is meant, presumably) and EMP are met; providing guidance for the functioning of the EMC; taking into account all relevant information and issues raised by stakeholders when making project decisions; and evaluating reports and correspondence received from the independent Chair of the EMC.¹⁶⁹ It is further provided¹⁷⁰ that a suitably qualified Independent Environment Control Officer (ECO) must be appointed by the developer (DWAF); to monitor, on a daily basis, project compliance with the

162 *Ibid* at 3.2.2.7. These terms of reference being that the EMC would:

- (a) monitor and audit project compliance to the specific conditions of the RoD, environmental legislation and specific measures as stipulated in the EIR and the EMPs;
- (b) make recommendations to the Director-General: DEAT on issues related to the monitoring and auditing of the project;
- (c) be able to vary the frequency of meetings [required to be on a bi-monthly basis from the inception of the project – *ibid* at 3.2.2.5] should the need arise to review the prescribed frequency of meetings. Any changes should be communicated to the Department for acceptance;
- (d) [be] disbanded at a time to be determined by [DEAT] in consultation with [DWAF].

163 *Ibid* at 3.2.2.2. These members being: (a) a Chairperson [to be independent; and to have appropriate people and project management skills – *ibid* at 3.2.2.3]; (b) the developer's (DWAF) representatives; (c) representatives of affected residents/ratepayers' association[s]; (d) ward councilors; (e) non-governmental organizations; (f) community leaders; (g) representatives of Farmers Associations; (h) an Environmental Control Officer (ECO); and (i) an aquatic and terrestrial ecologist/s.

164 *Ibid* at 3.2.2.4.

165 *Ibid* at 3.2.2.6. The report to include, 'at the very least, the matters as described in 3.2.2.7'.

166 *Ibid* at 3.2.2.8.

167 *Ibid* at 3.2.3.1.

168 *Ibid* at 3.2.3.2.

169 *Ibid* at 3.2.3.4.

170 *Ibid* at 3.2.4.

conditions of the RoD (the RRoD is meant, presumably), environmental legislation and recommendations of the EMP; the applicant (DWAF) to bear the costs of the ECO.¹⁷¹

A 'suite of Environmental Management Plans (EMPs)' is required; including pre-construction EMPs, post-construction EMPs and operational EMPs.¹⁷²

DWAF is required to submit EMPs to DEAT for acceptance before the commencement of any of the activities related to this authorisation.¹⁷³ There also are further conditions stipulated, including that the necessary land rights for particular sections of the project be acquired by DWAF before roll-out of those sections;¹⁷⁴ and that there be compliance with other legislation.¹⁷⁵

The RRoD concludes by advising that the applicant (DWAF):

...must comply with the conditions set out in this letter. Failure to comply with any of the above conditions may result in, inter alia, the Department [DEAT] withdrawing the authorisation, issuing directives to address the non-compliance – including an order to cease the

171 *Ibid* at 3.2.4.1. The ECO to remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is handed over to DWAF by the contractor for operation – *ibid* at 3.2.4.6.

172 *Ibid* at 3.2.5.1.

173 *Ibid* at 3.2.5.2. Relevant here is that the dam is being built, at least partially, to benefit mining interests and that mining companies will even bear part of the cost (see n 7 above). This could have an important consequence for both DWAF and the mining companies involved. In terms of s 41(1) of the *Mineral and Petroleum Resources Development Act 28 of 2002*: "...[a]n applicant for a prospecting right, mining right or mining permit must, before the Minister [meaning the Minister of Minerals and Energy] approves the environmental management plan or environmental management programme in terms of section 39(4), make the prescribed financial provision for the rehabilitation or management of negative environmental impacts."

In addition, s 41(5) of the same Act provides that: "...[t]he requirement to maintain and retain the financial provision remains in force until the Minister issues a certificate in terms of section 43 [a 'closure certificate'] to such holder, but the Minister may retain such portion of the financial provision as may be required to rehabilitate the closed mining or prospecting operation in respect of latent or residual environmental impacts.

It is submitted that these provisions will be relevant in respect of the De Hoop dam. It would therefore be interesting (and potentially instructive) to see whether DWAF and/or the mining companies involved are at any point called upon to make such financial provision. Considering that the Sekhukhune Land Centre of Endemism is potentially endangered by the development, financial provision ought to be of significant value.

174 *Ibid* at 3.2.6.

175 *Ibid* at 3.2.7. Such other legislation includes, in particular, that pertaining to archaeological remains (*ibid* at 3.2.7.1); relocation of burial sites (*ibid* at 3.2.7.2); and that pertaining to all sites 'indicated as having scientific and research significance' (*ibid* at 3.2.7.3).

activity – as well as instituting criminal and/or civil proceedings to enforce compliance.¹⁷⁶

By comparison with the flaws and inadequacies in the initial RoD, as discussed above in paragraph 2 of this article,¹⁷⁷ the DoA and RRoD would appear to show sterling attention being given to the requirements of South Africa's environmental legislation — and to the ADR spirit of *NEMA*. The cynical critic could argue, however, that the RRoD merely serves to mask that the construction of the dam always has been a *fait accompli*, given the prevailing political will toward development and the momentum of the ASGISA initiative, and that insufficient attention ultimately has been paid to the 'no development' option.¹⁷⁸ Nevertheless, *NEMA* requires that social, economic and environmental considerations all be considered as components of sustainable development;¹⁷⁹ and, with no one of these three interests being given priority,¹⁸⁰ construction of the De Hoop dam subject to the strictures of the RRoD is probably as satisfactory a result as the concerned environmentalist could realistically have hoped to achieve.¹⁸¹

176 *Ibid* at '4: Consequences of non-compliance'.

177 Contrast, eg, the requirement in the RoD that DWAF initiate an investigation into the conservation of an equivalent area of the Sekhukhune Land Centre of Plant Endemism to replace that lost due to the construction of the dam and its impoundment area (RoD p 4 3.2.4, DEAT 2005 <http://www.dwaf.gov.za/> 17 May) with the requirement in the RRoD that the applicant (DWAF) must: "...establish and maintain a conservation area of equal size and similar nature to the area of the Sekhukhune Land Centre of Endemism, to be flooded or otherwise transformed as result of the building of the dam, as mitigation for the loss of this land. This conservation area must be established at the time that the dam becomes operational. The process for identification and establishment of this conservation area must be discussed with and agreed to by the DEAT (RRoD 3.2.1.13).

The difference between 'initiate an investigation into' and 'establish and maintain' could hardly be greater.

178 In the RRoD, for example, the Minister does not expand convincingly upon his assertions in the RoD that 'the need for the proposed dam has clearly been demonstrated' – RRoD at '2: Key factors informing the decision'.

179 S 2(3): Development must be socially, environmentally and economically sustainable.

180 S 2(2) *does* provide that "environmental management must place people and their needs at the forefront of its concern"; but this cannot be seen as a 'developer's charter' – environmental protection is as much a 'need of the people' as is economic development.

181 According to media reports in October 2006, DWAF Director-General, Jabu Sindane, said: "[i]nstead of finger-pointing and harassing concerned citizens, we worked with the Department of Environmental Affairs and NGOs to find an acceptable solution." Groenewald 2006 *M&G* 6 Oct. This statement, the present writers feel, represents a 'face-saving effort' by DWAF; after the DoA and RRoD made it clear that the EIR which DWAF had relied on earlier was flawed.

8 Conclusion

In a climate of uncertainty, politics thrive. This is a universally accepted phenomenon. Uncertainty is germane to environmental issues. It is necessary, therefore, to build in a culture of cooperative governance, supported by an ADR culture¹⁸² and functions throughout the process, to negotiate a way between paralysis and uncontrolled development. ADR cannot be something ‘tacked on’ at the end.¹⁸³ It takes time to build ADR capability into every facet of the science and technology that underpins the analysis of water resources, water quality, aquatic ecosystems analysis and analysis of goods and services from the environment. *NEMA* and the *NWA* are soaked in the spirit of ADR precisely because their drafters recognised that this would be the only practical way to achieve the goals of equity, environmental sustainability and economic efficiency. The old law created a climate for economic exploitation to the detriment of the other two; and now, as the *NWA* has not been implemented, we, ironically, must still live with the old weaknesses. The result is the De Hoop dam situation prior to the RRoD: precisely the result which *NEMA* and the *NWA* were intended to prevent from occurring.

It is not possible for the authors of this article to state with certainty that the De Hoop dam either should or should not be built; just as this is not possible for any of the protagonists in the debate. The best that can be done in any development – and particularly where the development is on a major scale and has the potential to cause major environmental disruption – is to proceed with caution, to act only upon the best scientific data available and to ensure that all requisite legal steps have been taken.

It is submitted that an objective view of the matter shows that these steps were not initially taken in respect of the De Hoop dam. As has been shown above,

182 The argument for naming the culture that should prevail within the multi-stakeholder cooperative governance framework as ‘an ADR culture’ is made above in s 6 of this paper.

183 It is laudable that the Minister: DEAT has provided in the RRoD for what amounts to an ADR process; but this remains ‘fire fighting’ – the real benefits of ADR (negotiation, consideration and compromise) have been lost.

important stakeholders' interests and significant environmental considerations apparently were not given due consideration in the Environmental Impact Report and the Record of Decision. It is clear, therefore, that the decision-makers did not act in accordance with the section 2 principles of *NEMA*, as they were required to do. Nor did the decision-makers act in accordance with the conflict-breaching mechanisms which the Constitution and *NEMA* require them to use. Hopefully, the De Hoop dam controversy shows that it is possible for ADR to be used to breach conflict in environmental and developmental disputes. It is a great pity that ADR considerations were not brought in at a far earlier stage – as the present writers contend they ought to have been – as this may have prevented much acrimony, expense and the grave risk of serious environmental damage occurring.¹⁸⁴ There is much to be learned from the matter.

In respect of the De Hoop dam, the writers of the present article submit, the Minister of DEAT was right to set aside (at least, partially) a grossly flawed EIA/RoD process – including his own RoD. The Minister could then, and probably ought to, have sent the applicant (DWAF) 'back to the beginning' and required that a credible EIA process be conducted. In addition, the Minister could then have required the use of ADR to find the best and most equitable path. Indeed, it is submitted that by not doing so the decision-maker missed out on the opportunity to bring all interests into the fold properly and, thereby, to accommodate these interests equitably, and thereby to make the best — or at least the best informed — decision. Further, it is submitted (as has been argued above) that that not only was an opportunity wasted; but the decision-maker was in breach of its legal obligations in terms of *NEMA* and the Constitution. An ADR process in this matter could have pointed South Africa in the direction of environmental cooperation and successful management. In the end, however, the best that can be hoped for is that the protagonists in future such disputes – and the present writers submit that there *will* be similar disputes in the future –

184 A risk which, it is contended, has not been entirely eliminated. The complexities, for example, of removing and reinstating the Sekhukhune Land Centre of Endemism cannot be underestimated.

will have learned from the errors made in the De Hoop dam authorisation process.¹⁸⁵

185 The EIA process for the proposed Richmond Dam (see s 2 and n 24 and 25 above) might provide an immediate test case for the willingness of the protagonists – Anglo-Platinum, DWAF and DEAT – to engage in proper consultation with interested and affected parties.

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List of abbreviations

a	article
ACC	Authorities Coordinating Committee
ADR	Alternative dispute resolution
ASGISA	Accelerated and Shared Growth Initiative for South Africa
Ch	Chapter
CMA	Catchment Management Area
DEAT	Department of Environmental Affairs and Tourism
DoA	Decision on the lodged appeals
DWAF	Department of Water Affairs and Forestry
ECO	Environmental control officer
EIA	Environmental impact assessment
EMC	Environmental Monitoring Committee
EMP	Environmental management plan
EWT	Endangered Wildlife Trust
GN	Government notice
IEM	Integrated environmental management
KNP	Kruger National Park
<i>KPTON</i>	<i>Kruger Park Times Online News</i>
<i>M&G</i>	<i>Mail & Guardian</i>
n	note
<i>NEMA</i>	<i>National Environmental Management Act</i>
<i>NWA</i>	<i>National Water Act</i>
ORWRDP	Olifants River Water Resource Development Project
<i>P&LON</i>	<i>Policy and Law Online News</i>
Reg	Regulation
RoD	Record of Decision
RRoD	Revised Record of Decision
s	section
sa	Undated Internet source (followed by year found on Internet)
SAHRA	South African Heritage Resources Agency
<i>SAJELP</i>	<i>South African Journal of Environmental Law & Policy</i>
SANParks	South African National Parks

SAWC	South African Water Caucus
SEA	Strategic Environmental Assessment
ss	sections
WDC	<i>World Commission on Dams</i>
WMA	Water Management Areas
WUA	Water User Associations