



**REPRESENTATIONS/COMMENTS SUBMITTED BY
TROUT SOUTH AFRICA AND THE FEDERATION OF SOUTHERN AFRICAN FLY FISHERS
ON THE PROPOSED AMENDMENTS TO PART 2 OF CHAPTER 5 OF THE NATIONAL ENVIRONMENTAL
MANAGEMENT BIODIVERSITY ACT, 2004
SET OUT IN THE NATIONAL ENVIRONMENTAL MANAGEMENT BILL, 2015
THAT WAS PUBLISHED FOR COMMENT ON 13 OCTOBER 2015**

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1. Introduction

- 1.1 These representations are made jointly by Trout South Africa (TSA) and the Federation of Southern African Flyfishers (FOSAF).
- 1.2 These representations focus on the proposed amendments to Part 2 of Chapter 5 Environmental Management Biodiversity Act, 2004 or NEMBA. Chapter 5 of NEMBA is of particular concern to the trout value chain given the numerous attempts that have been made by environmental officials over the years to declare rainbow trout (*oncorhynchus mykiss*) and brown trout (*Salmo trutta*) – hereafter referred to as trout, invasive and consequently subject to a process of prevention and/or systematic removal.
- 1.3 This unfortunate fact and indeed the proposed amendments themselves speak to a deeper malaise affects environmental law making in general and consequently the ability of these laws to improve the health and wellbeing of South Africans. That malaise is the deepening misalignment between the environmental right described in section 24 of the Constitution and the manner in which environmental authorities are seeking to make and implement environmental laws.
- 1.4 The consequence of this misalignment is that environmental law is creating disabling environments rather than the enabling environment that is required by government to effect sustainable development and service delivery. This is particularly evident in aquaculture where the Department of Environmental Affairs or DEA and some provincial environmental authorities, notably Mpumalanga, are actively frustrating efforts to grow aquaculture in accordance with the aquaculture development goals set by Operation Phakisa.
 - (a) It is not just the trout value chain that is being compromised by this behaviour. Even attempts to grow aquaculture using indigenous fish are being frustrated on the basis that indigenous fish selectively bred for food production are “mutants”.¹ The result is a no win situation where aquaculture using alien fish is discouraged because they are alien. Aquaculture using indigenous fish is also discouraged because fish used in aquaculture may “pollute” the genetic purity of fish living in the wild.
 - (b) Trout based aquaculture is huge in Mpumalanga. Apart from accounting for about 40% of South Africa’s trout production it also stocks trout into Mpumalanga’s trout fishing waters. Trout fishing and the tourism business it drives sustains the economies of towns such as Dullstroom.²

¹ This is the accusation levelled by the MTPA against the red strain of *O. mossambicus*.

² Gijsbertus Hoogendoorn (2010). Second homes and local economic impacts in the South African post-productivist countryside <http://etd.uovs.ac.za/ETD-db/theses/available/etd-10192011-134815/unrestricted/HoogendoornG.pdf> page 119 In addition, Dullstroom forms part of the Highlands Trout Triangle Association (HTTA) which is seen as one of the most popular fly-fishing regions in Africa and reportedly has one of the largest concentrations of trout dams in Africa, with over 1200 dams (Rogerson, 2002b:153). An anonymous interviewee posited the following regarding the influence of trout fishing in the district: ‘Trout fishing is the greatest attraction of Dullstroom.’ Another interviewee stated, ‘I would say that trout fishing is the only

- 1.5 This conflict between the President and his cabinet's desire to grow aquaculture on the one hand and the opinion of environmental officials on the other that aquaculture is harmful to biodiversity speaks to another equally serious misalignment. This misalignment arises from the failure of environmental authorities to comprehend that the environmental right is a human right and not a right indigenous biodiversity enjoys to be protected from human beings. They do not understand that the reference to the environment in the constitution is not a reference to indigenous biodiversity but rather a reference to how all biodiversity including alien biodiversity and indeed how the wider conspectus of the biophysical³ influences human health and wellbeing.
- 1.6 This conflict speaks to two other inconsistencies that have seriously adverse consequences for the rule of law.
- (a) Environmental authorities do not appreciate that environmental management and thus the protection of biodiversity must take place within the broader conspectus of the principles outlined in section 2 of the National Environmental Management Act, 1998 or NEMA (the NEMA Principles).
 - (b) Environmental authorities do not appreciate that the rule of law is suspicious of process that are driven by opinion rather than the application of rules to proven facts.
- 1.7 We deal with this conflict in more detail later but at this stage point out that this failure to appreciate the environmental right means that:
- (a) The NEMA Principles are ignored in formulating and applying laws.
 - (b) Laws and their implementation are increasingly informed by the opinions of so called experts rather than the application of rules to facts.
- 1.8 This failure to properly apply our laws is having far reaching impacts on service delivery and economic growth⁴, as well as the Constitution, constitutional principles and the rule of law. Trout have in a way become the canary in the coal mine that warns of these misalignments.
- 1.9 It seems that the DEA is trying to legislate its way out of the problems that arise due to this misalignment by the introduction of an ever growing number of increasingly complex and

constant in the town. If it was not for the trout fishing, Dullstroom would not have emerged as a tourist destination.' Trout fishing is deeply entrenched in the tourism destination image of Dullstroom. Marketing mechanisms of the entrepreneurial ventures of the town and area make extensive use of Dullstroom's reputation as a prime trout fishing destination (De Jager, 2010). The core tourism product of the region, and Dullstroom specifically, is trout fishing, yet the diversity of adventure based activities such as rock climbing, abseiling, hiking and mountain-biking has served to strengthen and diversify tourism in the area.

³ Used in the sense defined in NEMA, namely of (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them.

⁴ For example MEC for KwaZulu-Natal was reported in the press on 14 September as saying that there are 452 outstanding development projects valued at 1.7 trillion rands *still waiting for the necessary environmental impact assessment (EIA) approval* - <http://www.iol.co.za/news/south-africa/kwazulu-natal/focus-on-streamlining-clearing-backlogs-1.1750254>

harsh laws that adversely affect the lives of ordinary South Africans. Worrying aspects of this regulatory invasion of the human space include:

- (a) These laws make an increasingly wide range of activities unlawful thus restricting the space where human beings can operate lawfully. Aquaculture, for example is restricted regarding alien fish because according to the admittedly extreme views of Dr Weyl at the South African Institute of Aquatic Biodiversity or SAIB:

At first glance, alien fish appear to be a convenient resource for public use. After all, alien fishes are generally acknowledged as a major threat to biodiversity both inside and outside of protected areas because they impact on aquatic ecosystems by hybridising with native species, altering habitats, introducing parasites and disease, and by competing with and preying on native biota (Weyl et al 2014).⁵

However the use of indigenous fish used in aquaculture is also discouraged as the selective breeding that is essential for normal agricultural production is seen by officials as creating “mutants” that pollute the genetic purity of the indigenous species. Thus Mr Hoffman of the Mpumalanga Tourism and Parks Agency (MTPA) recently refused the establishment of new tilapia aquaculture facilities in Mpumalanga saying that:

Aquaculture poses a threat to South Africa’s biodiversity and many mistakes were made previously and we should learn from these mistakes! That is the reason why we from the MTPA will not allow any Oreochromis mossambicus hybrids, colour mutants and O. niloticus in the Mpumalanga Province, not even in closed systems. To our knowledge, O. mossambicus in the rivers of the Mpumalanga Province, is relatively clean and no hybrids do occur and we would like to keep it like that.⁶

- (b) What is lawful depends ultimately on the opinion of an official rather than any transparent objectively predictable set of rules. Rule by opinion is replacing the rule of law.
- (c) One must employ expensive consultants to advise not only on how you must comply with these laws but also how you have transgressed them in the first place. These laws are often incomprehensible to experts let alone the ordinary people who are made criminal by them.

1.10 Perhaps the biggest concern is that their complexity and the cost of implementation and compliance means that increasingly large areas of the South African economy are closed to everyone but the very rich who can pay the very high price that environmental authorities are levying on entry into the economy.

⁵ Weyl, O.L.F., Ellender, B.R., Wasserman, R.J. & Woodford, D.J., 2015, ‘Unintended consequences of using alien fish for human benefit in protected areas’, *Koedoe* 57(1), Art. #1264, 5 pages.
<http://dx.doi.org/10.4102/koedoe.v57i1.126>

⁶ Letter from Mr Andre Hoffman to Mr Nic James of Rivendel Hatchery dated 2 November 2015.

- 1.11 We suggest that government take stock of where all of this is going and its impact on the economy, service delivery and ultimately human health and wellbeing.
- (a) We think that it is time to resolve the inherent conflicts that exist between the ecological view which sees humans as enemies of the environment and the constitutional view that sees human beings as central to the environment.
 - (b) We think that the presidential directive that changes to our laws be accompanied by a risk assessment is a good one.
 - (c) The risk assessment that accompanies the Proposed Amendment is inadequate. It does not come close to fulfilling what is required of a proper risk assessment and hopelessly underestimates the cost of implementing the proposed laws to both to the fiscus and to the larger economy.
 - (d) A proper assessment of whether these laws are constitutionally aligned and are delivering value is required if environmental law is to be harmonised with the constitution and government policies.

2. The Parties

- 2.1 Trout South Africa (TSA) is a formally constituted commodity group formed in 2013 and recognised by the DAFF. It represents the trout value chain comprising trout aquaculture, trout production and processing, trout fishing, trout tourism including fishing venues, hospitality and accommodation facilities both community-based and commercial, trout related academia and any other service providers related to trout tourism, tackle dealers, manufactures.
- 2.2 The Federation of Southern African Flyfishers (FOSAF) is a non-governmental organisation formed in 1985 to promote the sport of fly fishing and the interests of flyfishers throughout Southern Africa, in order to represent their interests to official organs of state for consultation and liaison in matters of policy, governance and the law, to the mutual benefit of all. FOSAF is a member of TSA.
- 2.3 Both TSA and FOSAF have made numerous representations to DEA regarding the proposed listing of trout as an invasive species under NEMBA. The representation of TSA at the Phakisa Ocean Labs process that took place in July last year resulted in having trout removed from the list of species that were listed as invasive under NEMBA on 1 August 2014.
- 2.4 Since then both organisations have worked closely with DEA and DAFF towards crafting an enabling legal framework in which the trout value chain can be encouraged and nurtured. TSA is recognised by DAFF as representing the interests of the trout value chain and as such is represented in DAFF's Aquaculture value chain meetings as well as in the marine Aquaculture Industry Liaison meetings.

3. About trout

- 3.1 The trout value chain in South Africa is 125 years old. The first successful introduction of trout took place on the Bushman's river in KwaZulu-Natal on 7 May 1890.⁷ This was shortly followed by successful stockings in the Western and Eastern Cape. Trout were introduced into Gauteng Mpumalanga and Limpopo 100 years ago.
- 3.2 The stocking of trout was initially made possible by the establishment of government owned and operated hatcheries in KwaZulu-Natal⁸ and the Eastern⁹ and Western Cape¹⁰. These initiatives proved so successful that in 1947 government made stocking South Africa's waters to alien fish that offered good sport and good eating a priority. Bass were largely introduced as a result of these efforts.
- 3.3 It is worth noting that these post war initiatives were all science based.¹¹ In fact the scientists who promoted the introduction of alien fishes during that time were all government employees. They are the former colleagues of the scientists who now are advising government to remove those species.
- 3.4 Present day scientist claim that the authorities that permitted the widespread stocking of alien fish were irresponsible. Closer examination however shows that this is not true. The scientists of the day who promoted and organised the stocking of South Africa's rivers with alien fish did their best with the knowledge they had at the time. Critics of the day who included a small number of conservationists like the environmental officials of today were told that what was being done was science based. What has happened is that the scientific consensus has changed. This is not unusual. Scientists change their minds all the time. Indeed it is very likely that if we could turn the clock forward another 70 years we will find that scientists in the future will be just as critical of the recommendations of their present day colleagues as the scientist of today are critical of the recommendations of their colleagues of 70 years ago.
- 3.5 The successful introduction trout 125 years ago has given rise to a complex and valuable value chain comprising elements of agriculture, subsistence and recreational fishing and tourism. The diverse nature of the value chain and the fact that a great deal of the trout targeted by recreational anglers are farmed for this purpose makes the value chain different from the value chains connected with other forms of recreational fishing. Trout anglers are the only fishing community in South Africa who invest in their fishery by breeding fish for fishing and by maintaining and in many cases transforming habitats to create the clear cold and unpolluted waters in which trout thrive.
- 3.6 This investment makes the fishery itself valuable. It is why one must include the value represented by the fishery when determining the value of the trout value chain which in

⁷ This initiative was led by John Parker whose efforts were funded by what was then the Natal Colonial Government.

⁸ Tetworth.

⁹ Pirie.

¹⁰ Jonkershoek.

¹¹ This is borne out from the literature in magazines, journals and books published at the time where government scientists such as Dr Hey and Dr Nel recommended the stocking of South Africa's fresh waters to alien fish.

turn explains why a relatively small number of anglers have developed a fishery and a value chain that makes such a large contribution to the health and wellbeing of South Africans.

- 3.7 Listing trout as invasive or treating trout as dangerous aliens threatens the inherent value that lies in trout and thus the whole trout value chain.

4. **Phakisa**

- 4.1 The Phakisa Ocean labs conference that took place in June and July last year played an important role in securing the future of the trout value chain. Phakisa is about unlocking value in our economy by initiating enabling laws and processes that remove stumbling blocks and align government and private efforts behind a common goal of improving service delivery, growing the economy and enhancing the health and wellbeing of all South Africans.
- 4.2 TSA participated in and fully supports this process as does FOSAF. They applaud the Phakisa initiative which has enabled a process which resulted in a sea change in government thinking and which has given the trout value chain hope that it can make the contribution it knows it is capable of.
- 4.3 The win- win settlement that was reached at Phakisa between TSA and the DEA which was endorsed at a meeting between the Minister of Environmental Affairs (the Minister) and the provincial environment MEC's at a MINMEC held in July this year means that:
- (a) Trout would not be listed as invasive in areas where they already occur in South Africa outside certain protected areas.
 - (b) Trout will be declared category 2 invasive in certain protected areas and where they do not presently occur (but could establish if they were introduced).
 - (c) The trout value chain will self-regulate in areas where trout is not declared invasive (the intention being to mitigate the risk of trout being introduced outside those areas).
 - (d) Instead a process was initiated that is intended to determine and map the whereabouts of trout in South Africa so as to facilitate the implementation of the points a), b) and c) above.
- 4.4 This was a historic moment that provided the much needed clarity that is necessary to grow the trout value chain especially in previously disadvantaged rural communities whose access to the necessary quantities of cold unpolluted water make them prime localities for the development of new trout aquaculture facilities. It also offered, given trout's role as canary in the coal mine, a glimpse of what is possible when seeking to balance sustainable development and conservation imperatives to find win-win solutions based around practical goals.

- 4.5 Unfortunately the implementation of this process has been frustrated by environmental officials post the Phakisa Ocean Labs Conference.
- (a) The legislative reform that has taken place post the Phakisa Ocean Labs Conference has not been enabling as was promised. The changes that were made to the listing of aquaculture related activities under NEMA that allegedly have a significant environmental impact were largely cosmetic. Suggested Norms and Standards increased the existing regulatory burden rather than reduced it. Government officials continue to treat aquaculture as if it is a dangerous activity rather than something that should be encouraged.
 - (b) It is still a daunting and expensive task to establish a lawful aquaculture facility.
 - (c) Attempts to try and find win-win solutions are frustrated in Mpumalanga where the same provincial officials refuse to meet with members of the trout value chain and their counterparts in agriculture. A meeting that was meant to have taken place on 9 November 2015 was called off at the last moment. This is the fourth failed attempt to hold such a meeting.
 - (d) Again in Mpumalanga environmental approval processes such as the routine issue of permits have been delayed detrimentally affecting existing trout aquaculture businesses. Some of these businesses have even been targeted with prosecution and threatened with closure despite assurances that were given at Phakisa that such prosecution would not take place while the situation was being regularised.
 - (e) At a national level the mapping process required to map the whereabouts of trout has been delayed by almost a year and is still not complete.
 - (i) Meetings that should have taken place with the trout value chain to advance this process have been delayed and then postponed and are likely to be postponed again.
 - (ii) Agreements that have been reached as to how the mapping process is to take place have been ignored.

- 4.6 The level of frustration is such that TSA has had to escalate a complaint in terms of the Phakisa process.

5. **Constitutional misalignments**

- 5.1 The above difficulties can at one level be seen as the kind of official kick back that happens when bureaucratic hegemonies, especially rapidly growing ones such as that at the DEA, are confronted with something new such as the Phakisa initiative. However at another level it speaks to what we referred to earlier, namely a deeper and more problematic misalignment between the human centred sustainable development values articulated in

NEMA and the Constitution and conservationist belief that protecting the environment means protecting indigenous biodiversity from human beings.

- 5.2 Section 24(a) of the Constitution says that *every person has a right to an environment that is not harmful to his or her health and wellbeing*. The reference to the environment in section 24(a) does not mean the world before human beings arrived. Environment is defined anthropocentrically in NEMA as:

the surroundings within which humans exist and that are made up of

- (i) the land, water and atmosphere of the earth;*
- (ii) micro-organisms, plant and animal life;*
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; **and***
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being; (Our emphasis added.)*

- 5.3 The legislative mandate which is set out in section 24(b) of the Constitution needs to be seen in these terms. Section 24(b) gives citizens the right to *have the environment protected, for the benefit of present and future generations, through the application reasonable legislative and other measures that:*

- (a) prevent pollution and ecological degradation;*
- (b) promote conservation; and*
- (c) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*

- 5.4 The Constitutional Court has ruled that these three requirements must be interpreted holistically. Thus:

The Constitution recognises the interrelationship between the environment and development; indeed it recognises the need for the protection of the environment while at the same time it recognises the need for social and economic development. It contemplates the integration of environmental protection and socio-economic development. It envisages that environmental considerations will be balanced with socio-economic considerations through the ideal of sustainable development. This is apparent from section 24(b)(iii) which provides that the environment will be protected by securing “ecologically sustainable development and use of natural resources while promoting justifiable economic and social

development". Sustainable development and sustainable use and exploitation of natural resources are at the core of the protection of the environment.¹²

- 5.5 It also follows that this must be done having regard to the primary purpose of this right, namely that *every person has a right to an environment that is not harmful to his or her health and wellbeing*. Regrettably there is a tendency amongst environmental officials to overlook both the holistic nature of section 24(b) of the Constitution and that it must be read purposively having regard to section 24(a).
- 5.6 The environmental right and indeed the Constitution itself is not the crude construct described in chapter 8 of the proposed SIP guideline that was recently published for comment.
- 5.7 The DEA with respect quotes the wrong legal authority in that guideline. The world has moved on since 1998 when the Supreme Court of Appeal decided the Save the Vaal Case.¹³ They also quote the Kaunda case¹⁴ out of context to advance what we suggest is a wholly inappropriate notion of so called fundamental rights.
- 5.8 If you read the passage from the Kaunda judgement quoted in the guideline in the fuller context of the preceding paragraphs to that quote, a very different picture emerges to that painted in Chapter 8 of the proposed SIP guideline. It is a picture that emphasises the importance of applying constitutional values and the broader context of the NEMA principles when listing activities as having a significant environmental impact. The Chief Justice writing for the majority of the court said:

[156] As a nation, we have committed ourselves to establishing "a society based on democratic values, social justice and fundamental human rights". The very first provision of the Constitution sets out the founding values upon which our constitutional democracy is founded. These values include human dignity, the achievement of equality and the advancement of human rights and freedoms. Our democratic state is therefore committed to the advancement and protection of fundamental human rights. This commitment is immediately apparent in the Bill of Rights, which is the cornerstone of our constitutional democracy and which affirms democratic values of human dignity, equality and freedom.

[157] In this sense our Constitution must be seen as a promissory note. Indeed, in peremptory terms, section 7(2) provides that "[t]he state must respect, protect, promote and fulfil the rights in the Bill of Rights.

¹² Paragraph 44 of *Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province and Others* (CCT67/06) [2007] ZACC 13; (7 June 2007).

¹³ *Director: Mineral Development, Gauteng Region and Another v Save the Vaal Environment and Others* (133/98) [1999] ZASCA 9; [1999] 2 All SA 381 (A) (12 March 1999).

¹⁴ *Kaunda and Others v President of the Republic of South Africa* (CCT 23/04) [2004] ZACC 5; 2005 (4) SA 235 (CC); 2004 (10) BCLR 1009 (CC) (4 August 2004).

[159] It is this commitment to the promotion and protection of fundamental human rights that binds us and defines us as a nation and which must discipline our government and inform the duty which it owes to its nationals.

- 5.9 We think it is necessary, to repeat the first section in our Constitution that describes those values. It reads:

Republic of South Africa

The Republic of South Africa is one, sovereign, democratic state founded on the following values:

- (a) *Human dignity, the achievement of equality and the advancement of human rights and freedoms.*
- (b) *Non-racialism and non-sexism.*
- (c) *Supremacy of the constitution and the rule of law.*
- (d) *Universal adult suffrage, a national common voters roll, regular elections and a multi-party system of democratic government, to ensure accountability, responsiveness and openness*

- 5.10 The opening passage preamble to the Constitution also bears mentioning as it speaks to South Africa's aspirations as a nation. It says:

*We, the people of South Africa,
Recognise the injustices of our past;
Honour those who suffered for justice and freedom in our land;
Respect those who have worked to build and develop our country; and
Believe that South Africa belongs to all who live in it, united in our diversity.*

- 5.11 It is trite law that although these rights are fundamental, they are not all absolute. Only three rights are guaranteed as absolutely non derogable rights in the Constitution. They are the right to life, the right not to be enslaved or subjected to servitude and the right to dignity.¹⁵ Other rights such as the environmental right may be limited in terms of section 36 of the Constitution *in terms of law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom.*

- 5.12 This proviso is necessary given that many fundamental rights conflict with other fundamental rights. The right to freely carry on one's trade or profession, the right to own land, the right to housing and the right to, health care food water and social security are all rights that can potentially conflict with the right to an environmental that is not harmful to our health and wellbeing.

- 5.13 This is one of the reasons why it is important to integrate the environmental right into the general conspectus of human rights and law in general.

¹⁵ Section 37 of the Constitution.

- 5.14 The integration of laws requires a focus or a key principle or value point around which the laws can find common ground. The promotion of sustainable development and human health and wellbeing is that core focus. That this is so is emphasised in the principles set out in the NEMA Principles.
- 5.15 The overriding importance of promoting our health and wellbeing is emphasised in Section 2(2) of NEMA which obliges lawmakers and officials to place.

people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.

- 5.16 Environmental officials mistake the need to conserve indigenous biodiversity as this key principle underlying the environmental right or when they see the conservation of indigenous biodiversity as being central to the environmental right.
- (a) An example of this mistake playing out in practice is the proposal that fines be judged exclusively against the impact a transgression has on biodiversity when the purpose of NEMA is in fact to manage the broader conspectus of activities that have a significant impact on the environment.
 - (b) It is true that the NEMA Principles include principles that are conservationist in nature if read by themselves. The precautionary principle is one¹⁶ as is, for example, the principle that sustainable development requires a consideration of *the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied.*¹⁷
 - (c) However the environmental principles even the precautionary principle and the conservationist ideal of protecting ecosystems are all interconnected in a broader conspectus that places human health and wellbeing uppermost.
 - (i) Officials forget that the NEMA Principles and indeed the NEMA itself refer to biodiversity or biological diversity only once (in section 2(4)(a)(i)).
 - (ii) This principle is moreover one of eight sub principles that must be read in the context of another nineteen principles that inform sustainable development in general which in turn must be applied having regard to specifically the four major principles that give substance to the meaning of the environmental right.
 - (iii) Principle amongst these is section 2(2) of NEMA which requires environmental *management to place people and their needs at the forefront of its concern.*

¹⁶ Section 2(4)(a)(vii) of NEMA.

¹⁷ Section 2(4)(a)(i) of NEMA.

- 5.17 The fact that a species might pose a threat to biodiversity does not per se make it invasive. The legal test for invasive requires that the ecological threats posed by the establishment and spread of an alien species and its consequent threat to biodiversity must also threaten human health and wellbeing.¹⁸
- 5.18 We have pointed this out to officials in the DEA many times. We have offered to engage with their legal advisors on the issue on more than one occasion. These invitations have been rebuffed with Dr Preston going so far as to say that we would have to take the DEA to court.¹⁹ Unfortunately the conservationist perspective adopted by the DEA means that environmental officials do not appreciate this important limitation on what the Minister can legitimately list as invasive. This perspective blinds them to the fact that the reference to environment when used in the definition of invasive is not an ecological one but rather a human rights one that views ecology from the perspective of a human environment.
- 5.19 We should be eradicating, removing or preventing species only where their threatening ecological impacts cause or are likely to cause significant harm to human health and wellbeing. The list of species proclaimed under NEMBA would be a lot shorter and less controversial if this were the case. However even that much more limited list would strain the resources of the state given that purpose of declaring a species as invasive is to eradicate, remove or prevent that species from reproducing or spreading.
- 5.20 This speaks to a further constitutional misalignment that threatens a core constitutional value, namely the rule of law.²⁰ As mentioned above, the DEA relies on the “expert”²¹ opinion of scientists in identifying adverse impacts on biodiversity rather than a fact based process that can be objectively measured by the application of rules and principles. This was highlighted:
- (a) When our request for reasons why the DEA wanted to list 559 species as invasive was refused on the basis that it *is not economically possible or feasible to expect the Department to publish all the background information and reasoning which gave rise to the draft regulations and this is not the intention of the section.*²²
 - (b) The reasons that the DEA gave for wanting to declare trout invasive contained a letter dated 3 February 2014 addressed by Ms Radia Razak to FOSAF’s Mr Ilan Lax

¹⁸ Invasive species are species whose establishment and spread outside their natural distribution range:

- (a) *threaten ecosystems, habitats or other species or have demonstrable potential to threaten ecosystems, habitats or other species; and*
- (b) *may result in economic or environmental harm or harm to human health.*

See also Biodiversity law and the weeding out of alien species by Cox et al published in the July 2015 edition of De Rebus. <http://www.derebus.org.za/biodiversity-law-and-the-weeding-out-of-alien-species/>

¹⁹ This threat was made at a stakeholder meeting that took place at the National Botanic Gardens in Pretoria on March 2014. Despite a promise to make a transcript of the meeting available to TSA and FOSAF this has not been done notwithstanding repeated requests.

²⁰ Section 8.1(c) of the Constitution states that the Republic of South Africa is one, sovereign, democratic state founded on inter alia Supremacy of the constitution and the rule of law.

²¹ I qualify the use of the word expert because the test for expertise or the expertness of an opinion applied by the DEA is not the same as the test that applies in law for admitting expert opinion as evidence. For a useful general discussion of what a court requires of an expert and the dangers involved in resorting to expert evidence see the De Rebus article - Beware the hired gun. <http://www.derebus.org.za/beware-the-hired-gun/>

²² Letter from the DEA’s Ms. Linda Garlipp to TSA’s Mr Ian Cox dated 14 March 2015.

where she both admitted that there was a paucity of evidence establishing that trout were invasive but claimed that trout in the opinion of experts nonetheless had a proven track record of invasiveness.

- (c) Another example of opinions trumping facts is the oft stated opinion that “trout are amongst the 100 most invasive species in the world”. The so called scientific study that gave rise to this statement is not fact based. It can’t be. There is no objectively verifiable global standard for ranking environmental impacts. It is an opinion of a scientist based on a study of the opinions of other scientists. It has no relevance to the situation as it exists in South Africa let alone in any process that professes to pass the test of just administrative action yet it is widely quoted by scientists like Dr Weyl to justify their opinions.

5.21 This practice of relying on opinions rather than a process of interpreting facts by the transparent application of rules is pervasive in environmental management both in the DEA and in the provincial and municipal branches of government.

- (i) Regrettably it is one that has been encouraged over decades of practice where in many instances environmental practitioners have cut deals with officials to find compromises rather than apply or even interrogate the law to the facts relevant to environmental permit applications.
- (ii) The result is a widening gap between environmental law as it is written and environmental management as it is practiced. This widening gap is now so severe that it threatens the rule of law and indeed the constitutional values of freedom, dignity and equality that the rule of law is required to uphold.
- (iii) The consequence of this is that the DEA is becoming a law unto itself whose interpretation of its environmental mandate is increasingly encroaching upon the mandates of other government departments. This is compromising the ability of those departments to deliver on their mandates.

5.22 These difficulties speak to the reason why courts are so cautious about making decisions based upon opinions rather than facts. Indeed the cautionary rules adopted by our courts illustrate why what the DEA is doing is proving so problematic. Our courts like courts elsewhere in the world test expert opinion based evidence against these principles:

- (a) *Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation.*
- (b) *An expert witness should provide independent assistance to the court by way of objective, unbiased opinion in relation to matters within his expertise An expert witness in the high court should never assume the role of an advocate.*

- (c) *An expert witness should state the facts or assumptions upon which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion.*
- (d) *An expert should make it clear when a particular question or issue falls outside his expertise.*
- (e) *If an expert's opinion is not properly researched because he considers that insufficient data is available, then this must be stated with an indication that the opinion is no more than a provisional one.*
- (f) *In cases where an expert witness who has prepared a report could not assert that the report contained the truth, the whole truth and nothing but the truth without some qualification, that qualification should be stated in the report.*²³

5.23 These principles were recently commented upon by the Supreme Court of Appeal in the Potato Co Op case²⁴ where the court after endorsing the above principles went on to say:

[99] *Lastly when dealing with the approach to an expert witness I have found helpful the following passage from the judgment of Justice Marie St-Pierre in Widdrington:*

'Legal principles and tools to assess credibility and reliability

[326] *"Before any weight can be given to an expert's opinion, the facts upon which the opinion is based must be found to exist"*

[327] *"As long as there is some admissible evidence on which the expert's testimony is based it cannot be ignored; but it follows that the more an expert relies on facts not in evidence, the weight given to his opinion will diminish".*

[328] *An opinion based on facts not in evidence has no value for the Court.*

[329] *With respect to its probative value, the testimony of an expert is considered in the same manner as the testimony of an ordinary witness. The Court is not bound by the expert witness's opinion.*

[330] *An expert witness's objectivity and the credibility of his opinions may be called into question, namely, where he or she:*

- *accepts to perform his or her mandate in a restricted manner;*

²³ Paragraph 81 *National Justice Compania Naviera SA v Prudential Assurance Co Ltd* ('The Ikarian Reefer')

[1993] 2 Lloyd's Rep 68 at 81-82)

²⁴ *PriceWaterhouseCoopers Inc and Others v National Potato Co-operative Ltd and Another* (451/12) [2015] ZASCA 2; [2015] 2 All SA 403 (SCA) (4 March 2015)

- *presents a product influenced as to form or content by the exigencies of litigation;*
- *shows a lack of independence or a bias;*
- *has an interest in the outcome of the litigation, either because of a relationship with the party that retained his or her services or otherwise;*
- *advocates the position of the party that retained his or her services; or*
- *selectively examines only the evidence that supports his or her conclusions or accepts to examine only the evidence provided by the party that retained his or her services.*

5.24 Judge Wallis who delivered the unanimous decision of the court made the following comment about the *Widdrington Case*:

The judgment is one for the clarity of which I can only express admiration. It was upheld on appeal on all major issues.

5.25 The DEA should adopt similar principles when seeking or relying expert opinion but does not do so.

- (a) Experts are not independent nor do they maintain independence. On the contrary they work closely with officials and if they are not themselves employed by the state are reliant on the state for research funding.
- (b) These experts are often activists for the cause they are called upon to give evidence upon so much so that whole fields of science such as for example invasion ecology have come to be based on an ideological point of view or belief rather than by the application of pure science. This homophily²⁵ has a tendency to become uncritical and defensive even of its core beliefs sometimes coalescing into a movement. The invasive species movement which currently operates within government is an example of this.
- (c) These experts do not identify the facts upon which they rely as is required by our courts but instead quote the conclusions of other research to support their opinions notwithstanding that such work was itself the result of an opinion.
- (d) The result is that such research does not create a matrix of empirical data which can be objectively applied and assessed but rather a house of cards built on a community of opinions held together by around belief rather than science.

²⁵ The love of the same - described at page 74 of the Technical Report for the National Freshwater Ecosystem Priority Areas project August 2011.

- (e) Dr Weyl's statement quoted at paragraph 1.9(a) above is an example of this. It makes unsubstantiated statements. While some alien fish, notably carp carry disease it is not true of all alien fish. All alien fish do not hybridise with indigenous fish as he suggests and the impact of alien fish on biodiversity varies enormously depending where you are. The introduction of trout into KwaZulu Natal for example has had almost no negative impacts on biodiversity. In fact the impacts such as they are have been overwhelmingly positive. Yet the development of the community based projects where most of the growth potential for trout based aquaculture in the province cannot get off the ground because official believe what such scientists are saying.

5.26 This failure to objectively apply known facts to transparent and constitutionally defensible rules not only represents a significant failing in law it also represents a significant failing in governance.

- (a) This failing is magnified in that opinion based structures naturally operate to defend the hegemonies that inevitably build around these opinions when they are backed up by power.
- (b) These hegemonies encourage unprincipled deal making and discourage principled criticism. Indeed those that criticise them are singled out for attack. This has been the case in the trout value chain where leaders in the value chain who support Operation Phakisa have been targeted for prosecution. This makes those whose businesses rely on environmental approval fearful of criticising the process lest their applications be turned down or delayed. Transparent and just application of law is the victim of the crony relationships that develop in these situations.

5.27 These structures also become increasingly complex so much so that ordinary people cannot reasonably be expected to understand laws that potentially make them criminals. Compliance with these laws requires one to buy expert assistance. This is beyond the means of most South Africans. Laws that are incomprehensible to the majority of the people to whom they apply are inherently unreasonable. They thus fail the basic constitutional test that environmental laws must be reasonable.

6. Proposed amendments to Chapter 5 of NEMBA

6.1 The proposed changes to Part 2 of Chapter 5 of NEMBA appear to be relatively minor. This is an illusion. The changes are in fact very far reaching.

6.2 The Proposed Bill suggests that effectively three changes be made to NEMBA, namely:

- (a) That the requirement that every landowner notify the competent authority of the presence of invasive species on their property be dropped in favour of a provision requiring landowners to do this only when notified to do so by the Minister.
- (b) The requirement that every landowner take steps *to control and eradicate the listed invasive species and to prevent it from spreading* be dropped in favour of a

provision requiring landowners to do this only when notified to do so by the Minister.

- (c) That the tautology that exists in the present Act in the use of “eradicate” by itself and as part of the definition of control is removed.

6.3 The practical effect of what is proposed is to place much more power in the hands of the Minister and thus officials in the DEA and provincial environmental authorities. Chapter 5 of NEMBA as originally drafted posited a simple and reasonable legislative scheme.

- (a) The Minister could list species that were invasive nationally and provincial MEC’s could list species that were not listed nationally but were nonetheless invasive in the province concerned.
- (b) This power to list was limited by:
 - (i) The definition of invasive which required the Minister or the MEC to show that the species caused economic harm or was harmful to human health or harmed the environment as it is anthropocentrically defined in NEMA. In other words the Minister had to show that the species was ultimately harmful to human health and wellbeing.
 - (ii) The fact that such species had to be eradicated or controlled which was defined to mean eradicate or if that was not possible to prevent the species from reproducing or spreading.
 - (iii) The fact that NEMBA required the listing to operate generally in a province and did not permit species to be listed by area.
 - (iv) The fact that no provision existed which entitled the Minister to exempt restricted activities in respect of a listed invasive species.
- (c) The effect of NEMBA as originally drafted was to restrict the list of species that could be listed to a very small number of truly harmful species. This offended official and scientific opinions of what is invasive.
- (d) This resulted in a conflict between scientific and official opinion of what is invasive on the one hand the one hand and what could be legally listed as invasive on the other. The DEA has chosen to go with scientific opinion and ignore or where possible modify the law rather than apply NEMBA as was originally intended.
 - (i) The amendments to NEMBA that took place in 2013 are one example of the law being modified to try and create space for a science that is in conflict with the law. Those amendments permitted species to be listed as invasive by area and for restricted activities to be exempted. This enabled the Minister to list a species as invasive but exempt a

landowner from having to apply for a permit to possess that species. Thus landowners who have invasive species on their properties were exempted from the obligation of obtaining a permit for possession in all cases but so called Category 2 in terms of the AIS lists and regulations that were promulgated on 1 August 2014. This will apparently greatly reduce the cost of compliance. We say apparently because the apparent saving is an illusion.

- (ii) The proposed amendments in the Proposed Bill are another example of this. Land owners are still obliged to notify competent authorities of the existence of alien species on their property and take steps to eradicate these species or prevent them from reproducing or spreading if this is not possible. The cost of this will run into the billions if not trillions of rands. The amendment is again intended to avoid this consequence by limiting this obligation to those cases where the Minister requires this to be done. Again the advantages of this are more apparent than real.

6.4 We say that the advantages of these amendments are more apparent than real because they ignore the scheme which is set out in NEMBA for dealing with species that have been listed as invasive.

- (a) NEMBA contemplates an integrated approach for the eradication of invasive species.
 - (i) Requiring the permitting of restricted activities in respect of invasive species is one part of the total plan as are the obligations placed upon landowners to take steps to eradicate or discourage invasive species on their properties and to notify competent authorities of the existence of invasive species on their property.
 - (ii) Another overlooked obligation is that imposed on organs of state to prepare and implement invasive species monitoring and control plans. This obligation is not amended by the proposed amendment to Chapter 5 of NEMBA.
- (b) Each obligation speaks to the other. Organs of State cannot be reasonably expected to prepare invasive species monitoring and control plans if landowners are not obliged to inform them of the existence of invasive species on their property. Landowners cannot be reasonably expected to take steps to eradicate or discourage invasive species on their properties in the absence of invasive species monitoring and control plans.

6.5 The proposed amendments destroy the integrity of this scheme.

- (a) How after all can an organ of state undertake the arduous task of preparing and implementing invasive species monitoring and control plans if the obligation of

landowners to assist is dependent on the Minister saying that they must cooperate?

- (b) How can organs of state be expected to implement these plans if the obligation to control or eradicate invasive species is determined by the Minister?

6.6 The proposed amendment does not address these questions nor does it recognise that the Minister's powers to prescribe steps are constrained by what is will still be, despite the proposed amendment the general purpose and intent of Part 2 of Chapter 5 of NEMBA, namely that invasive species must be eradicated or controlled.

- (a) The obligation imposed in section 77 of NEMBA that all *organs of state in all spheres of government must prepare an invasive species monitoring, control and eradication plan for land under their control* as well as the minimum requirements of those plans as prescribed in section 77(4).²⁶
- (b) The steps that have been prescribed by the Minister in the 2014 AIS Regulations must be read in the light of this general constraint and are themselves constrained by them. Thus:
- (i) Species that are listed as category 1(a) (presently there are none) must be eradicated.²⁷
- (ii) Species that are listed as category 1(b) must be controlled as in systematically removed or prevented if this is not possible.²⁸
- (iii) Species that are listed in category 2:²⁹
- must be contained by the landowner within the property on which they occur.
 - must be controlled in terms of an Invasive Species Management Programme that must provide for their removal or prevention if this is not possible.
 - may only be utilised under the authority of an exemption or a permit whose issue is itself constrained by these considerations.
- (iv) Species listed in category 3 must be controlled in terms of an invasive species management programme and as we have already pointed out that plan must provide for the control of each listed invasive species that occurs within an area covers by the plan.³⁰

²⁶ See paragraph 7.3 where this is dealt with in detail.

²⁷ 2014 AIS regulation 2.

²⁸ 2014 AIS regulation 3.

²⁹ 2014 AIS regulation 4.

³⁰ 2014 AIS regulation 5.

- 6.7 The legislative and regulatory regime described above is incompatible with the notion that the Minister can direct landowners when they must take steps to eradicate or discourage invasive species on their properties and to notify competent authorities of the existence of invasive species on their property. Any attempt to do so will be ultra vires the Minister's powers. The Proposed Bill does not address this.
- 6.8 A worrying aspect of these changes and the ones that precede it is the extent to which legislation is being amended to place law making in the hands of officials (through the Minister) rather than in parliament where it should be. While a measure of ministerial discretion is sometimes required, dangerous lines are crossed when the discretion extends to the formulation of the laws themselves. This is what is happening in this case. A clear legislative regime ordained by parliament is being replaced by an uncertain one whose implementation lies in the broad discretion of Minister and officials.
- 6.9 We suggest that this technical failing speaks to the much more fundamental failing of governance we referred to earlier. The DEA in adopting a science based approach is creating a situation where what it is trying to do amounts to a fundamental misalignment with the Constitution and the rule of law. This makes the integration of environmental principles, the so called NEMA Principles very difficult if not impossible to achieve.
- 6.10 What we are seeing is the development of opinion based government premised on the views of environmental scientists and officials rather than one based on the rule of law. In essence the DEA is gradually implementing a scheme where it can do as it likes. Thus the rule of law is replaced by a case of rule by officials based not upon the just application of fact to rules but rather on the opinion of so called experts.
- 6.11 This misalignment is illustrated by the other change the proposed Bill suggests, namely the amendment of the definition of control and eradicate. The definition of control and the use of the words combat and eradicate in part 2 of Chapter 5 have created a great deal of confusion especially around the extent to which environmental authorities may legitimately manage the sustainable use of invasive species.
- (a) The right to manage as opposed to control invasive species was disputed by the Kloof Conservancy in the Kloof Conservancy Case. The issue was not decided because the required alien and invasive species lists and regulations were published before judgement was handed down, thus rendering the case moot but for the issue of costs and the implementation of alien and invasive species control and monitoring plans in terms of section 76. However, the DEA's deputy director: Policy Development Magdel Boshoff disputed this allegation at paragraph 127 of an affidavit that was filed in the matter saying that:
- (i) Section 65 contemplated the management of invasive as well as alien species; and that

- (ii) Restricted activities concerning invasive species can be managed by permit.³¹

In particular she alleged at paragraph 126 that:

*Given the provisions that relate to the objectives of Chapter 5 and the provision of a permit system involving listed invasive species, it is clear that **NEMBA** takes into consideration the benefits of invasive species, especially those in Category 2 and Category 3, and that it thus does not intend that all listed invasive species must be controlled or eradicated, although the impact of these species on biodiversity needs to be prevented or minimised. It is further clear that **NEMBA** intends to draw a difference between the control, eradication and management of invasive species.*

- (b) However with respect this was far from clear. Indeed it requires a great deal of imagination and a disregard of first principles of interpretation to reach the conclusions that Ms Boshoff reached.
 - (i) The circumstances in which restricted activities involving invasive species may be permitted is limited to those circumstances where the species is found to have a negligible or no invasive potential and the social and economic gains of carrying out the restricted activity are high.³²
 - (ii) While section 64 of NEMBA does refer to management of listed invasive species it also refers to the control or eradication of alien species. Yet there is no provision in part 1 of Chapter 5 of NEMBA that provides for the control or eradication of alien species. There is likewise no provision in Part 2 of Chapter 5 of NEMBA that provides for the management of invasive species outside the very limited circumstances where restricted activities may be permitted. The interchangeable use of terms such as control, eradicate and manage in regard to both alien and invasive species is clearly a general catch all rather than an open door enabling the DEA to imply powers which are not there.
 - (iii) Section 73(3) of NEMBA presently requires landowners *to take steps to control and eradicate the listed invasive species and to prevent it from spreading*.
 - (iv) Section 76 refers to infestations of invasive species on terms which make it clear that the purpose of such plans is eradication and control.

³¹ Paragraphs 124 to 126 of Magdel Boshoff's affidavit dated 13 December 2013.

³² Section 91(b) of NEMBA.

- (c) Notwithstanding this, the DEA has suggested that it can manage the use of invasive species³³ even going so far as to suggest in a press release issued on 19 May last year that the trout value chain would benefit from trout being declared invasive³⁴. However this promise is not one the DEA can lawfully make. It is one which if implemented will render the DEA vulnerable to attack from organisations dedicated waging war on alien and invasive species such as the Kloof Conservancy.

6.12 The fact that sections 17 to 20 of the Proposed Bill now seek to bring clarity suggests that notwithstanding the professed confidence of environmental officials (stated under oath), the Kloof Conservancy and the trout value chain were correct in questioning the effect of declaring beneficial species invasive. There is indeed a real concern that listed invasive species cannot be managed as the DEA suggests but must be eradicated or controlled.

6.13 The promised clarity is ostensibly to be found in an amended definition of “control”, the introduction of a new definition for eradicate and the amendment of section 73(3) as well as other consequential amendments. Thus it is proposed:

- (a) Control will be defined to mean:

in relation to an alien or invasive species, means-

- (b) *The removal of all visible specimens of an alien or invasive species from within a specified area of or the whole of the Republic; or*
- (c) *Where such systematic removal is not possible, to prevent, as far as may be practicable, the recurrence, reestablishment, re-growth, multiplication, propagation, regeneration or spreading of an alien or invasive species.*³⁵

- (b) Eradicate will be defined to mean:

³³The right to manage as opposed to control invasive species was disputed by the Kloof Conservancy but ultimately was not decided because the required regulations were published before judgement was handed down thus rendering the case moot but for the issue of cost and the implementation of alien and invasive species control and monitoring plans in terms of section 76. However, the DEA's deputy director: Policy Development disputed this allegation at paragraph 127 of her affidavit saying that section 65 contemplated the management of invasive as well as alien species and that restricted activities concerning invasive species can be managed by permit.

³⁴ *The regulation of invasive species. Clarification of the regulation of brown trout and rainbow trout* where the DEA announced:

“The current confusion relating to the implications has been fuelled by a campaign led by an anti-regulation lobby associated with the Federation of South African Flyfishers (FOSAF) and Trout SA, and provocative articles in *The Complete Fly Fisherman* and various newspapers. The following is the position of the Department of Environmental Affairs regarding the two trout species.

There is no threat to the continued operations of existing, legal trout industries as a result of the proposed Regulations and listing of trout as invasive species. Contrary to unsubstantiated and absurd claims that the Department is intent on “destroying the trout industry” and “eradicating trout”, Government agrees that these trout species must be exploited fully within the systems they have already invaded.

In fact, this legislation is important for the trout industry, to stop “trout waters” being invaded by fish species that out-compete trout.”

³⁵ Section 17 of the Proposed Bill.

*The complete removal of an alien or invasive species from within the Republic including all living parts of that species.*³⁶

- (c) The existing duty placed on landowners in terms of section 73(3) to take steps to control or eradicate invasive species on their property will be replaced by a duty to:

*take steps to control or eradicate the listed invasive as prescribed by the Minister.*³⁷

- 6.14 The meat of this amendment clearly lies in the proposed new section 73(3) whose reference to “as directed by the Minister” is intended to enable the legislative regime described by Ms Boshoff in her affidavit. But this regime is inherently problematic as is illustrated by the following passage taken from Dr Preston’s affidavit which was filed along with Ms Boshoff’s affidavit.

*If you take the Kloof area alone ... it would be virtually impossible for landowners to know which of the approximately 337 listed invasive species occur on their land. We have to have a prioritised systematic, achievable, targeted approach. If we look at the Monterey Pine in Constantia Cape Town, the argument is not that we absolve land-owners from clearing invasives but rather we decide which invasives are the priorities, and where in the landscape they are priorities. In that equation I am sure that there are many more species in the gardens of Constantia that are far more important to target than the Monterey pine IN THEIR GARDENS. That the Monterey pine is one of the very worst invaders that we face particularly in mountainous areas is our perspective. But that does mean that we would want to prioritise clearing mature specimens- even at land-owners cost-in the gardens of Constantia, away from the riparian areas and interface with the Table Mountain National park and other green belts. If we were to require this of land-owners, they may use rate-payer and other structures to refuse to do so, and I do not think we would have the capacity to go onto their land – even at their risk – and clear these massive trees next to their houses and other structures. Moreover, they could then demand that all public land should be cleared, and we do not have the resources to do so, and certainly not without dramatically compromising more important clearing work (or prevention or early detection or biological control, etc work) that should be done. It is akin to demanding that the multi millions of Indian mynah be controlled, when the resources to do so can achieve so much more when targeting other invasive species. Indeed, the human health invasives should also demand to be treated in the same way. The application of the law must be sensible fair, practical achieve sustainable outcomes and the benefits must outweigh the costs. One cannot use the law as a weapon against the citizens of the country. They have to be convinced of the merit of our work.*³⁸

³⁶ Section 17 of the Proposed Bill.

³⁷ Section 20 of the Proposed Bill.

³⁸ Paragraph 53 of Dr Preston’s affidavit dated 13 December 2013 that were filed in the Kloof Conservancy case.

- 6.15 The general incoherence of this justification underscores the difficulties inherent in the position Dr Preston is trying to justify.
- (a) The decision whether or not to list a species is a complicated one that has severe economic and social impacts that must be weighed up alongside the biodiversity gains before a species is listed. This is why real or a reasonable possibility of significant harm to human health and wellbeing is central to the question whether or not a species should be declared invasive.
 - (b) A much broader more integrated perspective of what is required in order to be invasive is required than the narrow approach that the DEA has adopted that only looks at threats to indigenous biodiversity. The approach is an integrated one as stated by the Constitutional Court in the Fuel Retailers Case. A narrow “scientific” focus on biodiversity is not enough.
 - (i) Other species may impact upon indigenous biodiversity even to the point of being threatening. But that does not justify listing that species as invasive in an area unless human harm can be shown in terms of an integrated process contemplated by the Constitutional Court, either to health or the economy or to the environment in the sense of the impact these *threats are harmful to the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being*³⁹. We paraphrase this by applying the constitutional test that they must not be harmful to human health and wellbeing.
 - (ii) This approach is consistent with the approach adopted in other jurisdictions notably the European Union where an alien species is only invasive if it is found to impact on biodiversity and related ecosystem services which are in turn defined as the direct and indirect contributions of ecosystems to human wellbeing.⁴⁰
 - (c) Chapter 5 of NEMBA does not allow the Minister to prescribe the management of invasive species outside the very limited circumstances invasive species can be permitted on the basis that the invasive potential is a negligible one. Trout are not invasive as the term is defined under NEMBA⁴¹. However if trout are listed as

³⁹ Paragraph (iv) of the definition of environment in NEMA.

⁴⁰ Article 3(2) read with article 3(6) of Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species.

⁴¹ Part of the problem with the science based approach adopted by the DEA is that scientists do not define invasive as the law does. There are at least two definitions for invasive in science that are fundamentally different to the legal definition. Richardson et al define an invasive species in these terms in chapter ___ of Fifty Years Of Invasion Ecology – The Legacy Of Charles Elton: *Alien species that sustain self - replacing populations over several life cycles, produce reproductive offspring, often in very large numbers at considerable distances from the parent and/or site of introduction, and have the potential to spread over long distances* (Richardson et al. 2000b ; Occhipinti - Ambrogi & Galil 2004 ; Pyšek et al. 2004). *Invasive species are a subset of naturalized species; not all naturalized species become invasive. This definition explicitly excludes any connotation of impact, and is based exclusively on ecological and biogeographical criteria (for discussion, see Daehler 2001b ; Rejmánek et al. 2002 ; Ricciardi & Cohen 2007). It should be noted that the definition supported by the World Conservation*

invasive then it will not be possible to permit the wide range of restricted activities that are essential to the survival of the trout value chain and especially trout based aquaculture.

- (d) Section 76 is prescriptive as to what must be done with infestations of invasive species.
- (e) NEMBA does not permit the Minister to list a species as invasive today on the basis that environmental officials will get round to it later. There is no death row in NEMBA. The Kloof Conservancy is correct, once a species is declared invasive South Africans are obliged to move forthwith to control or eradicate the species.
- (f) What environmental officials are trying to do is precisely what Dr Preston says they mustn't do. They are trying to impose a system that that is nonsensical, unfair, impractical, unsustainable and ruinously expensive. What is more it is one that is being used as a weapon against the citizens of the country as the trout value chain is learning to its cost.

7. Economic impacts of dealing with invasive species

7.1 The cost of dealing with the 559 species that have been listed as invasive by the Minister renders Part 2 of Chapter 5 of NEMBA unworkable given the law as it presently stands.

- (a) Yes the Minister has exempted landowners from having to obtain permits for most of the species that have been listed as invasive and which may occur on their property. However as we have pointed out this does not avoid the trillions of rands that will be spent if landowners are to notify competent authorities of the existence of invasive species on their properties and if they are to take steps to eradicate them.
- (b) Yes the Proposed Bill attempts to address this by converting compliance of what are presently absolute statutory obligations to obligations that need only be fulfilled if the Minister says so. But this as we have pointed out, conflicts with the obligation organs of state have to prepare invasive species monitoring and control plans.

7.2 The risk assessment that was published along with the Proposed Bill says that these amendments have no economic impacts for the state and that they can be implemented using existing resources. But it is easy to demonstrate that this is not true. The impact of trying to implement Part 2 of Chapter 5 of NEMBA on both the State and ordinary South Africans will be enormous. No studies have been done but it is likely that these costs will run into trillions of rands.

Union (IUCN), the Convention on Biological Diversity and the World Trade Organization explicitly assumes that invasive species cause impacts to the economy, environment or health (see IUCN 2000). This important difference has implications for risk analyses of invasive species (Hulme, this volume). Consequently, it is crucial for risk assessment protocols to assign dimensions of risk separately for elements of invasion and impact. Note: designation of a species as invasive should include a statement about the region under discussion; for example a species alien to a state can be native to a continent (see discussion in Lambdon et al. (2008))

7.3 Section 76(2) of NEMBA obliges all organs of state in all spheres of government to prepare invasive species monitoring, control and eradication plans for land under their control. The preparation of these plans is a mammoth task. Section 76(4) of NEMBA requires that these plans include:

- (a) *a detailed list and description of any listed invasive species occurring on the relevant land;*
- (b) *a description of the parts of that land that are infested with such listed invasive species;*
- (c) *an assessment of the extent of such infestation;*
- (d) *a status report on the efficacy of previous control and eradication measures;*
- (e) *the current measures to monitor, control and eradicate such invasive species; and*
- (f) *measurable indicators of progress and success, and indications of when the control plan is to be completed.*

7.4 The preparation of these plans is woefully overdue. Indeed although this aspect of the judgement is presently the subject an appeal⁴², one court has already placed the DEA on notice to implement to develop and implement these plans and ensure that the necessary officials are employed in order to ensure that this is done.⁴³

7.5 The Minister, no doubt mindful of the fact that the clock is ticking published a guideline for the preparation of these plans on 1 September 2015. This guideline highlights the huge undertaking the preparation of these plans is. The guidelines recommend that affected organs of state which include all local authorities:

- (a) Map the land under their jurisdiction where any of the 559 invasive species may occur, breaking this land into logical management unit compartments.
- (b) Compile a comprehensive list of the 559 listed invasive species that occur or might occur in each management compartment, showing the scientific name, common name(s) Category (i.e. 1a, 1b, 2, 3) average density, prioritization of each species, and risk of potential invasion.
- (c) Identify the presence of each of these 559 species in each management unit that enables the authority to prioritise measures for their eradication or control in terms that identify the risks so called infestations of these species pose to areas of high biodiversity importance.

⁴² The appeal is set down for hearing in the SCA on 25 November 2015.

⁴³ *Kloof Conservancy v Government of the Republic of South Africa and Others* (12667/2012) [2014] ZAKZDHC 60 (22 October 2014).

- (d) Assess the extent of each infestation with sufficient detail and particularity to enable an assessment of the severity of the infestation, the effort that will be required to ensure its removal and the success or lack thereof that has been achieved in this regard.
- (e) Based on this prepare a control plan in respect of each listed invasive species in each management unit.
- (f) Monitor progress regarding the implementation of these control plans.

7.6 The notion that this is can be done within the existing capacity and resources of South Africa's local authorities is an absurd one.

- (a) The DEA and provincial environmental departments have not even been equal to task of mapping the whereabouts of two trout species whose range is limited to a tiny part of South Africa. This is despite the assistance of the trout value chain and the wealth of data that is already in official hands regarding the whereabouts of trout.
- (b) How are much less well-resourced local authorities going to undertake what is the exponentially greater task of just mapping the whereabouts of 559 listed invasive species in the thousand if not tens of thousands of management units that will be necessary to give effect to this exercise?
- (c) Very few people are qualified even to recognise these species let alone plan and manage their eradication or control. Where will the resources and capacity required to achieve this massive task come from?

7.7 The President is correct in insisting that the cost and benefits of proposed laws are properly interrogated before attempts are made to implement them. The cost of controlling 559 invasive species will be so astronomically high that it is difficult to even comprehend what it will be. Dr Preston who heads up the DEA's biosecurity unit stated on oath recently that attempts to remove a single listed invasive species, namely triffid weed from the Huhluwe Imfolozi Park had cost R85 million by 2013.⁴⁴

7.8 South Africa is a country with many priorities and scarce resources. The DEA is applying Chapter 5 of NEMBA in ways that place huge and unreasonable demands on these limited resources. Giving effect to these laws is going to result in resources being diverted from elsewhere. The question one asks is whether this is going to advance the health and wellbeing of South Africans. This is not a question that DEA can answer because its efforts have not taken this into account.

7.9 Consequently the DEA cannot say why these efforts will advance human health and wellbeing. The best they can do is suggests that this will somehow unlock a green economy that will make this all affordable but this is wishful thinking at best. South Africa must

⁴⁴ Paragraph 14 of an affidavit dated 30 July 2013 that was deposed to by Dr Preston in the Kloof Conservancy Case.

ultimately have one economy if the country is to thrive as a nation. The fact that apartheid left the country with two economies is a serious failing that needs to be addressed. This is widely recognised. It is a core constitutional value which is emphasised in the strong element of restorative justice found in the NEMA principles. Adding a third economy to the mix exacerbates what are already dangerous notions of otherness in the country. It is alienating and as such represents a step in the wrong direction.

- 7.10 Thus the listing of 559 species as invasive together with the array of legislative and regulatory provisions will we contend have huge consequences for the economy as scarce state resources must be channelled to prepare and implement the plans noted above. This will have implications for the state's capacity to deliver on the Constitution's inherent promise of sustainable development and the opportunity for restitution of rights related to the use of natural resources. This approach by the DEA is incompatible with the Constitution, constitutional values and the NEMA principles. Thus the conservationist approach currently adopted by the DEA and environmental authorities will ultimately compromise core constitutional rights of freedom equality and dignity if indeed this is not already happening.⁴⁵

8. Conclusion

- 8.1 The introduction of an environmental right into the Bill of Rights was a revolutionary step both in philosophical and legal terms.
- 8.2 Unfortunately there has been insufficient thought given to how this right fits within the conspectus of other constitutional common law and so called "indigenous" rights.
- 8.3 Conservationists, especially those in government have uncritically assumed that that the introduction of the environmental right amounts to a legislative endorsement of their beliefs rather than a challenge to develop a culture of sustainable development built on the foundation of the constitutional values.
- 8.4 They are wrong to do so and this mistake or more correctly fundamental failure of governance is causing South Africa a great deal of harm.
- (a) Environmental legislation such as that proposed in the draft 2015 NEMLA Bill do not put people first.
 - (b) They do not align with the environmental right or the NEMA principles but rather seek to place the need to protect indigenous biodiversity above the health and wellbeing of South Africans. This misalignment speaks to a massive failure in governance that in turn is making it difficult to integrate environmental laws into the general fabric of the South African legal system.

⁴⁵ The domination of conservationist principles over constitutional values is prejudicing fishers in the DWESA community and their communal rights to fish in the recently proclaimed marine reserve. The failure of DEA to respect those rights is becoming increasingly fraught and has already resulted in the two fisherman being killed by environmental authorities. <https://realisingrights.wordpress.com/2013/03/06/community-in-dwese-cwebe-seeks-recognition-of-customary-practises/>

- (c) This is proving very expensive, not just in terms of implementing these laws but also in terms of sustainable development and indeed human rights in general.