Trout Wars

By

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Some years ago I attended the funeral of a relative who had courted controversy more often than most.

So of course he had made more than his fair share of enemies as well as some very good friends.

The family priest who was a very good friend, faced with speaking to this reality said:

> "It is all a matter of how you look at things". Holding his hand palm upwards, he went on, "You can look at it one way or", turning his hand over, "you can look at it another way or perhaps"- he said holding his hand up, "you can choose to see both sides. It is all a matter of perspective."

I want to make the importance of perspective the central theme of my talk. You see when you talk about war, what you are talking about is an irreconcilable conflict between different perspectives.

- So is what the conflict over trout about?
- Why does the Biosecurity Unit want to list trout as invasive?
- And most importantly what are we doing to resolve the conflict?

Those are the three questions I want to talk to you about tonight.

The trout war is a fight about perception.

- On the one hand we have the Biosecurity Unit and its scientists at the state owned South African Institute for Aquatic Biodiversity or SAIAB who say that trout are bad and trout fishers are even worse. They see the trout industry as elitist environmental profiteers who put pleasure before the good of mankind. They think we are essentially dishonest and are intent on destroying the environment. They argue we are not real fisherman.
- The trout industry, on the other hand, has very different view of trout and itself. We see trout as being good for the environment. Trout fishers see themselves as environmentalists and the trout industry as one of the earliest successes of the so called green economy. We believe that the trout industry makes a valuable contribution to the health and wellbeing of South Africans and our environment.

The Biosecurity Unit is the unit inside the Department Of Environmental Affairs that is responsible for implementing the National Environmental Management: Biodiversity Act or the NEM:BA. It is currently led by the architect of the working for water program, Dr Guy Preston. I mention him not because, if you excuse the pun, I think he is a bad guy (on the contrary I admire the work he has done on the working for water campaign), but because he has been touring the country telling anyone who will listen to him that he does not really have it in for trout.

He says that he needs to make trout invasive because scientists tell him they are. He says he does not want to destroy the trout industry but must stop trout spreading to areas where they are not. He says that scientists (SAIAB) have told him that this is best achieved by declaring trout invasive in trout hatcheries.

The trout industry agrees that trout should not be introduced into areas where they don't already exist. However we point out that this is unlikely to happen as trout have been around for 125 years and have already established in most areas where they can survive. If they are not in an area the chances are they cannot survive there, or are cut off by a natural barrier such as a waterfall. Making trout invasive to stop them from spreading into areas they can't get to without human intervention is like using a sledgehammer to crack a peanut.

So the trout industry does not really believe Dr Preston when he says he is not opposed to the trout industry. We have good grounds for this lack of trust.

- First the assurances he gives are not compatible with government's legal duty.
    - The law says one must control invasive species and control is defined to mean:
        - Eradicate, and if that is not possible,
        - Prevent the spread or regrowth.
    - We say government and thus Dr Preston have a legal duty to eradicate trout if they can. Promises that he does not want to do this mean little if they are unlawful.
- Secondly it is very easy to eradicate trout in trout hatcheries. So, much of what he says about not wanting to eradicate trout because it is impossible to do so, is in fact meaningless. You can wipe out trout in most of South Africa simply by closing the trout hatcheries. We worry that is what government must do if the Minister of Environmental Affairs lists trout as an invasive species.
- Thirdly it is not what the Biosecurity Unit has been saying or what it truly means.
    - This is not the first trout war. That stared in 1986 when scientists in the employ of Cape Nature tried to get rid of trout.
    - Until about October last year when the Department of Agriculture, Fisheries and Forestry or DAFF told the Biosecurity Unit trout were valuable, the Bio Security unit called trout an infestation.
    - The continued survival of trout has become a personal affront for many of the scientists that Dr. Preston relies on for advice.

This loss of trust is a tragedy. Trout fishermen have been at the forefront of the fight to save the environment for over 100 years. It is an often overlooked fact that the foundations of some of South Africa's premier conservation bodies were laid down by trout fisherman employed by government to protect South Africa's trout waters. KZN Ezemvelo Wild Life and Cape Nature are two examples.

Many of KZN's mountain reserves exist today because state fisheries officers used their offices as such to protect our mountain catchments and the trout that lived there by persuading their employers to make them reserves.

The business of sustaining the trout industry, be it a hatchery or recreational water, requires the industry to support environmentally sustainable land use. Speak to Wolf Avni for 5 minutes and you will know what I am talking about!

But be this as it may, the attack in recent years has destroyed the decades of trust and goodwill that once existed between the trout industry and the Department of Environmental Affairs.

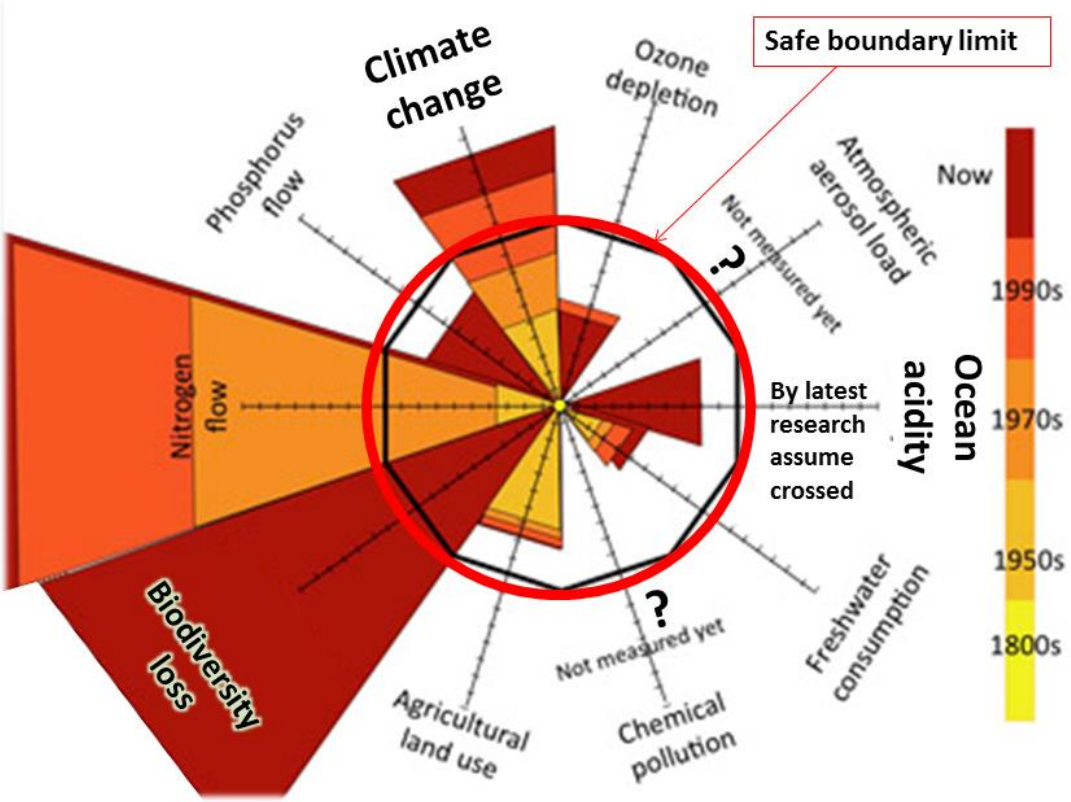
This, in a nutshell, is where the battle lines are drawn.

So where does the thinking that wants trout declared to be invasive come from?

It comes from fear. The very real fear that if we carry as we have done since the Second World War it is possible that we will change the planet to the point where it no longer sustains human life. There are a number of ways of looking at this threat and they all have their supporters and their detractors. I am going to use the planetary boundary approach advocated by the Swedish academic and environmental scientist Professor Johan Rockstrom.

Planetary boundaries is an attempt to define a safe operating space for humanity. You could say it represents the cutting edge of our thinking around environmental sustainability issues.

So what are these boundaries and what is the nature of the threat that is scaring us? It is this:

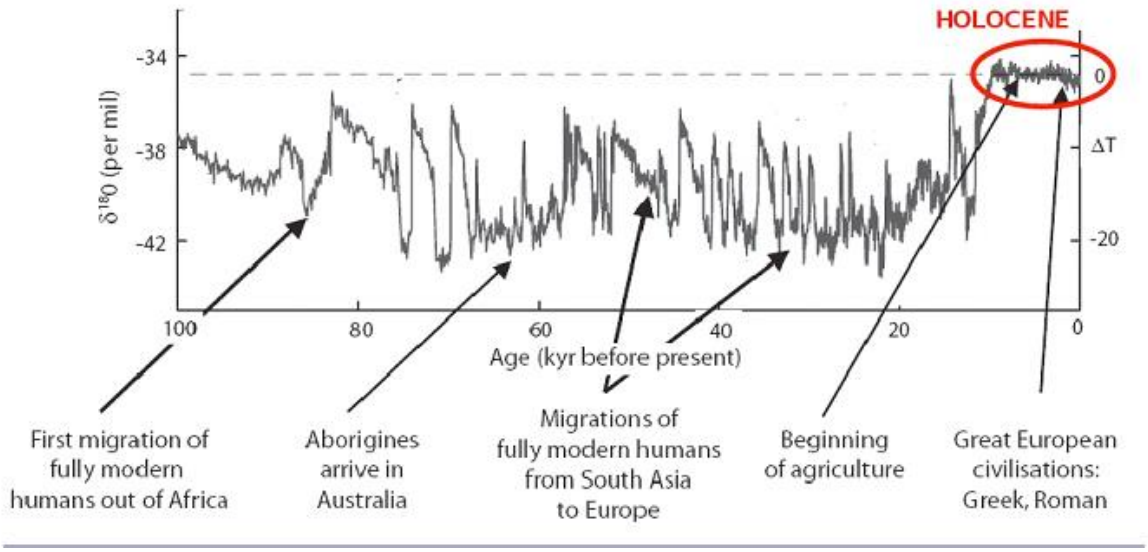


Planetary Boundaries

The story told by this picture is a bleak one. It illustrates a massive loss in biodiversity brought on at least in part by human impacts. Professor Rockstrom postulates that this suggests that we are at the beginning of what may be the sixth largest extinction in planetary history.

If Professor Rockstrom and his team are correct it means our excesses have resulted in us crossing ecosystem tipping points which in turn may result in the catastrophic collapse of biological systems that are essential to human existence.

They warn that these collapses could mark the end of the 10 000 years of extraordinary stability that is the Holocene period. They argue that human civilisation as we know it is built on this stability.



Some say this has happened already and the tipping point changes in climate change, biodiversity and ocean nitrogen levels indicate that we are now in a post Holocene period characterised by human impacts on the environment. They call this the Anthropocene Period.

While the thesis is an attractive one, it is still a thesis. The relationships between the various interplanetary boundaries are complex and poorly understood. However none of this alters what is now an established fact, namely human beings are impacting adversely on the environment and to our long term detriment. But that is no reason to panic. I am still optimistic. Like Dr Roskstrom, I believe that we as humans can survive, even in very large numbers, if we think and behave smart.

The trouble is that people do not think smart when confronted by fear rule. They react instinctively and that is often unwise.

The Biosecurity Unit's solution is primarily one of blaming alien and invasive species for the loss of biodiversity.

I do not think that finding something to blame is going offer a meaningful solution to the pressing need to address the anthropogenic effects on the current loss of biodiversity.

I am not alone in this view. It is one of the main reasons why the Kloof Conservancy have taken the DEA to court. It is trying to stop the Biosecurity Unit from delaying the implementation of the NEM:BA.

Alien and invasive species do pose a threat to biodiversity but the threat is a minor one when compared to other anthropogenic threats.

- It ranks last in the list of such anthropogenic threats.
- The impact of all alien species including all aquatic species is about 4% of the total of all the anthropogenic threats to aquatic biodiversity.

So the big picture is that the threat posed by alien fish such as trout is a small fraction of a small fraction of the total threat. The threat posed by trout is not a game changer in the sense that eradicating trout will either make the problem go away or even contribute to the solution.

That is why Europe has taken a different approach to protecting biodiversity. They recognise that it will make no difference to biodiversity, for example, if they list rainbow trout as invasive. That species underpins Europe's aquaculture industry. They are not listed as invasive even though rainbow trout have the potential to threaten indigenous brown trout populations. However the threat is minimal when compared to other threats.

Europe has gone after what are probably the biggest threats to aquatic biodiversity, namely pollution and river degradation. They have got the trout fishing community to help them do it. So, 20 to 30 years after this initiative started, you can now catch wild brown trout in central London. Salmon are once again beginning to run the Thames River. That is how clean Britain's rivers have become. Clean rivers open a whole range of possibilities that are not available to us when our rivers are polluted. Trout fishermen in Britain are now breeding insects so that rivers may be reseeded with insect species that died out as a result of pollution that occurred after the Second World War.

We are doing very little in this regard. Our rivers have degraded to the point that many are no more than open sewers and this decline continues unabated.

The Biosecurity Unit is trying to ring fence the problem by applying the old game ranger approach of preserving reserves of prestinity. Their focus is on protecting those areas where human impacts are low rather than addressing the human behaviour that are the cause of those impacts. So trout become a problem not because they really threaten biodiversity but because they live in in high mountain streams where anthropogenic impacts are low.

This does not address the threat Professor Rockstrom warns of. I think it is a denial of this threat in the hope that a ritual sacrifice of trout on the altar of indigenousness will somehow make a difference.

The Biosecurity Unit claims that what it does is based on what it calls good science. In truth it means the research that comes out of SAIAB whose centre for invasion biology advocates the narrow and I think crude idea that any alien species that impacts on indigenous species is invasive and, as such, must be eradicated or prevented.

I would not call that good science. If Professor Rockstrom is right it is the antithesis of good science. Good science requires the intelligent weighing up a complex range of factors. Origin is only one of them. The introduction of an alien species into an environment can do a lot of good even if it does impact on indigenous species as for example trout does.

It is also not practical. Many economically useful species that are essential to our economy threaten biodiversity. The timber industry is one. Cattle are another. There are many more. After all most of agriculture involves the propagation of alien species.

But this focus on finding a sustainable balance is only relevant if you are trying to fix the problem. It has been suggested by the author and academic Professor Duncan Brown that trout have become

the scape fish in the quest to protect biodiversity. Now it has to be said if you think of trout and trout fishers as SAIAB does then, trout look like the ideal sacrifice.

No one can dispute that the prejudice against trout at SAIAB is massive. It is a strange thing but in the ivory towers of aquatic biodiversity research trout are seen as a far bigger problem than bass and carp despite the absence of any evidence to support this.

But that is the power of prejudice. It blinds one to reality.

There is no real scientific basis for declaring trout to be an invasive species. Yes they are predators and they do predate on indigenous species but this very seldom poses a threat to endangered species. For example trout pose no threat to any species in KZN. In that handful of isolated cases where trout are a threat, other threats weigh more heavily.

Put differently getting rid of trout is not going to make things better. Indeed it is almost guaranteed to make things worse.

The approach adopted by the Biosecurity Unit is incompatible with our law which requires a balanced approach that takes a broad range of factors into account. The science that drives the Biosecurity Unit's thinking is only one of these factors and in by no means the most important.

Our constitutional rights based system is all about finding balance. The environmental right that is contained in section 24 is built around the need to find a balance that sustains the health and wellbeing of existing and future generations of South Africans. It is a law built on the idea of smart thinking that Professor Rockstrom calls for.

The approach adopted by the Biosecurity Unit is the antithesis of this.

Trout SA and FOSAF are currently working with government including the Biosecurity Unit to rectify the way trout are dealt with under the NEM:BA so I can't talk to what is being discussed at the moment. I can say that we have come a long way since the Biosecurity Unit sought to declare trout invasive across the country on the basis that trout are an infestation.

I would love to be able to say that this has been brought about by the application of the legally enshrined principles contained in the Constitution. Regrettably this has not been the case.

- The manner in which the Biosecurity Unit seeks to apply the NEM:BA is fundamentally unlawful. Unlawfulness is the enemy of principle.
- Pragmatic extra-legal deal making has brought us to this point.
- The impetus has not been the need to protect environment but rather the reality that trout is an important industry that significantly underpins wealth creation in rural communities.

In particular it is a case of having to build South Africa's freshwater aquaculture industry. Paradoxically that is very much a matter of saving the environment.

- People need protein and the wealthier and more populous the planet becomes the greater the demand for protein. Traditional land based methods of protein production are expensive and very damaging environmentally. Aquaculture offers a much cheaper and more environmentally friendly source of protein.

- Though millions are being invested in starting other forms of fresh water aquaculture, at present trout farming is South Africa's only successful fresh water aquaculture industry.
- It is a simple equation. Get rid of trout and you threaten the future of fresh water aquaculture and thus whatever opportunity South Africa has to produce protein in a more environmentally friendly way.

The fat lady is far from singing as yet but hopefully if we keep the pressure up we may get her to sing trout's tune in the near future. Indeed I am hopeful that with enough public support we can persuade the Biosecurity Unit that it is counterproductive to list trout as invasive.

The added but unacknowledged benefit is what Wolf Avni has been saying for years. Trout offers an alternative land use that is both:

- Economically sustainable; and
- much more environmentally friendly than many other traditional forms of agricultural land use.

What Wolf has done at Goshen is in my view far more in line with the smart solutions Professor Rockstrom is calling for than what the Biosecurity Unit is trying to do.

There is in fact no need or basis upon which to declare trout as invasive.

There is a need for the Biosecurity Unit to work closely with the trout industry and rebuild the trust which existed for the better part of 100 years.

That is where the best interest of the trout industry and biodiversity lies.

I am hopeful that despite all that has happened that this is nonetheless still possible.
