Cobus Venter
Stellenbosch Economics
C +27 (0)82 452 3745,
E cobus@cmvgroup.co.za
W www.stellenboscheconomics.co.za

Consulting Economist To:
BER
BUREAU FOR ECONOMIC RESEARCH

Stellenbosch Economics

Briefing document: Comments on draft NEM:BA Alien and Invasive Species Lists and Regulations. Published in the government gazette of 12th February 2014.

03 April 2014

Prepared by: JLC Venter in his personal capacity, Stellenbosch Economics. Senior Consulting Economist to the Bureau for Economic Research (BER).

Prepared for:

Ms Nomahlubi Sishuba

Environmental Programmes

Department of Environmental Affairs

14 Loop Street, Cape Town, 8000

Tel: 021 441 2700

Fax: 021 441 2751

Email: NSishuba@environment.gov.za

Context:

The following document is submitted in response to the proposed NEM:BA Alien and Invasive Species list and regulations and the probable impact on the broad trout and flyfishing industry in South Africa. The response is written in my personal capacity and without remuneration. I am acting as a concerned citizen who has advanced knowledge on the subject matter.

In the middle 1990s I conducted the first (to my knowledge) national survey and economic impact assessment of the South African Flyfishing Industry as requirement for my research based Master's in Economics from Stellenbosch University. I submitted my final thesis in December 1998 and was

duly awarded my degree[1]. I was forwarded the notice on the proposed regulatory changes on the 27th March 2014 by the Millstream Owners Association in Dullstroom and noted the very short time available for comments.

While the following note is not meant to be comprehensive, there is significant concern that the proposed changes to legislation might have very significant economic impacts and that these cannot be ignored until the full magnitude of the impacts have been calculated. I have perused the available literature and while I cannot claim to have conducted a fully comprehensive literature review given the time frame, I was unable to find a current and comprehensive survey of what the economic impact of this sector is **nor** the probable costs involved with this regulatory change.

In my capacity as a senior consulting economist I conduct regular economic impact assessments for various institutions.

While I cannot comment on the validity, or not, of the environmental or ecological aspects, prudent regulation requires that all aspects of proposed changes are taken into account and costs and benefits are weighed up before unilateral changes are made. It is my concern that this is not currently the case due a lack of clear data on the full economic impact of the trout industry on the country. By not being able to fully understand the status quo in terms of economic activity stimulated by, and maintained via, the broad trout and fishing industry it is impossible to objectively decide on what the impacts might be.

By not being able to map the entire value chain accurately it is impossible to clearly identify **not only the external costs** (which possibly include environmental or conservation aspects) **but importantly also the external benefits** (which would include employment in the sector, value ad and tax revenue).

While I concede that my analysis in the next section is indicative only it is based on robust but dated research that I have tried to update in a limited manner to make it applicable to the current period.

The flyfishing Industry and trout:

One of the main purposes of regulatory impact assessments is to analyse what the effects of regulatory changes will be on the real economy as opposed to an ideal state. Almost all economic and social activity takes place within the context of some or other regulatory environment and as with all things in life, outcomes are often based on trade-offs. Economics generally studies the principle of scare resources and their application to satisfy infinite demands. ANY impact assessment whether regulatory or other, typically starts with a value chain analysis (who does what where).

My original study titled "The South African Flyfishing Industry" (Jacobus LC Venter, University Stellenbosch 1998) attempted to map the sector using original research and values that were applicable during 1996. While the study aimed to assess the entire flyfishing sector it became clear that primarily, the focus was on trout. Fishers then also targeted secondary species such as Bass, Yellowfish and marine game species. Therefore the following comments are applicable to the trout industry as this is inseparable from flyfishing in general in my view.

[1] In other words my findings were reviewed independently as part of the academic process.

The findings were not unexpected given the very visible effects that the trout and fishing sector has in areas such as Mpumalanga and Kwazulu-Natal. Using the most conservative methodology throughout to avoid double counting and any possibility of critique based on inflating the numbers I arrived at a conservative annual spend of R122 million annually based on only 14000 national participants in 1996. This number ONLY calculated the actual spend of fishermen/women on their sport during 1996 and did not in any way capture the dynamic effects of their spending also stimulating others to spend.

It is easy to argue that this number VERY significantly understates the impact as the associated tourism activities, and others travelling to trout destinations but not actually fishing, are not taken into account.

More recent studies[2] found broad similarities concerning the numbers of trips undertaken annually and the income profiles of participants, thereby leading me to conclude that in broad terms the industry has not changed that much. However estimates of participants have increased to 45000[3].

I therefore attempted to update my finding assuming that the basic structure remains valid with appropriate methods.

Firstly if one assumed that there are now 45000 active flyfishers, then the 1996 value would have been R392 million in Rand1996.[4] I then used the consumer price index (CPI) as an inflator to arrive at appropriate current values. Inflating R392m by CPI between 1996 and 2013 implies that the spending has now grown to R1.144billion in 2013 nominal value. I did not attempt to map what this spending actually means to the domestic economy in my thesis as the capacity to do so was available to me at the time.

One of the greatest advances in modern economics has been the tremendous data growth available in the computer age. This allows for far more significant and intricate linkages being calculated within the economy. The national accounting framework presents the final outcomes of the economic activity within South Africa and using these accounts, allows for the development of a Social Accounting Framework (SAM) and the calculation of economic multipliers.

Economic impact analysis is an important tool for analyzing the possible effects of an economic decision on a community, town, city, or country. It is used for modelling the intricate linkages between different industries and measuring the economy-wide effects of a specific sector, intervention or project. The greater the linkage (forward and backward) that a sector has on the rest of the economy, the greater the multiplier benefit. Thus, we can then track how changing expenditures are multiplied through the economy using input-output analysis. For South Africa, the input-output analysis required for the analysis, is produced and maintained by Quantec who in-turn extensively interpret and expand on national data sets.

---

[2] See Butler,G 2013 "An Assessment of the Social and Economic Impacts of Tourism Development in Dullstroom, Mpumalanga" University Johannesburg School of tourism and hospitality. Also Van Blerk, H , 2001 MARKINOR "Project Schubert"

[3] Leibold et al 2008, "*THE ECONOMIC IMPACT OF SPORT & RECREATIONAL ANGLING IN THE REPUBLIC OF SOUTH AFRICA, 2007"*

[4] 122000000/14000*45000=R392m

The macroeconomic impact assessment of the value of the flyfishing and trout industry is based on economic multipliers derived from detailed input-output analysis and a comprehensive Social Accounting Matrix (SAM) based model for South Africa. Input-output analysis can be described as an accounting framework that provides a snapshot of the economy at a specific point in time (e.g. the year 2010[5]), describing the composition and level of economic activity and the interactions and dependencies between industries and institutions. Over time, relationships between various units become clear and it is possible to detect clear linkages between changes in one sector to various other factors such as employment and output. From these relationships one can generate coefficients that allow multipliers to be calculated.

Input-output models are well-suited for the purpose of this study, and generally, for modelling the intricate linkages of different industries and measuring the economy-wide effects of a specific sector. These models are often used for economic impact analysis, where the economic implications of a potential action (e.g. a large infrastructure investment) or new policy or regulation can be evaluated prior to taking that action.

The SAM and input-output tables provide a fully coherent view[6] of the economy at a specific point in time. While the actual SAM for the broader economy is currently available up to 2013, the multipliers used in this study reflect the 2010 South African economy due to the detailed employment and other data requirements with regard to the various sub-sectors of the economy that are only generated occasionally[7]. This implies that the relationships inherent to the multipliers are only valid given the structural relationship within the economy during that year or at that point in time.

Fortunately, multipliers are reasonably stable over the shorter term as they in fact reflect the dynamic outcome of the various forces that are constantly at play within the domestic economy. Therefore it is acceptable to use the most recent multipliers available in analysis of this kind as there is little alternative.

Again, there is too limited data to calculate specific multipliers for the trout industry so I used, for indicative purposes, the multipliers available for sport and recreation which define the actual outcomes from spending either directly (the fisherman buying a new rod), indirectly (the sports store ordering new shelving for the rod display area) or induced (the cabinet maker gaining a small percentage of his/her income due to the shelving being bought and buying goods with his earnings).

The multipliers indicate that for every R1m spend there is a gross domestic product impact through the multiplier effect of 1.64 and that every R1m spend generates or sustains 11.4 jobs throughout the entire value chain. Using these numbers allows the researcher to calculate the indicative value of the industry.

[5] This is the latest available sector specific multipliers available from Quantec Research

[6] In other words they reflect “what is” rather than what is hoped for.

[7] Note that the input-output tables use formal statistics and are therefore dependent on updates from Statistics South Africa.

In this case, spending of R1144million ads R1.876 billion to GDP and sustains employment to more than 13000 people[8].

Concluding remarks

While I fully allow for the fact that these numbers might indeed be incorrect, crucially in this case, they might very well be broadly accurate as well. Should a regulatory change fundamentally alter these relationships, it is absolutely vital to understand the probable impact on peoples' lives and to weight any costs against the benefits of the regulatory change – before implementing the changes.

Altering regulation in a vacuum is extremely risky as it no ways mitigates the possibly devastating impacts on the areas affected. Given that much of the trout and fishing industry is located in under developed, rural areas such as the Mpumalanga Highveld and the Drakensberg where there are already high levels of unemployment, implies that the regulator must be very wary of the unintended costs involved with the regulatory change.

It is my sincere belief that in the absence of an in depth economic impact analysis, the current proposed altering of the regulatory framework for trout is not prudent regulation and has the potential to cause great economic damage.

JLC Venter, Stellenbosch 4 April 2014

[8] Note that these numbers are indicative only and are not substantiated.