

An Analysis of the Economic Benefits of MSC Certification for the SA Hake Fishery

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1. Olrac-SPS; 2. BER; 3. MSC



Certification is a market-based incentive



- Assumption that there must be an economic benefit for most fisheries to pursue certification
- The principle of “rewarding environmentally responsible fishery management and practices”
- Most obvious examples are price premiums for certified products
- Also to secure or maintain market access
- Product traceability



Balancing the costs



- Recognise that certification is not suitable for all fisheries
- Mostly driven by:
 - Market demand or opportunities
 - Scale of the fishery (volume & value)
 - Cost-benefit analysis might be helpful



Potential Benefits



Perceived socio-economic, environmental and biological benefits of certification and eco-labelling for the producers, consumers and retailers

Expected benefit / Stakeholder	Retailers/food service sector	Consumers	Producers
Price increases	X		X
Improved client relationship	X		X
Improved management resulting in longer-term sustainability	X	X	X
Better knowledge of provenance / source	X	X	X
Continued / improved access to markets			X
Improved public image	X		X
Product differentiation and market segmentation	X		X



Source: Standing 2009, UNEP 2009, Mathew 2011

An economic case study – SA Hake Trawl



- Most valuable commercial fishery in South Africa
- Directly employing 8,300 men and women (37% of all fisheries employment).
- More than 63% of the catch is exported, bringing in US\$ 187 million in annual revenue
- Indirectly supporting a network of logistics companies, secondary processors and exporters



Connecting to global markets



- SA Hake certified 2004, recertified in 2010
- Strengthened position in other 'MSC-friendly' markets (UK, US, Germany, Netherlands etc.)
- Environmental gains include quota reductions, ring-fencing of fishing grounds, by-catch management, reduced seabird interactions
- Process benefits – much improved cooperation among all stakeholders (*Field et al, 2013*)



How can something
this delicious be
good for the planet too?

MSC certified S.African Hake £2.99

OUR VALUES
MAKE US
DIFFERENT



Sainsbury's
Try something new today



Global Whitefish production (wild capture)

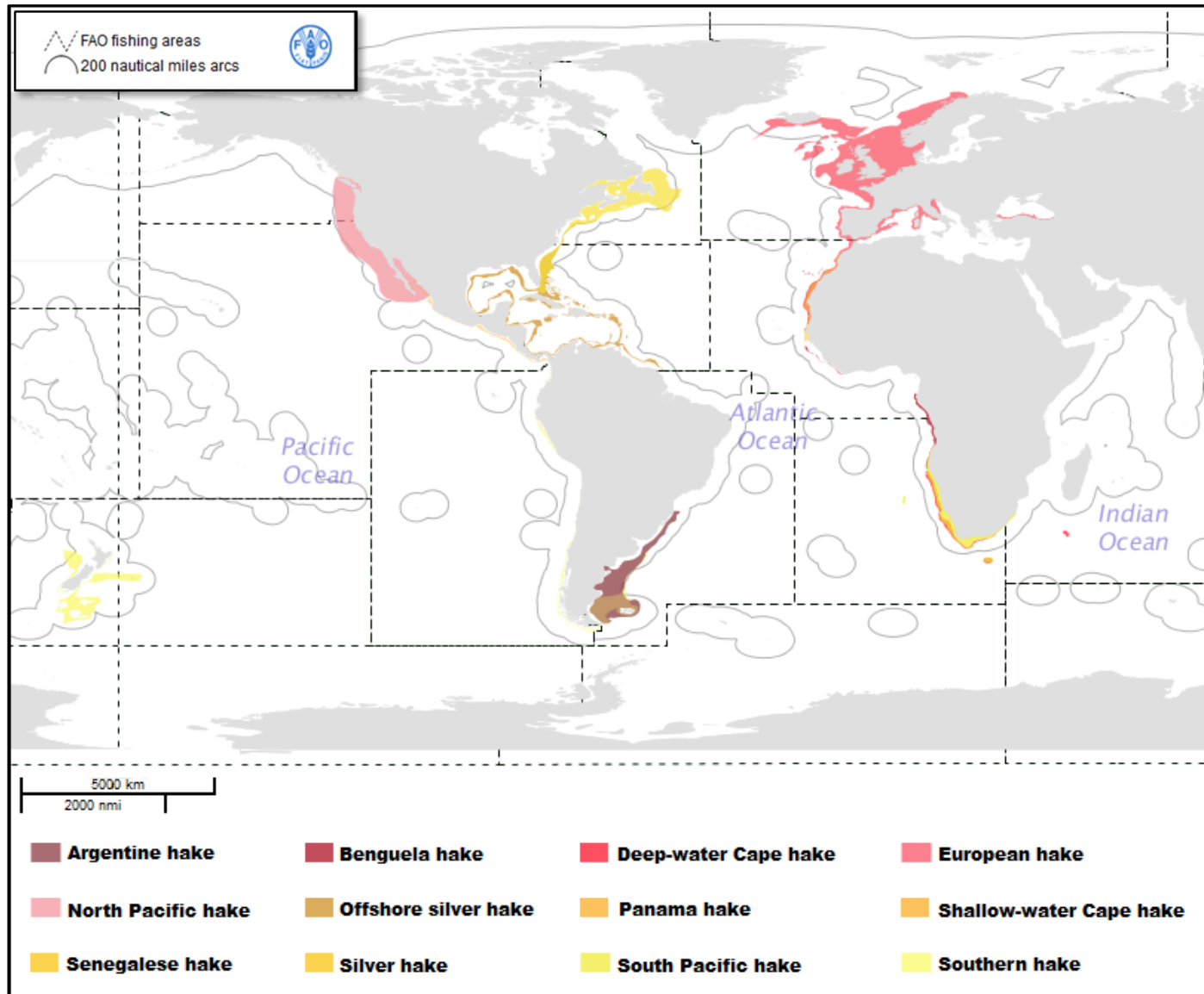


Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Russian Federation	1,614,036 t	1,897,102 t	1,671,987 t	1,774,180 t	1,824,777 t	1,980,115 t	2,041,257 t	2,049,275 t	2,397,462 t	2,342,519 t
United States of America	1,948,010 t	1,995,413 t	2,067,374 t	2,111,273 t	2,080,808 t	1,865,956 t	1,548,083 t	1,231,077 t	1,336,055 t	1,850,162 t
Norway	1,113,413 t	1,390,021 t	1,508,114 t	1,293,485 t	1,248,753 t	1,110,159 t	989,571 t	857,573 t	943,701 t	755,817 t
India	197,582 t	203,701 t	161,448 t	296,879 t	298,417 t	286,194 t	342,520 t	329,451 t	579,151 t	378,807 t
Argentina	514,063 t	497,413 t	599,808 t	522,923 t	517,861 t	429,274 t	417,247 t	429,230 t	390,780 t	374,080 t
Iceland	602,230 t	831,851 t	808,299 t	655,763 t	702,955 t	601,573 t	510,674 t	479,495 t	402,152 t	316,785 t
Japan	304,751 t	293,021 t	299,167 t	260,543 t	268,787 t	273,637 t	261,580 t	284,293 t	313,602 t	292,669 t
Uganda	112,500 t	107,288 t	165,446 t	185,457 t	163,333 t	214,200 t	190,200 t	181,000 t	162,629 t	226,164 t
Egypt	201,571 t	221,626 t	201,564 t	171,563 t	158,712 t	164,720 t	147,355 t	172,517 t	183,580 t	185,112 t
New Zealand	261,880 t	240,381 t	192,274 t	184,143 t	151,513 t	149,461 t	144,370 t	151,408 t	165,610 t	170,508 t
Tanzania, United Rep. of	52,500 t	59,600 t	62,025 t	44,414 t	55,397 t	140,161 t	126,060 t	136,010 t	152,672 t	159,292 t
Chile	302,658 t	257,496 t	212,510 t	187,239 t	183,776 t	167,586 t	177,405 t	177,542 t	173,748 t	157,236 t
Namibia	171,673 t	205,142 t	182,907 t	169,147 t	145,710 t	125,536 t	134,847 t	136,920 t	146,307 t	149,808 t
Nigeria	39,951 t	68,205 t	53,384 t	79,306 t	75,139 t	81,967 t	107,954 t	128,621 t	134,615 t	138,814 t
Spain	142,417 t	172,829 t	146,075 t	153,337 t	154,033 t	122,330 t	128,107 t	157,002 t	142,323 t	136,067 t
South Africa	158,056 t	145,553 t	161,840 t	151,741 t	140,364 t	149,161 t	140,265 t	114,547 t	120,735 t	131,571 t
Rest of the world	2,291,534 t	2,408,149 t	2,532,521 t	2,516,031 t	2,563,598 t	2,389,541 t	2,320,491 t	1,991,119 t	2,089,382 t	1,976,527 t
Grand Total	10,028,825 t	10,994,791 t	11,026,743 t	10,757,424 t	10,733,933 t	10,251,571 t	9,727,986 t	9,007,080 t	9,834,504 t	9,741,938 t

Whitefish production from wild capture fisheries in tonnes of green weight, taken from FAO FishStatJ, for the top 16 producing countries globally

SA, with 1.4% of global catches are 'price takers' and not 'price fixers'

Geographical distribution of hakes



Recent market trends in hake markets



- Certification of SA Hake created diversification opportunities to non-traditional markets such as the UK, Germany, Switzerland, Australia
 - Buyer commitments often the driver
 - Other southern hake fisheries (e.g. Namibia, Argentina, Uruguay, Chile) struggling to remain competitive due to their dependence on the strength of traditional markets in southern Europe (Spain, Portugal and Italy)
 - These markets hard hit by recent economic crisis
 - Cheaper farmed whitefish imports gained market share (e.g. Pangasius) in southern Europe
 - Emerging markets such as China, India and Brazil likely to be expensive and difficult to break into. Cheaper farmed product already established in some of these markets
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Background to the study



The MSC's Southern Africa office commissioned 2 independent consulting companies to look at the economic benefits that certification has brought to the SA Hake fishery:

1. **OLRAC's** business is focused on providing technical expertise to the fishing industry such as state-of-the-art quantitative science, but also integrating the economic and practical realities of fishing into management recommendations.
2. **Bureau for Economic Research (BER)** one of the oldest economic research institutes in South Africa and has built a local and international reputation for independent, objective and authoritative economic research and forecasting.



Focus of the 'economic benefits' study



1. Review of global white fish market
 2. Focus on recent trends and influence of downward economic trends in main markets in southern Europe
 3. Importance of market diversification; the role of MSC certification in providing access to 'new' markets
 4. Volumes and prices of hake traded in different markets, type of products, sustainability requirements/procurement policies of buyers, application of MSC logo on products etc.
 5. Position of SA Hake on global markets when compared to non-certified hake fisheries from Namibia, Argentina, Uruguay and Chile (*potential competitive advantage*)
 6. Current levels of employment in SA Hake companies and the potential impacts on employment if the fishery was no longer certified
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South African Hake: economic benefits



1. An analysis of the economic benefits of MSC certification for the South African hake fishery



Data sources: UN COMTRADE and FAO FishStats data augmented by the MSC's own database of consumer facing and non-consumer facing products exported from South Africa. Also interviews with industry, NGO, news articles etc.

Assumptions made on the baseline, being the present fishery situation and value, conversion factors for value-added products and currency exchange rates

Model constructed with four different scenarios of how the South African hake fishery might look in the absence of MSC certification.

Compared with uncertified hake fishery in Namibia – similar to SA regarding exports and prices.

Assumptions used in the model to calculate the baseline value of the fishery and simulate the Scenarios 1 through 4.



Social Discount rate	10%
Gr wt to H/G wt conversion	0.72
H/G to VAP (fillet) gr wt conversion	0.6
Current TAC (2012) expressed as Gr wt	144,622 t
% Tariff duties of EU importers for SA Hake	11.5%
Demand price elasticity for non-fillet products in SA market	- 0.40
Demand price elasticity for fillet products in SA market	- 0.60
% of Hake sold in SA market (Scenario 4)	80%
% of non-fillet products sold in domestic market based on SA Hake export (<i>Baseline & Scenarios 1-3</i>)	37%
% of non-fillet products sold in domestic market (apply only to increase supply from <i>Scenario 4</i>)	90%
Price premium of MSC SA Hake	16%
Current exchange rate assumption (SA Rand vs US\$)	R10.40

Potential Scenarios

- | | |
|---|---|
| 1 | <i>Market and product status quo with loss of MSC price premium</i> |
| 2 | <i>Shift from Northern to Southern Europe export market</i> |
| 3 | <i>Downgrading export product type to mostly non-fillet</i> |
| 4 | <i>Shifting most exports to the domestic market</i> |

- Study found that under each scenario considered independently, the SA Hake trawl industry's contribution to South Africa's GDP value would decrease substantially
 - Decrease of 28 - 47%, depending on the scenario
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Olrac study (cont.)



The impacts of successive scenarios were combined over a period of 5 years by simulating the following impacts:

Period	Result
1 st Year	loss of price premium
2 nd Year	loss of access to premium markets
3 rd Year	substitution of value-added to basic product types in the product mix
4 th Year	a dramatic shift of export volume into the domestic market
5 th Year	Continued shift to domestic markets

Summary of Scenarios



Overall summary of scenarios and NPV calculations at a discount rate of 10% and under different exchange rate assumptions

NPV calculation over a 5 year period with a discount rate of 10%	Exchange rate of R10.40/US\$		Exchange rate of R14.00/US\$	
	Billion rands	% change from baseline	Billion Rands	% change from baseline
NPV of SA Hake fishery after 5 years				
- status quo (baseline from Y1-Y5)	R 12.33		R 14.90	
- scenario 1 in Y1, 2 in Y2, 3 in Y3 & 4 in Y4 & Y5	R 8.02	-35.0%	R 9.42	-36.8%
Estimated cumulated loss based on scenario 1 in Y1, 2 in Y2, 3 in Y3 and 4 in Y4 & Y5 vs in Y1-Y5				
- After 1 year (Scenario 1)	R -0.84	-28.4%	R -1.01	28.4%
- After 2 years (Scenario 1 then 2)	R -1.59	-28.2%	R -1.93	28.3%
- After 3 years (Scenario 1 then 2 then 3)	R -2.32	-28.8%	R -2.81	28.7%
- After 4 years (Scenario 1 then 2 then 3 then 4)	R -3.36	32.6%	R -4.21	33.8%
- After 5 years (Scenario 1 then 2 then 3 then 4 for last 2 years)	R -4.31	35.0%	R -5.48	36.8%

1. A high level economic impact assessment of the benefits to the domestic economy resulting from the continued MSC certification of the SA hake trawl fishery



Economic **multipliers** derived from detailed input-output analysis and a comprehensive Social Accounting Matrix (SAM) based model for SA.

Input-output analysis: an accounting framework that provides a snapshot of the economy at a specific point in time (e.g. the year 2010), 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.

BER study (cont.)



National employment multipliers and potential employment impacts

	Direct	Indirect	Induced	Total	Fishery Impact @ 20% (R640m)	Fishery Impact @ 30% (R960m)	Fishery Impact @ 40% (R1280m)
Employment Impact Total	1.7	5.2	3.8	10.7	6,848	10,272	13,696
Highly skilled	0.12	0.37	0.42	0.91	582	873	1,164
Skilled	0.69	1.26	1.26	3.21	2,054	3,081	4,108
Semi and unskilled	0.78	2.4	1.32	4.5	2,880	4,320	5,760
Informal	0.11	1.1	0.8	2.01	1,286	1,929	2,572

- The multipliers suggest that for every R1 million lost there will be 10.7 jobs lost in the industry and broader economy.
- The national employment multipliers suggest that an estimated value loss of R960 million (US\$ 90 million) without certification would result in very significant job losses.

BER study (cont)



“Traditionally the Spanish off-take for (relatively low added value commodity) hake product accounted for an overwhelming proportion of foreign sales but, over the last four or so years, the widely documented financial and employment emergency in Spain has led to a spectacular demise in Spanish hake demand .“

“Displacement from traditional outlets forced industry to penetrate far more competitive channels elsewhere in more prosperous parts of Europe. South African industry achieved gratifying success by taking advantage of two notable features of the newer markets.”

“(1) these higher priced European markets require ever greater amounts of small packaged branded high value added white fish goods and, importantly in these times in a world with ready surpluses of tradable white fish, (2) these new target markets are virtually inaccessible to non-MSC certified suppliers.”

Results of economic benefit studies



- SA Hake outperformed other non-certified hake fisheries in the market place, through a combination of greater market diversification, higher levels of value-addition and greater stability in markets.
 - This has resulted in high levels of re-invest in the fishery, creating employment and job security.
 - Analysis indicated that without certification the **Net Present Value** (NPV) of the fishery would decrease by about **35% over a 5-year period**, with a potential loss of about **12,000 jobs**.
 - This underlines the value certification had brought to the fishery.
-

SA Hake economic study conclusions



- Certification allowed SA Hake industry to benefit from fluctuating market conditions – *readiness to adapt to unforeseen market changes*
- Market diversification options gave them a competitive edge
- Greater stability and investment in local industry and infrastructure
- Clear employment benefits



Some examples of significant environmental improvements brought about through certification of the SA Hake fishery



Seabirds:

- As a **condition of certification**, the fishery had to assess the risk of seabird bycatch.
- BirdLife SA worked in collaboration with fishing industry and government to develop mitigation measures.
- Has led to a **90% reduction in seabird deaths** and **99% reduction in albatross deaths** since 2006 (*Animal Conservation*, Apr 2014)

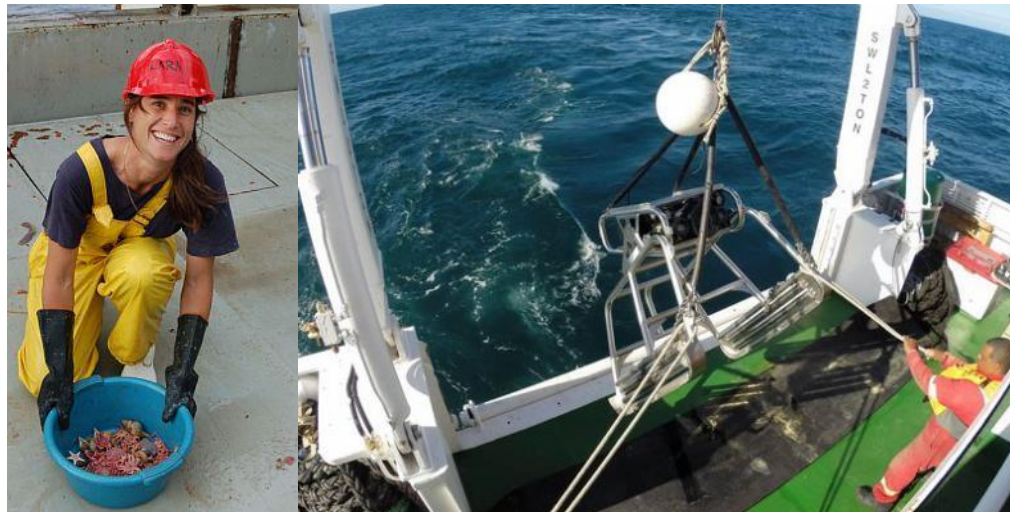


Environmental benefits



Benthic Impacts:

- As a **condition of certification**, the fishery had to assess the impacts of their fishing activities on benthic communities
- The *Benthic Trawl Experiment* is a joint research project between government scientists, the research community and the fishing industry.
- It's the first in a series of experimental surveys of the impact of bottom trawling on the benthic communities of the outer shelf of SA's west coast



Conclusion



- ✓ Growing evidence that MSC are delivering on their mission
- ✓ The case for environmental improvements and improved sustainability is strong
- ✓ Growing evidence that the market case is also strong and that responsible fishery operators are being rewarded in the market place



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Thank you!