Ecological Risk Assessment (ERA) Workshop for False Bay

The ERA workshop for False Bay took place in Cape Town, South Africa, between the 29th May and 21st June of 2012. The workshop was hosted by WWF-SA, and facilitated by Helene Smit of Feather Associates and Dr Samantha Petersen of WWF-SA. After an initial multi-stakeholder workshop held in February 2012, a series of focused group workshops was held with each individual stakeholder group, during which representatives were elected to go forward into the second multi-stakeholder ERA workshop phase. 112 individuals participated in the workshop series as a whole. 76 individuals participated in the focussed group workshops, with 20 participants (representatives) taking part in the second phase multi-stakeholder ERA. There was wide representation of the stakeholder groups in False Bay, allowing for very healthy debate.

Please see Appendix 1 for a complete list of stakeholder groups, and representatives from each group who attended phase 2 of the ERA process .

A brief description of False Bay

False Bay is a popular destination in the Cape Metropolitan Area for outdoor recreational activities. Non-consumptive recreational activities such as swimming, surfing, sunbathing, picnicking etc., mainly occur on the sandy shores, predominantly along the northern coastline and beaches along the western and eastern coasts. Popular areas include Fish Hoek, Muizenberg, Mnandi, Monwabisi, Kogelbaai and the Strand. Snorkellers and scuba divers are also very active in False Bay, mostly around the rocky shores, such as Miller's Point. Exploitative activities such as recreational angling (rock and surf, as well as boat-based) and bait collection extend around the shores of the entire bay.

There has been rapid urban growth in the areas surrounding False Bay, particularly along the northern shores. The recent identification of additional

coastal development nodes along the False Bay coastline will result in an inevitable increase in recreational and consumptive use pressures on the bay. Coastal resorts in False Bay frequently reach capacity during peak season times. Development planners face the challenge of meeting the increasing demand for easily accessible coastal developments, in an environmentally sustainable manner.

Commercial fishing in False Bay dates back more than 300 years and currently includes beach-seine ('trek-net fishery") and commercial line-fisheries (including the traditional line fishery from Kalk Bay, and the ski-boat fishery), some abalone and some rock lobster fisheries (although no mechanised or trap fishing has been permitted in the bay for a number of years). However many of South Africa's inshore marine resources are considered overexploited or collapsed, with a few being fully exploited, mainly due to the accessibility of the resources to a wide range of marine user groups (ranging from traditional line-fishers to recreational fishers and the ski-boat fishery). Examples of over-exploited resources that are also utilised in False Bay include rock lobster, smooth-hound shark, elf/shad. Collapsed resources include many of the linefish (e.g. kob, geelbek/cape salmon, red and white steenbras, red roman, and red stumpnose). There are however some resources that are considered optimally exploited, such as snoek and yellowtail (WWF-SA, 2011).

Eco-tourism enterprises, for example whale-watching, shark cage diving, and Seal Island boat trips etc., are gaining in popularity in False Bay and are seen by many as a positive step towards the sustainable use of the bay's marine resources, with the potential to generate alternative local livelihood options. Another recent development has been the application for a number of aquaculture ventures in False Bay, for example the ranching of yellow-tail, and the initiation of an experimental whelk fishery. These are examples of how the traditional uses of False Bay are expanding to include new uses, all of which will have their own additional impacts (environmental and social).

The ever increasing utilisation of the bay's marine resources by a wide range of often competing users, has resulted in conflict and tension between the various stakeholder groups. A number of issues – ranging from exploitation of the bay's fish stocks, spatial use of the bay, shark/human interactions, water quality and pollution in the bay and safety and security along the coastline, are just a small number of examples amongst many of the issues.

Historically, marine and coastal management was managed via a sector-based approach, which was adequate given that utilization of the sea and its resources was limited to few uses (e.g. fishing and navigation) that rarely influenced one another. But the rapid growth of ocean and coastal utilization from many sectors created conflict among uses (e.g. the waste assimilation function is not compatible with the bathing /surfing function) that sectoral

management could not sufficiently address, hence the need for collaborative, integrated coastal management that includes input from civil society in the decision making processes. There are also often conflicting priorities between the different ecological and social perspectives, and there is a need to find a balance between these two and recognize that they are in fact inter-dependent and need to be considered equally.

A brief overview of the current legislation delineating governance responsibilities with regard to marine and coastal management follows:

Coastline (up to the High Water Mark):

- General environmental governance responsibilities in terms of the Constitution and NEMA: *All three spheres of government*
- Management of watercourses leading into the ocean, e.g., rivers and estuaries in terms of the National Water Act – *Department of Water Affairs (DWA)*
- Environmental authorisation for listed activities in terms of NEMA – *provincial & national government (Department of Environmental Affairs and Development Planning (DEADP), Department of Environmental Affairs (DEA), Department of Mineral Resources (DMR))*
- Specific coastal management responsibilities assigned to each sphere of government in terms of NEM: Integrated Coastal Management Act – *All spheres*
- Land use planning authority in terms of the Land Use Planning Ordinance – *provincial and local government*

Marine environment:

- General environmental governance responsibilities in terms of the Constitution and NEMA - *All three spheres*
- Environmental authorisations for listed activities in terms of NEMA – *mostly national government below high water mark (DEA and DMR)*
- Management of marine living resources in terms of the Marine Living Resources Act – *Department of Agriculture, Forestry and Fisheries (DAFF)*
- Management of marine pollution under NEMA and the following acts:
    - Marine Pollution (Prevention of Pollution from Ships) Act 2/1986
    - Marine Pollution (Intervention) Act 64/1987
    - Marine Pollution (Control & Civil Liability) Act 6/1981

    - Merchant Shipping Act 57/1951 - *mostly DEA, also DAFF*
- Regulation of effluent discharges into the sea in terms of the National Water Act – *DWA*
- Management of merchant shipping and maritime safety under various acts and international accords – *South African Maritime Safety Authority*

Harbours:

- Regulation of national ports through National Ports Act – *Cape Town Harbour - NPA*
- Management of other harbours and slipways in terms of Schedule 4B to the 1996 Constitution and the MSA, in the following terms *'Pontoons, ferries, jetties, piers and harbours, excluding the regulation of international shipping and national shipping and matters relating thereto' – Local sphere in cooperation with other spheres*

In terms of ICMA Municipalities are required to prepare and implement:

- Municipal Coastal Management Programme;
- Coastal Planning Scheme;
- Coastal by-laws; and
- Estuary Management Plans.

The legislation and mandates create a challenging context for management of coastal and marine resources, especially in False Bay which is so intensely used by many user groups (Laros 2012).

Methodology

The method used is based on the Australian and New Zealand Standard Risk Analysis, which was adapted for use in a fisheries context (Fletcher *et al.* 2002, Fletcher 2005, Nel *et al*. 2007). It has since been further adapted, based on the outputs of the original ERAs carried out in South Africa and Namibia, through several iterations (i.e. applied in local workshops, tested and modified accordingly) to ensure regional applicability (Paterson and Petersen, 2010). It provides a structure to consider divergent issues in a transparent and accountable manner. Risk Analysis in the ERA method involves consideration of the sources of risk, reaching consensus on the consequence and likelihood that they may occur. Moreover, it allows for the prioritisation of issues or hazards with justification and the subsequent prioritization of management responses. It requires stakeholders to deliberate and develop a shared position. This process results in an agreed-upon roadmap for the way forward. In essence, it is a way of operationalising policy.

The application of this methodology in False Bay, in the context of a multiple-use area, rather than a single use (often including multiple areas), is a new application – and as such required an adaptation of the methodology. Lessons learnt during the process will be used to further adapt the methodology in order to be robust for use in such contexts.

The methodology relies on a three step process:

1. Identification of concerns or issues

Through the identification process all issues present in the bay are recorded. Any issue identified by one or more participants is included in the list of issues, whether or not it is supported by others. The result is a comprehensive list of concerns as perceived by all participants in the workshop.

In the False Bay Coastal Conservation Partnership stakeholder engagement process, step 1 took place in the focussed group workshop series. An initial multi-stakeholder workshop, open to anyone, was held, during which a draft vision for False Bay was developed. This vision was then used as the ideal, the achievement of which was risked by concerns or issues raised. A separate workshop was held for each stakeholder group. These workshops focussed on the identification and prioritization of issues and risks within the Bay, and allowed each group to thoroughly identify all the risks or issues that they could think of with respect to False Bay.

Initial prioritization was done by each stakeholder group on their own set of issues, resulting in 3 – 6 priority issues from each group.

All the issues and risks were then collated into one list. Each issue that was raised but not prioritised was given a score of “1” for every group that raised it. Each issue that was prioritised was given a score of “2” for every group that prioritised it. The scores for each issue were then added together, and every issue that scored a “2” or higher in total was carried forward into step 2. This meant that every issue that was raised by two stakeholder groups or more, even if it wasn’t prioritised, and every single issue that was prioritised even if only once, was taken into step 2 of the ERA.

2. Prioritisation of Issues

Each identified issue – in this case the list of issues scoring “2” or more in the previous step (although the scores are all removed at the start of this step so as to give each issue an equal basis to begin with) – is then prioritised by scoring the likelihood of a given risk and the consequences if it does actually occur. The likelihood is scored on a scale of 1 to 6, and the consequence is scored on

a scale of 0 to 5. A risk value rating is then calculated as the product of the 'consequence' and 'likelihood' scores; these "risk scores" then provides a means of prioritising the entire set of identified issues. At this step it is important to gain consensus, as far as possible, on the consequences and likelihoods. While this can be a contentious stage during the workshop, there was generally a high level of agreement experienced during the workshops.

Each issue is then categorised as 'Negligible' (score of 0), 'Low' (score of 1-6), 'Moderate' (score of 7-12), 'High' (score of 13-17) and 'Extreme' (score of 18 or greater) priority, according to their overall risk score. Once ranked, it is assumed that issues scoring "low" or "negligible" should not require specific management actions whereas issues with "high" and "extreme" scores should all require urgent management actions. At the end of the False Bay ERA workshop, issues which scored "risk" values of 7 and higher were retained as high priority issues for potential remedial management action.

3. Identification of management responses

All issues of sufficient priority (i.e. greater than 'Moderate' risk) will be used to input into a situational assessment of the status quo, out of which gaps will be identified. These will be fed into a process of consultation with the relevant agencies and civil society, the intended outcome of which would be a strategic, integrated management intervention for False Bay to address the problem. The process of consultation with governance agencies is underway (see attached summary record of False Bay Governance Workshop).

Results of the Workshop

General overview of the ERA process

Identification of issues

A total of 123 issues were identified for False Bay by the workshop participants, listed in Appendix 2 along with the scoring system (which stakeholder group(s) raised them, and whether they were prioritised in step 1 or not). 44 of these scored 2 or more in step 1 of the process, and were thus taken into step 2. These issues are listed Appendix 3.

Prioritization of issues

The prioritization process of 44 issues (Figure 1) resulted in 37 issues (85 %) scoring 'moderate' (a risk value rating of 7) or greater.

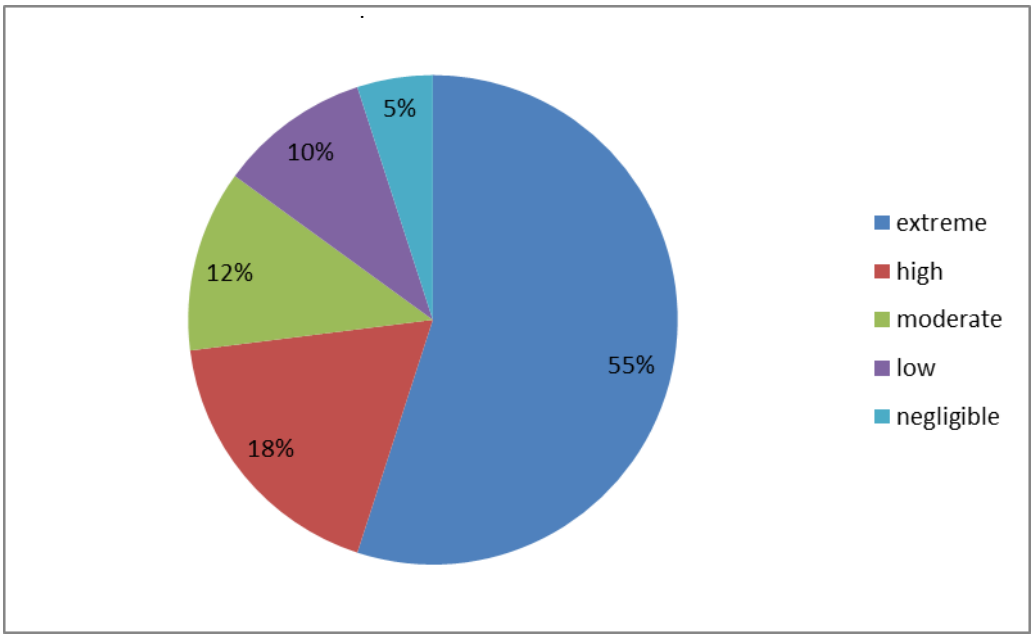

Figure 1. Percentages of issues per risk category. Out of 44 issues, 24 were in the extreme category, 8 high, 5 moderate, 4 low, 2 negligible and 1 unresolved.

Of those 37 issues, the majority of issues (65 %, or 24/37) fell into the extreme category. ‘High’ and ‘Moderate’ rated issues accounted for 22 % (8/37) and 13 % (5/37) respectively (Figure 2).

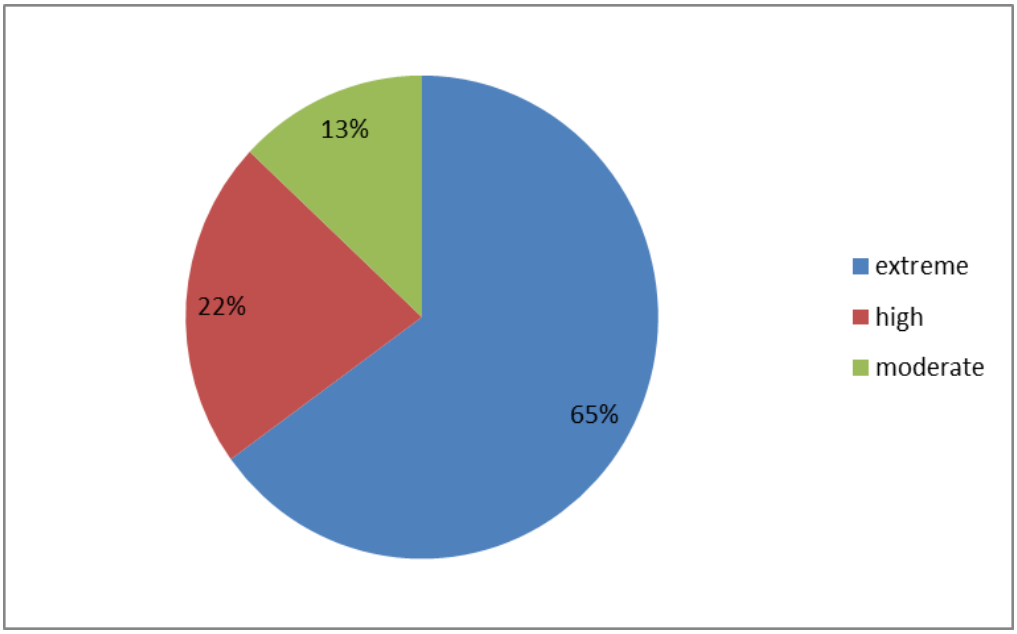

Figure 2. Of the 37 issues scoring greater than 7 (moderate) per risk category, 65% were in the extreme category, 22 % high and 13 % moderate.

A list of the 37 issues scoring “moderate” (7) or more is shown in Appendix 4.

Summary description of key issues

There were a number of key issues that were emphasised by all participants in the workshop series, and prioritised by every stakeholder group.

Compliance and law enforcement issues

These issues all focused around the lack of compliance with, and enforcement of, existing laws and City by-laws. This was seen to be due to many contributing factors such as a lack of capacity, resources, monitoring, policing, response to reports about law-breaking. Also to blame was the under-resourcing of enforcement departments leading to demotivated staff, confusion and uncertainty about whose responsibility compliance and enforcement is, poor management, inadequately trained staff, and uncertainty about how to contact responsible agencies. A need for sustained, consistent enforcement was identified.

Poaching

Although essentially a part of compliance and law enforcement issues, poaching was given its own focus because of the significance of the problem. It was perceived to have a direct effect on social systems as well as on commercial and recreational fisheries. Issues included a lack of monitoring, policing and compliance, fragmented enforcement, the failure of the judicial system and prosecutors, and the perception that the government is driving illegal use of the resources though mismanagement. Also contributing is the uncertainty among stakeholders about whom to call and who has jurisdiction, as well as the non-responsiveness of responsible agencies.

Education, Awareness and Training

A lack in education and awareness was identified. Education with regard to conservation, biodiversity, oceans, our marine environment, the social aspect of fisheries, the history of South Africa and False Bay was seen as necessary – and a change in approach to education, to be more pro-active. Although the youth were identified as the primary targets, it was also noted that adult education was not to be neglected.

Awareness around False Bay was seen as lacking, and there was consensus that an awareness drive was needed to increase awareness about our environment, biodiversity, conservation, use of resources, sustainability of resources, sustainable development, and False Bay as an iconic space.

Training was also seen to be needed with respect to the laws and City by-laws governing South Africa, the City of Cape Town and False Bay, fisheries facts and trends, rights allocations, skills development, eco-tourism and alternative livelihoods provision.

Public Safety

Public safety was raised as a concern by almost all stakeholder groups. The northern shore of False Bay (beaches east of Muizenberg) was identified as being particularly problematic. Suggestions for improvement included the need for visible, effective policing and public protection, and the fact that public transport and amenities should be monitored and policed. It was further suggested that there was heightened awareness and communication needed around public safety in the False Bay area.

The need for a coordinated, integrated approach

These issues focused on the need for integration and coordination amongst all governance agencies, at a national, provincial and local level. With regards to False Bay, it was seen that this would mean that an integrated management plan is needed, incorporating an integrated compliance strategy (law enforcement and policing included), with consistency of regulations, and with clearly defined responsibilities amongst agencies. It was further emphasized that all governance agencies need to have the authority and capacity to enforce their specific responsibilities, and that there was a need to optimize resources which would be better met by an integrated approach.

Conclusion and Way Forward

ERA workshops provide an excellent way of monitoring and stimulating ecosystems based management implementation in a transparent and participatory manner through consultation and discussion amongst diverse stakeholders. This report summarizes the priority issues raised by stakeholders. The next step is to examine what current programmes and management actions are actually taking place in and around False Bay, by all governance agencies, civil society institutions and NGOs, to address priority issues raised. This ‘response document’ will also allow for the identification of gaps in the management of the bay.

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WWF COASTAL CONSERVATION PARTNERSHIP: False Bay

Ecological Risk Assessment (ERA) Workshop for False Bay: 29 May and 21 June 2012

NAME	ORGANISATION / ASSOCIATION or STAKEHOLDER GROUP
Terry Corr	AfriOceans Conservation Alliance
Judian Bruk	Trek net fishery; experimental fisheries
Kenneth Kingma	Trek net fishery
Pedro Garcia	South African United Fishing Front
Tony Trimmel	Kalk Bay Boat Owners Association
Zane Merton	Western Cape Shore Angling
Alan Lindner	A Whale of a Heritage Route
Monty Guest	Underwater Africa
Malcolm Grant	Western Province Deep Sea Angling Association
Grant Spooner	Marine Scene
Lee Wiid	Western Province Deep Sea Angling Association
Siham Allie	Rock Lobster fishery
Sizwe Abrahams	Tourism
Val Arendse	Trek net fishery
Peter Southwood	Southern Underwater Research Group
Abduragmaan Ryklief	Trek net fishery
Nizaar Majiet	False Bay Yacht Club; spearfishing
Scott Russell	Abalone fishery
Helene Smit	Facilitator – Feather Associates
Peter Chadwick	WWF-SA
Arne Purves	City of Cape Town
Eleanor Yeld Hutchings	WWF-SA
Samantha Petersen	WWF-SA

WWF COASTAL CONSERVATION PARTNERSHIP: False Bay

Ecological Risk Assessment (ERA) Workshop for False Bay: 29 May and 21 June 2012

Stakeholder Groups consulted:

- General public and non-consumptive users
- Tourism and eco-tourism
- Recreational fishers
- Commercial line fishery
- Commercial rock lobster fishery
- Commercial abalone fishery
- Commercial net fishery
- Research and non-governmental organisations

WWF COASTAL CONSERVATION PARTNERSHIP: False Bay

Ecological Risk Assessment (ERA) Workshop for False Bay

Appendix 2. All issues identified by stakeholders (all groups) during the False Bay Ecosystems Risk Assessment process

NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
1	External negative impacts on False Bay are out of our control		2			1			**3**
2	Commercial fisheries are allowed in high-use and high-importance recreational areas					1			**1**
3	Public do not know what happens in False bay					1	1		**2**
4	There isn't communication and awareness amongst public and user groups			1		1	1		**3**
5	Barriers and obstruction to entering the eco-tourism market exist			1		1			**2**
6	Eco-tourism is over-regulated			1		1			**2**
7	Sewage, municipal dumps and polluted rivers are draining into False Bay		1	1		1	1		**4**
8	Shark education and awareness not sufficient during summer on beaches					1			**1**
9	Businesses in False Bay have responsibilities and roles within the Bay that must be emphasised					1			**1**
10	Public not protected against unwise activities e.g. building in coastal zone					1			**1**
11	The ICMA and the rights of the public need to be taken into account when planning coastal development and/or activities					1			**1**
12	Community and civic leaders not identified by public					1			**1**
13	Aquaculture and experimental commercial fisheries not carefully considered in terms of ecosystem impact, conservation or management strategy		1			1			**2**
14	Coordinated research plan and data base of existing and historical research for False Bay doesn't exist					1			**1**

WWF COASTAL CONSERVATION PARTNERSHIP: False Bay

Ecological Risk Assessment (ERA) Workshop for False Bay

NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
15	Commercial fishers not incentivised to participate in tag and release or fisheries research		1						**1**
16	Species catch limitations inadequate and unimaginative		1						**1**
17	Kelp and organic debris removal on beaches disruptive to ecosystem		1						**1**
18	Litter and contaminants off boats and from shore anglers polluting False bay		1					1	**2**
19	No permit requirement for returning empty bait boxes to port in line fishery		1						**1**
20	Open access to most shark species on commercial permits resulting in increasing targeting of sharks		1		1				**2**
21	Cow sharks targeted for livers for cage diving industry - wasteful and ecologically damaging		1		1				**2**
22	Boats putting to sea in unseaworthy condition and unsuitable sea conditions		1						**1**
23	Safety at sea currently reactive		1						**1**
24	Commercial fishery for Kabeljou collapsed in False bay		1						**1**
25	Unregulated fishing from the shore		2						**2**
26	Inspectorate not going east of Strandfontein		1						**1**
27	Lobster traps and ropes are a safety hazard		1					1	**2**
28	South African Navy chases commercial fishers out of their waters for target and fire practice		1						**1**
29	No functional reporting channels or hotlines for poaching and illegal activities						1		**1**
30	Information or suspicious leads received by authorities not acted on						1		**1**
31	Justice system failure (prosecutions, sentences)			2		2	2		**6**

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Ecological Risk Assessment (ERA) Workshop for False Bay

NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
32	Legal abalone fishery insignificant relative to illegal fishery, also leads to disheartenment and frustration						1		**1**
33	Aquaculture not promoted						1		**1**
34	Abalone Reseeding and ranching not allowed						1		**1**
35	Abalone fishers not being allowed to use traditional resource areas, but areas now are being poached out						1		**1**
36	Government officials espousing personal agendas or policies						1		**1**
37	No integration, cooperation or communication among government departments or agencies			1	2	2	1		**6**
38	Negative stigma around abalone negatively affects legal business and trade						1		**1**
39	Focus lacking on abalone issues - should be more in the public eye						1		**1**
40	Money, funding and time wasted e.g. Operation trident						1		**1**
41	Focus is not on prevention of poaching, but on apprehension of poachers						1		**1**
42	Public safety in False Bay, on beaches, on transport, and in general area of the Bay is lacking			2	1	2	1	1	**7**
43	Beach driving does not need to be banned in Western Cape						1		**1**
44	SANParks negatively affecting access to the resource (e.g. extra costs, permits)						1		**1**
45	Trek net fishery unregulated and having a negative environmental impact		2				1		**3**
46	Misguided public perception of net fishery	1							**1**
47	Local knowledge not included and used	1							**1**

WWF COASTAL CONSERVATION PARTNERSHIP: False Bay

Ecological Risk Assessment (ERA) Workshop for False Bay

NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
48	Trek net fishery heavily restricted (hugely decreased number of rights)	1							**1**
49	Compliance enforced and concentrated within net fishery but not elsewhere	1							**1**
50	Rights are not even and equal	1							**1**
51	MPAs do not exist for any reason other than to increase MPA coverage	1							**1**
52	Non-sale, non-commercial species caught in the trek are not allowed to be kept, even only to the limit of a recretional permit	1							**1**
53	Food security is a real risk	1							**1**
54	Reality of the socio economic status of the trek fishery and people involved is not considered	1							**1**
55	Trek fishery is location bound and can't chase the fish like the ski boat fishery	1							**1**
56	Governance confusion - DAFF vs DEA	1							**1**
57	Proper research has not been done on fish species in False Bay to clear up existing misperceptions	1							**1**
58	There is a lack of clarity on the rights allocation process post 2013 from national government	1							**1**
59	People don't have alternative livelihood sources during winter	1							**1**
60	White shark numbers are increasing	1	2						**3**
61	Increasing seal/gear conflicts	1	2						**3**
62	Fishery is very weather dependent and therefore feeding families is weather dependent	1							**1**
63	Shark shield buoys used by Fish Hoek lifesavers negatively impacting the fishing	1							**1**
64	People who are not necessarily fishermen are getting rights	1							**1**

WWF COASTAL CONSERVATION PARTNERSHIP: False Bay

Ecological Risk Assessment (ERA) Workshop for False Bay

NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
65	different tourism types (consumptive and non-consumptive) all grouped together			1					**1**
66	Harbours dirty, polluted and not maintained			1					**1**
67	Amenities dirty, polluted and not maintained		2	1		2			**5**
68	False Bay does not have a directed marketing campaign locally or internationally			1					**1**
69	Lack of creative and artistic initiatives			1					**1**
70	Lack of central False bay tourism hub			1					**1**
71	Lack of funding for False Bay tourism			1					**1**
72	No valuation of ecosystem goods and services exists for False Bay			1				1	**2**
73	Lack of collective, galvanised tourism body (for all tourism sectors)			1					**1**
74	Blue Flag status is misleading - non-compliance with regulations			1					**1**
75	Lack of consultation between government and user groups			1					**1**
76	Lobster size regulations ecologically unsound, should be "slot" limit							1	**1**
77	Not enough sustained lobster research done in False Bay (and elsewhere)							1	**1**
78	No transparency and access to decision-making and research							1	**1**
79	No publicly accessible audit of the fishery and its associated funds							1	**1**
80	No no-take MPAs in False bay protecting the lobster resource adequately							1	**1**
81	Beaches filthy							1	**1**
82	No audit and accountability of what happens to recreational permit fees							1	**1**
83	Recreational angling community have a very big impact on the ecosystem							1	**1**

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NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
84	People on eastern side of False Bay not being engaged in process							1	**1**
85	False Bay does not have iconic status despite being most used coastal area in western cape							1	**1**
86	No strong, dedicated lobbying and advocacy group							1	**1**
87	Fisheries not the focus of DAFF							1	**1**
88	Fishing industry used as payment mechanism for politicians							1	**1**
89	MPAs in False Bay not fulfilling their role				1				**1**
90	Fishing occurs within the no-take areas of the MPA				1				**1**
91	Sense of entitlement exists within the entrenched commercial fishery in False Bay				1				**1**
92	Difficulty in pinpointing exact factors as reasons for changes and shifts in resources - Global warming, climate change, overfishing				1				**1**
93	No collaboration between conservation interest group and responsible/governance agencies				1				**1**
94	Lack of understanding mong different stakeholder groups leads to shifting blame or "fingerpointing"				1				**1**
95	SCUBA divers regulated as a "fishery" by SANParks				1				**1**
96	Legal fishery for demersal sharks having negative impact				1				**1**
97	Negative commercial impact of undersize fish retention				1				**1**
98	Regulations inconsistent across country				1				**1**
99	Lack of clear signage and communication of regulations				1				**1**
100	Unethical recreational fishing practices		2		1				**3**

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NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
101	Lack of education and awareness campaigns for marine and fishery conservation				1				**1**
102	"Bycatch" is in fact often targeted and not strictly regulated enough				1				**1**
103	Recreational fishing not recognised for its contribution to the economy				2				**2**
104	Management agencies do not have adequate funding, staff, skills, capacity or resources		2		2		2		**6**
105	Estuary and estuarine fisheries management inadequacy and non-compliance				2				**2**
106	Lack of compliance capacity and resources			2	2	2	2	2	**10**
107	Lack of compliance funding				2		2		**4**
108	No enforcement of existing regulations		2	2	2	2		2	**10**
109	Government depends on funding from selling confiscated poached resources				2			2	**4**
110	Poaching condoned in TAC				2		2	2	**6**
111	Law enforcement fragmented and ineffectual		2	2	2	2	2	2	**12**
112	Recreational fishing permit fees not put back into recreational fishing				2				**2**
113	False bay ecosystem and bottom topography needs proactive restoration		2		2				**4**
114	Flawed rights allocation and verification process							2	**2**
115	Lack of education on skills development, financial management, equipping people to manage their rights allocation, resource use and abuse, and value-adding to the resource	2				2		2	**6**
116	Lack of amenities		2			2	2		**6**
117	Lack of acknowledgement and information on the economic multiplier benefits of tourism			2					**2**
118	Mistrust of new groups and new processes	2							**2**
119	Net fishery can't drive on beach as part of their permit conditions	2							**2**

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NUMBER	ISSUE DESCRIPTION	NET FISHERS	LINE FISHER	TOURISM	RECREATIONAL FISHERS	GENERAL PUBLIC	ABALONE FISHERS	ROCK LOBSTER FISHERS	TOTAL SCORE
120	White steenbras not allowed to be kept by the net fishery although it is allowed as a recreational species	2							**2**
121	No clarity on multiple rights holding and the incoming small scale fisheries policy	2							**2**
122	Lack of access points to False Bay		2				2		**4**
123	Lack of strategic leadership and will		2						**2**

Appendix 3. Issues taken forward into step 2 of the False Bay Ecosystem Risk Assessment process for risk value scoring and prioritization

*issue number relates to the order in which they were identified originally

No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
7	Sewage, municipal dumps and polluted rivers are draining into False Bay	Ecological	4	5	**20**	Extreme	Examples are Zandvlei, Kalk Bay Harbour (this issue is currently being fixed), Macassar - fish populations suffering as a result. Eerste River is the most polluted in SA. Likelihood is affected by geographical area.
20	Effort migration to shark species (non-protected) on commercial permits resulting in increasing targeting of sharks	Ecological	4.5	5	**22.5**	Extreme	The numbers of demersal sharks are decreasing drastically. There appears to be migration from targeting edible fish to sharks because it's so lucrative. Recreational fishers selling catches "recrommercials" are problematic. There is a perception that white sharks are no longer able to feed successfully i.e. attack increase.
110	Poaching condoned in TAC	Social and economic	5	6	**30**	Extreme	This relates to abalone and rock lobster. There are negative socio-economic consequences – it is seen as a travesty of justice by communities dependent on these resources. To reserve part of the TAC for the poachers is wrong.
72	No valuation of ecosystem goods and services exists for False Bay	Ecological	4	6	**24**	Extreme	Amenity value is not an ecological concern but rather a socio-economic one. There is a need to recognise dependence on the resource, by towns and businesses etc. May only be valued once it is lost. Decision making relates to the value/economic worth of the resource, which gives a basis on which decisions are made - a spin-off lever. If there is no report that values the total Bay, we can't measure it against anything, and it gives us no basis for justifying decision. Why is the valuation important? Should be built into all decision making.
42	Public safety in False Bay, on beaches, on transport, and in general area of the Bay is lacking	Social and economic	4	5	**20**	Extreme	Although a bird sanctuary area, Macassar is a no-go zone due to crime & violence. There are impacts on the ecosystem with respect to driving and quad-biking on beaches. Safety improvement would increase values of property, activities, etc. Public transport (e.g. trains) dangerous. The problem is highly localized.

No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
103	Recreational fishing not recognised for its contribution to the economy	Social and economic	3.75	5	**18.75**	Extreme	There is positive spin-off: marine tourism, associated businesses to the area, holiday houses, guest houses, supporting infrastructure and secondary businesses. Some disagreement about the percentage of the contribution of recreational fishing exists. Studies have been undertaken to value recreational fishing and have concluded that it is a significant sector economically (and ecologically in terms of ecosystem pressures). It is geographically localised in terms of areas dependent on marine tourism, e.g. commercial fishermen in Kalk Bay have catered for recreational fishers, proving lucrative to the point of abandoning commercial fishing. No consensus reached and its contribution not agreed upon. In all likelihood it will be affected by the Small Scale Fisheries Policy (and its implementation) which didn't take recreational fishing into account.
112	Recreational fishing permit fees not put back into recreational fishing	Social and economic	4	6	**24**	Extreme	"Back into recreational fishing" includes compliance, research, education, etc. for the benefit of recreational fishing. DAFF doesn't ring-fence funding though because of unequal levies (if it did, attention would all be given to the big industrial fishing sectors). The real issue is the lack of transparency and accountability as to what happens to the fees generated through recreational fishing – this may apply to other fishing sectors too.
114	Flawed rights allocation and verification process	Social and economic	5	6	**30**	Extreme	The effect of the flawed process has been devastating on communities: some communities have been obliterated with respect to commercial activities. Ecosystem impacts are also notable because of enforced turn to poaching. Small Scale Fisheries Policy looks like it will cause tremendous dislocation.
115	Lack of education equipping people to manage their rights allocation	Social and economic	5	6	**30**	Extreme	There is a lack of education on skills development, financial management, equipping people to manage their rights allocation, resource use and abuse, and value-adding to the resource. Small Scale Fisheries Policy is not going to change this but in fact will aggravate it, and the underlying problem.
116	Lack of amenities	Social and economic	4	5	**20**	Extreme	Including slipways, ablutions, waste disposal points and walkways.

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No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
121	No clarity on multiple rights holding and the incoming small scale fisheries policy	Social and economic	4.5	6	**27**	Extreme	This could be catastrophic. It's not science based. We're moving towards communal (legal entity) systems and basket systems, but resource allocation and implementation not finalized yet – seen as akin to a "blank cheque".
122	Lack of access points to False Bay	Social and economic	4	5	**20**	Extreme	Specific to boat access; the cost to the communities and fishers of getting to the access points is high (historically driven). This issue is geographically localized.
61	Increasing seal/gear conflicts	Social and economic	5	6	**30**	Extreme	For the line-fish sector it's becoming catastrophic. The issue is fishery orientated - noted that there is more than 1 perspective. This is a socio-economic score but the ecological aspect is different.
5	Barriers and obstruction to entering the eco-tourism market exist	Governance	4	5	**20**	Extreme	Permit costs, conditions, and application processes are prohibitive. This assumes that we want responsible tourism in False Bay. Ecotourism should be a viable alternative, sustainable, ecologically friendly livelihood option.
6	Eco-tourism is over-regulated	Governance	4	5	**20**	Extreme	Same as above.
31	Justice system failure	Governance	5	5	**25**	Extreme	This includes prosecutions and sentencing.
37	No integration, cooperation or communication among government departments or agencies	Governance	5	5	**25**	Extreme	
104	Management agencies do not have adequate funding, staff, skills, capacity or resources	Governance	5	5	**25**	Extreme	Most of these issues are governed by labour laws, not necessarily the agencies themselves. Also note that there are "pockets of excellence".
106	Lack of compliance capacity and resources	Governance	5	5	**25**	Extreme	
107	Lack of compliance funding	Governance	5	5	**25**	Extreme	For example there is overtime funding from SANParks, but not from DAFF

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No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
123	Lack of strategic leadership and will	Governance	4.5	5	**22.5**	Extreme	Western Cape has a unique situation politically (divergent political leadership) although this is not the only contributing factor. "Irreversible" needs to be used cautiously! Local knowledge needs to be taken into account. Note that strategic and political leadership are not necessarily the same. On-the-ground and policy-making levels don't always speak to each other. There is no consistency in strategic leadership
105	Estuary and estuarine fisheries management is inadequate	Governance	4	6	**24**	Extreme	Management is inadequate and there is non-compliance with regulations. This was raised during the Zandvlei crisis but also occurs in Silvermine estuary. They all have emergency sewerage overflows. The water act also feeds in here!
109	Government depends on funding from selling confiscated poached resources	Governance	5	6	**30**	Extreme	What would they do with the confiscated resources otherwise? Law enforcement is rewarded for the value of the confiscation of the illegal resource use.
1	External negative impacts on False Bay are out of the control of stakeholders	External	4	6	**24**	Extreme	Small Scale Fisheries Policy is a good example (comes from Pretoria, going to be implemented, going to affect False Bay). The risk is the fact that these are out of our control.
13	Aquaculture not carefully considered in terms of ecosystem impact, conservation or management strategy	Ecological	4	3.5	**14**	High	May need to be looked at in future as a possible solution. No consultation always causes major issues. Issue depends on what controls are in place and what the duration is. Data deficiency means that consequences can't be truly known. Species introduction can be catastrophic. Likelihood depends on whether decisions are science-based or politics-based.
25	Unregulated fishing from the shore	Ecological	4	4.5	**18**	High	There is a lack of regulation by inspectors/compliance officers. Regulations would be welcomed by anglers in order to assess their contribution/effort. Permit costs are too high for poorer communities. Inspectorate won't move east of Muizenberg (dangerous) – but there needs to be more compliance in that area. There is not perfect compliance anywhere. This is impacting on many fish and shark species. There was a non-consensus on level of impact that shore anglers can have - one participant feels a 1 consequence score more reasonable.

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No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
117	Lack of acknowledgement and information on the economic multiplier benefits of tourism	Social and economic	4	4	**16**	High	Responsible, non-consumptive tourism is a very important part of False Bay's activities. It has the ability (not always, but can have) to co-exist in a non-conflicting way with other user groups, because you are selling an experience). This is recognised, but not necessarily to the extent of the contribution it does in fact make. It is acknowledged by some governance entities, but not all.
118	Mistrust of new groups and new processes	Social and economic	4	4.5	**18**	High	A multi-stakeholder forum needs to be organic. People have been through many processes before and have felt betrayed. New groups staking their turf will always be viewed by already existing stakeholders as trying to take over, or limit them. Some mistrust exists around the entities themselves. Processes can be viewed as an attempt to take over.
108	No enforcement of existing regulations	Governance	4.5	4	**18**	High	The existing legislation is enough; it just needs to be enforced. Geographic location plays a huge role in this problem.
111	Law enforcement fragmented and ineffectual	Governance	3	5	**15**	High	Sea-based patrols are conducted by SANParks and now the South African Navy; but there are no control centers.
3	Public do not know what happens in False bay	Governance	4	4	**16**	High	People's perceptions about activities and sectors within False Bay are largely dependent on their education and awareness about what is happening. If the public is kept informed then there is less chance of unnecessary conflict, and it closes the expectation gap.
67	Amenities dirty, polluted and not maintained	Social and economic	4	4	**16**	High	Example is of Miller's Point recreational area – the impact of them not being maintained is serious. With beach amenities seasonal cleaners are employed to do maintenance, but not during the winter! There is reluctance by councils and authorities to do anything or to work together. Another example is of Kalk Bay Harbour beach. Eventually dirt and pollution will find its way into the sea and affect the ecosystem. Where there are Blue Flag beaches and in the Blue Flag season, amenities have been improved markedly but this is all highly localised (massive discrepancies in different areas).

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No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
21	Cow sharks targeted for livers for cage diving industry	Ecological	4	1	**4**	Low	This is wasteful and ecologically damaging. White shark cage diving permit conditions no longer allow shark products to be used therefore cow shark market has been removed. Intervention has helped reduce longline catch
45	The existing trek net fishery unregulated and having a negative environmental impact	Ecological	2	1	**2**	Low	There is a perception that bycatch/undersized/non-allowed catch is not being returned; this relates to the perception of no officials being on site and no inspections being done which is a compliance issue. Rights holders state that 90% of the time there are inspectors. Different trek locations have different potential "harmfulness" so this issue needs to be considered on a location basis.
113	No attempt made to restore False bay ecosystem and bottom topography	Ecological	0.5	6	**3**	Low	Benefits include: creation of artificial reefs, diving tourism, more structure for fishing, could be adding habitat that we are losing through pollution or resource exploitation, and more habitat for valuable resource species. Kelp removal is negatively impacting the ecosystem.
119	Net fishery can't drive on beach as part of their permit conditions	Social and economic	4	1	**4**	Low	Fish won't be in a good condition, which will have negative economic impact. Theft of fish is also a concern. There's a problem with compatibility of beach driving and other beach activities. This ban seems a little unfair – it's a public perception issue, compounded by lack of communication amongst governing bodies and multi-users. It's a technical issue being addressed in other forums.
13	Experimental commercial fisheries not carefully considered in terms of ecosystem impact, conservation or management strategy	Ecological	3	2.5	**7.5**	Moderate	Is there any way to retract experimental fishing permits immediately? Experimental fisheries may have a knock-on effect. There is potential risk of overharvesting because of not knowing the resource well. Needs to be context-based/species specific. No consensus on consequence score; went with majority democracy, and a compromise on likelihood score.
60	White shark numbers are increasing leading to reduced bather safety risks economic viability of tourism and associated business	Social and economic	2	4	**8**	Moderate	Research is not showing this to be true. There is economic impact due to tourism/lifesaving/ocean use decrease, as well as negative notoriety to False Bay with respect to shark attacks. There's been business/livelihood decrease – having a ripple effect. The ecotourism value of sharks needs to be considered for its positive impacts on False Bay. Sharks play in important role in ecosystem balance. There are more people in water now. More sharks have positive impact on fishing. Consensus was not reached.

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No.*	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE	RISK CATEGORY	COMMENT
18	Litter and contaminants off boats and from shore anglers polluting False Bay	Ecological	2.5	4	**10**	Moderate	There are no disposal systems. Litter washes onto shores, the harbours are filthy, discarded fishing line causes entanglements. Angler pollution is decreasing. Permit conditions for some fishery sectors include returning litter. Boat-based and shore anglers should be considered and responded to separately.
100	Illegal fishing practices by recreational anglers	Ecological	4	3	**12**	Moderate	These include keeping undersize fish, exceeding bag limits, keeping protected species, selling catches (known as "recrommercials"). This has negative economic consequences for commercial fishery. It does depend on what sector of the recreational fishery is being considered. There is a trend for recreational boat anglers to target and sell demersal shark species. It is hard to judge the scale of impact. There are severe economic and ecosystem consequences to these practices. It is not organized angling competitions as they impose and enforce adherence to regulations.
4	Lack of communication and awareness amongst public and user groups	Governance	3	4	**12**	Moderate	A two-way communication street is needed to guide and inform perceptions because people are very informed in their own spheres but between groups it is lacking. This depends on the quality of the communication. There is also the perception that "it's a problem if they know too much". False Bay is affected by all stakeholder groups which can lead to or drive user conflict, resulting in confusion.
27	Lobster traps and ropes are a safety hazard	Social and economic	0	1	**0**	Negligible	Spin-off from dive ban in False bay (can't carry dive gear on board). Need to factor in the ring nets inshore that impact on pleasure craft as well - ropes are just cut off. Can be a serious problem in the event that it does happen.
120	White steenbras not allowed to be kept by the net fishery	Social and economic	Unresolved	6	**Unresolved**		Although it is allowed as a recreational species; very prized gamefish by recreational fishery; rec fishery grateful for protection that they enjoy; suggestion that there is not enough evidence that white steenbras are in fact endangered; trek fishery feels that there has been a huge increase in the amount of steenbras in the Bay (especially in the daytime); consistent, fair approach with consultation - seems unfair that the law is not applied consistently; this is the risk to the net fisher; data-deficiency is a huge problem; competing issues here - contentious issue

Appendix 4. Prioritised issues (those with a risk score of 7, the "moderate" risk category, or greater) in the False Bay Risk Assessment process.

*issue number relates to the order in which they were identified originally

No.**	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE*	RISK CATEGORY	COMMENT
121	No clarity on multiple rights holding and the incoming small scale fisheries policy	Social and economic	4.5	6	**27**	Extreme	This could be catastrophic. It's not science based. We're moving towards communal (legal entity) systems and basket systems, but resource allocation and implementation not finalized yet – seen as akin to a "blank cheque".
122	Lack of access points to False Bay	Social and economic	4	5	**20**	Extreme	Specific to boat access; the cost to the communities and fishers of getting to the access points is high (historically driven). This issue is geographically localized.
61	Increasing seal/gear conflicts	Social and economic	5	6	**30**	Extreme	For the line-fish sector it's becoming catastrophic. The issue is fishery orientated - noted that there is more than 1 perspective. This is a socio-economic score but the ecological aspect is different.
5	Barriers and obstruction to entering the eco-tourism market exist	Governance	4	5	**20**	Extreme	Permit costs, conditions, and application processes are prohibitive. This assumes that we want responsible tourism in False Bay. Ecotourism should be a viable alternative, sustainable, ecologically friendly livelihood option.
6	Eco-tourism is over-regulated	Governance	4	5	**20**	Extreme	Same as above.
31	Justice system failure	Governance	5	5	**25**	Extreme	This includes prosecutions and sentencing.
37	No integration, cooperation or communication among government departments or agencies	Governance	5	5	**25**	Extreme	
104	Management agencies do not have adequate funding, staff, skills, capacity or resources	Governance	5	5	**25**	Extreme	Most of these issues are governed by labour laws, not necessarily the agencies themselves. Also note that there are "pockets of excellence".
106	Lack of compliance capacity and resources	Governance	5	5	**25**	Extreme	
107	Lack of compliance funding	Governance	5	5	**25**	Extreme	For example there is overtime funding from SANParks, but not from DAFF, so DAFF compliance is only funded between 8 am and 4 pm, only on weekdays.
123	Lack of strategic leadership and will	Governance	4.5	5	**22.5**	Extreme	Western Cape has a unique situation politically (divergent political leadership) although this is not the only contributing factor. "Irreversible" needs to be used cautiously! Local knowledge needs to be taken into account. Note that strategic and political leadership are not necessarily the same. On-the-ground and policy-making levels don't always speak to each other. There is no consistency in strategic leadership
105	Estuary and estuarine fisheries management is inadequate	Governance	4	6	**24**	Extreme	Management is inadequate and there is non-compliance with regulations. This was raised during the Zandvlei crisis but also occurs in Silvermine estuary. They all have emergency sewerage overflows. The water act also feeds in here!

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No.**	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE*	RISK CATEGORY	COMMENT
109	Government depends on funding from selling confiscated poached resources	Governance	5	6	**30**	Extreme	What would they do with the confiscated resources otherwise? Law enforcement is rewarded for the value of the confiscation of the illegal resource use.
1	External negative impacts on False Bay are out of the control of stakeholders	External	4	6	**24**	Extreme	Small Scale Fisheries Policy is a good example (comes from Pretoria, going to be implemented, going to affect False Bay). The risk is the fact that these are out of our control.
42	Public safety in False Bay, on beaches, on transport, and in general area of the Bay is lacking	Social and economic	4	5	**20**	Extreme	Although a bird sanctuary area, Macassar is a no-go zone due to crime & violence. There are impacts on the ecosystem with respect to driving and quad-biking on beaches. Safety improvement would increase values of property, activities, etc. Public transport (e.g. trains) dangerous. The problem is highly localized.
103	Recreational fishing not recognized for its contribution to the economy	Social and economic	3.75	5	**18.75**	Extreme	There is positive spin-off: marine tourism, associated businesses to the area, holiday houses, guest houses, supporting infrastructure and secondary businesses. Some disagreement about the percentage of the contribution of recreational fishing exists. Studies have been undertaken to value recreational fishing and have concluded that it is a significant sector economically (and ecologically in terms of ecosystem pressures). It is geographically localised in terms of areas dependent on marine tourism, e.g. commercial fishermen in Kalk Bay have catered for recreational fishers, proving lucrative to the point of abandoning commercial fishing. No consensus reached and its contribution not agreed upon. In all likelihood it will be affected by the Small Scale Fisheries Policy (and its implementation) which didn't take recreational fishing into account.
112	Recreational fishing permit fees not put back into recreational fishing	Social and economic	4	6	**24**	Extreme	"Back into recreational fishing" includes compliance, research, education, etc. for the benefit of recreational fishing. DAFF doesn't ring-fence funding though because of unequal levies (if it did, attention would all be given to the big industrial fishing sectors). The real issue is the lack of transparency and accountability as to what happens to the fees generated through recreational fishing – this may apply to other fishing sectors too.
114	Flawed rights allocation and verification process	Social and economic	5	6	**30**	Extreme	The effect of the flawed process has been devastating on communities: some communities have been obliterated with respect to commercial activities. Ecosystem impacts are also notable because of enforced turn to poaching. Small Scale Fisheries Policy looks like it will cause tremendous dislocation.
115	Lack of education equipping people to manage their rights allocation	Social and economic	5	6	**30**	Extreme	There is a lack of education on skills development, financial management, equipping people to manage their rights allocation, resource use and abuse, and value-adding to the resource. Small Scale Fisheries Policy is not going to change this but in fact will aggravate it, and the underlying problem.
116	Lack of amenities	Social and economic	4	5	**20**	Extreme	Including slipways, ablutions, waste disposal points and walkways.

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No.**	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE*	RISK CATEGORY	COMMENT
7	Sewage, municipal dumps and polluted rivers are draining into False Bay	Ecological	4	5	**20**	Extreme	Examples are Zandvlei, Kalk Bay Harbour (this issue is currently being fixed), Macassar - fish populations suffering as a result. Eerste River is the most polluted in SA. Likelihood is affected by geographical area.
20	Effort migration to shark species (non-protected) on commercial permits resulting in increasing targeting of sharks	Ecological	4.5	5	**22.5**	Extreme	The numbers of demersal sharks are decreasing drastically. There appears to be migration from targeting edible fish to sharks because it's so lucrative. Recreational fishers selling catches "recrommercials" are problematic. There is a perception that white sharks are no longer able to feed successfully i.e. attack increase.
110	Poaching condoned in TAC	Social and economic	5	6	**30**	Extreme	This relates to abalone and rock lobster. There are negative socio-economic consequences – it is seen as a travesty of justice by communities dependent on these resources. To reserve part of the TAC for the poachers is wrong.
72	No valuation of ecosystem goods and services exists for False Bay	Ecological	4	6	**24**	Extreme	Amenity value is not an ecological concern but rather a socio-economic one. There is a need to recognise dependence on the resource, by towns and businesses etc. May only be valued once it is lost. Decision making relates to the value/economic worth of the resource, which gives a basis on which decisions are made - a spin-off lever. If there is no report that values the total Bay, we can't measure it against anything, and it gives us no basis for justifying decision. Why is the valuation important? Should be built into all decision making.
108	No enforcement of existing regulations	Governance	4.5	4	**18**	High	The existing legislation is enough; it just needs to be enforced. Geographic location plays a huge role in this problem.
111	Law enforcement fragmented and ineffectual	Governance	3	5	**15**	High	Sea-based patrols are conducted by SANParks and now the South African Navy; but there are no control centers.
3	Public do not know what happens in False bay	Governance	4	4	**16**	High	People's perceptions about activities and sectors within False Bay are largely dependent on their education and awareness about what is happening. If the public is kept informed then there is less chance of unnecessary conflict, and it closes the expectation gap.
117	Lack of acknowledgement and information on the economic multiplier benefits of tourism	Social and economic	4	4	**16**	High	Responsible, non-consumptive tourism is a very important part of False Bay's activities. It has the ability (not always, but can have) to co-exist in a non-conflicting way with other user groups, because you are selling an experience). This is recognised, but not necessarily to the extent of the contribution it does in fact make. It is acknowledged by some governance entities, but not all.
118	Mistrust of new groups and new processes	Social and economic	4	4.5	**18**	High	A multi-stakeholder forum needs to be organic. People have been through many processes before and have felt betrayed. New groups staking their turf will always be viewed by already existing stakeholders as trying to take over, or limit them. Some mistrust exists around the entities themselves. Processes can be viewed as an attempt to take over.
13	Aquaculture not carefully considered in terms of ecosystem impact,	Ecological	4	3.5	**14**	High	May need to be looked at in future as a possible solution. No consultation always causes major issues. Issue depends on what controls are in place and

No.**	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE*	RISK CATEGORY	COMMENT
	conservation or management strategy						what the duration is. Data deficiency means that consequences can't be truly known. Species introduction can be catastrophic. Likelihood depends on whether decisions are science-based or politics-based.
25	Unregulated fishing from the shore	Ecological	4	4.5	**18**	High	There is a lack of regulation by inspectors/compliance officers. Regulations would be welcomed by anglers in order to assess their contribution/effort. Permit costs are too high for poorer communities. Inspectorate won't move east of Muizenberg (dangerous) – but there needs to be more compliance in that area. There is not perfect compliance anywhere. This is impacting on many fish and shark species. There was a non-consensus on level of impact that shore anglers can have - one participant feels a 1 consequence score more reasonable.
67	Amenities dirty, polluted and not maintained	Social and economic	4	4	**16**	High	Example is of Miller's Point recreational area – the impact of them not being maintained is serious. With beach amenities seasonal cleaners are employed to do maintenance, but not during the winter! There is reluctance by councils and authorities to do anything or to work together. Another example is of Kalk Bay Harbour beach. Eventually dirt and pollution will find its way into the sea and affect the ecosystem. Where there are Blue Flag beaches and in the Blue Flag season, amenities have been improved markedly but this is all highly localised (massive discrepancies in different areas).
4	Lack of communication and awareness amongst public and user groups	Governance	3	4	**12**	Moderate	A two-way communication street is needed to guide and inform perceptions because people are very informed in their own spheres but between groups it is lacking. This depends on the quality of the communication. There is also the perception that "it's a problem if they know too much". False Bay is affected by all stakeholder groups which can lead to or drive user conflict, resulting in confusion.
13	Experimental commercial fisheries not carefully considered in terms of ecosystem impact, conservation or management strategy	Ecological	3	2.5	**7.5**	Moderate	Is there any way to retract experimental fishing permits immediately? Experimental fisheries may have a knock-on effect. There is potential risk of overharvesting because of not knowing the resource well. Needs to be context-based/species specific. No consensus on consequence score; went with majority democracy, and a compromise on likelihood score.
60	White shark numbers are increasing leading to reduced bather safety risks economic viability of tourism and associated business	Social and economic	2	4	**8**	Moderate	Research is not showing this to be true. There is economic impact due to tourism/lifesaving/ocean use decrease, as well as negative notoriety to False Bay with respect to shark attacks. There's been business/livelihood decrease – having a ripple effect. The ecotourism value of sharks needs to be considered for its positive impacts on False Bay. Sharks play in important role in ecosystem balance. There are more people in water now. More sharks have positive impact on fishing. Consensus was not reached.
18	Litter and contaminants off boats and from shore anglers polluting False Bay	Ecological	2.5	4	**10**	Moderate	There are no disposal systems. Litter washes onto shores, the harbours are filthy, discarded fishing line causes entanglements. Angler pollution is decreasing. Permit conditions for some fishery sectors include returning litter.

No.**	RISK	CATEGORY	CONSEQUENCE	LIKELIHOOD	RISK SCORE*	RISK CATEGORY	COMMENT
							Boat-based and shore anglers should be considered and responded to separately.
100	Illegal fishing practices by recreational anglers	Ecological	4	3	**12**	Moderate	These include keeping undersize fish, exceeding bag limits, keeping protected species, selling catches (known as "recrommercials"). This has negative economic consequences for commercial fishery. It does depend on what sector of the recreational fishery is being considered. There is a trend for recreational boat anglers to target and sell demersal shark species. It is hard to judge the scale of impact. There are severe economic and ecosystem consequences to these practices. It is not organized angling competitions as they impose and enforce adherence to regulations.