

## SEA Case Study: Port of Cape Town

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I'm going to talk about the strategic environmental assessment for the Port of Cape Town that I've been involved in. Before we start that, it's just important to see where we are. Cape Town is on the southern tip of Africa, so we're all the way down there, and that's really where this case study has been played out.

But what I want to do is, even before we jump into the detail of the strategic environmental assessment, is just give an impression of the Port of Cape Town and where it is situated. There we see a picture there of the Port of Cape Town in the foreground, with Table Mountain in the background. The Port of Cape Town has a container terminal. It also has a multi-purpose terminal for the export of fruit. It also has a ship repair industry. It also has an oil storage and fuel facility, as well as an area to accept large cruise liners. And really an important part of the regional and national economic growth, it stimulates economic development. It's a key part of the import and export of the country.

Just slightly to the right of that you'll see there's the V&A Waterfront, the Victoria and Alfred Waterfront, which has taken over the oldest part of the port and really has developed as a tourist hub for Cape Town. It's one of the most visited tourist destinations in South Africa. Ferries depart from there to Robben Island where Nelson Mandela was held prisoner for so many years. So really a key hub as far as tourism, shopping centers, restaurants is concerned.

Then we see the City of Cape Town basically moving in onto the port, encroaching onto the port, and each one of these issues I'll go into more detail just now. We will see pictures of this actually happening.

Also, the port is situated in this marine environment. We have a sensitive marine environment, as well as a marine environment that has a lot of historical and cultural wreckages from ships that have been visiting the Cape for the past four centuries. So from that perspective, also an important component.

We also have industrial development moving in on the port, really causing all kinds of constraints for future port development, and then a critical aspect, really, around access to the Port of Cape Town. We see that access to the Port of Cape Town is really through one national

major route, and so all traffic entering and exiting the port comes through the city, and that causes all kinds of problems with the city.

If we go into detail now and we see if we look at our port city land use planning issues, we see there in the middle the development of the International Convention Center, which has recently been completed in Cape Town. We also see the development of hotels and office blocks, really in close proximity and the line, the interface between the port and the city. Also, a lot of development in the V&A Waterfront, an additional housing development, some of the most expensive real estate in South Africa, all kinds of developments that attract tourism.

Then that is linked really to the access of the port, and because of all these developments, access to the port is extremely limited. We have big peak-hour traffic problems where we have long delays of traffic trying to get in and out of the city, and that results in delays of traffic trying to get in and out of the port.

Another aspect then is rail transport or rail accessibility to the port, which is extremely underutilized at present.

If we then look at some of the social issues around the port, the National Port Authority, which is the port operator of this port, is extremely aware of its commitment and its need to look after its own employees, as well as understanding its dynamic with the surrounding communities.

We also see that since September the 11th, international ports are now required to have a certain security tolerance, and as a result, people are not allowed in and out of the port. You require permits to access the port. And also, obviously, the port has been a major contributor to jobs and employment in the region, so all the economic activities and the on- and off-loading taking place in the port is critical.

If we now move into the marine environment and start looking at the implications around there, a lot of marine erosion or coastal erosion of the shoreline of Table Bay. We have developments right on the shoreline that are being threatened as a result of the erosion. And basically looking at how does the expansion of the port actually cause the erosion in the bay?

Then, again, I've mentioned the historical context of the port. Ships have been visiting the port for more than four centuries, and we see the development since 1879, the first development of the port and the growth there from there onwards, and the importance of the historical shipwrecks located underneath the water or underneath the sand, and what are the implications of that for future port development.

Then we move into the biophysical marine environment where the marine ecology is an important component. We have the African penguin, which is a threatened bird species, small population located on Robben Island, highly vulnerable to oil spills and any types of marine pollution that may be emanating from the port.

We also have sandy marine environments, which are also critical components to the whole ecological function of the bay. And then the rocky shorelines and the kelp beds, which is another important component.

Again, what are the interactions with the port in terms of pollution and in terms of water contamination? How does the port interact with this marine environment?

Another aspect of the port is what kind of economic data does the port use to actually predict or actually plan for future port development. We see the short-, medium-, and long-term port development, and the question is how does the port interact with the stakeholders and what information is it using to predict the future development of the port.

So, really, what I'm trying to emphasize here when we go back to that picture of the Port of Cape Town is to see that the port is surrounded by a complex social and built environment, but it's also located in an extremely sensitive biophysical environment. And the present decisionmaking processes of the Port of Cape Town and the National Port Authority were not equipped to deal with the integration of these kinds of issues, and that's why the CSIR was then appointed to undertake a strategic environmental assessment for the Port of Cape Town to assist them with these issues.

If we look at the aim, then, of the strategic environmental assessment, really defined by the SEA guidelines, the South African SEA guidelines, which defines SEA as a process of integrating the concept of sustainability into strategic decisionmaking. So it's integrating sustainability or sustainable development into strategic decisionmaking.

An important part here was saying, well, what is the strategic decisionmaking level that we are looking at, and, really, it's the local port planning level that we are looking at. We were criticized in the process for this because people said we should be looking at the Port of Cape Town in relation to other regional ports. And then they said, well, look at all the ports in South Africa. They said, well, what about the ports and the relationship to the ports to our neighbors, Namibia and also Mozambique. We said, no, the level that we're going to look at is at the local port planning level. That's where we can influence the decisionmaking.

If we then look at the legal framework, what was driving the strategic environmental assessment? Why did the National Port Authority actually undertake it? First of all, no legal requirements for strategic environmental assessment. However, our National Environmental Management Act, the main act in South Africa that governs environmental management, does mention the need to assess the implications of policies and programs. However, more specifically in the South African National Commercial Ports Policy, strategic environmental assessment is specifically mentioned as a tool that can be used to integrate biophysical, social, and economic issues and to raise that to a high level of decisionmaking, in other words, at the planning level.

The National Port Authority in this case would approve the strategic environmental assessment, but as its consultants involved in the process, would want the National Port Authority to commit to the outcomes of the strategic environmental assessment. As a result, we asked them to

commit to the vision for sustainable port development. We'll talk a little bit later about the vision just now.

Okay. The critical component to the strategic environmental assessment was linking it specifically to decisionmaking, and I would highly recommend that, before you start a strategic environmental assessment, you ask yourself the question: What is the decisionmaking process that we are trying to influence? If there's no decisionmaking process that you're trying to influence, then you've got to ask the question: Why do the strategic environmental assessment?

In this case, the decisionmaking process was the port planning process, the port environmental management system with ISO 14001, and then the corporate social investment programs. And you can see the difference. One was revised every three years, the other one on an annual basis, and the other one ongoing. So this is really how the port made the decisions.

Then how do we get into the process? That diagram is a little bit small, will be a little bit small on your screen, but you should have it in your notes. If we look at Phase 1, it was really the scoping. We needed to identify a vision, and we needed to involve stakeholders, and I'll talk just now about the stakeholder engagement. But we needed to involve them in fighting a vision for sustainable port development. How could the Port of Cape Town best contribute towards sustainable development of the region?

And out of that, then, we used the stakeholders to identify the strategic issues. What are the issues that will stop the port from actually achieving that vision? And once we had that, we said, okay, well, how do we get specialists to actually assess these strategic issues? And we developed terms of reference for that.

Phase 2 then was doing the strategic assessment, in other words, appointing the specialists and asking them, first of all, number one, to look at the state of the environment and say, well, with regards to the specific strategic issue, what is the state of the environment? What are the trends? What is actually happening? From there, we could then sit back and identify sustainability objectives and targets, which basically say if we want to achieve our vision for sustainable port development, what other objectives in this specific environmental component do we actually have to achieve?

Along with that, then, recommending indicators and monitoring programs, which is a critical part then for management to actually monitor the implementation and to check are they on the path toward sustainable development. So that was a critical part of the whole strategic assessment, and I'll come back to that a little bit later.

If we then look at Phase 3, which was a sustainability framework around integrating all these specialist studies--we had seven or eight specialist studies that we had to integrate and write up in a more informed way and in an easier way for then the actual people who were going to implement the guidelines, comprehensively put that together and make sure that then it was implementable by the various people within the port.

The important part to remember here, as we see, the vision that was developed in the scoping process actually drives the implementation. In the same way that a policy in an environmental management system, an ISO 14000 management system, drives implementation, and you need top management commitment, in the same way you need top management commitment to the vision for sustainable development.

Okay. To come back to the stakeholder engagement, we identified key stakeholders and we invited them to meetings, and this was really an exclusive process. We excluded people. We invited only the people that we wanted. We got them into meetings and workshops, and we asked them to help us to identify a vision for sustainable port development, and we asked them to identify strategic issues.

However, with regards to access to information, we were inclusive. Anyone was allowed to access that information. We had a website. We went out information sheets to a broader audience, and we advertised in local newspapers. So, really, with regards to workshops and meetings, we were exclusive, and we only wanted certain groups to come in and help us brainstorm and develop this vision, and these are critical stakeholders, so it wasn't just a menial process that we undertook. It was a detailed process that we undertook to identify these people, and then really allowing anyone to access the information.

Okay. What were the strategic issues that were identified? First of all, the marine ecosystem, and I've spoken a bit about this already. How would the marine ecosystem constrain future port development? What are the existing trends in that environment and what are the objectives, targets, and indicators that the port needs to be cognizant of when making certain decisions? Marine archaeology, ships visiting the Cape for more than four centuries. We're saying that shipwrecks are protected under national legislation. Any shipwreck older than 60 years is a national monument. As a result, this could constrain future port development. We need to look at this issue, too.

Shoreline stability, the interaction with a port expanding into a water body, changing currents and wave patterns, and as a result, changing erosion patterns of the beaches. How does the port interact with this?

Then accessibility, a key component. How do trucks and cargo and cars access the port? And how are materials imported and exported through the port? A key component for the port to meet its economic mandate. If you can't access the port efficiently, the port obviously can't meet that economic mandate through being efficient and providing a good service.

Then port city land use issues. We saw those hotel developments, convention center, V&A Waterfront, all growing around the port and constraining it. You have a boundary between the port and the city. On the one side, you may have a five-star hotel. On the other side, you've got an operation that needs to operate 24 hours a day with flashing lights and a lot of noise and some dust. And those are not compatible. So all these unrealistic constraints are being put on the port.

Socioeconomic and corporate and social investment, key part, too. How does the port actually interact with the surrounding communities and how does the port interact with its workforce? Okay. We needed to get a better idea of that.

Then the economic impact of the port, really focusing on two issues. The first one is what kind of information does the port consider in its economic analyses and which stakeholders do they involve? And then the second one was specifically for the port to identify economic indicators, to assist with them defining how they contribute toward sustainable development.

Another strategic issue then was institutional arrangements. We identified a weak linkage point with the port not really communicating with the City of Cape Town and that there was a need to develop a port city forum. And now we were quite specific in the recommendations that we gave: who should sit on the forums, how often they should meet, what kind of issues they should discuss. And these were critical components to facilitate cooperative decisionmaking around future development of the port and the city. Because they're so closely intertwined, this was critical. Obviously, too, how the port communicates with the users, the people who actually use the port, and the broader surrounding stakeholders.

So what we've done now is we've gone through a process of defining a vision with key stakeholders and strategic issues. We then appointed specialists to actually go and investigate these in terms of state of environment, in terms of a whole lot of other requirements that we set for them. And now these specialist studies have come back, and we then integrated that into what we called a sustainability framework for the Port of Cape Town, or really the SEA report.

And what now is in this SEA report? First of all, the vision. The vision for sustainable port development is right on the front page, and we've required that the port manager actually sign a commitment to implementing that vision. Again linked the same way an environmental management system requires top management to commit to the policy, because the policy drives implementation, in this case the vision for port development drives implementation.

State of environment, a discussion on each strategic issue. Then sustainability objectives and targets for each of those issues. So, in other words, if we're aiming to this vision, under this specific strategic issue what objectives and targets do we have to meet? Together with indicators and a monitoring program so that port management can actually understand the progress towards achieving those objectives and targets.

And then, finally, guidelines that came out to specifically the port planners, the port environmental management, and the corporate affairs manager, guidelines that explained to them exactly what they needed to do to achieve these objectives and targets.

And then, ultimately, the need to communicate in the same way a port communicates on its financial sustainability, to communicate then on its biophysical, social, and economic sustainability, in the recognized form these days in the form of a sustainability report. So to say the information that you're collecting and using to make more informed decisions to facilitate more sustainable port development, you also then need to report on that on an annual basis and give your external stakeholders an idea of the information you're using.

Implementation, again, just to emphasize that it was linked to existing decisionmaking processes, the port planning process, the environmental management system process, and the corporate social investment. And, again to emphasize the need for that institutional arrangement around the port city forum, ensuring that the port authorities were interacting with the city authorities and also that the port was communicating with the broader stakeholder group.

Just to start closing down and to summarize now, to again look at that SEA process. If we say, well, first of all, we identified the decisionmaking processes within the Port of Cape Town, how do they make their decisions? We then said, well, let's take it and review those. We then defined a vision for sustainable port development, and we identified strategic issues that would prevent the port from achieving the vision for sustainable development.

We then moved on to gather information about the state of environment with regards to those specific issues, identify objectives, targets, and indicators, together with monitoring programs to help us track our progress, and also then to define guidelines to assist specifically the port planner, port environmental manager, and the corporate affairs manager with implementing the recommendations that we've proposed.

Those guidelines then fed straight back into those decisionmaking processes, the port planning process, management system, and corporate social investment. Of course, with the two critical issues of stakeholder engagement on the one side, the port city forums and the other city forums that we recommended, and the external communication in the form of a sustainability report.

So just to summarize all of that, those decisionmaking processes led into a sustainability framework, which fed, actually fed back into those decisionmaking processes, with the requirement that a sustainability report comes out on an annual basis, together with regular communication with various groups around the port.

But when it came to those implementation guidelines, we had to find a different way of actually presenting them, because the guidelines were presented under each strategic issue: marine ecology, accessibility, shoreline stability. What we took now is all those guidelines out and we divided them up into six categories, and those six categories were baseline research, consideration for port planning, consideration for port operations and management, monitoring, stakeholder engagement, and sustainability reporting.

So we took all those guidelines with the various strategic issues, and we put them into the relevant processes, and we identified specific departments within the Port of Cape Town that were responsible for implementation. Where the City of Cape Town was responsible for cooperative decisionmaking with the port, we also highlighted the fact that the city of Cape Town needs to be involved.

We also gave a cross-reference of those guidelines to the actual objective that was trying to be achieved. So if you implement this guideline, this person implements this guideline, it will achieve this objective which helps you achieve your vision for sustainable port development.

So out of this whole process, what are the learning points? What did we actually learn through this process? First of all, we were defining that the SEA was focused on providing a framework to facilitate or to promote sustainable port development. We were not doing port planning. We were not drawing up an environmental management system. We were defining a framework to facilitate more informed decisionmaking, and we identified those decisionmaking processes, which is my next point, essential to link the SEA to those existing decisionmaking processes, to make sure that you can influence them and the information that the authorities then use helps them to make more informed decisions, which ultimately lead to more sustainable development.

Buy-in from the client was absolutely critical. The National Port Authorities were obviously paying a large amount of money for this process, and because it's a new process, they had to know that it would actually deliver what they wanted out of the process.

Then also engaging the stakeholders was extremely challenging in trying to develop a vision for sustainable port development, because the stakeholders were really focused on the small, little issues. They didn't want to look into the future, where the port should go into the future. So that was quite challenging.

Again, then, the specialists' involvement. Many of the specialists really had experience of environmental impact assessments where they were looking at a specific development and the impact of that development on the surrounding environment. We were really asking them to look from the surrounding environment's perspective and say, well, how does that influence the future port development? So we said in marine ecology, how does that influence future port development? Access to the Port of Cape Town, how does that influence future port development? So, really, it was quite a challenge to coach our specialists and help them to provide us with the right information.

Okay. That's really all that I've got to say. Just in conclusion, then, we ran this process for this dynamic environment. We can see there again from the picture that the Port of Cape Town is surrounded by extremely complex built and social environment, but it's also founded within this extremely sensitive biophysical environment. And the existing decisionmaking processes that the National Port Authority had couldn't deal with the integration of these issues. So what we did is we took our sustainability lenses, we looked at the decisionmaking processes, and we said, well, this is how you can make more informed decisions that will hopefully lead to more sustainable port development.

As you can see, just in closure, the City of Cape Town, a beautiful place to visit. You're welcome to visit us at any time. You will have a fantastic holiday here, and we look forward to seeing you down here sometime.