

How gaming is helping protect our oceans



By [Glenn Gillis](#)

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South Africa's oceans, like others around the world, are under grave threat from overfishing, poaching, and other illicit marine activities. That threat isn't just to the fish caught up on lines and trawler nets either. Rather, it represents a danger to entire ecosystems below and above the water and also to livelihoods and the economy as a whole. That's without even considering marine poaching, which is [enriching violent criminal gangs](#).



Image source: Michael Bogner – [123RF.com](#)

For an indication of how devastating depleted oceans could be, consider the fact that the fishing sector contributes around R6bn to the country's economy every year and employs approximately 30,000 people. While the latter number may not sound like a lot, it's important to remember that many of those people live in small seaside towns and villages that rely heavily on fishing for economic activity. It's also worth bearing in mind that the country's broader "blue economy", which covers the full scope of economic marine activity, is set to be worth up to R177bn by 2033 and could create some 800,000 jobs in the same period.

But if overfishing and poaching are allowed to continue unchecked, that potential will quickly dissipate and may even disappear completely. As such, new and innovative approaches are needed when it comes to the prevention, detection, and prosecution of illegal maritime activities. Fortunately, impact games can offer a helping hand.

Gamification and training

The potential for games to serve a role in this space isn't simple conjecture. When it comes to things like training especially, games have proven themselves time and time again. From finance to construction and healthcare, custom impact games have helped train people in a broad range of industries in ways that are fun, engaging, and which help people better retain the information that they've learned. We would know as we've built a fair number of those games ourselves.

We also know that games can be extremely useful when it comes to training the officials who are charged with protecting our oceans. A prime example is the game that we built to support Nelson Mandela University's [FishForce programme](#) which

trains fisheries control officers and inspectors.

Part of the training undertaken by students in the FishForce programme is practical, meaning that they accompany qualified officers on activities like ship inspections to ensure that a fishing operator's documents are all in order. At the height of the Covid-19 pandemic, those kinds of practical experiences were impossible to perform within the government's state of disaster regulations. As such, the programme looked to find an alternative training and teaching method which could be implemented remotely. In addition, the programme was also looking for innovative ways to advance the learning experience of students.

In response to the programme's goals, we created *FishForce: Bridge Inspection* - a game that simulates the daily routine of a fisheries crime officer. Through the course of the game, players are taken through various scenarios, such as permit inspections, how to properly inspect a vessel, and filing out the correct documentation for reporting a crime. In many ways, the game transforms training into a detective experience underpinned by fun and curiosity.

Characters onboard these vessels lend story and meaning to what the player does while providing responses that either help or hinder the inspection. Players spend time gathering information from the kinds of vessel documents that they're exposed to in real life. They inspect and cross-check ship and crew details based on their knowledge from training. The game also encourages players to focus on the most important activities of all: taking notes and photos to record all aspects of the inspection.

As a result, once a player gets onto an actual vessel, they should be well-versed in what's expected of them and be prepared and capable of jumping straight into the job. Perhaps more importantly though, they'll also have built up three of the most important core skills needed by an inspector: critical thinking, diligence and curiosity. Aiding the development of those skills is the fact that every item in the game is part of the open inspection sandbox, and it's up to the player to decide which actions are most relevant to them and their mission.

The player is also given a performance breakdown based on the notes they took, the issues they flagged, and the thoroughness of their inspection. These scores can then be sent back to their training supervisors, ensuring that they're able to give more comprehensive and more frequent feedback to students.

Ultimately, the vision with the game is to evolve and expand it to further explore the full work cycle expected of a fisheries control officer (FCO), from pre-inspection checks (like risk assessments) to escalations that involve evidence gathering and arrests.

Of course, we know that a single game isn't going to save South Africa's oceans on its own. That said, given that fisheries control officers play such a vital role in the oceans' protection, the better equipped they are in their training, the better they'll be able to perform their jobs. The same is undoubtedly true for many other functions of ocean protection and conservation. As such, any game that helps the people at the forefront of the fight for our seas better perform in their jobs is well worth every hour of game development. In addition, with the conservation and sustainability of our oceans, seas, and marine resources at the core of one of the UN's 17 sustainable development goals ([Goal 14: Life below water](#)), we are very

proud that our collaboration with FishForce can contribute towards responding to the universal call to action to protect the planet and transform our world for the better.

ABOUT GLENN GILLIS

Glenn Gillis is the managing director of Sea Monster Entertainment, one of South Africa's pre-eminent animation, gaming and augmented reality companies. He has a Business Science degree from UCT and has been an entrepreneur, hired gun, and consultant with growing, knowledge-intensive businesses around the world for over 25 years.

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