



PLENTY MORE FISH...

Fishing doesn't have to cause the environmental devastation glimpsed in Netflix's *Seaspiracy* documentary. The fishers of South Africa's Western Cape now catch to order, thanks to a free smartphone and a life-changing app

Words: Lucy Kehoe
Photographs: Jane Hilton

IT'S EARLY MORNING IN STRUISBAAI, a coastal town on the Western Cape of South Africa. As the waves roll in off the Atlantic, down by the shore the local fishermen disembark from their boats, waders up to their chest, some lugging boxes of ice filled with today's catch. It's a timeless scene, apart from the sight of the fishermen tapping away at the pixelated screens with their calloused fingers. Each is logging his catch: the species, the size, and when and where it was caught. In the next few hours, notifications will go out. Fish for sale.

On shore, a team of mostly women workers await the delivery of today's catch at a processing facility squeezed into a retrofitted shipping container. Among them is the quality control team lead, Emily Newman, known to her team as Aunty Miemie. She skillfully checks over the catch before repacking gurnard, Cape bream and silverfish into ice boxes that will be dispatched to some of South Africa's best restaurants.

This is the premise of Abalobi, a social enterprise that aims to deploy smartphone apps to support South Africa's small-scale fishing communities by providing a digital marketplace for their daily catch – taking fish from boat to plate as efficiently and responsibly as possible. The brainchild of local fisheries scientist Dr Serge Raemaekers, Abalobi was launched in 2015 and offers an alternative method of fisheries management – one Raemaekers claims is responsible and mitigates overfishing while providing a reliable living for vulnerable fishing communities.





Raemaekers' initial aim for the project, however, wasn't focused on getting Cape bream onto the menus of Cape Town's restaurants. Formerly a researcher and senior lecturer at the University of Cape Town, his job required up-to-date data on fish stocks. Approaching local communities in Struisbaai, and further up the coast in Lambert's Bay, about potentially logging their catches on a basic app, he faced difficulties. The fishermen weren't keen on sharing the information – where and when they fished was a closely guarded secret. Keeping tight-lipped was as much about avoiding fines and prosecutions for fishing from unsustainable stocks as it was a decision to preserve any economically valuable information.

But the offer of a free smartphone enticed some of the fishermen to get involved. In addition to accessing the app, which provided a way to track catches and boat costs, the smartphones enabled them to obtain vital, up-to-date weather information. Raemaekers was also keen to keep ownership of the data with the fishermen; they didn't have to share their logged catches, it was their choice.

Then came Abalobi's second app, a marketplace. Launched in December 2017, it gave the fishermen direct access to chefs seeking fresh, line-caught fish. Catch the fish, log the catch, then send it to an Abalobi quality control centre onshore and a notification would go out. Along the coast, chefs' phones would buzz. If they took the bait and made a purchase, the catch would be delivered with a story. Scan the QR code on the packaging and the chefs would be able to learn where the fish came from and who caught it, adding transparency and traceability to an often-obtuse supply chain.

The lives of the Struisbaai fishermen sit at odds with recent projections about industrial fishing seen on our screens. *Seaspiracy*, a 2021 Netflix documentary on the environmental impact of fishing, suggested allegedly sustainable practices were blood-splattered and dirty, involving dolphin deaths, slave labour and little regard for ocean biodiversity. It was criticised for upping the shock factor. Yet, according to the United Nations' Food and Agriculture Organization, an estimated 5.8 million fishers across the world earn less than £1 per day and 10 per cent of the world's population relies on fishing for their livelihoods. Abalobi figures suggest that 50 per cent of the global fishing catch is caught by small-scale fishers, most of whom have little hope of representation at the tables where fishing policy is mapped out.

In South Africa, small-scale fishermen historically have been marginalised and poorly protected. 'Post-apartheid, the fisheries authority has struggled to recognise the rights and traditions of most fishers along the South African coast,' says Raemaekers. There is little understanding of traditional fishing grounds, with different

communities operating under different rights and fishing quotas. In Struisbaai, the idea of industrial-scale commercial fishing seems distant. There are no huge super trawlers scouring vast areas of the ocean floor – just colourful, traditional Chucky boats bobbing about off-shore.

In a country where more than 55 per cent of the population lives in poverty (rising to 64 per cent among the Black community), strict quotas leave fishing communities in the lurch. Most fishermen have a monthly household income of between 2,000 and 5,000 Rand (£245 or less), according to Abalobi. Increasingly frustrated by extreme poverty, food insecurity and the stresses of the South African economy, some young fishers turn to illegal fishing activities to make a living. Abalone, a gastronomic delicacy in Chinese cuisine, sits at the centre of a healthy black market, selling for up to £100 per kilogram. In Struisbaai, nights belong to abalone poachers as young, desperate fishers dive into dangerous, shark-stalked waters in search of the delicacy.

Securing a regular income offers an alternative to engaging in illicit activities, helping in some ways to protect abalone stocks. Fishermen using Abalobi's app are paid directly after the sale of their fish and via digital channels, a marked change from when middlemen brokers would offer cash-in-hand in the harbour and take most of the profit. 'We've moved these fishing communities from being largely food insecure to 97.5 per cent of fishing households connected to the Abalobi marketplace app being food secure,' Raemaekers explains.

Raemaekers also points to Abalobi's engagement with the local lobster industry. In 2018, it piloted a project to try to address unregulated fishing of West Coast rock lobster and secure reliable, fair prices for the fishermen. The sweet, rich lobster tail meat is a coveted ingredient among chefs. But in the 1960s, overfishing caused the stock in the region to collapse, and it's barely recovered since. Fishermen currently face quotas on how many lobsters they can catch. Gaining the right to fish for them is an arduous, expensive process. For those with the rights, the income generated by lobster sales is a large part of their annual income. For those without, illegal fishing offers a chance to cash in.

So, Abalobi arrived with a potential solution. Partnering with those fishermen who held the rights to catch the lobsters, they implemented a fully traceable marketplace. Chefs could now buy the sought-after rock lobster on the Abalobi app at a fair market price and with the knowledge that it had been caught on quota. A partnering system was also set up, ensuring the fishermen had an advocate within the fisheries sector, helping to address challenges in the legal system. Illicit fishing still happens but buyers can now avoid supporting the black market.



Under the bright lights in the sterile whiteness of the Struisbaai processing centre, the iridescent scales of fresh fish glimmer, eyes staring blankly up from hefty yellowtails, the coral-blushed heads of Cape redfish and wide-skulled gurnards. The fish are packed together on a metal table, bodies flowing alongside others as though still part of a kaleidoscopic shoal. Icy shards scattered around keep the temperature low.

This is where the harvest is processed, checked by efficient workers armed with clipboards and wearing hairnets, white wellies and wipe-clean aprons. There are two batching facilities currently operating in the Western Cape. The fish arrive in cooler boxes, labelled with the name of the boat that caught them. Slithering the catch out onto the table, the women re-measure the fish to make sure they meet size requirements, check their temperature and scrutinise the eyes (they should be plump, shiny and clear) and then the gills, which should be clean, cold and slime-free.

'I enjoy working with fish,' says Aunty Miemie, hairnet tucked behind her ears. Like most of the women who work in Abalobi's processing facility, fishing runs in her family. Not only does her husband, Marthinus, own a boat, but two of her grown-up children depend on fishing for their livelihoods, just like her parents did before her. 'It's in my blood. I'll be here to the end of time,' she says. On weekends, away from work, Aunty Miemie heads to the town pier to fish – only then it's for pleasure.

As operations have grown, the Struisbaai processing facility has moved operations up to Lambert's Bay and a Cape Town batching facility. Abalobi now has a global outlook, with programmes running along the Western Cape as well as further afield in the Seychelles, the Comoros Islands, Ireland and Italy. 'We've been working with hundreds of fishers,' Raemaekers explains, 'but how do we do this with thousands?' His vision is for many more Aunty Miemies, able to work and thrive in a livelihood they were born into, all with the help of one simple app. •

'Like most of the women who work in Abalobi's processing facility, fishing runs in Aunt Miemie's family. Not only does her husband, Marthinus, own a boat, but two of her grown-up children depend on fishing for their livelihoods, just like her parents did before her'







'According to the United Nations, an estimated 5.8 million fishers across the world earn less than £1 per day and 10 per cent of the world's population relies on fishing for their livelihoods'