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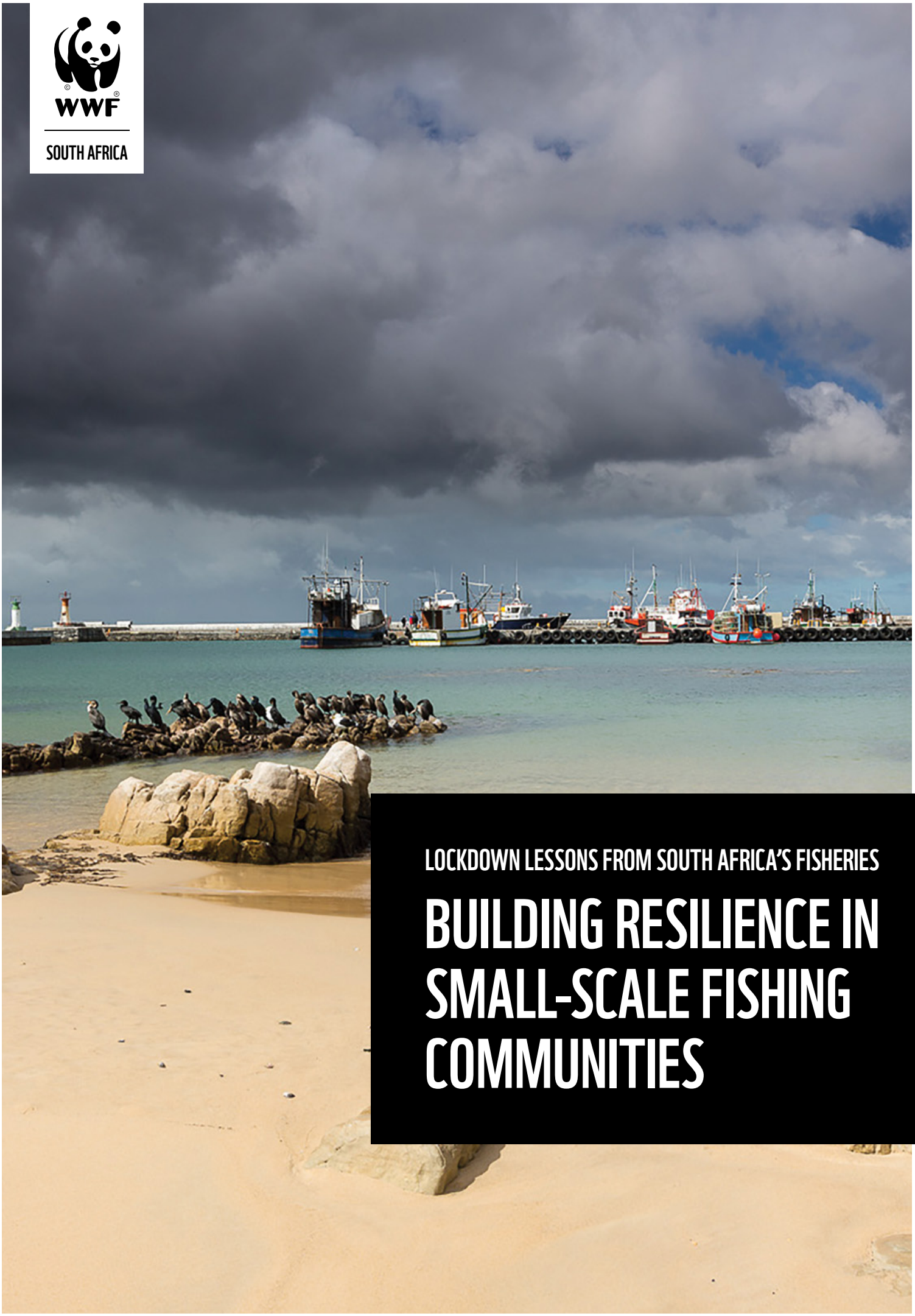
SOUTH AFRICA



LOCKDOWN LESSONS FROM SOUTH AFRICA'S FISHERIES

BUILDING RESILIENCE IN SMALL-SCALE FISHING COMMUNITIES

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Citation: Mbatha, P. 2021. *Lockdown lessons from South Africa's fisheries: Building resilience in small-scale fishing communities*. WWF South Africa, Cape Town, South Africa.

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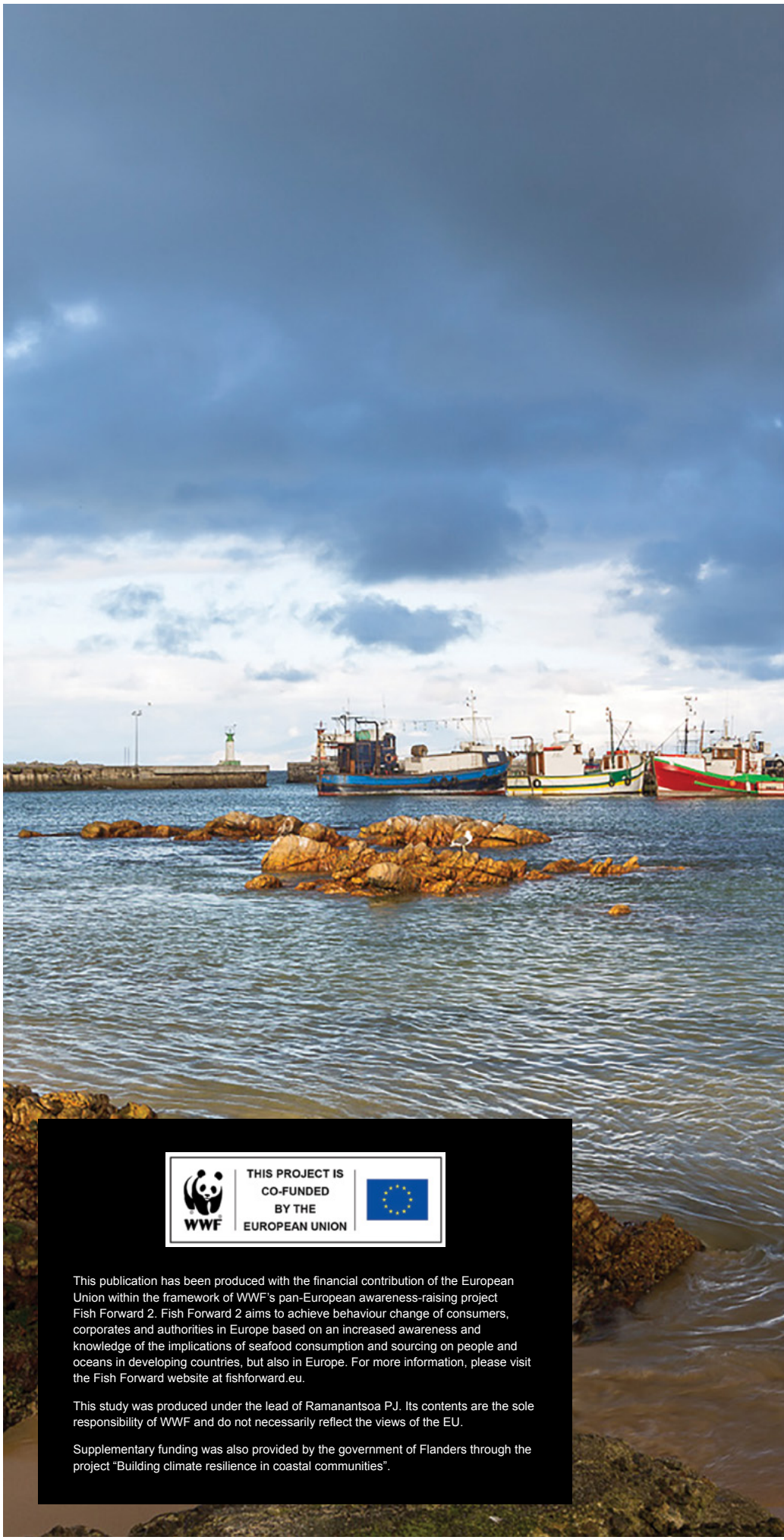
Acknowledgements
Ramanantsoa PJ would like to thank several people who made this study possible. First, thank you to the respondents from the various coastal communities of South Africa who answered the survey questions. In KwaZulu-Natal: Sokhulu, Empembeni and Mtwalume; in the Eastern Cape: Sicambeni, Ngoma and Hamburg; in the Western Cape: Arniston, Struisbaai and Buffeljagsbaai; and in the Northern Cape: Hondeklipbaai and Port Nolloth. Second, thank you to Coastal Links and Small-Scale Fisheries Co-operative leaders in the communities who provided in-depth qualitative narratives on emerging issues in their communities and provinces. Lastly, thank you to the respondents of the key informant interviews.



THIS PROJECT IS CO-FUNDED BY THE EUROPEAN UNION

This publication has been produced with the financial contribution of the European Union within the framework of WWF's pan-European awareness-raising project Fish Forward 2. Fish Forward 2 aims to achieve behaviour change of consumers, corporates and authorities in Europe based on an increased awareness and knowledge of the implications of seafood consumption and sourcing on people and oceans in developing countries, but also in Europe. For more information, please visit the Fish Forward website at fishforward.eu.

This study was produced under the lead of Ramanantsoa PJ. Its contents are the sole responsibility of WWF and do not necessarily reflect the views of the EU.

Supplementary funding was also provided by the government of Flanders through the project "Building climate resilience in coastal communities".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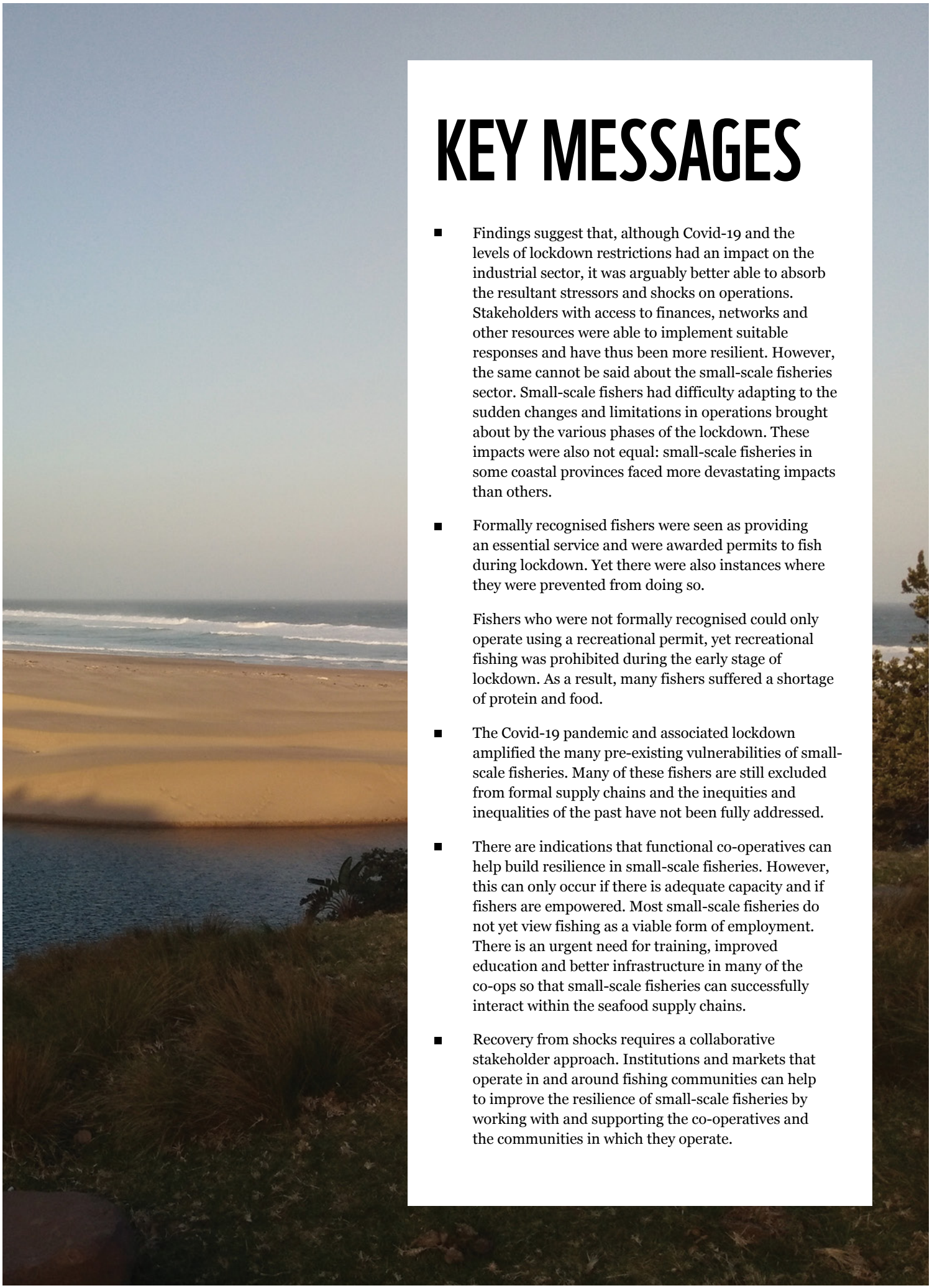


KEY MESSAGES

- Findings suggest that, although Covid-19 and the levels of lockdown restrictions had an impact on the industrial sector, it was arguably better able to absorb the resultant stressors and shocks on operations. Stakeholders with access to finances, networks and other resources were able to implement suitable responses and have thus been more resilient. However, the same cannot be said about the small-scale fisheries sector. Small-scale fishers had difficulty adapting to the sudden changes and limitations in operations brought about by the various phases of the lockdown. These impacts were also not equal: small-scale fisheries in some coastal provinces faced more devastating impacts than others.

- Formally recognised fishers were seen as providing an essential service and were awarded permits to fish during lockdown. Yet there were also instances where they were prevented from doing so.

  Fishers who were not formally recognised could only operate using a recreational permit, yet recreational fishing was prohibited during the early stage of lockdown. As a result, many fishers suffered a shortage of protein and food.

- The Covid-19 pandemic and associated lockdown amplified the many pre-existing vulnerabilities of small-scale fisheries. Many of these fishers are still excluded from formal supply chains and the inequities and inequalities of the past have not been fully addressed.

- There are indications that functional co-operatives can help build resilience in small-scale fisheries. However, this can only occur if there is adequate capacity and if fishers are empowered. Most small-scale fisheries do not yet view fishing as a viable form of employment. There is an urgent need for training, improved education and better infrastructure in many of the co-ops so that small-scale fisheries can successfully interact within the seafood supply chains.

- Recovery from shocks requires a collaborative stakeholder approach. Institutions and markets that operate in and around fishing communities can help to improve the resilience of small-scale fisheries by working with and supporting the co-operatives and the communities in which they operate.

INTRODUCTION

The Covid-19 pandemic affected all sectors in the food supply chain. To determine the effect of lockdown on the fisheries sector, a study focusing on small-scale fisheries was conducted.

The outbreak of the novel coronavirus (Covid-19) in China at the end of 2019 and its subsequent spread across the globe resulted in a wide range of disruptions, responses, actions and reactions from governments and decision-makers. Food security issues, such as chronic and acute hunger, have been a major global concern for many years. The ongoing Covid-19 pandemic has exacerbated these challenges and highlighted the importance of building resilience in the most vulnerable populations.

GLOBAL CONTEXT

The Food and Agriculture Organization (FAO) of the United Nations reported that lockdowns, the shutting down of tourism and restaurant markets and a decrease in consumer demand for seafood are among the major Covid-19 impacts that have directly affected the sustainability of the global fisheries sector (FAO, 2020b).

The United Nations Department of Economic and Social Affairs (UN/DESA, 2020) reports that before Covid-19 erupted, the global community was already off track to achieve the goals of ending poverty and combating food insecurity, which are embedded in the Sustainable Development Goals (SDGs). Covid-19 has further stalled efforts towards "achieving" various other SDGs and has disproportionally affected the poorest and the most marginalised people in countries around the world. The World Bank reported in 2021 that since the start of Covid-19 lockdowns, food security in different countries has been largely affected by high levels of income loss and inflation in retail markets. This was coupled with increases in global food prices by approximately 20% between January 2020 and January 2021.

The FAO estimated in 2017 that, globally, approximately 60 million people were directly employed in the primary fisheries sector (wild-capture and aquaculture combined) and a further 200 million were directly or indirectly employed along the supply chain (FAO, 2020a). Seafood supply chains are varied and complex, operating at difference scales, from local to regional and even global. However, along all supply chains, activities such as fishing or aquaculture, processing, transport, and distribution and marketing (retail and wholesale) are key to ensuring their success. Unfortunately, these key activities increased the vulnerability of the supply chain to disruptions caused by the Covid-19 pandemic: the very measures introduced to curb the spread of Covid-19 had a profoundly negative effect on consumer demand, market access, transportation networks and border controls (FAO, 2020c). Of all activities, the transportation and distribution of seafood were the most affected (Figure 1).

Consequently, the people most affected by the Covid-19 pandemic in the fisheries sector included coastal fishing communities, through reduced fishing efforts, and lower aquaculture production sales. At the same time there has been a loss of markets. Coupled with high operational costs, this led to temporary or permanent job losses. Many of the most vulnerable groups have been disproportionately affected by the Covid-19 pandemic (FAO, 2020c).

Recent reports that looked specifically at the impact of Covid-19 on fishers globally, especially small-scale fishers, found that Covid-19 has made them more vulnerable as it added to the livelihood challenges that fishers were grappling with before the pandemic (America et al., 2020; Bennet et al., 2020). These challenges include marginalisation, food insecurity, insecure resources and rights tenure, and poverty.

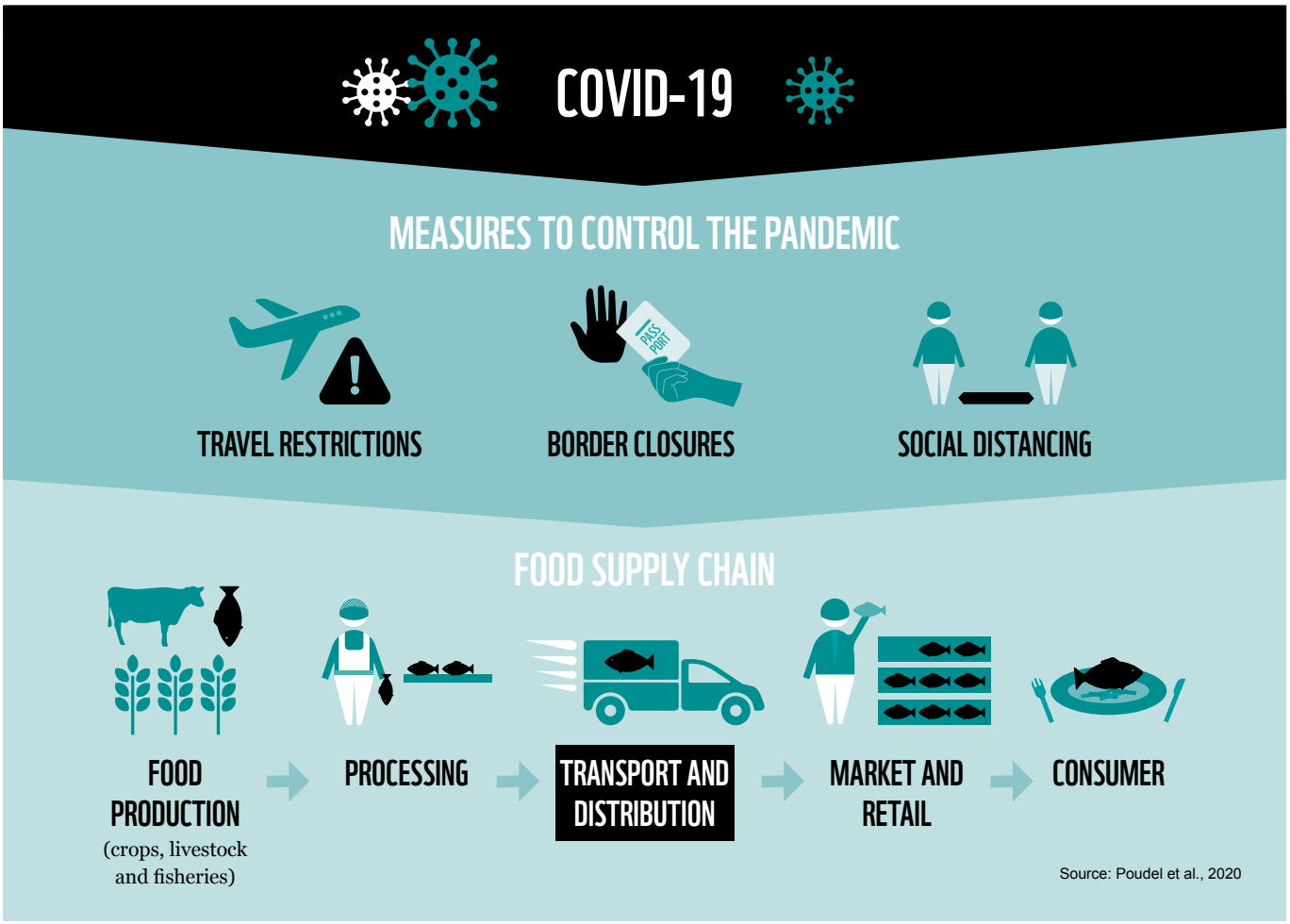


Figure 1: Impacts of Covid-19 on the supply chain

Projections indicate that the impacts of the pandemic, coupled with some mitigation measures implemented by global public health institutions and states, will have long-term impacts on global food systems, including the health and nutrition of many (FAO, 2020). Border closures, restrictions on transport and lockdowns are among the major policy decisions that have left many vulnerable people without livelihood security.

LOCAL CONTEXT

Coastal fishing communities in the global South have been more susceptible to the social and economic challenges associated with the pandemic, and South Africa has not been an exception. A study on the impact of the initial phases of lockdown in South Africa has revealed that two in five adults reported that their households had lost their main sources of income between March and June 2020 (Wills et al., 2020).

Prior to the pandemic, the vulnerability of small-scale fishers in South Africa and the inequitable benefit sharing in the fisheries sector were known to be skewed to the disadvantage of small-scale fisheries. This was explicitly highlighted in the Small-Scale Fisheries Policy published in 2012 (DAFF, 2012), which formally recognised the customary rights of small-scale fishers that had been taken away during apartheid. The Small-Scale Fisheries Policy was formulated after it was recognised that the post-apartheid legal and policy reforms had not made sufficient progress to address the historical injustices in the sector.

Despite a paucity of information on how small-scale fishers benefit or derive substantial value from high-value species such as lobster, linefish and abalone (Raemaekers et al., 2011; Isaacs, 2013; Nthane et al., 2020), it was evident that the Covid-19 pandemic was having a substantial impact on small-scale fishers.

2 IN 5 ADULTS

REPORTED THAT THEIR HOUSEHOLDS HAD LOST THEIR MAIN SOURCES OF INCOME

WWF STUDY ON THE IMPACTS OF LOCKDOWN ON THE SMALL-SCALE FISHERIES SECTOR

RESEARCH NEED

Since the start of the Covid-19 pandemic, several studies have sought to understand the global and country-level impacts of the pandemic on seafood supply chains and the livelihoods of fishers. However, a dearth of knowledge remains on the direct impact of the Covid-19 pandemic on socio-economic aspects of fishers' livelihoods. Recent studies have attempted to address this gap but have largely focused on individual companies and groups in the commercial sector (Parliamentary Monitoring Group, 2020). As a result, not much is known about responses of the small-scale fisheries sector and their communities in South Africa.

This report attempts to bridge that knowledge gap by presenting a combination of documentary evidence and first-hand insights from key informants along the entire fisheries supply chain, including small-scale fishing communities, on the socio-economic impact of the Covid-19 pandemic.

RESEARCH FOCUS

This report highlights some of the key impacts of the Covid-19 pandemic and resulting restrictions on different aspects of the seafood supply chain, focusing mainly on small-scale fishers in South Africa. The first part of the report focuses on the key impacts of restrictions (market losses, economic fluctuations, changed working conditions, loss of employment, Covid-19 relief mechanisms) on the more commercial and formalised sections of the seafood supply chain. The second part of the report uses specific indicators to create socio-economic profiles of small-scale fishing communities in the four coastal provinces (KwaZulu-Natal, Eastern Cape, Western Cape, Northern Cape) that are then linked to the same key impacts used in the first part.

The impacts considered cover a 15-month period commencing with the initial outbreak of Covid-19 in China at the end of 2019 and ending with the data collection phase in April 2021. The report gives unique insights into the socio-economic impacts of Covid-19 beyond the first wave and how the South African government's risk-based approach to lifting restrictions and the subsequent reintroduction of certain restrictions during the second wave influenced supply chains and affected communities.

RESEARCH APPROACH

The study was conducted in two parts through the collection of data from online and telephonic surveys and interviews, and from documentary evidence, literature reviews and archival material. A theoretical framework for the study was developed using existing studies and literature.

During Part 1 of the study, a literature review and electronic survey explored the socio-economic impacts of Covid-19 on seafood supply chains, with identified stakeholders/actors involved in fisheries (i.e. fisher organisations, companies and restaurants). Survey data was collected from government representatives and 22 key informants to fill in the gaps where information on the economic, social and environmental impacts of Covid-19 did not already exist, or where it needed to be enhanced. The surveys contained closed and open-ended questions that were used to provide a narrative of the reasons behind those impacts (current and future).

Part 2 of the study constituted an in-depth assessment of Covid-19 impacts on small-scale fishing communities: three located in KwaZulu-Natal (Sokhulu, Empembeni and Mtwalume), three in the Eastern Cape (Sicambeni, Ngoma and Hamburg), three in the Western Cape (Arniston, Struisbaai and Buffeljagsbaai) and two in the Northern Cape (Hondeklipbaai and Port Nolloth) as shown in Figure 2. For this part, a survey was designed to gather quantitative and qualitative information and narratives about the perceived impacts of Covid-19 on various aspects of fishing and livelihoods. The survey consisted of a combination of closed and open-ended questions that focused on people's livelihoods, fishing activities, and other issues that emerged during the pandemic. A total of 120 participants were surveyed across the four coastal provinces (30 per coastal province) spanning 11 communities[1] (10 participants per community). The study included both male and female participants, as gender dynamics are an important consideration in small-scale (and all) fisheries research.

A community member assisting as a researcher identified the 10 survey participants per community based on the definition of small-scale fishers (see box) found in the Small-Scale Fisheries Policy (DAFF, 2012). As a result, all community participants surveyed during this study were traditional or customary fishers, with a long history of relying on fishing for their livelihood. Once participants had been identified, they were sent the survey questions in their local languages. Participants could either answer the survey on their own or go through the questions with a research assistant.

DEFINITION OF SMALL-SCALE FISHERS

Small-scale fishers are defined as "persons that fish to meet food and basic livelihood needs or are directly involved in harvesting/processing or marketing of fish, traditionally operate on or near shore fishing grounds, predominantly employ traditional low technology or passive fishing gear, usually undertake single day fishing trips, and are engaged in the sale or barter or are involved in commercial activity."

– DAFF, 2012: iv

[1] In the Northern Cape there are only two small-scale fishing communities, therefore 20 community members were interviewed in the larger co-operative located in Port Nolloth.

ETHICAL CONSIDERATIONS AND LIMITATIONS OF THIS STUDY

Prior and informed consent was granted orally by all participants. The ethical considerations of this study along with the aims and objectives were explained to participants in their local languages. Participants were granted an opportunity to opt out of the research at any time, and their personal details have been kept anonymous.

KEY INFORMANTS

4 SEAFOOD COMPANIES

2 FISHING ASSOCIATIONS

4 FISHER ASSOCIATIONS
(1 representative in each of the four fishing provinces)

3 SUPPLIERS

8 RESTAURANTS

1 NGO

GOVERNMENT

Figure 2: Location of the different communities surveyed during Part 2 of the study

THE IMPACT OF COVID-19 ON FISHERIES

This section details the outbreak of Covid-19 in China, its global spread and its implications for the South African fisheries sector.

Scholars working in the field of sustainable livelihoods, such as Chambers and Conway (1992) and Scoones (2009), describe a livelihood as sustainable if it can cope with or recover from stresses and shocks. A key component to this is people's ability to formulate sustainable and resilient livelihood strategies. This, in turn, is largely determined by the access they have to different types of livelihood resources. Ribot and Peluso (2003: 1) define access as "the ability to benefit from things, including material objects, persons, institutions, and symbols".

The Covid-19 pandemic and associated lockdown restrictions have acted as stressors and shocks to the economies and economic activities of countries around the world, affecting people's access to resources and livelihoods. This has been true for the fisheries sector globally, as the pandemic has had a severe impact on operations in the global seafood supply chain.

CORONAVIRUS OUTBREAK IN CHINA AND ITS IMPACT ON FISHERIES

China is one of the largest producers, exporters, importers and consumers of seafood on a global scale. It is also the largest producer and exporter of seafood products in Asia and the Pacific, and among the largest importers of shellfish from countries like South Africa (FAO, 2020a). It was thus alarming when the novel coronavirus (later identified as Covid-19) was first reported in Wuhan, China, in December 2019, and said to have emerged from a seafood and poultry market (Taylor, 2021). In the wake of Covid-19, various events took place in China that had serious ramifications for countries all over the world. As infections increased, Chinese government officials took radical steps to curtail the spread of the virus by closing markets, temporarily banning wildlife trade – including seafood – and implementing strict lockdowns throughout the country.

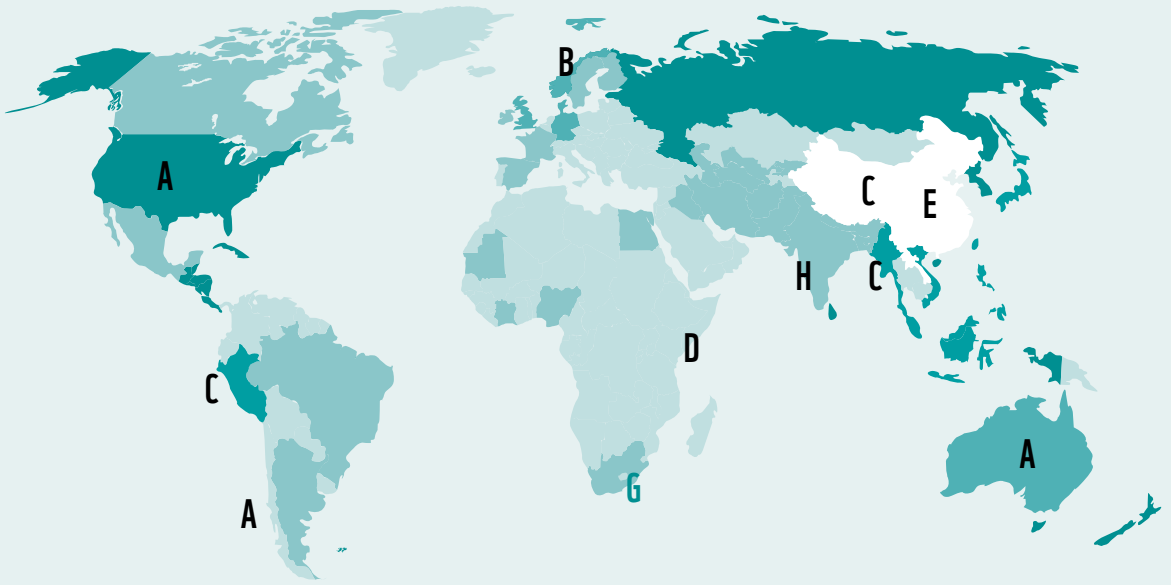
The timeline in Figure 3 details the evolution of Covid-19 in China, and the associated disruptions and responses it generated.

Strict lockdown measures in China resulted in the shutting down of the economy and transport facilities. This meant no sale and transportation of seafood products. At the time of hard lockdown, the restricted movement of people and the closure of supermarkets and restaurants put further pressure on the fisheries sector. Chinese exporters of processed seafood such as tilapia, catfish and whitefish also struggled due to limited demand for these products outside China (FAO, 2020a). Lockdown and quarantine restrictions imposed by China had ripple effects on global seafood supply chains, especially in countries whose seafood export markets are largely dependent on the Chinese seafood market (Figure 4). The closure of economic and transport activities in January and February 2020 meant lower import volumes, as seafood shipments were paused due to low demand and the ban on imports of live species into China. Love et al. (2021) collated data from the initial global lockdown period in 2020 to map out the impact of the pandemic and lockdowns on the seafood sector. The study found that certain supply chains were more resilient and therefore able to respond and adapt, whereas others were severely disrupted and, in some instances, temporarily collapsed.

COVID-19 TIMELINE FOR CHINA

Mid-December 2019	An increasing number of individuals report severe flu-like symptoms at hospitals in Wuhan, China.
30 December 2019	Doctors in Wuhan start warning people about an outbreak of a SARS-like virus.
31 December 2019	WHO is informed of an outbreak of "viral pneumonia" by the Wuhan Municipal Health Commission.
1 January 2020	**Chinese officials close Wuhan's Huanan Seafood Wholesale Market after it was linked to the outbreak. Sale of live seafood at markets (both live and online) and restaurants is banned.**
9 January 2020	WHO confirms that the "pneumonia" has been identified by Chinese scientists as a novel coronavirus.
14 January 2020	Chinese officials report possible human-to-human transmission and recommend emergency preparations for a possible pandemic.
15 January 2020	China reports first official death from the novel coronavirus: a 61-year-old man, a regular customer at the Wuhan Seafood Market.
23 January 2020	China implements a total lockdown of Wuhan extending to the province Hubei with immediate effect. **The rest of China soon follows. Logistics are halted and domestic distribution channels are cut off.**
26 January 2020	China implements a temporary ban on wildlife trade. **Seafood imports are also halted.**
30 January 2020	WHO declares a global health emergency.
End January 2020	International prices for lobster caught in South Africa drop from $37/kg to $19/kg. Fishers turn to local markets to sell their catch. Local prices also drop, from R340/kg to R120/kg.
15 February 2020	**Chinese government introduces measures to assist the local aquaculture and capture fishery sector.** • **Aquaculture:** Processing operations may resume, transportation is enabled, and online platforms can be used to coordinate demand and supply (FAO, 2020a). • **Capture fisheries:** A daily reporting system is implemented. Vessel owners are responsible for all preventative measures needed to mitigate Covid-19. Fuelling and crew recruitment have to be done in safer ports (FAO, 2020a).
23 February 2020	West Coast Rock Lobster season extended for nearshore fishery in the Western Cape to June 2020, and to November 2020 for offshore fishery and Northern Cape fishers.
24 February 2020	**China permanently bans wildlife trade.** The ban is about wildlife trade for food. People are also banned from eating wildlife. Wildlife trade for medical and non-food purposes is still permitted. This ban does not include species considered to be "livestock" or **aquatic animals including marine life.**
11 March 2020	WHO declares COVID-19 a pandemic.
27 March 2020	South African lockdown commences.
8 April 2020	Wuhan lockdown lifted after 76 days.

Figure 3: Covid-19 outbreak timeline for china and associated responses



A Wild lobster, farmed salmon, geoduck exports cease

B Farmed salmon exports to China cancelled

C Cancelled exports continue, Chinese freezers full, ships rerouted

D Imports of Chinese tilapia slow

E Chinese aquaculture exports struggling with border and labour restrictions

F World Health Organization declares Covid-19 a pandemic

G Lobster fishery closed due to cancelled exports to China

H Slow recovery of exports of farmed shrimp to China and USA

Source: Love et al., 2021

Figure 4: Global fisheries affected by lockdown

Total seafood trade with China (million tonnes)

0,25 0,5 0,75 1

CORONAVIRUS OUTBREAK IN SOUTH AFRICA AND ITS IMPACT ON FISHERIES

At the beginning of March 2020, the coronavirus reached South Africa. As global concern around the rapid spread of the virus grew and countries around the world started to experience overwhelming increases in case numbers and deaths, the South African government acted rapidly and before the end of March 2020 the nation went into a hard lockdown. A timeline of the Covid-19 outbreak in South Africa and the associated lockdown restrictions, including a description of the different alert levels adopted by the South African government at different stages of managing the pandemic, are shown in Figure 5.

In South Africa, the Alert Level 5 lockdown or hard lockdown was said to be one of the strictest lockdowns in the world, due to the extreme restrictions on people's movement and on economic activities. The South African government was initially praised by organisations such as the World Health Organization (WHO) for its handling of the pandemic during the early stages of the crisis. However, it soon became clear that these tough lockdown policies were having severe social and economic impacts on the country (Arndt et al., 2020). Even more concerning is the fact that these impacts appear to have been unequally borne by the South African population, with the poorest proportion of the population being most affected. For instance, low-skilled workers are the ones whose food and livelihood security were affected the most. When examining the impacts of lockdown policies on income, food and nutrition security, studies (Arndt et al., 2020; Love et al., 2021) reveal that the negative impact of the lockdown on food security was caused by the loss of household incomes and associated purchasing power.

COVID-19 TIMELINE* FOR SOUTH AFRICA

FIRST WAVE OF COVID-19

5 March 2020	First case of Covid-19 reported in KwaZulu-Natal, South Africa.
15 March 2020	**National state of disaster** declared by the president. A National Command Council (NCC) is established to advise the presidency about the country's Covid-19 responses.
23 March 2020	**National lockdown** announced by the president.
27 March 2020	**Alert Level 5** lockdown restrictions come into effect – high Covid-19 spread with low health system readiness (referred to as the hard lockdown) Initially for 21 days but extended to 35 days. Mandatory stay at home. Only businesses classified as essential services may operate. All "non-essential" industries operating locally and internationally are closed. Exports in industries such as fisheries also halted for a while. **Commercial fishing is listed as an essential service.**
1 May 2020	**Alert Level 4** lockdown restrictions come into effect – moderate to high Covid-19 spread with low to moderate health system readiness. Stay at home still in place. Online sales permitted. Restaurants open for home delivery only. Beaches remain closed.
1 June 2020	**Alert Level 3** lockdown restrictions come into effect – moderate Covid-19 spread with moderate health system readiness. Stay at home still in place. Limited interprovincial travel permitted. Beaches remain closed. **Recreational fishing permitted.**
18 August 2020	**Alert Level 2** lockdown restrictions come into effect – moderate Covid-19 spread with high health system readiness Permitted activities – small group visits, interprovincial travel, restaurants with capacity restrictions, accommodation and hospitality venues reopen. Beaches and parks reopen.
21 September 2020	**Alert Level 1** lockdown restrictions come into effect – low Covid-19 spread with high health system readiness International and local travel permitted. Larger gatherings permitted.

SECOND WAVE OF COVID-19

29 December 2020	**Adjusted Alert Level 3** lockdown restrictions come into effect – moderate Covid-19 spread with moderate health system readiness Increased infections result in a ban on all social gatherings and alcohol sales. Curfew reintroduced. All beaches, rivers, public swimming pools closed.
6 February 2021	Community surveys for small-scale fisheries commence in the four coastal provinces.
1 March 2021	**Adjusted Alert Level 1** lockdown restrictions come into effect and remained in place for the duration of this study (7 May 2021) Social gatherings permitted in reduced numbers. Alcohol ban lifted. All beaches, rivers, public swimming pools are reopened. Curfew extended.
6 March 2021	Community surveys for small-scale fisheries end.

* Timeline reflects changes that occurred in sectors that influenced fishing communities either directly or indirectly. For more details on the alert levels and lifting of restrictions see the national coronavirus website at sacoronavirus.co.za

Figure 5: Covid-19 outbreak timeline for South Africa and associated responses

THE FISHING SECTOR'S INSIGHTS FROM LOCKDOWN

Whereas the overall impact of Covid-19 remains uncertain, challenges faced by the fishing sector are already evident. This section presents the findings from the seafood supply chain interviews and small-scale fisher surveys.

INSIGHTS FROM THE SUPPLY CHAIN

Findings presented in this section were derived from data collected from the 18 informant interviews.

Informants were first asked about the status of their business before the hard lockdown was implemented. Nearly all the informants who were interviewed indicated that prior to the hard lockdown the seafood sector was doing relatively well.

"Our restaurant business was doing fine before lockdown started in March 2020. Before then, business was up by about 27%, and right now (in April 2021), it is down by 20%."

– Informant response (KII14,[2] 2021)

For most informants, the key impacts of Alert Levels 5 and 4 across the supply chain were the sudden loss of income as markets crashed and restaurants had to close, plus the temporary closure of national borders and restrictions on international and local travel, increased operating costs and increasing Covid-19 cases among employees. Some informants reported direct sales to regular customers.

Informants were then asked if the easing of lockdown restrictions from Level 3 to Level 1 resulted in any positive or negative changes in their operations. Most informants cited a positive change as restaurants were able to reopen and some of the travel restrictions were lifted. However, a few informants noted that it was not adequate to allow for a recovery. An informant who owns a restaurant business that sells seafood asserted that even when restaurants could reopen during Alert Level 3, the damage caused by prior lockdown levels was difficult to reverse.

When asked if the introduction of tighter lockdown restrictions during the second wave had had an impact on operations, the responses varied. Several informants indicated that the impacts of the tighter restrictions had not been as severe because people were more prepared for the second wave and subsequent restrictions.

However, some informants indicated that the impact was either similar to that experienced during the hard lockdown or, in some cases, even worse. Informants indicated that for the linefish sector, the impacts of the increased restrictions during the second wave were like the hard lockdown, even though those restrictions were not as severe. Informants who relied heavily on tourism cited a major impact because the summer holiday season is normally a peak income period and the introduction of tighter restrictions meant that much of that income was lost.

[2] KII stands for Key Informant Interview.

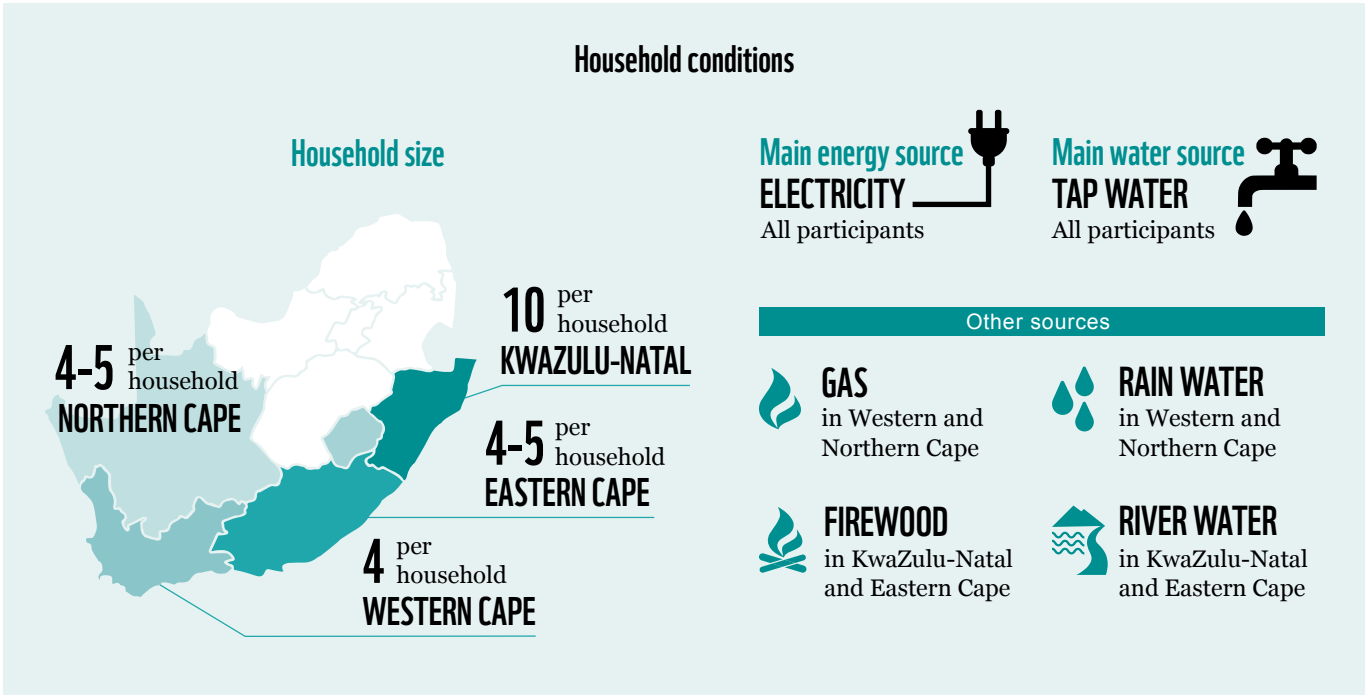
"Some of the major impacts were that at times we did not have clients for a whole day and some of our staff were retrenched. We rely on our clientele to pay our salaries and to pay the costs for us running our operations smoothly. Many people were relying on TERS [Temporary Employee/Employer Relief Scheme] to sustain their households. Business was not as fruitful, and clients were very scared of Covid-19. As a result of the lockdown, we had to become innovative and we began selling raw fish and delivered products door to door."

– Informant response (KII16, 2021)

SOCIO-ECONOMIC PROFILE OF SMALL-SCALE FISHERS

Age and gender

Participants were asked to list their gender and age. Of the 120 participants surveyed, 88 were male and 32 were female. KwaZulu-Natal had the highest number of female participants at 10, whereas the Northern Cape had the lowest number of female participants at two. The average age of the participants was 49.



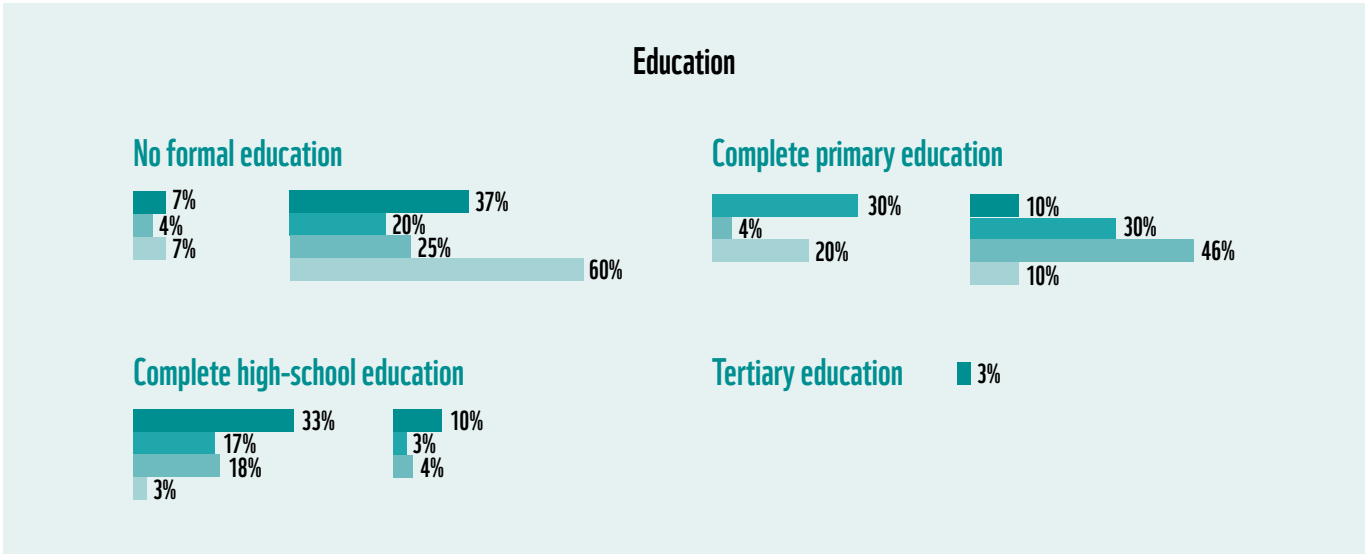


Figure 6: Education level attained by participants KwaZulu-Natal Eastern Cape Western Cape Northern Cape

Participants were asked questions on their education (Figure 6) and occupation status. In terms of education, in KwaZulu-Natal and the Northern Cape an incomplete primary education was the highest level attained by most of the participants and in the Eastern Cape, a complete primary education. In the Western Cape, an incomplete high school education was the highest level attained by most of the participants. Among all the survey participants there was just one who had a tertiary education. KwaZulu-Natal, the Eastern Cape and the Western Cape each had at least one participant with a technical education.

When disaggregated by gender, it was only males who had either a tertiary or a technical qualification. The highest qualification for a female was a complete high school education. When averaged across the provinces, the most frequent education level attained by males was an incomplete primary education (29%) and, by females, an incomplete high school education (40%).

Employment

Participants were then asked what they considered their employment status to be. Even though they were all fishers, most participants considered themselves as "unemployed", indicating that they do not view fishing as an adequate source of income but more as a means of survival. The Western Cape had the highest level of unemployment among participants at 93%, followed by the Northern Cape at 82%, the Eastern Cape at 70% and KwaZulu-Natal at 55%. Formal employment was listed in just two of the provinces, namely the Eastern Cape and KwaZulu-Natal, in very low percentages – a mere 16% and 7% respectively.

Sources of income

Participants were asked a series of questions about their income, starting with a list of how many sources of income they had. Most participants indicated they had at least one to two sources of income. For the Northern Cape (77%) and the Western Cape (63%) one source of income was the most selected option. For KwaZulu-Natal (53%) and the Eastern Cape (40%) two sources of income was the most selected option.

Participants were also asked to list all their sources of income and indicate which ones they considered to be the most important (Figure 7). In all the provinces, fishing was the most frequent source of income listed. This was followed by government grants in both KwaZulu-Natal and the Eastern Cape, domestic work in the Western Cape, and business in the Northern Cape. The most important source of income for all the participants across all the coastal provinces was fishing.

Small-scale fishing activities

Participants were asked a series of questions about their fishing activities, starting with the top three species that they caught. In all four provinces, linefish species were the top species fished, followed by molluscs in KwaZulu-Natal and the Eastern Cape, and lobster in the Western Cape and Northern Cape (Figure 8).

The top linefish species caught varied between provinces, with a large diversity of species caught in KwaZulu-Natal and the Eastern Cape. The top linefish species per province were as follows: for KwaZulu-Natal, bream (28%) and shad (17%); for the Eastern Cape, kob (40%) and grunter (17%); for the Western Cape, yellowtail (60%) and carpenter/silverfish (30%); and for the Northern Cape, snoek (84%) and yellowtail (32%).

The participants were also asked to indicate whether they participated in linefishing, intertidal harvesting or both. In all coastal provinces, most participants indicated that they were involved solely in either linefishing or intertidal harvesting. There were very few who participated in both activities. When disaggregated by gender across all four coastal provinces, most males participated in linefishing and most females participated in intertidal harvesting.

Lastly, participants were asked to indicate whether they fished for their own consumption, for selling, or both. In the Northern and Western Cape, all participants indicated that they fished for selling and subsistence. In the Eastern Cape and KwaZulu-Natal, most participants indicated that they fished for selling and subsistence. However, 25% of participants in the Eastern Cape and 10% of participants in KwaZulu-Natal indicated they fished solely for their own consumption.

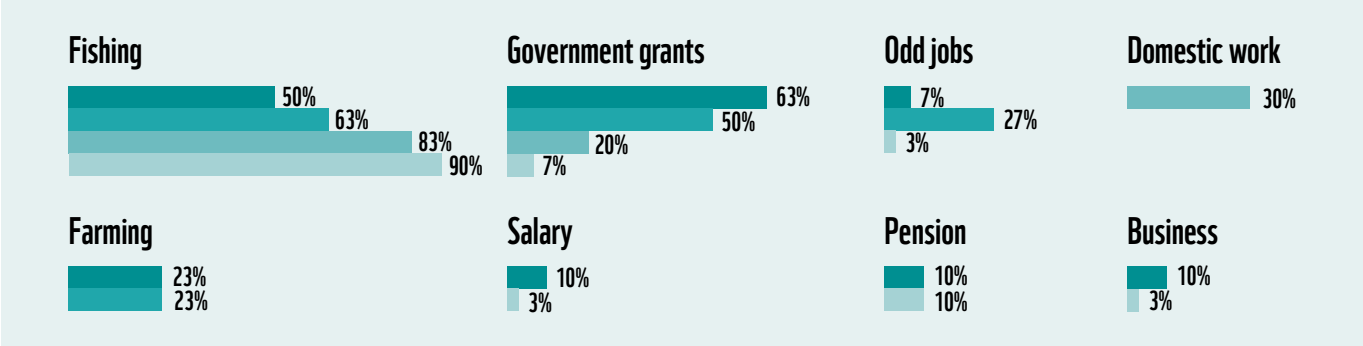


Figure 7: Sources of income listed by participants

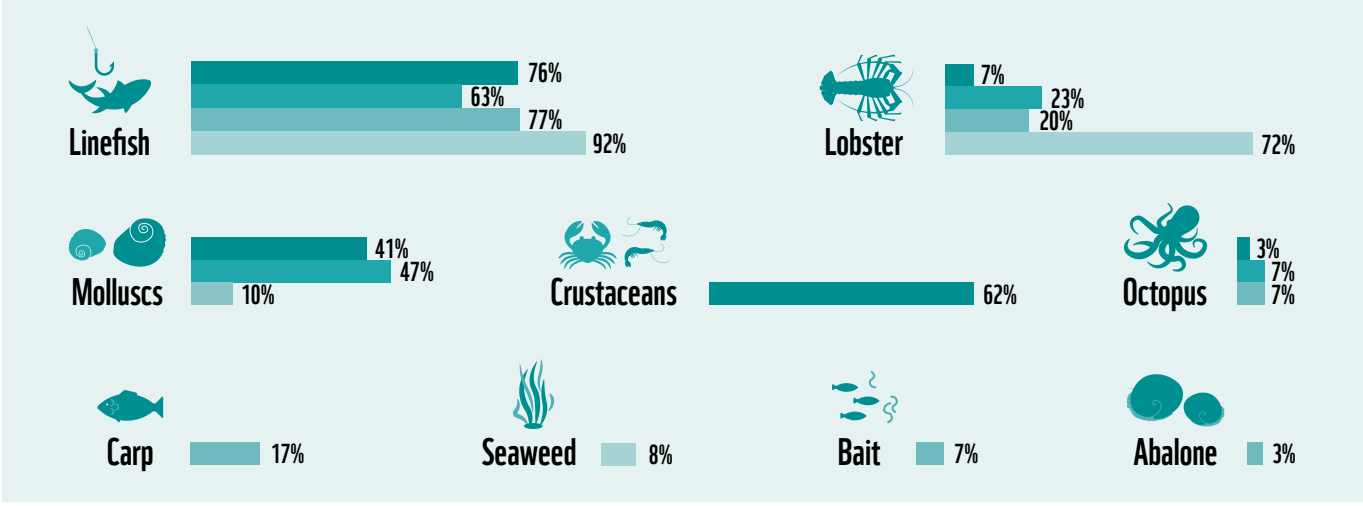


Figure 8: Main species groups caught by participants

Impact of lockdown Alert Levels 5 and 4 on livelihoods

Participants were asked how the lockdown restrictions during Alert Level 5 and Alert Level 4 had affected their livelihoods (Figure 9). In all the provinces, the majority of participants listed loss of income as the main impact. The loss of income was attributed to a loss of markets (e.g. restaurant and market closures, a lack of tourists, low demand, export restrictions), closure of factories and difficulties they encountered when trying to fish. In the Western Cape, the travel restrictions (e.g. the national curfew) made it very difficult for fishers to follow the fish when the shoals moved. Other reasons cited by fishers include increased poverty, a lack of protein and food, and fear.

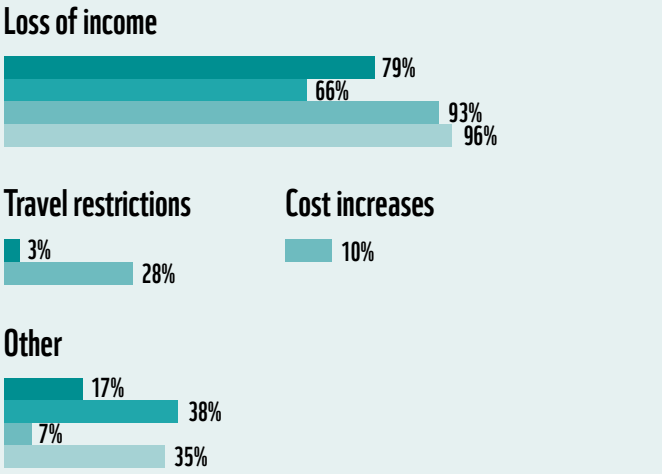


Figure 9: Impact of lockdown during Alert Levels 5 and 4

Effect of eased lockdown restrictions on livelihoods

Participants were asked whether the easing of lockdown restrictions had influenced their livelihoods. The results indicated that on average 47% of the survey participants experienced an improvement in their livelihoods after lockdown restrictions were eased, whereas 26% stated that their livelihoods had deteriorated. Altogether 28% experienced no improvement. The Northern Cape was the only province where more than 50% of the participants indicated an improvement in livelihood with eased restrictions (Figure 10).

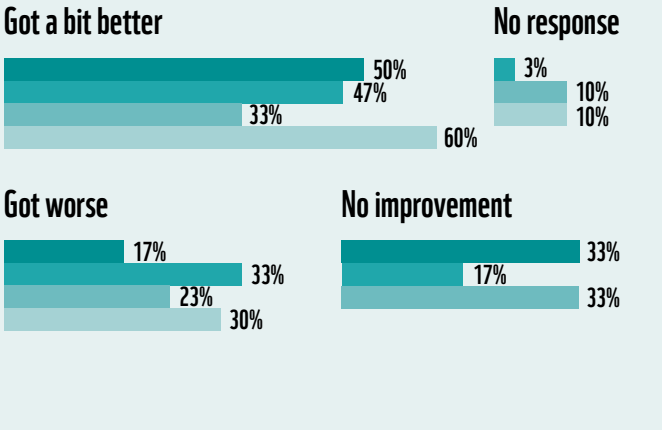


Figure 10: State of livelihoods during eased lockdown restrictions

Impact of Adjusted Alert Level 3 restrictions on livelihoods

Participants were asked how the reintroduction of tighter lockdown restrictions during the second wave, called Adjusted Alert Level 3, affected their livelihoods (Figure 11). In KwaZulu-Natal, the Eastern Cape and the Northern Cape, a loss of income was the main impact. This was attributed to the loss of tourism. In all three provinces, tourism is a significant generator of income during the peak summer months and this income was lost once tighter lockdown restrictions were implemented. However, it is important to note that many of the participants across the provinces indicated that because they could fish, the introduction of tighter restrictions had had no impact. Several participants indicated increased emotional stress during the second wave as they themselves had contracted Covid-19 or lost a loved one to Covid-19. Financial and livelihood security for the future was also flagged as a concern.

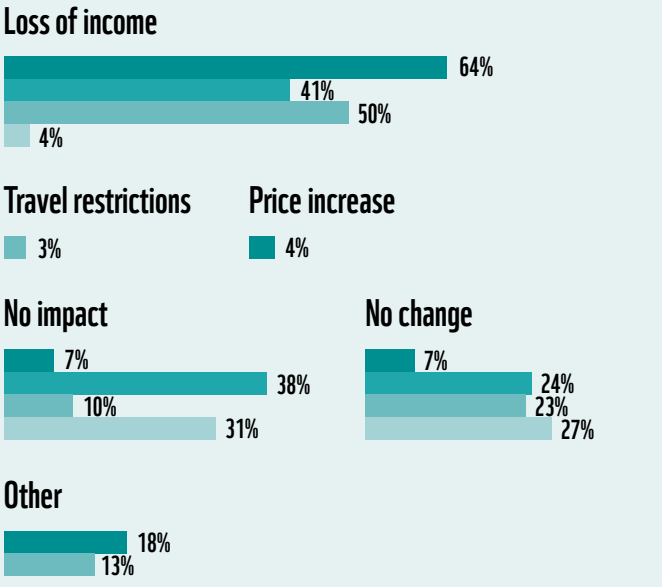


Figure 11: Impact of Adjusted Alert Level 3 lockdown

TYPE OF AID RECEIVED DURING THE PANDEMIC

Participants were asked to list the type of aid they received during the pandemic (Figure 12). In the Northern Cape, most participants indicated that they had received no aid. In KwaZulu-Natal, the Eastern Cape and the Western Cape, the majority of participants indicated they had received at least one food parcel. Participants from the Western Cape indicated that the Department of Forestry, Fisheries and the Environment had provided food parcels to all registered small-scale fisheries during the hard lockdown, but this was a one-off event in most cases. In KwaZulu-Natal, the Eastern Cape and the Northern Cape, about a third of participants received the Covid-19 grant. In the Western Cape, very few participants received the Covid-19 grant.

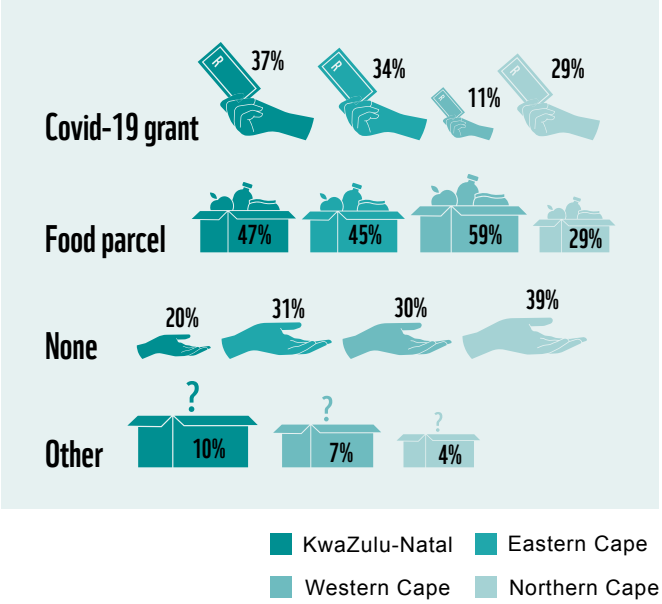


Figure 12: Type of aid received by participants

SOME PARTICIPANTS WERE ASKED HOW THE SALE OF MARINE RESOURCES WAS AFFECTED BY COVID-19 AND WHAT ROLE THEIR CO-OPERATIVE PLAYED DURING THE LOCKDOWN

"We have been fishing and selling to the community and tourists. But now that we have co-ops, we want to preferably get companies as customers. The middleman arrangement does not work for us because we want access to the market directly. The middleman tends to exploit us for our catches. This is for the whole KwaZulu-Natal coastline. From Port Elizabeth [Gqeberha] to Tugela mouth, there is a tourist market, so that helps, unlike for us here in the north ... the co-ops are new, so they do not have much capacity to make a difference."

– KwaZulu-Natal fisher

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"Some fishers sell their catch to the tourists, particularly species like oysters, mussels and kob – these are popular among tourists. The only 'big company' customer that we have managed to secure in our co-operative is Live Fish Tanks. The last time we had this buyer was 2019, we agreed on being their supplier then, but this arrangement stopped due to Covid-19 and has not been restored. We also used to supply East Coast rock lobster to this company. Since Covid-19 came, both the company and tourists were not able to sustain us as buyers. The tourist market is slowly picking up as travel restrictions are lifted. Some restaurants are starting to buy resources from the co-operatives now. We would like to pursue an arrangement with the Department of Education, the Department of Health and the Department of Social Development to supply fish resources to schools and old-age homes instead of exporting overseas as the co-operative. Covid-19 showed us as the co-operative that we need to rely more on local and national markets like these and not on exporting resources overseas."

– Eastern Cape fisher

"The linefish is sold to local communities like Gansbaai, Stanford and Bredasdorp and to Abalobi [a mobile app for selling fish]. We also sell the crayfish to Abalobi and companies like I&J, Walker Bay and Two Oceans. The white mussels are sold to similar companies and local fishermen who use them for bait. We sell the black mussels and alikreukel from the stalls we have during weekends to the local people and tourists, although the number of tourists recently has declined due to Covid-19 travel restrictions. We sell pickled fish to supermarkets like OK Bazaar and a small fruit and vegetable market, but what is sold varies as this is based on orders … The co-operatives did help the communities during Covid-19 (although they don't exist in all areas). In Buffeljagsbaai, there is a co-op that is doing very well because we were made essential workers during Covid-19 lockdown, so we could still sell. We shared and donated what was made by the co-ops to the communities and applied to the ANC and DFFE [Department of Forestry, Fisheries and the Environment] for food parcels, which we received. We are currently writing a business plan so that we can include other business ventures and services in the co-op like landscaping and clearing alien bushes. This is because fishing is a seasonal activity, so during winter things are difficult for fishing, so we want to branch into other things. We would like to make a request that someone from the University of Cape Town comes to Buffeljagsbaai to assist the women on the South Coast who would like to sell fish resources and crafts because we noted the help women in communities like Kleinmond are currently receiving from Craig Smith and WWF. Mrs Mary Hall from Kleinmond confirmed this."

– Western Cape fisher


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"Normally we sell the catch to local people within the Namaqualand area. This also includes middlemen who buy the resources from us and sell them at a higher profit margin. At the moment, we do not have big buyers, but we wish to do this in the future through the co-operative. When it comes to high-value species like crayfish, snoek and lobster, we sell these to marketers from the Western Cape who export the product to China … the existence of the co-ops has been very helpful because when the virus started, we as small-scale fishers were made essential workers, so we were able to go to the sea and sell as part of the co-operative. The co-op allows the community to be part of the seafood value chain and make an income from things like processing the fish. We were also able to make donations to people who aren't in the co-operatives but are part of the community. The co-op definitely has a sense of ubuntu."

– Northern Cape fisher

DISRUPTIONS AND SHIFTS IN THE FISHERIES SECTOR

Overall, the findings reveal that the fisheries sector in South Africa was heavily disrupted and affected by Covid-19. Yet, this impact was not equally distributed throughout the seafood supply chain, with some parts facing more challenges than others. This section discusses the findings of the interviews and surveys.

GENERAL IMPACTS

The disruptions resulting from the Covid-19 pandemic primarily came about because economic activities were abruptly halted by the lockdown in South Africa, and there was a ban on exports and imports globally due to closed borders and no flights. The findings of this study clearly reveal that small-scale fishers were overall significantly affected by Covid-19 and the subsequent lockdown. However, the impact was not necessarily consistent between communities or provinces – some experienced a more significant impact than others.

Various respondents indicated that before the pandemic was declared a national disaster by the president, operations such as tourism, restaurants and flights, which are crucial to the healthy functioning of seafood value chains, were doing quite well. Tourism opens markets that are willing to pay premium prices for seafood products and this income trickles down to boat owners and rights holders. Several flights in and out of South Africa resulted in daily exports of catch to key markets in Asia and Europe. Informants indicated that before the lockdown, the markets were benefiting many in the sector and that small-scale fishers in various areas had better access to markets to sell their fish.

However, in the weeks leading up to the national lockdown, many fishers became increasingly concerned about how Covid-19 would affect the market and how to plan for it, given the many uncertainties.

"We noticed a decline in the value of our fish species immediately after the lockdown was announced, so that decreased the little income fishers could make. We did not have access to masks and sanitisers, so we had to use our own money to purchase these things initially."

– Informant response (KII9, 2021)

For many involved in the fisheries sector, it was the crash of international markets and the dearth of sales to local restaurants that caused substantial disruptions to livelihoods and operations. Findings reveal that most of the sector turned to retail (direct to customer) sales, as that was the only place where demand for seafood went up during the lockdown. The administration of marketing operations, however, became difficult for many parts of the fisheries sector as most things moved online. This resulted in delays in sales and delivery as people involved in the sector had to acquire skills that they had not needed before.

IMPACTS ON THE SEAFOOD SUPPLY CHAIN

Since the first hard lockdown, some of the main impacts in the commercial sector have been the temporary closure of ports and airports, increases in retail demand and operating costs, and increasing Covid-19 cases among employees.

The second wave of the pandemic led to the reintroduction of stricter lockdown measures between December 2020 and February 2021. Various informants indicated that the impact of the lockdown during the second wave had not been as severe. Lessons learnt from the first wave made it possible for people in the sector to better navigate the second stricter lockdown.

However, this view was not unanimous among informants. Some of the informants felt that the government should have done something different, drawing on lessons from the first lockdown, by either implementing a hard lockdown (Alert Level 5 or 4) or no lockdown at all. The introduction of the "Adjusted" Alert Level 3 or soft lockdown did not work well for businesses and/or the economy. The expectation with Alert Levels 3, 2 and 1 was that they would allow businesses to "bounce back", while in reality, "businesses do not have switches that can turn on and off easily" (KII1, 2021). After undergoing stresses and shocks, it takes time for smaller businesses to find a rhythm again.

IMPACTS ON SMALL-SCALE FISHERIES

In the small-scale fisheries sector, fishers who held a commercial fishing permit or who were recognised small-scale fishers according to the list generated through the Small-Scale Fisheries Policy implementation process, could continue fishing during the hard lockdown, as the government had declared the fisheries sector an essential service. Therefore, many fishers were still able to fish and, in theory, able to make a living (as opposed to various other sectors that were shut down completely).

However, despite having essential service permits, many participants in KwaZulu-Natal and the Eastern Cape reported being harassed by police who were enforcing lockdown rules and, in some instances, were prevented from fishing. As a result, several small-scale fishers ended up not fishing during certain periods of the lockdown for fear of being harassed by law enforcement officers.

Unfortunately, due to historical exclusions, several traditional subsistence and small-scale fishers were not recognised as small-scale fisheries during the Small-Scale Fisheries Policy process that was rolled out by the Department of Forestry, Fisheries and the Environment to identify bona fide small-scale fishers who would receive fishing rights. Consequently, many of these fishers fished using a recreational permit, which was not permitted to operate during Alert Levels 5 and 4. This had a profound impact on these fishers as they were unable to fish for food. Many of them cited a loss of protein and increased periods of hunger.

Participants across all the provinces flagged major issues regarding the issuing of permits by the Department of Forestry, Fisheries and the Environment during the Covid-19 pandemic. Permits would arrive late, causing fishers to miss out on the fishing season, or would be incorrect or incomplete. Permits were also not always translated into the local language, which meant that many fishers did not fully understand their permit conditions.

In general, small-scale fishers who were more integrated into seafood value chains that involved local and international markets (through marketers, middlemen or langanas) were significantly affected because the value of their catch dropped. They also struggled to market their catch due to the restrictions on interprovincial travel and limitations on exports.

KwaZulu-Natal

A key challenge experienced in small-scale fisheries is that the enforcement of fisheries regulations by the Department of Forestry, Fisheries and the Environment is poor along the KwaZulu-Natal coast in places outside of the iSimangaliso Wetland Park (KII4, 2021). As a result, a lot of illegal and unregulated fishing is taking place, so much of what is being harvested and fished is not accounted for in the catch reports and ultimate stock assessments.

There is a realisation that the centralisation of power is problematic as the Department of Forestry, Fisheries and the Environment does not have the capacity to train fishers and ensure that they benefit as much as they can from the formation of small-scale fisheries co-operatives. Also, there are reports of many "new entrants", mainly youth, in various communities, who joined in the hope of making money from the co-ops but do not have a lot of knowledge about fishing and are not bona fide fishers. The Covid-19 disruptions added to the pot of complexity that affects small-scale fisheries on the KwaZulu-Natal coast.

Moreover, the representative of the Department of Forestry, Fisheries and the Environment who was interviewed in this study raised concerns that it will not be possible to effectively implement the co-ops without additional financial and logistical assistance and support from relevant government departments and if law enforcement issues continue to be ignored by the government.

Eastern Cape

Before lockdown, small-scale fisheries co-ops on the Eastern Cape coast were making a lot of money from selling East Coast rock lobster to the Asian market (which was the biggest client). However, that market was lost during the lockdown and has not recovered even with the reopening of international markets (KII3, 2021). Several participants cited the loss of tourism as a major challenge as many of them would sell their catch to tourists at premium prices. This was especially noticeable over the festive season, which coincided with the second wave of Covid-19 infections. The tighter restrictions, coupled with international travel limitations and a reluctance among people to travel, had a major impact on communities located along the coastline as many were relying on the income from this period to recover from the effects of the harder lockdown.

A key informant noted that co-operatives in the Eastern Cape did not bring much Covid-19 relief because they lacked resources and that the Department of Forestry, Fisheries and the Environment had not provided any assistance.

Western Cape

The lockdown increased competition among marketers working with small-scale fishers. Findings reveal that these stakeholders believed that only large commercial companies were able to operate more "normally" and could cope better with the impacts of lockdown. Whenever a few international flights are available, airlines prioritise big business (top commercial fishing companies such as Oceana, I&J, Lusitania) and these companies sometimes influence the price of marine resources in the market when it suits them, while smaller businesses struggle.

Also, there was a perception that businesses that do not solely rely on profits from the fisheries sector but obtain support from other sources such as donor funding (e.g. Abalobi) were hard to compete with. They may have an income regardless of constraints on seafood value chains imposed by Covid-19 restrictions. One business owner pointed out that such businesses are strong competitors to other smaller businesses, as they operate in similar places and secure fish from the same communities. This was particularly evident in the Western Cape. Nevertheless, small fishing companies not part of "big business" also resorted to alternative and innovative ways to improve business during lockdown, by shifting focus away from just wholesale and getting directly involved with end consumers and retailers.

Northern Cape

For fishers there was frustration about constant issues with the issuing of permits by the Department of Forestry, Fisheries and the Environment. Local people mentioned that permits were a significant problem as they usually arrived late and were sometimes inaccurate. Other fishers from the province remarked that it was difficult to cope with Covid-19 disruptions because as co-ops they could not hold meetings freely in person any more, whereas before the lockdown, they could meet and discuss important issues. They had to adapt to online meetings, using platforms like Zoom, which they struggled with because they did not have the digital resources and the technical know-how. As a result, there was a serious communication breakdown among members of the co-ops.


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Case studies

SEAFOOD SUPPLY CHAINS AFFECTED BY COVID-19

Seafood supply chains in general have varying degrees of interconnectedness and dependency, which can affect their ability to respond to sudden shocks and stresses. This section looks at how three different seafood supply chains were affected by Covid-19, and their associated responses.

LINEFISH

Two of the major impacts of Covid-19 restrictions and disruptions in the linefish sector have been a change in demand for resources and a shift in prices. During the Covid-19 lockdown, fishing for those with a commercial or small-scale fishing permit was listed as an essential service and so remained open. Informants revealed that fishing operations in this sector were good at the beginning of lockdown.

After the lockdown started, linefish prices were lower because there were fewer places to sell the fish: the tourism sector had collapsed, so there were no tourists or restaurants to pay premium prices. As a result, fishers did the same work but got less money for their catch. It is also reported that fishers received 30% less value for their catch during the hard lockdown, and retailers took advantage of this. Wholesalers were scared to buy because of the uncertain future and many businesses were looking for bargains because of the high risk of buying at the time. Therefore, there was a stark reduction in the amount of money the sector generated.

There were also perceptions that the easing of the lockdown by the government, especially between June and November 2020, did not necessarily improve the status quo for businesses involved in the seafood sector. Respondents noted that smaller businesses were already doing badly before Covid-19, due to the downgrading of the country's investment rating to junk status. The lockdown then strangled business further and many small businesses did not survive, except for the few that had savings to subsidise themselves. The easing of restrictions did not necessarily provide immediate relief; the relief/improvement provided was too little and did not restore conditions and operations to pre-pandemic conditions. The value of stock went down, for example kingklip used to be R115/kg before lockdown, but during lockdown it was R50–R60/kg. Markets for yellowtail, tuna and silverfish crashed due to the halting of sales. The lockdown therefore caused significant changes in operations.

A few informants also noted that the price differences between locally caught seafood and imported seafood products were often not in favour of the local fishers. Yellowtail farmed in China and imported into South Africa, for example, is sold for R16/kg, whereas local yellowtail caught in the linefishery is sold for R60/kg. People frequently choose the cheaper option, even though it is not local, making recovery from the impacts of Covid-19 more difficult for South African fishers.

"There was plenty of tuna and yellowtail – a good amount of fish. [How much was] caught and [the] effort to fish also increased because people who were fishing part-time were now fishing full-time – lots of fish was landed in the first three months of hard lockdown. However, the issue that there was very limited access to markets and prices fell exponentially – people who were getting R60/kg for yellowtail were now suddenly getting R20, but still having to put in the same amount of work and money to go to sea. There was also a big bait shortage because it was not being imported so bait prices went up from about R250 a box to R450 a box, very expensive."

– Informant response (KII1, 2021)

WEST COAST ROCK LOBSTER

The West Coast rock lobster fishery was hardest hit when Chinese markets shut down in the days leading up to the lockdown in China. The complete closure of these markets was difficult for the sector because China is the main international market for South African West Coast rock lobster. Fishers then turned to local markets to sell their catches. However, this was made difficult for several reasons. First, the WWF-SASSI (Southern African Sustainable Seafood Initiative) Red listing of West Coast rock lobster meant that many restaurants and retailers chose not to purchase it. Second, as countries implemented travel bans, there was a dramatic reduction in tourism, which resulted in a drop in demand and price. This subsequently led to a surplus of lobster. As a result, many fishers were stuck with most of the lobster they had harvested. Lastly, the subsequent introduction of a nationwide lockdown for South Africa further exacerbated these impacts as all non-essential services, including restaurants, were prohibited from operating during this time. The reopening of the Chinese market after a four-week closure did not necessarily translate into immediate improvements in the value chain. Import restrictions and bans were still in place and demand had dropped. As a result, the price of lobster decreased from $37/kg before lockdown to $19/kg.

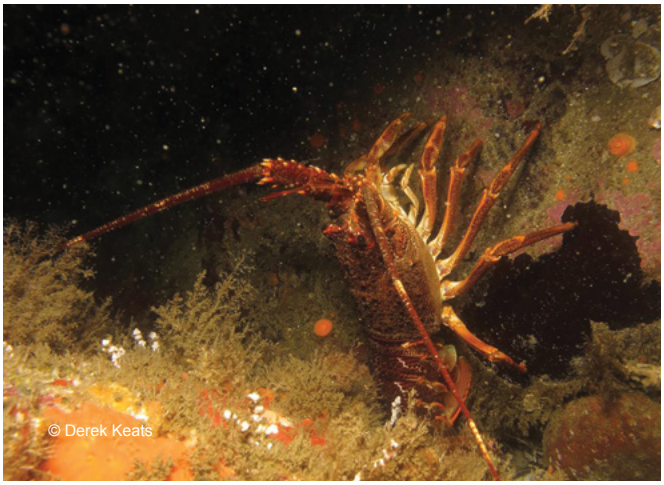
Exports were also heavily affected by the hard lockdown. In South Africa, most West Coast rock lobster caught for international sale is currently linked to the availability of international flights. Prior to the lockdown there were frequent international flights out of Cape Town every day, so marketers had a choice of three to four airlines for exporting their seafood products. However, after the beginning of the lockdown, this was reduced to only two flights per day through a single airline. This placed pressure on factories with limited storage capacity for West Coast rock lobster. Therefore, vessels had to be stopped from fishing even if the catch was good. Higher freight costs also limited travel opportunities. In the Western Cape, there were instances where West Coast rock lobster had to be transported by truck to Johannesburg before being loaded onto an international flight. Informants estimated an 80% increase in freight costs, which resulted in a direct loss of income for rights holders (KII2, 2021).

Another issue pointed out by informants was that airlines prioritised the big quota holders such as Oceana and Lusitania over smaller rights holders. This essentially blocked smaller businesses and rights holders from deriving better incomes.

To keep the supply chain going and for consumers to gain confidence in the global lobster trade, respondents pointed out that China had introduced rules to ensure that Covid-19 did not spread from the products it imported. This involved the implementation of testing protocols to ensure that products were not being affected. When export products arrived, China sampled the exports and tested them for any signs of the virus. If they found any, the whole shipment was confiscated.

China also introduced measures for improving the marketing for lobster, which somewhat improved profitability in the whole supply chain. For instance, in China, lobster is now marketed online and is promoted as a takeaway option, which has increased the demand. However, Northern Cape small-scale fisheries pointed out that various challenges remain in South Africa. For instance, a member of a local co-op mentioned that they lost about 800 kg of West Coast rock lobster because they had had no electricity due to load-shedding; therefore, everything they had harvested and stored for possible export was spoilt and had to be discarded. West Coast rock lobster harvesters in the Western Cape pointed out that working with “middlemen” during the difficult times of the pandemic enabled them to continue to export their lobster. As a result, they were able to generate an income, despite Covid-19 restrictions. In contrast, other fishers pointed out that the lockdown had forced them to think outside the box and eliminate “middlemen” by selling their catch directly to consumers, which enabled them to make more money. Despite all the fluctuations and uncertainty, one year after the lockdowns began, the international price for West Coast rock lobster had increased as markets in China began to stabilise and exports became easier.

The lack of permits also placed significant constraints on businesses. Respondents in this study, especially rights holders in the Northern Cape, reported that there had been a miscommunication between rights holders and the government regarding permits, which hampered the recovery of fisheries when business resumed.



West Coast rock lobster and the WWF-SASSI seafood guide

Species that are listed Red on the WWF-SASSI seafood guide (wwfsassi.co.za/sassi-list) are not necessarily illegal to sell, but consumers are discouraged from buying them and retailers and restaurants are also discouraged from sourcing these species. In the case of West Coast rock lobster, it is legal to harvest by fishers who have a permit. Specific catch limits are set each year. However, this species is severely depleted and subject to high levels of poaching. See also wwfsassi.co.za/fish-detail/119 for more detail on West Coast rock lobster, in general.

EAST COAST ROCK LOBSTER

East Coast rock lobster is fished along the coast of the Eastern Cape and KwaZulu-Natal provinces. Respondents who participated in this study reported that before the initial nationwide hard lockdown, things were going quite well in the sector. The value chain mainly involved coastal communities, buyers, restaurants (mainly in Johannesburg and Cape Town) and international markets (mainly in Asia). However, one of the major challenges pointed out by buyers working with communities in the Eastern Cape, where there is a greater abundance of the resource, is the lack of infrastructure (electricity and land on the beach for constructing factories or holding facilities for live lobster). It is reported that buyers are struggling with these problems and that municipalities are not very helpful in finding solutions, which make operations difficult and cause local fishers to lose income.

Covid-19 disruptions have further exacerbated the difficulties prevalent in this sector. The major impact was the loss of the East Coast rock lobster market for the Eastern Cape and KwaZulu-Natal small-scale fisheries, which had a negative impact on livelihoods in the form of loss of income. This was largely due to the closure of markets and a ban on trade implemented by China during the early stages of the pandemic. China is an important international market for East Coast rock lobster. Although fishers were provided with essential service permits, confusion among South African Police Service officials resulted in many fishers being stopped from going out to sea. Out of fear, many small-scale fisheries stopped fishing because they were discouraged by police who were threatening them. Local fishers in the Eastern Cape confirmed that lockdown happened right before the crayfish season, so because of the restrictions, they missed the season and missed out on selling this high-value species. Before lockdown, they were already in negotiations with a private sector company for small-scale fishers to supply lobster to that company. However, this opportunity did not come to fruition. Moreover, due to interprovincial travel restrictions imposed during the lockdown, buyers based in other parts of the country could not travel to the Eastern Cape.

When restrictions were eased during Alert Levels 3, 2 and 1, respondents did not perceive much of a change because international markets for East Coast rock lobster did not reopen, as they did for West Coast rock lobster.

According to East Coast rock lobster buyers, international markets that have reopened since the easing of lockdown restrictions only buy West Coast rock lobster. It is not clear why this is the case. The price of exported East Coast rock lobster has decreased from R180/kg to R120/kg due to Covid-19 disruptions. Also, the challenges with access to land for factories and holding facilities have resulted in small-scale fisheries on the East Coast getting low prices. Mitigation of Covid-19 impacts on the sector has been difficult. Respondents reported that there was very little assistance from the government. When buyers and processors want to build infrastructure to store live lobster, the bureaucratic restrictions imposed by the government and municipalities prevent progress. There were also perceptions at a local level that the catch method used by Western Cape communities provides them with an extra advantage. Eastern Cape communities use sticks to catch East Coast rock lobster, which restricts the amount they can harvest. Fishers in the Western Cape use traps to harvest West Coast rock lobster, which are more efficient and result in higher catches.

MITIGATION AND RECOVERY

In response to the challenges imposed by Covid-19 and associated lockdowns, the government has implemented a series of emergency responses and recovery measures to try to mitigate the impacts of Covid-19 restrictions on livelihoods. Large private sector organisations and NGOs also offered emergency assistance to small-scale fishers who had been the worst affected. There was a varied response among the participants on the effectiveness of these measures.

Mitigation measures included direct cash transfers from government, food distribution schemes, issuing of loans and subsidies, health and safety measures, direct marketing to consumers, reduction of the workforce, sharing strategies and establishing food banks in small-scale fishing communities.

The global commercial fisheries sector saw the implementation of quick responses to the pandemic, which included mitigation strategies focusing on worker protection and consumer health, in addition to securing value chains (Love et al., 2021). Reductions in worker numbers coupled with the use of technology and innovation to shift from wholesale markets to retail and online markets have also been widely adopted strategies. It became apparent that companies with fewer workers and more connections to consumers and retailers were doing better in terms of coping with the impacts of the pandemic.

In the small-scale fisheries sector, responses to the pandemic have largely involved establishing food banks and mobilising fishers to help the more vulnerable in their communities by sharing resources and information (Bennett et al., 2020; Love et al., 2021). Government assistance in the form of direct cash injections and NGO assistance in supporting small-scale fishers to market their catch have also been among the strategies that helped people in the sector to cope with the impacts of the pandemic. Around the world, pre-existing economic, social, environmental, climatic and political conditions have exacerbated the impacts of Covid-19 on the vulnerable livelihoods of small-scale fisheries. However, various community, government and non-government interventions were introduced to curb the impacts of Covid-19 and lockdown restrictions on livelihoods. For instance, in north and central America, indigenous fishers are beginning to seek alternative livelihoods from terrestrial coastal areas and are adopting sharing strategies in their communities (Bennet et al., 2020).

In South Africa, findings reveal that stakeholders involved in the sector have also developed strategies to maximise benefits for small-scale fisheries during the Covid-19 pandemic. Linefish buyers and marketers who previously focused on wholesale activities, for instance, have expanded operations into retail to reach end consumers (Figure 13). In fact, retail sales were the only place where seafood demand went up. Organisations such as Abalobi have resorted to similar adaptations, developing traceability and marketplace technologies that saw end consumers being able to order daily catches from small-scale fishers to be delivered to their homes. This was one way of ensuring that small-scale fishers had a market under lockdown conditions because restaurants were not operating at full capacity. Many in the sector also turned to online sales. However, the transition to online sales and marketing was initially marked by delays as people involved in the sector had to acquire skills that they did not have and had not needed before the lockdown.

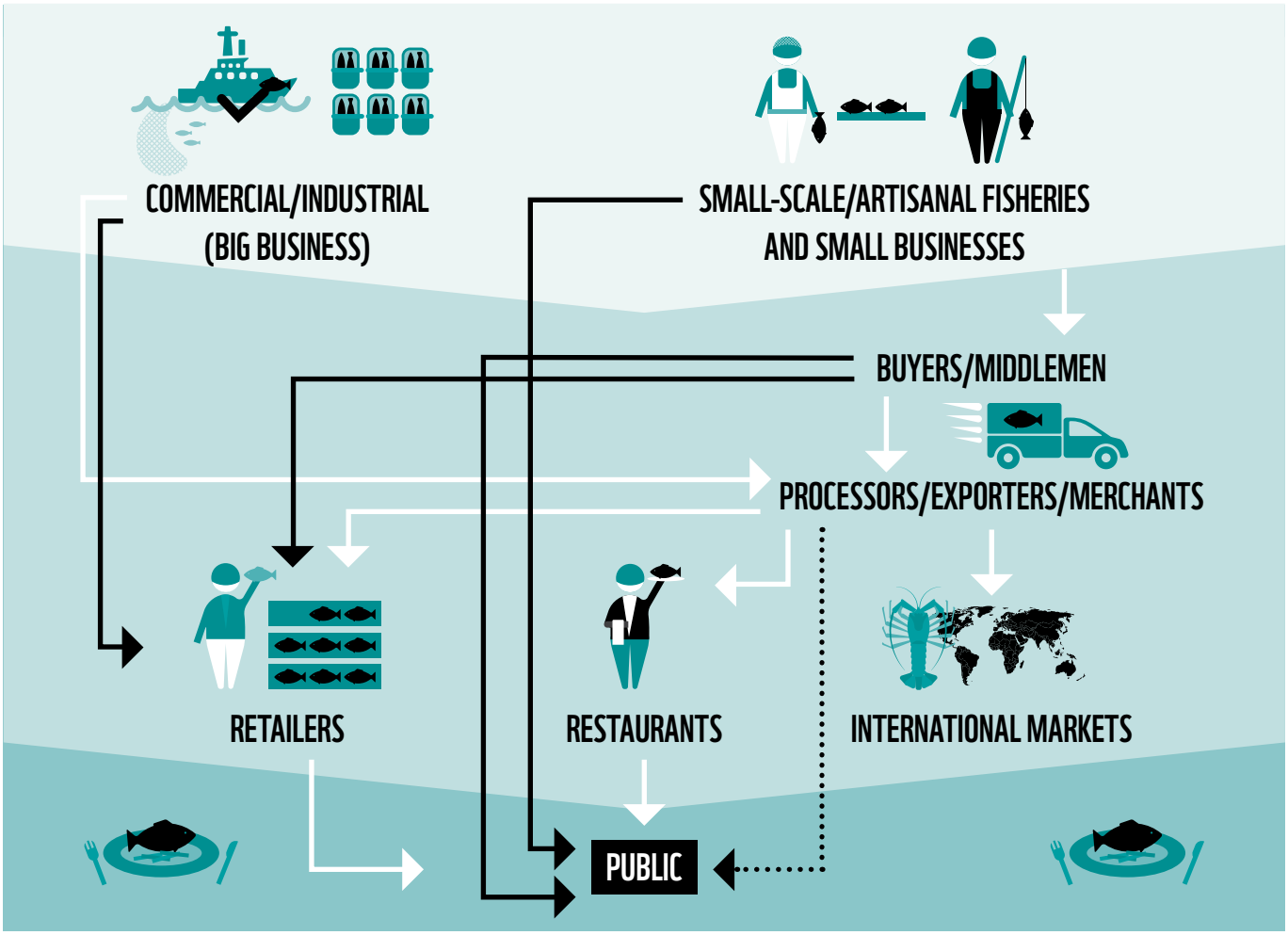
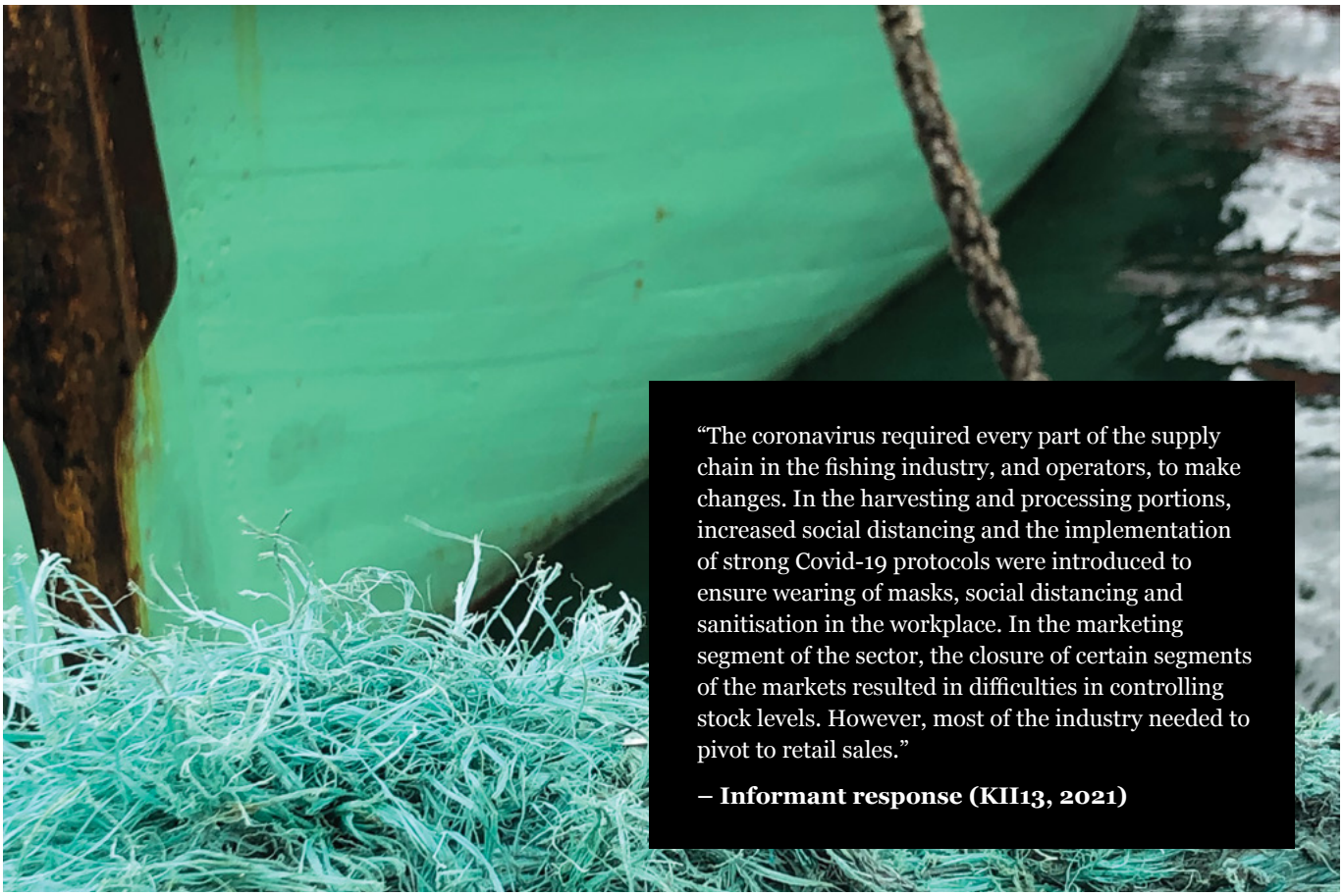


Figure 13: A typical seafood value chain in South Africa with shifts due to the impact of Covid-19 depicted by the dotted line



"The coronavirus required every part of the supply chain in the fishing industry, and operators, to make changes. In the harvesting and processing portions, increased social distancing and the implementation of strong Covid-19 protocols were introduced to ensure wearing of masks, social distancing and sanitisation in the workplace. In the marketing segment of the sector, the closure of certain segments of the markets resulted in difficulties in controlling stock levels. However, most of the industry needed to pivot to retail sales."

– Informant response (KII13, 2021)

MITIGATION RESPONSES BY THE COMMERCIAL FISHERIES SECTOR

In the commercial fisheries sector, big companies and organisations formulated Covid-19 responses to mitigate the impacts of the pandemic. Some examples are listed below (Parliamentary Monitoring Group, 2020).

Oceana Group Ltd

Oceana employs about 4 000 people in South Africa, with over 90% of its workforce coming from historically marginalised communities. The company's Covid-19 mitigation strategy involved measures that included the provision of food security and safety for employees, improved communication, hands-on leadership, R3,4 million spent on Corporate Social Investment projects, 7 000 food parcels to small-scale fishers and a R20 million Covid-19 bonus to employees.

Fish SA

Fish SA, an association that targets small pelagic fish, anchovy, pilchards and longline hake, decided to keep all their employees during Covid-19 lockdown.

Premier Fishing and Brands Limited

Premier Fishing and Brands Limited is said to be one of the largest black-owned commercial fishing companies in South Africa. The company introduced Covid-19 risk assessment policies, which included the covering of medical costs for employees.

Irvin and Johnson (I&J) Limited

I&J employs over 2 000 workers and focuses on fishing and commercial aquaculture (abalone). The company responded by investing over R18 million in Covid-19 mitigation measures and established a Covid-19 task team to mitigate the impacts of the pandemic on its operations. It also distributed food parcels to employees and the communities they come from.

Sea Harvest Corporation

Sea Harvest employs approximately 3 200 workers and is 83% black-owned. The company reports that it was hit hard by the pandemic because close to 200 of its employees tested positive for the coronavirus. The lesson from that was to tighten screening, physical distancing and the provision of personal protective equipment to ensure that Covid-19 did not affect operations.

MITIGATION RESPONSES IN THE SMALL-SCALE FISHERIES SECTOR

Overall, it appeared that the commercial sector had sufficient financial resources to create and implement Covid-19 mitigation strategies for businesses to operate at close to normal levels. This was not the case in the small-scale fisheries sector. Various informants and participants pointed out that the commercial fishing sector is privileged in that it could thrive even when Covid-19 impacts placed constraints on exports and the local sale of resources. Efforts in the small-scale sector to mitigate the impacts of Covid-19 largely focused on temporary relief (from the government, private sector, NGOs) through the provision of short-term grants and food aid. The key strategies that were used are listed below.

Essential service permits

The recognition of fishing as an essential service and the subsequent issuing of essential service permits to small-scale fisheries was a key mitigation strategy. Many small-scale fisheries were able to continue fishing for food and earn a livelihood. However, this was limited to fishers who had been formally recognised as small-scale fisheries and included on the list generated through the implementation of the Small-Scale Fisheries Policy (DAFF, 2012). It was also noted that once recreational fishing was permitted, those fishers who did not get an essential permit could also fish. This became a key mitigation strategy during the second wave when tighter restrictions were introduced once again.

Food parcels

Food parcels were provided to small-scale fishers by the government, NGOs and private sector organisations. Some participants noted that in some areas soup kitchens were set up by the local government, private sector organisations and NGOs.

Covid-19 relief grant

Some fishers benefited from the government's introduction of the temporary Covid-19 relief grant. The Covid-19 relief grant was intended for any individual across any sector who no longer received an income. The grant was limited to people who met the following criteria: they are South African citizens, permanent residents or registered refugees above the age of 18; they are unemployed and not receiving unemployment insurance benefits; they do not receive any social grants (pension, disability, child welfare, etc.); they do not receive a stipend from the National Student Financial Aid Scheme; they are not receiving any other government Covid-19 response support; and they are not resident of a government-funded or subsidised institution (SASSA, n.d.). As a result, not every fisher received the grant and, in some instances, access was not consistent. The grant amounted to just R350 per month.

NGO support

NGOs such as Masifundise and Abalobi not only helped small-scale fisheries with the marketing of fish, they also supplied sanitisers and quality face masks. Masifundise also supplied farming equipment so that communities could plant vegetables for their own consumption.

However, various fishers indicated that they still need help to build resilience in their fishing communities, as part of a more long-term process so that they can better withstand future shocks and stressors. Respondents indicated a strong need for the upskilling of small-scale fishers to help them to be successful as co-operatives in the seafood value chain.

RECOMMENDATIONS FOR RESILIENCE

The Covid-19 pandemic has highlighted the many vulnerabilities of small-scale fishing communities and the challenges they face towards building resilience. The pandemic has, however, provided a unique opportunity to see functional co-operatives responding and adapting to these challenges to support the notion that resilience is possible.

The following are recommendations towards building sustainable, adaptive and resilient fisheries and fishing communities.

1.	**Recognise inequities and inequalities across the sector**	Access, rights, benefits and losses are unevenly distributed in the fisheries sector. Although this is a legacy of historical regimes, the impact of this legacy needs to continuously be recognised by the current governance system. The governance system needs to ensure that previously disadvantaged fishers have access, rights and benefits and that the losses are distributed fairly throughout the sector. The implementation of measures to provide redress can go a long way in promoting equality within the sector.
2.	**Build resilience against stressors and shocks in small-scale fishing communities**	The spread of Covid-19 has revealed that small-scale fishing communities are very reliant on both external and government interventions for their livelihoods and to overcome negative impacts from exogenous stressors and shocks. Support needs to be provided to local structures and institutions to build resilience in small-scale fishing communities.
3.	**Develop capacity and empowerment at local level**	Access to information, knowledge, networks, infrastructure (e.g. cold-storage facilities) and decision-making platforms is needed to build capacity in and empower local structures (i.e. fisheries co-operatives) to assist their communities in dealing with the negative impacts of Covid-19 (and other social ills). Since the start of the pandemic, many small-scale fisheries have felt left out of decision-making processes and fora because communication has taken place mostly online and fishers generally lack the resources and technology to engage. Support in this regard could bring local empowerment and reduce reliance on external organisations and the government.
4.	**Clarify rights and facilitate access to resources**	Various traditional small-scale fisheries still do not have secure rights of access to resources. During the lockdown, some fishers were prevented from fishing and were harassed by police and rangers, even though they were deemed to be essential workers. The government needs to improve the clarification of small-scale fishers' rights in this regard. Permits, once awarded, need to be issued timeously and with the correct information (in a language that the recipient can understand) to avoid any confusion.
5.	**Balance social, economic and ecological goals**	Policies and regulations dealing with the effects of Covid-19 and the ensuing lockdowns, or those directed at managing/protecting coastal and marine resources should not prioritise economic and ecological goals over social ones. There needs to be a balance across the three, rather than trade-offs.
6.	**Ensure good governance**	Actors working towards building resilience ad mitigating the impacts of Covid-19 – and other future shocks, such as the impacts of climate change – should not work in silos but should combine efforts to first determine the needs on the ground, which will then inform the responses that are not only needed but that would also be effective.

At the global scale, the Food and Agriculture Organization has identified food security and nutrition as key priorities for responding to the Covid-19 pandemic (FAO, 2020b). Globally, researchers have proposed a range of frameworks to assist governance actors in supporting vulnerable sectors such as small-scale fisheries in dealing with the impact of Covid-19. Bennet et al. (2020: 341) proposed a collaborative governance framework that could be effective in mitigating the negative impacts of Covid-19 and the resultant lockdowns. The framework encourages governments, researchers, NGOs, donors and the private sector to work together and provide support to small-scale fishers to help them cope with the social, economic and other unforeseen impacts of the pandemic.

The findings of the study reveal how Covid-19 disruptions and policies have significantly affected the South African fisheries sector. However, the impacts of the pandemic were not experienced equally across all stakeholders in the sector. Stakeholders with access to finances, networks and other resources had a better chance of absorbing the impacts and have thus been more resilient. However, those that lacked the resources struggled. Stakeholders such as small-scale fisheries have had difficulty maintaining normal operational levels in the face of the sudden changes in the sector caused by the Covid-19 lockdown. Historical inequalities, the slow pace of transformation and inadequate capacity building for co-operatives in fishing communities have made it nearly impossible for communities to build any resilience to sudden shocks.

At every stage of the study, it became increasingly clear that capacity building in small-scale fisheries co-operatives is essential to ensure that the implementation of the Small-Scale Fisheries Policy is meaningful and successful. Even in functioning co-operatives, many fishers still view themselves as “unemployed”. In fact, most small-scale fisheries do not yet view fishing as a viable form of employment. There is a strong need for improved education and better infrastructure in many of the co-operatives so that small-scale fisheries can successfully interact with the seafood supply chains and start providing a viable income to fishers.

Broad concerns highlighted by the pandemic include the vulnerability of small-scale fisheries and the fact that seafood value chains and markets remain inaccessible to many of them. There are calls for a more holistic approach to fisheries management. The general view is that improved fisheries governance is not the only solution for dealing with food and livelihood insecurity in small-scale fisheries; there is a need to garner more support from other relevant institutions to buoy up fisher livelihoods. Institutions and markets that operate in and around fishing communities can help to improve the resilience of small-scale fisheries by working with and supporting co-operatives. Adopting a systems approach to fisheries that recognises fisheries as social-ecological systems could potentially help fishers to cope better with sudden shocks and stresses on their livelihoods, such as the impacts of the Covid-19 pandemic.

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