



VULNERABILITY TO VIABILITY
GLOBAL PARTNERSHIP

A Situational Analysis of Small-Scale Fisheries in South Africa: From Vulnerability to Viability

V2V Working Paper No. 2022-9

Moenieba Isaacs, Mafaniso M. Hara, Tracey Lee Dennis,
Qurban A. Rouhani, Carmen Mannarino, Naseegh Jaffer

October 2022

Editors:

Ana Carolina Esteves Dias

School of Environment, Enterprise and Development (SEED), University of Waterloo, Waterloo, ON, Canada

Derek Armitage

School of Environment, Resources and Sustainability (SERS), University of Waterloo, Waterloo, ON, Canada

Prateep Kumar Nayak

School of Environment, Enterprise and Development (SEED), University of Waterloo, Waterloo, ON, Canada

Cover design:

Sevil Berenji

Cover photo:

Robert Seidel (Unsplash)

How to cite:

Isaacs, M., Hara, M. M., Dennis T. L., Rouhani, Q. A., Mannarino, C., Jaffer, N. (2022). *A Situational Analysis of Small-Scale Fisheries in South Africa: From Vulnerability to Viability*. V2V Working Paper 2022-9. V2V Global Partnership, University of Waterloo, Canada.

V2V Global Partnership Secretariat

School of Environment, Enterprise and Development,

Faculty of Environment

200 University Avenue West, EV 3

University of Waterloo, Waterloo, ON, N2L 3G1 Canada

Website: www.v2vglobalpartnership.org

Email: v2vglobalpartnership@gmail.com

V2V Global Partnership is supported by the Social Sciences and Humanities Research Council of Canada under its Partnership Grant Program.



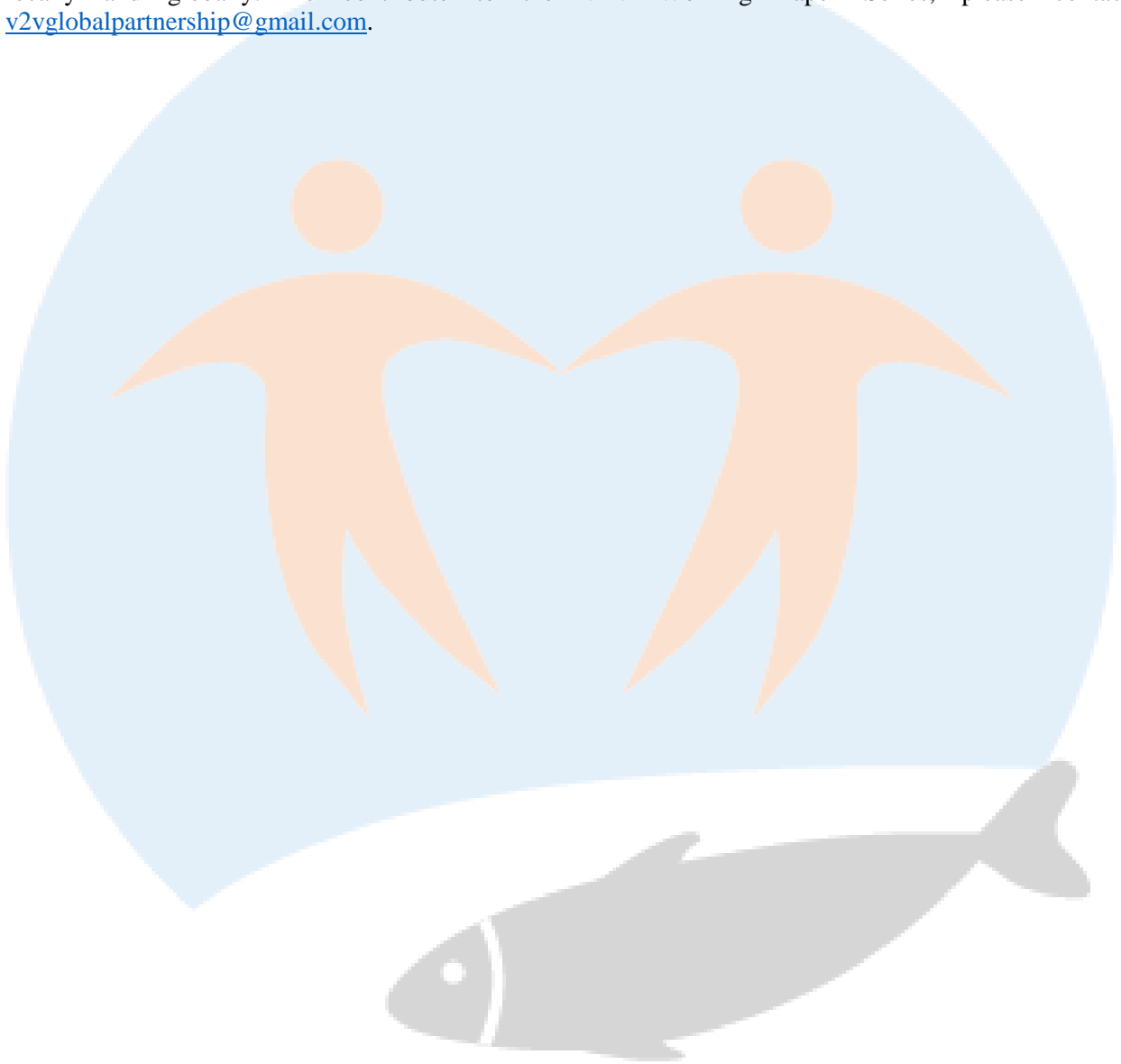
Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

V2V Working Paper Series

V2V Global Partnership “Working Paper Series” aims to facilitate the exchange of ideas, mobilize knowledge and generate broad-based discussions on vulnerability-viability themes within the context of small-scale fisheries. The Working Paper Series will provide a collaborative and interactive platform for academics, practitioners, representatives of civil society, and individuals interested in making written contributions to the theoretical, methodological, practical, and policy aspects of small-scale fisheries, both locally and globally. To contribute to the V2V Working Paper Series, please contact v2vglobalpartnership@gmail.com.



A V2V Situational Analysis of Small-Scale Fisheries

Small-scale fisheries (SSF) are an important economic resource, both at the local and global level; their depletion has ramifications on fundamental aspects of life, spanning from food security to society's wellbeing and culture. On the global scale, SSF provide food security, and a source of livelihoods and income for more than 100 million people. The objective of the V2V Situational Analysis is to build a global perspective on key vulnerabilities and opportunities associated with SSF viability across six countries in Asia (Bangladesh, India, Indonesia, Japan, Malaysia, Thailand) and in six countries in Africa (Ghana, Malawi, Nigeria, Senegal, South Africa, Tanzania). Each country level situational analysis identifies the key social-ecological drivers of change, emerging issues and challenges confronting SSF, and important policy and governance concerns.

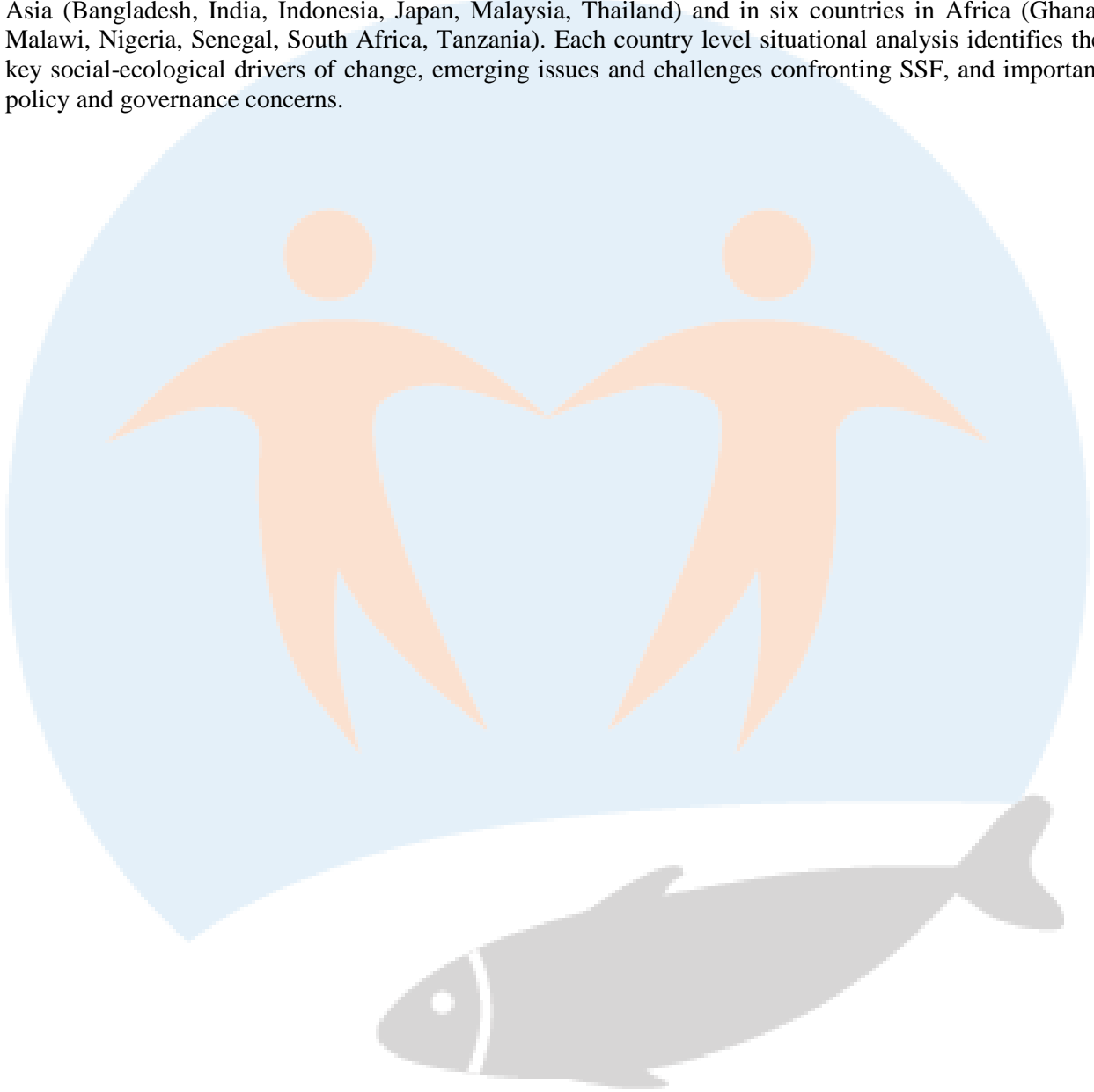


Table of Contents

1. Introduction.....	1
1.1 History and background.....	1
1.2 The nature and structure of fishing communities	2
1.3 Inland small-scale fisheries.....	3
2. Context and current picture.....	5
2.1 Description of the fishing sector.....	5
2.2 West coast rock lobster.....	6
2.3 Line fishery.....	7
2.4 Abalone.....	7
2.5 Recreational fisheries	8
3. Meaning and status of small-scale fisheries in South Africa.....	8
3.1 Small-scale fisher	9
3.2 Small-scale fishing sector	9
3.3 Small-scale fishing community	9
4. Social-ecological changes and key drivers	10
5. Emerging Issues and Challenges	11
5.1 Blue Economy	11
5.2 Sustainable Development Goals.....	12
5.3 Marine protected areas and the proposed 30X30 goal by 2030.....	12
5.4 Blue injustices of small-scale fisheries.....	12
5.5 COVID-19 pandemic.....	14
5.6 Implementation of the new fisheries policies	15
5.7 Women’s role in small-scale fisheries are disappearing.....	15
5.8 Small-scale fishers and technology:	15
6. Policy and Governance	16
6.1 Small-scale fisheries policy process	16
6.1.1 Marine small-scale fishers struggle for formal policy recognition.....	16
6.1.2 Inland fisheries small-scale fisheries policy process.....	16
6.2 Small-scale fisheries governance in South Africa	17
6.3 Co-management.....	17
6.4 Conclusion: A call for blue justice for small-scale fisheries	19
References.....	21

A Situational Analysis of Small-Scale Fisheries in South Africa: From Vulnerability to Viability

Moenieba Isaacs^{1*} • Mafaniso M. Hara¹ • Tracey Lee Dennis¹ • Qurban A. Rouhani² • Carmen Mannarino³ • Naseegh Jaffer³

¹ University of the Western Cape, Institute for Poverty Land and Agrarian Studies, Cape Town, South Africa

² Rhodes University, Department of Ichthyology and Fisheries Science, Rural Fisheries Programme, Makhanda, South Africa

³ Masifundise Development Trust, Cape Town, South Africa

* Corresponding author: misaacs@uwc.ac.za

1. Introduction

1.1 History and background

In South Africa, the fishing industry developed at the beginning of the 20th century and grew rapidly after World War II, peaking at more than 300,000 tonnes of landed catches in the early 1970s, and then declining thereafter (South African Deep-Seas Trawling Industry Association [SADSTIA], 1998). The rapid growth was based on the international vessels fishing in the inshore 12-mile zone. South Africa was one of the first countries to implement the 200 nautical miles Exclusive Economic Zone (EEZ) under the 1982 UNCLOS declaration. The exclusion of foreign vessels and a conservative management strategy led to the gradual recovery of catch rates by the mid-1990s to the levels last seen in the 1960s. Since the 1970s, the hake fishery has been controlled by company allocated quotas within the total allowable catch (TAC), including limitations on the number of vessels and closed areas. These processes happened during a political system that excluded the majority of its people from accessing economic, political and social freedoms.

According to Bailey (1999), in 1998 deep-sea trawling was heavily concentrated, with six pioneer companies controlling 81% of the TAC (amounting to 113,000 tons). However, between 1995 and 2002 there was a 19% cut for redistribution in the established deep-sea hake industry's TAC. In addition, there has been an increase in the number of new entrants within the deep-sea hake fishery. Between 1993 and 2005 the number rose to 52 quota holders Department of Environmental Affairs and Tourism [DEAT], 2002b; DEAT 2005a,b). The few well-established large-scale fishing companies monopolize the fishing market, integrating all their operations vertically and horizontally. This highly monopolized environment has made it close to impossible for small-scale fishers to enter and compete in the sector. In fact, small-scale fishers are immediately squeezed out of the market unless they fish for personal subsistence. Any form of competition (no matter how small) is squeezed out of the sector, which means you are either large-scale or subsistence in nature.

Small-scale fisheries are labour intensive, use low technology gear, only fish up to 12 nautical miles from shore, and usually only supply local markets. The National Development Plan (NDP) 2012 states that: "(s)mall-scale fisheries cannot be regarded as a way to boost employment. Capital-intensive industrial fisheries offer better salaries and better conditions of employment than small-scale low-capital fisheries. Reducing the rights allocated to industrial fisheries to award them small-scale operations simply cuts jobs" (RSA, 2012, p. 229). The question is whether this is in fact the case, and whether the new small-scale policy (2012) will create jobs.

To fast-track the development of ocean and job creation, the South African government responded promptly, using McKinsey-designed, expert-driven, multi-stakeholder projects with non-disclosure agreements, held over a period of 6 weeks in 2014 to develop the ocean's economy (Bond 2019). Operation Phakisa was launched in July 2014 as an initiative of the Presidency, aligned with the National Development Plan (2012) and White Paper on National Environmental Management of the Ocean (RSA, 2014). This is also known as the blue economy, oceans economy and blue growth using Marine Spatial Planning (MSP) to fast track economic growth opportunities for oil, gas expansion, and seabed mining. The blue economy is linked to the implementation of blue financialization, blue investments, blue bonds all supported through World bank. Conservation and protection of the marine resource through Marine Protected Areas complements the sustainability goal and directly links to the United Nations Sustainable Development Goals (UNSDGs). The economy is linked through elite and adventure tourism. The South African ocean's economy plans support sustainable growth in the non-fisheries economies like shipping, oil, gas, seabed mining will potentially contribute up to R¹177 billion to the country's gross domestic product (GDP), while creating up to one million new jobs by 2033. In 2022, the South African Government confirmed that they will not meet the economic targets National Development Plan (NDP) by 2030.

Small-scale fisheries have the potential to contribute positively to food security and the livelihoods of fishing communities and society at large. This is especially the case with the marine sector for coastal communities, but also potentially for inland communities through the use of fish resources on public dams.

1.2 The nature and structure of fishing communities

Many coastal settlements depend on harvesting marine resources for sale and direct human consumption. The current estimate is that around 147 unitary entities could be defined as 'communities' under the proposed community-based rights allocation system (see figure 1). In the Western and Northern Cape, in particular, these settlements often referred to as communities due to the geographical location and the link to fishing industries. The planned establishment of coastal settlements was based on a common model of company-established fishing towns such as Saldanha Bay, St Helena Bay, Lamberts Bay, Port Elizabeth, Jeffreys Bay, Port Nolloth, Hondeklipbaai, and others. The 'physical, historical, economic, social and political factors that led to the establishment of these towns have ensured continuing differentiation, posing different problems which will require distinctive approaches to change' (Lemon, 1991, p. 1).

Unlike in the Western Cape and Northern Cape, rural areas of the Eastern Cape and KwaZulu-Natal are governed under traditional authority systems. As a result, the concept of community appears to be still strong in these provinces. In areas of the Eastern Cape and KwaZulu-Natal the role of traditional authorities around harvesting marine resources has been documented by Kepe (1998), Isaacs (2003), Sunde and Isaacs (2008). The Legal Resource Centre's work on legal pluralism and customary rights (see Sowman et al., 2014) has made an important contribution to defining small-scale fishing communities.

One issue in defining community around coastal resources is to decide how far inland can be considered to be part of the coast, and therefore which communities should be viewed as coastal communities. The White Paper on Coastal Development (DEAT, 2000) proposed 20 kilometres as the limit for defining the coastal belt. Even then, some communities further inland than 20 kilometres have argued that they were moved from coastal areas as part of forced removals under apartheid and that their fishing rights should be restored on the basis of historical residence in coastal communities.

¹ The symbol refers to the South African rand, or simply the rand, is the official currency of South Africa.

Figure 1

Map of small-scale fishing communities along the coast of South Africa



Note. Small-scale Fisheries Community Handbook (2014).

1.3 Inland small-scale fisheries

When public dams were constructed as storage reservoirs for domestic, industrial and irrigation water, recreational fish species (mostly exotic) were introduced into the dams. For this reason, historically, it is only recreational fishing that had been formally recognised on public dams (Department of Water and Sanitation [DWS], 2015; Hey, 1977). This explains the dominance of recreational fishing and fishers on public dams. The Apartheid era exclusion of rural marginalised communities from accessing fish resources has also contributed to South African inland fisheries being utilised primarily by recreational anglers (Britz et al., 2015; McCafferty et al., 2012; Weyl et al., 2007). Therefore, despite over seven hundred public storage dams and impoundments that support growing small-scale and recreational fishing activities, small-scale fishers are still marginalised (Hara & Backeberg, 2014). For example, Britz et al. (2015) analysed a selection of 64 case studies of fishing communities on public dams in order to investigate and characterise the type of fishing and fisheries going on public dams in South Africa². Subsistence fishing activities were recorded on 77% of the sampled dams, recreational fishing on 69% of the dams and artisanal/small-scale fishing on 40% of the selected dams. Small-scale fisheries had largely operated on an informal basis until inland small-scale fisheries was formally recognized through the National Freshwater Inland Wild Capture fisheries Policy adopted by the Cabinet 4 August 2021. Before small-scale fisheries had been legally recognised, the lack of formal and legal recognition on public dams had meant that such activities had been frowned upon, and in most instances, criminalised (Hara et al., 2021; Britz et al., 2015). The major challenge, therefore, had been lack of a national policy and the institutional support required to develop the sector and realise the potential contribution of small-scale fisheries to poverty reduction and economic development. The lack of a legal framework had also led to growing conflicts among resources users, particularly between small-scale and recreational fishers (Britz et al., 2015; McCafferty et al., 2012).

² A similar survey was conducted for the Northwest Province (Weyl et al., 2007)

The colonial and Apartheid history of only recognising recreational fishing on public ‘lands’ is still a strongly held principle even currently. Thus, there is a well-established recreational fishery, largely composed of whites, organised through national fishing clubs and associations. The clubs and associations are well represented in policy platforms and remain a powerful force when it comes to protecting the interests of its members. These interests usually contest the participation of small-scale fishers in fishing on public dams through arguments that the fishing methods that are used by small-scale fishers, such as nets, are destructive and should be banned. No doubt, recreational fishing and the value chains thereof are worth millions of Rand and are important to the local economies since they utilise and support the many tourists’ accommodation and lodges around the dams and buy equipment for their activities. The stark inequality in the inland fisheries sector can be seen in that black, informal, marginalized and poor fishers still eke out fishing livelihoods on public dams as subsistence fishers.

The tourists’ accommodation sector and recreational sports fishers see small-scalers as illegal fishers and as poachers. Small-scale fishers are easy targets for law enforcement with fines and confiscation of gear common. Thus, small-scale fishers are still overlooked by policy makers and deemed invisible by recreational, adventure sports and tourism. For inland small-scale fishing communities, fishing is “also about a cultural, traditional and historical attachment to the area and the way of life of their ancestors”. This goes against the colonialist tradition of sports hunting practices and introducing fish species for sports hunting - Act 10 of 1867, Law 21 of 1884 and Cape Colony Fish Protection Act (Act 15 Of 1893). The colonialists not only introduced trout into South African waters, but also built state hatcheries to breed non-indigenous species of fish (such as trout and bass) to stock in rivers and dams for the needs of recreational anglers (Britz, 2015). In the late 1980’s provincial departments of environment could no longer justify their role in the stocking of non-indigenous species of fish in natural rivers and dams with their biodiversity mandate (Rouhani & Britz, 2011). Shifts in legislation by provincial environmental agencies (Britz, 2015) were made based on biodiversity perspectives but not promoting the activities of the indigenous, local, subsistence and small-scale fishers.

Thus, inland water resources remain largely underutilised despite their potential as a source of protein, income and employment for the rural poor living in the vicinity of these impoundments (Britz et al., 2015; McCafferty et al., 2012; Weyl et al., 2007). Equitable and sustainable use of South Africa’s inland fish resources will thus require a reform of the current rudimentary inland fishery governance and acceptance by recreational fishers to share resources (Hara and Backeberg, 2014; McCafferty et al., 2012).

Finally, the government recognised the need for an Inland Fisheries Policy in 2016, which led to the initiation of a process of developing an Inland Fisheries Policy (Department of Agriculture Forestry and Fisheries [DAFF], 2016). The purpose of the Policy is: to guide the sustainable development of inland fisheries through legislative reform and policy harmonization; definition of access rights; developing criteria for ensuring sustainable harvest levels; ensuring governance organisational support structures and capacity; cooperative governance and co-management arrangements; and the empowerment of rural communities to participate in equitable and sustainable management of the resource (Department of Environment Forestry and Fisheries [DEFF], 2020). On 25th February 2022, the National Freshwater (Inland) Wild Capture Fisheries’ Policy has been gazetted (Republic of South Africa [RSA], 2022). The policy seeks to formalise the currently informal and unrecognised activities of small-scale fisheries and will provide for an efficient regulatory regime for the inland fisheries sector. This is a welcome shift to include the livelihoods, access rights and recognition of inland fishers in the management of dams. Who will be responsible for implementing this policy, and to what extent the provincial departments will play a role in the implementation of the policy remains unclear.

2. Context and current picture

2.1 Description of the fishing sector

South Africa has a 3,000km long coastline from the borders with Namibia by the Atlantic Ocean to its Eastern side, where it borders Mozambique by the Indian Ocean. Four out of its nine provinces have coastlines, KwaZulu Natal, Eastern Cape, Western Cape and the Northern Cape. The Benguela ecosystem of the west coast is one of the most productive ocean ecosystems in the world in terms of biomass production and fishery resources due to the upwelling of cold, nutrient rich water (Cochrane et al., 2009). The South African Government (2014) indicated 10,000 recorded species of marine plants and animals. They recognise fishing as an economic activity and not merely a purely environmental and biodiversity matter. In fact, the government mentioned that their main challenge is to create a balance between socio-economic potential, protecting the integrity and quality of the resource, while at the same time addressing transformation within the sector. The key fishing legislations include the Marine Living Resources Act (No18 of 1998) (RSA, 1998) and the Small-Scale Fishing Policy of 2012 (RSA, 2012). The economic value of the fishing sector is R³6 billion per annum industry employment 27,000 people. South Africa has 147 fishing communities, 28,338 fisher households and 29,233 subsistence fishers. Marine living resources are mostly fully utilised and many high-value species (e.g., abalone and rock lobster) are over-exploited (DAFF 2014).

Coastal communities have harvested marine resources for consumption, livelihood, medicinal and spiritual and cultural purposes. Their practices are informal or recognized under recreational fisheries and only a few of these practices are recognized by authorities. Small-scale fisheries on the western and southern coast are mostly boat-based and restricted to inshore zone of 12 nautical miles and with gear restrictions. The activities are labour intensive, targeting migratory line fish, and women involved in pre-and – post harvest activities. Fishing activity is largely dependent on weather conditions, the availability of seasonal species, access to sites, and fishing rights (Sowman et al., 2014).

A great portion of the South African East Coast (Ciskei, Transkei and KwaZulu) were declared homeland areas⁴ during the Apartheid era. Economic productivity on the East coast is lower than that on the west coast and fishing is mostly for subsistence. Access to marine resources is dependent on the traditional authority and the social dynamics of each specific area. The locals use traditional fishing harvesting practices from a basket of resources on shore, including mussels, line fish, rock lobster, crab, oyster, and octopus. Men, women, and children are all involved in harvesting activity.

Subsistence fishers in KwaZulu Natal (KZN) have been systemically excluded from the legal and policy-making process since the 1800's. The KZN fisheries is a diverse group dating back to Indian indentured labour in the 1800's, as well as rural based predominantly of isiZulu and Tsonga culture living around lakes and estuaries. Subsistence fishers indicated that current policies have excluded subsistence fishers and that many subsistence fishers, in order to be able to provide for their families, purchase recreational permits, thereby rendering them even more invisible by hiding their actual dependence on the ocean resources. They argue that the South African political economy marginalizes small-scale and subsistence fishers in favour of large-scale commercial and recreational fishing (Sunde & Erwin, 2020).

⁴ The Bantustans or homelands, established by the Apartheid Government, were areas to which the majority of the Blacks population was moved to prevent them from living in the urban areas of South Africa. The Bantustans were a major administrative mechanism for the removal of Blacks from the South African political system under the many laws and policies created by Apartheid (SA History online).

South Africa has a well-established fishery sector, comprising two components: wild capture fisheries and aquaculture, mainly large-scale abalone, and mussels. Wild marine capture fisheries currently include three distinct areas: commercial, small-scale and recreational fisheries, each of which requires specific research and management interventions. The commercial marine fishing sector can be broken down further into industrialised, vertically integrated, capital-intensive fisheries, which generally operate in deep waters (e.g., hake trawl and pelagic purse seine fisheries) and inshore fisheries where both commercial and small-scale fishing activities take place. Inshore fisheries are more easily accessible and use more traditional types of gear (e.g., line fishery and near-shore rock lobster hoop net fishery, abalone diving).

There are two important rock lobster fisheries in South Africa. On the west coast, an inshore fishery is targeting west coast rock lobster (*Jasus lalandii*), and on the South coast a deep-water fishery is targeting *Palinurus gilchristi*. Rock lobster contributes less than 1% by mass to the total fishery, but its contribution by value is approximately 9–10%.

2.2 West coast rock lobster

The rock lobster fishery (i.e., WCRL) encompasses west and south coast species. The WCRL fishery is commercially exploited on the west coast of South Africa. Larger vessels use lobster traps while small-scale vessels use hoop nets. Rock lobsters are found at depths less than 80 m. Unsustainable catches over long periods, especially in the 1980s, as well as an increased export trade, resulted in increased fishing pressure and declines in catches and TAC. With state intervention in stock rebuilding and the introduction of Operational Management Plans in 1997, the resource was stabilised (Johnston & Butterworth, 2005; Hauck, 2008).

The TAC for the WCRL 2013-2014 fishing season (15 November to 21 April) had been set at 2,167.06 tonnes (about 250 tonnes less than the previous season). The catch apportioned to the commercial offshore sub-sector was set at 1,356.56 tonnes and for the commercial near-shore sub-sector at 451 tonnes. The TAC apportioned for the subsistence (small-scale/interim relief) sub-sector was set at 276 tonnes (138 kg per fisher for 1,782 fishers). The recreational fishing season has been restricted to 26 days with a bag limit of four WCRLs per person.

WCRL is rarely consumed by fishers as they prefer to sell to local agents for R150-350 per kg or to the local elite for R30-40 each. The local rights holders (long-term and interim relief) all sell their WCRL to local agents who sell to fishing companies, who then export the catches internationally.

In Cape Town there is a high demand for WCRL by the wealthy class, especially for religious celebrations (Eid and Christmas), New Year celebrations, weddings and dinner parties. The WCRL was a regulated sector that promoted export through the Crawfish Export Act of 1940. For over 60 years, a substantial local market grew over time, but was often ignored by the authorities. The fishery initially utilised small-scale vessels, rowboats and hoop nets to fish in the 1950s-60s before industrialised traps were introduced. Although the resource declined in the 1960s and 1970s, the informal and unregulated trade increased, as the economic alternatives to the west coast were limited (van Sittert 1994). Opportunities to supply the local and export markets were therefore taken up by informal fishers, who were increasingly regulated by government, and who had few other livelihood options (van Sittert 1994).

A strong local demand for lobster by the catering industry, restaurants and wine farms provided an ongoing market for fishers who relied on informal fishing to contribute to their household's income. WCRL is an important source of cash for many households on the west coast. Small-scale fishers are under an interim permit system of a meagre 90kg per season. This is not sufficient to sustain their families and livelihoods.

Small-scale fishers enter into agreements with fishing companies to process and market and the monies they receive is not viable and harvest more than their allocated amount. The overfishing will have a direct and negative on future sustainability and the governability of the WCRL fishery.

2.3 Line fishery

The fisheries department is responsible to allocate linefish permits under Catch Per Unit Effort (CPUE) and under Total Allowable Effort (TAE), and since 2006, these permits have been allocated on a long-term basis. Before 2006, the licensing system was allocated under A-licences referring full-time commercial boatowners and B-licences referring to part-time and semi-commercial boat owners. The licensing system mainly benefitted white boat owners in the commercial A licensing system, and under the B licensing system, government officials were allowed time off to fish. The crew was mainly contracted to fish for the day. The transformation of this system resulted in 450 linefish permits allocated to boatowners for 8 years. Very little transformation took place as 70% were white owners and 30% went to black boat owners. This sector could have been allocated fully to small-scale fisheries in 2013 and 2014 but was instead allocated to mainly white boat owners. Line fisheries in South Africa is a contested space as small-scale fishers are subcontracted as crew and paid catch per unit effort. This means that when they do not catch anything, they enter into cash advance payments that will be taken off their next catch. The crew on the line fish vessels move from one skipper to another and increases levels of exploitation for this group of fishers who are mainly moving from one vessel to another and are in most cases without rights. In reality they are contract cheap labour.

2.4 Abalone

The abalone (*Haliotis midae*, known locally as perlemoen) fishery is the most lucrative species in the South African fishing industry. The species is found in seven geographic fishing zones, from Hangklip to Quoin Point, although most of the commercial catch is harvested from only five of these zones. The industry employs 950 people, of whom 500 are boat based and 450 are land-based (DEAT, 2002). At the time, the industry was worth approximately R70 million per annum (DEAT, 2002a). Divers harvest the resource in shallow subtidal kelp beds. Commercial divers use small dinghies and scuba gear, while recreational and subsistence fishers are only allowed to use a snorkel. Quotas have been set at around 600 tonnes since 1990 (DEAT, 2002a, p. 18). Most of the catch is frozen and exported to the Far East, where abalone is considered a delicacy and commands a very high price (*Abalone Rule Book* 2001).

The management of the abalone resource has been a point of contention, especially given the lucrative nature of the species. Four major factors influence the abalone population in South Africa: the commercial exploitation, recreational fishing, poaching, and natural factors affecting the mortality of recently recruited juveniles. Statistics are currently skewed as a result of rampant poaching in the sector, and it is suspected that recreational and subsistence fishers are taking almost as much as the commercial sector. Poaching escalated at a rapid rate after 1994 and is currently out of control in certain areas (DEAT, 2002a). Due to the lucrative market for abalone in the Far East, there has been an escalation in illegal fishing activity, while the total recreational catch of 492 tonnes almost equals the commercial catch of 613 tonnes. According to Hauck (1999) the abalone species runs the risk of becoming commercially extinct within a few years. By the 1997/98 season the TAC declined to 536 tonnes of whole mass, and the scientific prognosis for the future is bleak due to the lack of control over poaching (Hauck, 1999).

Abalone aquaculture started in the early 1990s with a production of less than one ton per year. By 1997 the production reached 10 tonnes followed by 25 tonnes the year after with a value of R7 million. The total

annual production was estimated to reach 500 tonnes in 2001, almost as much as the TAC for this species from the natural resource. Big fishing companies controls 45% of the abalone aquaculture share and 55% are control by smaller companies (DAFF, 2015). Currently the abalone production exceeds 1,488 tonnes. In 2015, the illegal harvesting of abalone exceeded the production levels of aquaculture and legal harvesting of abalone of 96 tonnes to the amount of 2,989 tonnes (Bürgener 2016). In 2008/09 fishing season the fisheries department closed abalone fisheries and it had an immediate impact on the exports of abalone to the far east, Hong Kong, decreasing from 86% to 29%. In addition, illegal harvesting continued during the Covid-19 pandemic (Lau, 2018, Isaacs & Witbooi, 2019, de Greef & Hayson, 2022).

2.5 Recreational fisheries

The regulations governing the commercial and recreational fishing subsectors were separated in 1961. Recreational fishery for WCRL is currently regulated by daily bag limit, gear restrictions and mesh size, fishing days and no-fish periods. The recreational fishery involves approximately 750,000 people who spend at least R750 million per year in the process (*Fishing Industry Handbook*, 1997). The actual annual catch is estimates to be 17,000 tonnes of high-value species of abalone and WCRL (*Fishing Industry Handbook*, 1997). The spin-offs from these recreational activities are significant to the economy (equipment, boat sales, gear, bait and the tourist industry). Recreational fishing generates approximately R1.3 billion annually and employs 131,000 people in related activities (DEAT, 1998).

The profile of South Africa's inland recreational fishery is generally well understood. Fishing clubs are located in most major fishing areas, they keep records, and they are generally categorized according to the species of fish being targeted. For example, fishing clubs for bass anglers, fly fishers (for trout) and then cast fishing (for carp and catfish). The clubs are generally well organised, structured, and tiered from local to national level. The recreational fishing sector is also organized along two tracks, one for recreational anglers and the other for competitive anglers. The competitive component of recreational fisheries falls within the scope of the National Department of Sports and Recreation. There are about 1.3 million recreational anglers in the country with a contribution of approximately R36 billion (USD 2.4 billion) (Saayman et al., 2017). This statistic on recreational fishers do not factor in that many small-scale fishers (inland and marine) without formal rights purchase these permits as a form of the livelihood strategy and sell the catches. A more formalised system is very important for this group as how they use it is against the formal regulations and indirectly criminalising their fishing activity.

3. Meaning and status of small-scale fisheries in South Africa

The Marine Living Resources Act 18 of 1998 did not recognize small-scale fisheries and defined them as either subsistence, commercial or recreational (RSA, 1998). A formal litigation process (see the section on governance below) challenged these definitions and a small-scale fisheries policy was developed. Table 1 below describes the terms used for small-scale fishers, gear, vessels, and ecosystem types.

Table 1				
<i>Summary of small-scale fisheries profile in South Africa</i>				
Terms used in SSF	Gear types	Vessel types	Ecosystem types	Ecosystem detailed types
<ul style="list-style-type: none"> • Artisanal • Coastal • Indigenous • Inland • Inshore • Small boat • Small scale • Subsistence • Traditional 	<ul style="list-style-type: none"> • Gillnets • Hooks and lines • Lift nets • Recreational fishing gears • Seine nets 	<ul style="list-style-type: none"> • Canoe • Wooden¹ • Fiberglass¹ 	<ul style="list-style-type: none"> • Marine • Freshwater • Brackish 	<ul style="list-style-type: none"> • Intertidal • Beach • Coastal • Estuary
¹ 7-9.8m in length, travelling no further than 15 nautical miles from port, 4-6 cylinder diesel engines, 90hp (also known as <i>chukkies</i> locally); 8-10 crew.				

The marine small-scale fisheries policy of South Africa of 2012 framed the definitions presented in sections 3.1 to 3.3 below.

3.1 Small-scale fisher

Small-scale fishers are persons who fish to meet their food and basic livelihood needs, or who 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 (RSA, 2012a).

3.2 Small-scale fishing sector

The small-scale fishing sector refers to the sector of fishers who employ traditional and/or passive fishing gear and engage in a range of labour-intensive harvesting, processing, and distribution technologies to harvest marine living resources on a full-time, part-time or seasonal basis to ensure food security. This sector of fishers also engages in ancillary activities such as their own net-making, and boatbuilding, which provide additional fishery-related employment and income opportunities to their communities (RSA, 2012a).

3.3 Small-scale fishing community

Small-scale fishing community refers to an established socio-cultural group of persons who are, or historically have been, fishers and women, including ancillary workers and their families; have shared aspirations and historical interests or rights in the harvesting, catching or processing of marine living resources; have a history of shared small scale fishing activity but, because of forced removals, are not necessarily tied to particular waters or geographic area; and were or still are operating near or in the seashore or coastal waters where they previously enjoyed access to marine living resources, or continue to exercise their rights in communally in terms of an agreement, custom or law; and who regard themselves as a community (RSA, 2012a).

4. Social-ecological changes and key drivers

The creation of new policies⁵ for inland and coastal small-scale fishers was a necessary step toward addressing poverty in coastal communities in South Africa⁶, but it is not sufficient in addressing poverty and creating sustainable livelihoods. Most small-scale fishing communities in the four maritime provinces are in rural towns and villages where unemployment is even higher than in urban areas. Thus, in these areas, fishing provides one of the most potent or only venues for livelihoods and income. The policies have also created space for fishers to hold government management structures accountable for the impacts of long-term rights allocation. However, it is crucial for fisher communities to benefit economically, especially the marginalized poor; and to create local community institutions that address poverty. Co-management of the marine resources is what government, NGOs and CBOs are advocating for in the drafting of small-scale fisheries policy. The question remains whose responsibility it is to create these institutions, how much power and authority they will have (particularly on decisions on the allocation of rights at all levels) and how to ensure that the structures represent the interests of their communities.

Marine Protected Areas (MPAs) and permit restrictions have negatively impacted the livelihoods of fisher households. In many coastal communities there are MPAs that had been there since 1960s and very little justification why it should be permanent. Small-scale fishers also noticed many large-scale industries are allowed to place their fishing traps overnight in protected areas or they allow inshore trawlers to fish in MPAs. Small-scale fishers find it very difficult to access marine resources during winter months and would want to have access to MPAs during winter, especially in the southern areas – as their linefish comes closer to the shore during summer months.

Fishers questioned the role of marine scientists in informing the fisheries department of management regulations without the fishers in their studies. Since scientists had decision-making power over the amount and size of the fish that can be harvested, fishers' livelihoods was impacted. Fishers recollect how, in the past, their inability to access rights through formal channels many small-scale fishers resort to fishing illegally to access high-value species like, abalone for the quick and easy money. Fishers feel the system of allocations and the MPA restrictions forced indirectly force them to resort to poaching, even within the MPAs. With regulations in place, they are unable to harvest what they traditionally used to for their own consumption to subsist. A study by Dennis (2009) found that although fishers in an area understood the importance of protecting marine resources, they are excluded from the conservation and research processes in their fishing zones. Their families have fished in these areas for generations and their local knowledge could potentially be beneficial to the research and management processes. Yet, this knowledge is not perceived as relevant by government or others who are involved in the design of the MPAs.

Bishop (2021) describes the nature of communities around the Dwesa-Cwebe nature reserve in the Eastern Cape and how fishing is vital to their food security and livelihoods. In 2000 the area was declared an MPA which made fishing in the area a criminal offense. The land was returned to the community after a land claim in 2001. In a court case, where three community members were accused of illegal fishing in the MPA, the Court found that the accused had customary rights, but that it was still a criminal act in terms of the MLRA. This, according to Bishop (2021) raises the question of the nature of customary land and its place in the constitutional framework, the difference between law and practice and the relationship between culture and conservation.

It is clear that the current MPA model in South Africa has not been effective, and fishers are increasing their poaching activities in these protected areas. According to Almudi and Kalikoski (2010), no-take MPAs

⁵ Referring to the small-scale fisheries policy mainly for marine fisheries in 2012 and the recent inland fisheries policy.

⁶ To finally recognize this sector in policy and legislation is an important step.

are incompatible with livelihoods. Fishing communities need long-term rights to resources to be in place before a system of shared decision-making, rule creation, monitoring and enforcement between fishers and authorities would be a possibility. Hence, new legislation for MPAs and small-scale fisheries policy need a shift towards addressing social equity, conservation, and economic development of affected communities.

The ITQ-based approach of a one-size-fits-all model, rights-based fisheries has failed in small-scale fishing communities over the past 28 years (2022) and has resulted in the elite capturing the rights at the expense of the poor. The current ITQ allocation framework has been biologically biased, and allocation decisions were strongly influenced by the general reform processes in South Africa to achieve equity on the race and gender fronts. With regard to poverty alleviation, interim relief measures were, in many instances, allocated ad-hoc to give in to political pressures from fishing communities (Isaacs, 2006).

5. Emerging Issues and Challenges

5.1 Blue Economy

The blue justice concept is situated in the blue economy, oceans economy, and blue growth drive for sustainable development. In Africa, we had our own sustainable blue-economy conference in Kenya, Nairobi in 2018 that attracted over 17,000 delegates from governments, industries, donor agencies, conservation NGOs and academics. The main goal was to promote the blue economy, blue bonds, and blue investments as the next development strategy for African nations. A strategic framework for the blue economy policies to marine protected areas and marine spatial planning extractive mining industries, shipping, large scale aquaculture, are competing in the same space as small-scale fishers. The call for blue justice for small-scale fisheries stems from these large multinational platforms like the sustainable blue economy conference in Kenya in 2018 that overlooked, ignored, and made to be invisible (i.e., with no reference made) SSF, and only an indirect reference to an inclusive blue economy for people, culture, communities and societies (Isaacs, 2019).

The technical expert and foreign-investor driven blue growth in Africa is supported by the African Union, AU IBAR, AU DC, and World Bank (Bond, 2019, Schutter and Hicks, 2019). The invisibility of small-scale fishers in a multi-stakeholder platform created by the African Union Inter-African Bureau for Animal Resources (AU-IBAR) to draft regional policy is expert driven and male dominated with no representation from fisher organisations or movements contributing to the policy. This is in the backdrop of 90% of the fisheries inland and oceans on the continent is small-scale and contributes to food security, poverty eradication, sustaining ecosystems, supporting local communities, and livelihoods, and promotes cultural inheritance. Regional meetings and platforms are silencing the voice and inputs of small-scale fisheries as they are not represented and it is taken for granted that their interests are covered by the social goals of the SDGs.

The main focus of sustainable blue economy is on Africa's openness to investment, following an industrialisation model towards wealth and prosperity with the goal to unlock the economic potential (African Union, Inter-African Bureau of Animal Resources [AU-IBAR], 2019; RSA, 2015; Seychelles Government, 2017). The Seychelles' blue bonds (large seascapes for conservation MPAs with the Nature Conservancy) are seen as a big success story (Schutter & Hicks, 2019; Benjaminsen et al., 2011; Silver and Campbell, 2018; Brent et al., 2020). Yet the economic rationale of blue growth is "claimable, controllable and governable" Steinberg, 2018, p. 238). Africa's blue economy is achieved through selling 'paradise' holidays to elite and adventure tourism, oil, gas and phosphate extraction, shipping infrastructure of the 30,500 km coastline of Africa.

5.2 Sustainable Development Goals

The United Nations Sustainable Development Goals is framed holistically and should be viewed as integrated and indivisible with the vision achieve the social, economic, and sustainable goals by 2030. Governments across the world have been gearing up to new commitments and coastal states are linking this to the blue economy policies. The SDGs, seem reasonable as the soul of the goals is centred around the Universal Declaration of Human Rights (UDHR), concerning decent life with dignity to achieve zero poverty, no hunger, gender equality, zero inequalities, protection of life below water, and of that on land. However, many countries and donors in the blue economy and SDGs ‘pick and choose’ the SDG goals that best suit their economic growth or sustainability or both, thus focusing only on SDG Goal 14 – ‘Life Below Water’ – a sustainable goal, seen together with the infrastructure and investment goals of economic growth. What about the social goals? What about the life above the ocean and life on land where small-scale fishers live? What the SDGs tend to ignore is the place-based inequalities, especially for small-scale fishers. Where the SDGs align with the blue economy it tends to overlook the social goals of small-scale fishers – for example, gender inequality, zero hunger, no poverty, clean water and sanitation. Another example is when their rights are being violated by the displacement of the land and livelihoods to make space for gas pipelines or to clear the coastal area for marine protection.

5.3 Marine protected areas and the proposed 30X30 goal by 2030

Conservationists are arguing for more protected areas across land- and seascapes and to increase to 30% of the terrestrial areas and 30% of our oceans by 2030 (30x30). The environmental health varies across landscapes and seascapes, from near-intact in remote areas with low to no human population, to modified in lightly to densely populated shared spaces that have been altered by humans Obura et al. (2021) state across all of these spaces, even where nature is in a degraded state, it provides essential benefits to people, particularly to those living in poverty or with few materials or financial assets. The notion that only intact and protected areas needs further protection to the exclusion of people and their livelihoods is problematic. Financial resources in conservation will be used for fencing out small-scale fishers, militarizing conservation protected zones often against small-scale fishers. Obura et al. (2021) developed a framework that focuses on ‘working’ and ‘managed’ land- and seascapes where people interact with nature that is neither fully intact nor fully altered. Within this framework, there are established goals to make conservation effective and work for both nature and people. Small-scale fishers in South Africa view MPAs as one of the biggest threats to their livelihoods – their access is restricted, if they enter the MPAs they risk being shot at, confiscating their gear, fined for entering by law enforcement officials, and hence criminalizing their activity, while they watch how big fishing companies are allowed to place their fishing traps, inshore trawlers are allowed to fish, and weapons and missile testing are done in MPAs (see Isaacs & Witbooi, 2019).

5.4 Blue injustices of small-scale fisheries

The South African local small-scale fisheries’ struggle became national at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, and international in 2008 at the Food and Agriculture Organisation’s Small-Scale Fisheries Conference in Thailand. In a parallel meeting specifically for small-scale fisheries movements, the World Forum of Fisher Peoples (WFFP) and the International Collective in Support of Fishworkers (ICSF) developed a Bangkok Statement that framed an international struggle for social justice to drive a global framework for small-scale fisheries. The struggles led to the framing of the new SSF policy for South Africa and fed into Tenure Guidelines (FAO 2012, SSF Guidelines (FAO, 2014) to incorporate social justice principles into fisheries guidelines that were subsequently developed at the

international level. Although the SSF Guidelines gained some political traction, mobilising advocacy for SSF proved difficult as governments were reluctant to implement policies that promoted small scale fishers' rights.

In response, SSF activism in South Africa developed a small-scale fisheries policy that is holistic, community-based management, strong sense of cultural and customary practices that frame people's relationship with the ocean, prioritising the right to access food and livelihoods in a fair and equitable way. This culminated in the WFFP, ICSF, and the World Forum of Fishworkers and Fish Harvesters (WFF) forming an alliance in the International Planning Committee on Food Sovereignty (IPC), in order to draft the *Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication* (2014) (pers. comm. Naseegh Jaffer). In 2014, the SSF Guidelines were finally adopted with compromises and the removal of any reference to fishers in 'occupied territories'. The final text and document were a commendable achievement for small-scale fisher groups and also for their right to practice their livelihood, secure tenure, gender equality, contribute to governance processes and access markets (Jentoft et al., 2010).

This background paved the way for the evolution of blue justice where its local small-scale fishers have suffered several economic and social injustices since the fall of the Apartheid regime with the implementation of new fisheries policy. The context of Blue Justice is situated in the ITQ system of allocation of rights where that only makes a few viable and left many vulnerable, marginalised, and poor. The goal of Blue Justice is to show the inequalities between large-scale fisheries and small-scale fisheries in South Africa, and targeting their species. Another key element of Blue Justice is the dispossession and displacement of small-scale fishing communities in the name of conservation through marine protected areas and for high-end tourism through hotel development and eco-tourism. Small-scale fisheries now need to be redesign and repurposed to align with the sustainable blue economy. In the blue economy space, there is a resurgence of fortress conservation⁷ and increased use of securitisation and militarisation in marine protected areas (MPA) to promote elite and adventure tourism, all of which disenfranchise and criminalise small-scale fishers—blue justice thus challenges this preservation nature of conservation that leads to small-scale fishers being more vulnerable (Isaacs, 2019). A key element in the framing of Blue Justice is to highlight the injustices faced by small scale fisheries with the implementation of non-fisheries development in the oceans through fast-tracking of development in extractive industries like oil, gas, and phosphate and how it negatively impacts on the livelihoods. In 2021, coastal communities challenged the big multinational oil companies – Shell and Searcher – on their seismic surveys in South African courts. Their arguments were based on the lack of consultation of coastal communities and the direct impact on their livelihoods. In March 2022, the judge ruled in favour of coastal communities on the west coast and condemned seismic surveys for oil explorations on the west coasts. In April 2022 another big multinational company, Total, applied for oil exploration on the west coast. The question remains for how long would small-scale fishers be able to hold off on big multinational oil and gas companies' exploration in their fishing grounds? With the help of blue justice, South African SSFs will hopefully find the means to challenge developments and show their discontent in the process (Isaacs, forthcoming).

The concept of blue justice builds on the grabbing narratives of land, water, ocean, coastal, green scholarship using a political ecological lens to address market-led conservation of protected marine areas, and the ecological crisis narratives that contribute to exclusion of small-scale fisheries Franco, et al., 2014; Barbesgaard, 2016; Barbesgaard, 2017). Blue justice is about place-based struggles at the local and global levels, principles, processes and practices to, essentially, shift the political and economic power to be more sustainable and to transition to a more inclusive space of engagement for small-scale fisheries. Ultimately, it is about reducing inequalities for marginalised and vulnerable groups.

⁷ Fortress conservation refers to the belief in biodiversity protection through fencing protected areas from human where ecosystems can function without any human interaction.

To implement the objectives of the blue economy, the South African state should be aware of their policies that lead to criminalisation of poor people's livelihoods, moving people from land and fishing grounds for gas and oil extraction, securitisation and militarisation of marine protected areas, create obstacles for small-scale fishers' in securing tenure, and accessing resources and food, Blue justice for small-scale fisheries should be at the centre of the blue economy debates, discussions, dialogues and policies (Isaacs, forthcoming).

It is for this reason that South Africa has been a key site in the evolution of the concept of blue justice in 2018 (Isaacs forthcoming), based on the social justice struggles through the supported by research activism and social movements (Masifundise and Coastal Links) in transdisciplinary action research collaboration over the last 20 years. Blue justice is about placing social justice at the centre of the ocean economy debates, with small-scale fishers' voice being heard and their rights being represented during policy designs. Important for the international year of artisanal fishery and aquaculture (IYAFA, 2022) the need for blue justice for small-scale fisheries is of paramount importance.

5.5 COVID-19 pandemic

The Covid-19 pandemic had major effects on small scale-fisheries regarding food flow, social reproduction, and food security. The markets on the west and south coast came to a standstill because fish stocks could not be exported, the transportation of products was interrupted due to lockdown regulations and prices plummeted. The pandemic also heavily impacted household income by decreasing job opportunities for women. In fact, with these areas being very popular tourist destinations, women (who are mostly employed in the sector working in restaurants, guest houses and hotels) lost their job or found themselves working much less than usual. As a result, fisher households who depended on the women's income as well as the man's season catch, found themselves very strained by the impacts of the pandemic. In addition, with schools being closed and food programs no longer running, feeding children became even harder for these families, further destabilizing their food security (Isaacs & Nangle, 2021).

Small-scale fishers, no matter whether they are coastal or inland, are a marginalised, vulnerable group. Their condition became even more precarious during the pandemic, where they found themselves even more at risk of criminalization as the COVID-19 lockdown regulations restricted them to go out to fish (Masifundise, 2021). In this context, the impacts of the Covid-19 outbreak, and the lockdown regulations issued by the government in response to it have highlighted the lack of resilience among small-scale producers and traders within the national food system in South Africa, including in times of crisis. Under the pandemic, small-scale fishers have struggled due to a major loss of markets, falling incomes and mounting socio-economic insecurity (Isaacs & Nangle, 2021).

The measures adopted by the government in response to the pandemic have indicated little care for the contributions made by small-scale fishers to socio-economic development and a clear bias in favour of industrial fisheries in South Africa. Although the government supported small-scale farmers in the form of vouchers for inputs, subsidies and grants under Covid-19, it provided no such relief to small-scale fishers (Isaacs & Nangle, 2021). Isaacs et al. (2022) recommended that for small-scale fishers to be more viable during a COVID 19 pandemic, fishers will need more diverse local market opportunities, such as an opportunity to supply government facilities with fish through channels such as school feeding programs, shelters, hospitals, and prisons. Allowing local small-scale fishers to deliver fish to government facilities could serve an essential purpose in moving from vulnerability to viability and thereby strengthening their livelihoods.

5.6 Implementation of the new fisheries policies

Alignment between national and provincial departments policies regarding inland small-scale fishers is an important first step. Locally based organized groups for small-scale inland fishers is important to strengthen their voice, rights, access, and to practice their livelihoods. The space on the dams is still contested as access to fishing grounds, confiscation of gear and equipment and criminalization continues on a daily basis. More research in understanding the small-scale fisheries sector, livelihoods, culture, tradition, food security will be important. In South Africa this has been skewed towards marine small-scale fishers. However, in 2007, 1,000 interim relief permits were allocated as part of the out-of-court settlement with the claimants who opposed the ITQ system. With a new policy in place since 2012, and the amendment to the Marine Living Resources Act in 2016, fishers in the western cape province have been allocated interim permits after 14 years. Implementation of policies is one of the biggest challenges for small-scale fisheries.

5.7 Women's role in small-scale fisheries are disappearing

Daley identifies 'women's four-fold vulnerability' arising from commercial pressures on land and natural resources: i) constraints and systematic discrimination in relation to women's access to, ownership, rights and control of land and resources; ii) systemic discrimination in socio-cultural and political relations, particularly in relation to decision-making; iii) women's relative (cash) income poverty vis-à-vis men; vi) women's general physical vulnerability vis-a-vis men, manifested through gender-based and sexual violence against women (Daley, 2011: 6-8). Link to their vulnerability is the social reproductive roles they play in fisheries. These vulnerabilities we found in our project on the [African Food System](#) in South Africa, Tanzania and Ghana where we specifically noticed how the long supply chains⁸ are making women more vulnerable in Lamberts Bay and Struisbaai in South Africa – so much so that they are disappearing from the sector. This was not the case in Tanzania and Ghana where women still play a significant role in the post-harvest trade and processing for example drying, salting, and smoking of fish. The introduction of the cold chain to ensure high quality fresh whole fish for wealthy high-end restaurants and for exports. The efficiency drive of getting high quality protein to the export market as soon as possible, negatively impacts on the role of women and makes them more vulnerable. If more fish is diverted to the local market in a short supply chain⁹ then women could use the traditional methods of preserving fish like salting, curing, drying, and smoking of fish will make women's role in fisheries more viable. The commodification of the locally consumed fish to high end restaurants markets in Cape Town is also adding to the vulnerability of women's role in the post-harvest sector. The cold chain and commodification of fish small-scale communities consume directly impacts on their nutrition with the low consumption of fish and resorting to consuming cheap and highly processed food and protein (Isaacs et al., forthcoming).

5.8 Small-scale fishers and technology:

Abalobi online mobile application was introduced in 2015 to cut out the market agents (known as the langana) and to sell small-scale fisher's species to high end restaurants in Cape Town. Their model is based on marketing SSF species especially the ones they consume and sells it at premium prices, but their tallies are small and only fishers who are in the system benefit – making those in the system viable. A clear link to technology and viability of a few fishers. A certain number of fresh fish is needed to supply, and fishers fish directed to the restaurant market. Their income is based on sustainable harvested species only when the restaurants need fresh fish. With the Covid 19 health crisis and closure of restaurants and tourism the need for fish decreased dramatically and they had to resort to selling locally to market agents reduced prices.

⁸ Long supply chains refers to exporting fresh fish to wealthy international market.

⁹ Short supply chains refers to selling fish on the locally, it can be fresh, dried, or smoked.

It is also clear that technology does not favour women's role in fisheries and supplying niche markets on demand is often not sustainable. How then do we understand viability from a political ecological lens of who actually benefits?

6. Policy and Governance

6.1 Small-scale fisheries policy process

6.1.1 Marine small-scale fishers struggle for formal policy recognition

In 2005, in response to fisheries reforms and rights allocations, the Artisanal Fishers Association, Masifundise and the Legal Resources Centre, with support from academics, launched a class action suit against the Minister of the Department of Environmental Affairs and Tourism (DEAT). This case, 'Kenneth George and Others vs. the Minister', used the Constitution (1996) and the Equality Act (2000) to litigate against the reform process (ITQ allocation of fishing rights) in light of its social and economic impacts.

The main argument for this case was based on a human rights approach, focusing specifically on three main rights: the right to be recognised; the right to a livelihood; and the right to food and nutrition. These rights are protected in the South African Constitution of 1996. The claimants challenged the mainstream ITQ system in South Africa that favoured large firms, Black Economic Empowerment to achieve race and gender equity, and rights grabbers in the fishing communities (local elites). The claimants supported a paradigm shift from ITQs (neoliberal, privatised rights) to a collective rights allocation, a creation of legal entities, a multi-species approach, and preferential access to inshore species (Isaacs, 2015).

The class action started a research collaboration between academics, practitioners and fishers in 2005. They began looking at the realities of small-scale fishing at the local level, consulting with poor, marginalised small-scale fishers, and community-based organisations. Artisanal Fisher Association and Coastal Links, the non-government organisation Masifundise, researchers, and lawyers from the Legal Resource Centre aligned to develop arguments to launch the class action. The main goal of the collaboration was to ensure social justice for small-scale fishers. In preparation for court, researchers played a key role in providing expert evidence on the impact of the ITQ system on fishers in South Africa. Local researchers worked closely with the Artisanal Fishers Association, Coastal Links, Masifundise and the Legal Resource Centre to develop evidence, and formed a strong alliance to support this case (Isaacs, 2015).

The case was to be heard in the Equality Court, but in April 2007, the claimants of Kenneth George and Others agreed to put the case on hold, on the condition that small-scale fishers were allocated interim rights and a new small-scale fisheries policy was developed (Isaacs, 2006; Sowman, 2006; Sunde, 2006; Hauck, 2008; Isaacs, 2011a, 2011b, 2015). In 2012 the Small-Scale Fisheries Policy was adopted, and in 2016 the Amendment to the Marine Living Small-Scale Fisheries Policy formally recognised small-scale fishers.

6.1.2 Inland fisheries small-scale fisheries policy process

In South Africa, National Water Act (NWA) authorisation controls access to public water bodies, but fishing rights are controlled by the provincial environmental departments. Legally, communities have general access rights to public dams from 6am to 6pm in terms of the NWA (Tapela et al., 2013). Fishing permits are required to exercise withdrawal fishing rights, but structural challenges to small-scale fishers, such as poverty, lack of gear, and inability to access facilities to buy permits, force them to fish illegally (Tapela et al., 2013). Most recreational anglers and provincial environmental authorities are of the views

that gill nets are environmentally destructive and should be banned, this view results in the criminalisation of small-scale fishers who use nets, with recreational fishers and lodge owners enforcing the exclusion of nets and confiscating gear (Tapela et al., 2013).

The Nature and Conservation ordinances regulating inland water bodies differs between provinces in South Africa, as the mandate of conservation sits at the provincial level, with provincial departments or conservation authorities sitting with the decision-making power (Britz et al., 2015). There is no harmony between the responsible authorities that regulate inland fisheries at provincial level and in some cases, these provincial ordinances do not align with the constitution. This becomes even more of a challenge when water bodies span across provinces and the regulations in each province do not align. This is the case of the Vanderkloof Dam, which is bordered by both the Free State province and the Northern Cape province, who both have differing regulatory authorities. Currently, the responsibility over access to dams and their fishery resources is fragmented between various national and provincial departments, and the lack of state-level policy and guiding legislation is a constraint in the potential development of the sector (Tapela, et al., 2015).

The Northern Cape Province is taking the lead here with the support from DFFE to conduct an experimental fishery on Vanderkloof Dam with a view to potentially develop a small-scale fishery on it, the gap between the national government and the provincial department of environment became apparent (Rouhani et al., 2021a, b).

6.2 Small-scale fisheries governance in South Africa

South Africa has committed to an ecosystem approach for the governance and management of its fisheries (both marine and inland), which flows from the environmental right in the Constitution and the National Environmental Management Act (NEMA) (Act No. 107 of 1998). The constitution prescribes a sustainable development approach. The ecosystem approach incorporates the ecological, social and economic aspects of a fishery into the governance and management arrangements. This represents a major departure from the historic ‘command and control’ governance style that characterised environmental management before the democratic constitutional legislation was introduced. Changing the governance and management culture within state environmental institutions remains a work in progress as reconciling ecological, economic and social imperatives to implement a sustainable development approach is a challenge for staff within state environmental organisations who still see their mandate primarily as ecological protection.

The fisheries department supports a co-management approach for the management of both marine and inland small-scale fisheries (RSA2021¹⁰; RSA, 2012a). The co-management approach is seen as ‘people centred and community orientated’. Under this approach, The Department and small-scale fishing communities will have shared authority and responsibility for management of small-scale fisheries. Co-management is based on a participatory approach and processes, which promote social equity, justice and the collective governance of small-scale fish resources.

6.3 Co-management

Co-management, defined as “a partnership in which government agencies, local communities and resource users, non-governmental organisations and other stakeholders share, as appropriate to each context, the authority and responsibility for the management of a specific territory or a set of resources” (International Union for Conservation of Nature [IUCN], 1996), is viewed as the promising approach for fisheries

¹⁰ <https://www.gov.za/speeches/statement-cabinet-meeting-4-august-2021-5-aug-2021-0000-0>

management (Battistta et. al., 2018; Pomeroy et.al., 2015; Evans et al., 2011; Berkes, 2009; Jentoft, 1989). The context for the formulation of this approach is as follows: centralised management of fisheries by the state alone has been blamed of most of the problems of unsustainable fisheries management (Degnbol et. al., 2006; Pomeroy, 1994; Baland & Platteau, 1996). The other reasoning behind initiatives involving fishers is that by engaging them in management, fishers would act more responsibly towards the long-term goal of sustainability (Nunan et al., 2015; Hara et al., 2002; Hersoug & Rånes, 1997). Apart from ineffectiveness, sole state management has generally become too costly for governments, in particular those of developing countries. At the same time, purely local level management is also usually ineffective in the modern complex world of multiple stakeholders (Nielsen et al., 2004; Hersoug & Ranes, 1997).

In recent decades therefore, interest has turned to models and management strategies based on involvement of fishers and other stakeholders in management functions (Njaya, 2007; Calson & Berkes, 2005; Hara et al., 2002; Pomeroy & Berkes, 1997). Co-management is also seen as a mechanism of power sharing, enhancing trust and building social capital, institution building, problem solving and conflict resolution, knowledge sharing and social learning (Evans et al., 2011; Berkes, 2009). As a result, many co-management initiatives had been initiated in fisheries in Southern Africa and around the world in general. In Southern Africa, this has resulted in the creation of fisher representative organisations such as Beach Village Committees (Malawi), Beach Management Units (Zambia and Tanzania), etc, as joint local-level management bodies between government and local user communities. South Africa's small-scale fisheries policy and legislation propose co-management as the framework for management of the sector.

The presumed implications of an ideal co-management arrangement are that it would result in participatory and consultative democracy, thereby broadening the amount of knowledge that would influence the decisions. This should result in better regulations, in effect increasing the legitimacy of the regulatory system. The preceding should ultimately result in greater adherence to regulations, thereby resulting in a more proficient system and an efficient management regime (Bene et al., 2009; Sen & Nielsen, 1996; Jentoft & Mikalsen, 1994). It is important to recognise that co-management does not necessarily involve a reduction of regulations, rather, it entails that regulations should be developed locally with greater sensitivity to the particular conditions of fishers and their condition. In addition, the individual fisher not become a free agent; under co-management her/his actions are constrained in a socially controlled system by decisions which his peer group have helped to frame (Battista et al., 2018; Pomeroy et al., 2015; Ostrom & Basurto, 2011; Symes, 1997).

Co-management of small-scale fisheries means that affected stakeholders, especially fishers from fishing communities, shall be empowered to participate with Government in developing, implementing and evaluating fishery policies and management plans. Co-management requires devolution of some management decisions to the fishing communities and the inclusion of provincial and local government in the decision-making bodies. Representatives of small-scale fishing communities in a given area together with government (whether national, provincial, local – as context would require) will make up the co-management committees.

Co-management of the fishery will be implemented and strengthened on an ongoing basis. An adaptive management approach, tailored to each specific area, will be adopted. In the marine sector, small-scale fisher cooperatives have been created, which will form fisher representative bodies in the co-management arrangement. In the long-term, co-management of small-scale fisheries is expected to facilitate social and environmental responsibility among fishers and other members of the community; compliance to fisheries regulations; individual and collective empowerment; democratic approach to fisheries and environmental management; sustainable utilization of small-scale fish resources.

In view of the varying nature of the marine, coastal and inland environments and the different fishing and livelihood strategies that communities engage in, different fishery management plans will have to be developed for different areas, both in marine and inland small-scale fisheries.

In the inland fisheries policy, fisheries will be managed using the principals of co-management. While this is in line with the FAO and even with our marine fisheries, a recent attempt to use the principals of co-management in conducting an experimental freshwater fishery exposed possible limitations (Rouhani et al., 2021 a, b). In this particular case, to manage the experimental fishery, the Northern Cape government constituted a forum called the Advisory Group (AG). The AG comprised of all the relevant stakeholders. The experimental fishery was to take place on a dam that was traditionally a favoured destination for recreational anglers, and the objective of the provincial government was to potentially open this day for small-scale fishers. It was clear amongst all the members of the AG, that the success or failure of the experimental fishery was going to influence how small-scale could be rolled out in other parts of the country, therefore the stakes were high.

As the process to implement the experimental fishery began to unfold, it quickly became apparent that more attention ought to be given to the structure and co-management of inland fisheries. The power and privileged that recreational anglers possessed was quickly projected over small-scale fishers who lived in poverty. This inequality was real, and in itself created tensions in the advisory group. It was therefore very difficult to manage a co-management process in which there was so much difference in power between the two most important stakeholders, namely the recreational and small-scale fishers.

While this is not a criticism of co-management, it is rather a recognition that more groundwork is needed to establish the dynamics under which co-management may be performed. According to Masifundise, a lot of the issues present in this area in terms of community participation were also due to the fact that the Experimental Fishery Project was developed prior to engagement with the local communities. Fishers did not see this fishery as relevant to their livelihoods based on kraal fishing and angling.

Going forward, there needs to be a concerted effort by government and other role-players not only to strengthen, support and provide capacity to small-scale fishers so they can meaningfully participate in co-management, but also on how to exactly implement co-management practices. The basic architecture of co-management in South Africa will need to be designed in a way that balances participants with historical power over small-scale fishers who enter this process with historical disadvantages such as low literacy levels and intergenerational poverty.

6.4 Conclusion

The transition from vulnerability to viability is not straightforward and we need examine the environment-society relations and struggles of access to natural resources within small-scale fisheries. We need to understand the various form of power and levels of exploitation, biodiversity, property, gender, labour, and technology and its impact on small-scale fishers and communities. How do we analysis these power relations in following the transition from vulnerability to viability is critical and we also need to make sure that a few fishers viable enterprises have a direct or indirect levels of exploitation and thereby create more vulnerabilities. In furthering our understanding of political ecology and transition to viability the following questions we need to keep in mind: *who owns what?* – to understand property relations with regard to fishing rights allocation to small-scale fishers. *Who does what?* – to understand labour relations between fishers (crew), sellers, processors, rights holders, boat owners, market agents, fishing companies, etc. *Who gets what?* – to understand social division of income, resources, benefits and how it is shared amongst the fishers and communities. *What do they do with the created wealth and surplus?* – to understand class formation and differentiation within the communities. To fully understand the role of women we need to

analysis these questions and unpack their social reproductive roles within the sector and look at ways to make their role more viable.



References

- Almudi, T., & Kalikoski, D. C. (2010). Traditional fisherfolk and no-take protected areas: the Peixe Lagoon National Park dilemma. *Ocean & Coastal Management*, 53(5-6), 225-233. <https://doi.org/10.1016/j.ocecoaman.2010.04.005>
- African Union, Inter-African Bureau of Animal Resources. (August 2019). The Stakeholders' Consultative Workshop on Formulation of Africa's Blue Economy Strategy. Nairobi Kenya. https://www.aubiar.org/sites/default/files/2020-10/sd_20200313_africa_blue_economy_strategy_en.pdf
- Baland, J. M. & Platteau, J. P. (1996). *Halting Degradation of natural Resources; Is there a Role for Rural Communities?* FAO and Clarendon Press. Oxford. <https://doi.org/10.1093/0198290616.001.0001>
- Bailey, D. J. (1999). South African perspectives on rights in fishing and implications for resource management. FAO Fisheries Technical Paper 2000 No.404/2 pp.352-354. <https://www.cabdirect.org/cabdirect/abstract/20013059630>
- Barbesgaard, M. (2016). Blue carbon: ocean grabbing in disguise?. *Transnational Institute*, 1-11.
- Barbesgaard, M. (2017). Blue growth: savior or ocean grabbing?. *The Journal of Peasant Studies*, 45(1), 130-149. <https://doi.org/10.1080/03066150.2017.1377186>
- Battista, W., Romero-Canyas, R., Smith, S. L., Fraire, J., Effron, M., Larson-Konar, D., & Fujita, R. (2018). Behavior change interventions to reduce illegal fishing. *Frontiers in Marine Science*, 5, 403. <https://doi.org/10.3389/fmars.2018.00403>
- Béné, C., Belal, E., Baba, M. O., Ovie, S., Raji, A., Malasha, I., ... & Neiland, A. (2009). Power struggle, dispute and alliance over local resources: analyzing 'democratic' decentralization of natural resources through the lenses of Africa inland fisheries. *World Development*, 37(12), 1935-1950. <https://doi.org/10.1016/j.worlddev.2009.05.003>
- Benjaminsen, T. A., Bryceson, I., Maganga, F., & Refseth, T. (2011). [Conservation and land grabbing in Tanzania](#). In *International conference on global land grabbing* (pp. 6-8).
- Berkes, F. (2009). Evolution of co-management: role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management*, 90 (5), 1692-1702. <https://doi.org/10.1016/j.jenvman.2008.12.001>
- Bishop, M. (2021). Asserting Customary Fishing Rights in South Africa. *Journal of Southern African Studies*, 47(2), 291-308. <https://doi.org/10-1080/03057070.2021.1893989>
- Bond, P. (2019). Blue Economy threats, contradictions and resistances seen from South Africa. *Journal of Political Ecology*, 26(1), 341-362. <https://doi.org/10.2458/v26i1.23504>
- Brent, Z., Barbesgaard, M., & Pedersen, C. (2020). The Blue Fix: What's driving blue growth? *Sustainability Science* (2020) 15:31–43 <https://doi.org/10.1007/s11625-019-00777-7>
- Britz, P. (2015). The history of South African inland fisheries policy with governance recommendations for the democratic era. *Water SA*, 41(5), 624-632. <https://www.ajol.info/index.php/wsa/article/view/138078>
- Britz, P. J., Hara, M. M., Weyl, O. L. F., Tapela, B. N., & Rouhani, Q. A. (2015). Scoping Study on the Development and Sustainable Utilisation of Inland Fisheries in South Africa. *Water Research Commission Report TT615/1/14*. 272pp. <https://docslib.org/doc/7517204/scoping-study-on-the-development-and-sustainable-utilisation-of-inland-fisheries-in-south-africa-volume-1-research-report>
- Cochrane, K. L., Augustyn, C. J., Fairweather, T., Japp, D., Kilongo, K., Iitembu, J., ... & Vaz Velho, F. (2009). Benguela current large marine ecosystem—governance and management for an ecosystem approach to fisheries in the region. *Coastal Management*, 37(3-4), 235-254. <https://doi.org/10.1080/08920750902851187>
- Carlson, L., & Berkes, F. (2005). Co-management: concepts and methodological implications. *Journal of environmental management*, 75(1), 65-76. *Disrupting Fisheries Harms- Illicit flows of H. midae from South Africa to East Asia. Report*. Global Initiative Against Transnational Organized Crime. <https://doi.org/10.1016/j.jenvman.2004.11.008>
- Daley, E. (2011). Gendered Impacts of Commercial Pressures on Land. International Land Coalition. Rome International Land Coalition. <http://www.landcoalition.org/publications/gendered-impacts-commercial-pressures-land>
- Degnol, P., Gislason, H., Hanna, S. Jentoft, S., Nielsen, J., Sverdrup-Jensen, S. & Wilson, D. (2006). Painting the Floor with a Hammer: Technical Fixes in Fisheries Management. *Marine Policy*, 30, 534-543. <https://doi.org/10.1016/j.marpol.2005.07.002>

- Dennis, T. L. (2009). *Perceptions of history and policy in the Cape Agulhas Area: Could history influence policy on small-scale fishing?* [Doctoral dissertation, University of the Western Cape]. <http://hdl.handle.net/11394/2650>
- Department of Agriculture Forestry and Fisheries. (2012b). Status of the South African Marine Fishery Resources 2012. DAFF, Republic of South Africa.
- Department of Agriculture Forestry and Fisheries. (2014). Status of the South African Marine Fishery Resources 2014. DAFF, Republic of South Africa.
- Department Of Agriculture, Forestry and Fisheries. (2016). Draft National Inland Fishery Policy Framework For South Africa. Cape Town.
- Department of Environment Forestry and Fisheries. (DEFF). (2020). National Freshwater (Inland) Wild Capture Fisheries Policy for South Africa (4th Draft). Cape Town.
- Department of Environmental Affairs and Tourism. (2002a). Recommendations, Considerations and Decisions in Respect of Abalone rights for the 2002-2003 seasons. *Marine and Coastal Management*. DEAT Chief Directorate, Cape Town.
- Department of Environmental Affairs and Tourism. (2002b). Recommendations, Considerations and Decisions in Respect of West Coast Rock Lobster rights for the 2002-2005 seasons. *Marine and Coastal Management*. DEAT Chief Directorate, Cape Town.
- Department of Environmental Affairs and Tourism. (1998). A Coastal Policy Green Paper: Towards Sustainable Coastal Development in South Africa. *Coastal Management Policy Programme*.
- Department of Environmental Affairs and Tourism. (2005a). General policy on the allocation and management of long-term commercial fishing rights: 2005. Department of Environmental Affairs and Tourism, Cape Town.
- Department of Environmental Affairs and Tourism. (2005b). Policy for the allocation and management of commercial fishing rights in the hake deep-sea trawl fishery: 2005. Department of Environmental Affairs and Tourism, Branch Marine and Coastal Management, Cape Town.
- Department of Environmental Affairs and Tourism. 2000. Draft discussion document for fisheries management plan to improve the process of allocating fishing rights. August 2000. Cape Town: DEAT Chief Directorate: Marine and Coastal Management.
- Department of Water and Sanitation. (2015). Final Resource Management Plan: Voëlvlei Dam, Volume 1 of 2 – Main Report.
- Evans, L., Cherrett, N. & Pems, D. (2011). Assessing the impact of fisheries co-management interventions in developing countries: A meta-analysis. *Journal of Environmental Management*, 92, 1938-1949 <https://doi.org/10.1016/j.jenvman.2011.03.010>
- Food and Agriculture Organization. (2012). *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security*. Committee on World Food Security, FAO, Rome. https://www.fao.org/fileadmin/user_upload/nr/land_tenure/pdf/VG_en_Final_March_2012.pdf
- Food and Agriculture Organization. (2014). *Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty*. FAO, Rome. <https://www.fao.org/voluntary-guidelines-small-scale-fisheries/en/>
- Franco, J., Buxton, N., Vervest, P., Feodoroff, T., Pedersen, C., Reuter, R., & Barbesgaard, M. C. (2014). The global ocean grab: A primer. Retrieved from the *Economic Justice Program of the Transnational Institute website*: <http://www.tni.org/briefing/global-ocean-grab-primer-0>.
- Hara, M. & Backeberg G. R. (2014). An institutional approach for developing South African inland freshwater fisheries for improved food security and rural livelihoods. *Water SA*, 40(2), 277-286. <http://dx.doi.org/10.4314/wsa.v40i2.10>
- Hara, M. M., Donda, S. J. & Njaya, F. J. (2002). Lessons from Malawi's experience with fisheries co-management initiatives. In K. Geheb, & M.T. Sarch (Eds.) *Africa's Inland Fisheries: The Management Challenge*. (pp. 31-48). Fountain Publishers, Kampala https://repository.uwc.ac.za/bitstream/handle/10566/4335/benjaminsen_contested_resources_challenges_governance_natural_resources_2002.pdf?sequence=1&isAllowed=y#page=74
- Hara M., Muchapondwa E., Sara J. R., Weyl O., Britz P. and Tapela B. N. (2021). Inland Fisheries Contributions to Rural Livelihoods: An Assessment of Fisheries Potential, Market Value Chains and Governance Arrangements". *A Report to the Water Research Commission*. WRC Report No. 2497/1/20
- Hauck, M. (2008). Rethinking small-scale fisheries compliance. *Marine Policy*, 32(4), 635-642. <https://doi.org/10.1016/j.marpol.2007.11.004>

- Hauck, M. (1999). Regulating Marine Resources in South Africa: the Case of the Abalone Fishery. In J. Glaszewski and G. Bradfield (eds.) *Environmental Justice in the Legal Process*. Juta & Co., Cape Town. https://heinonline.org/HOL/Page?handle=hein.journals/actj1999&div=14&g_sent=1&casa_token=
- Hauck, M., & Sweijid, N. A. (1999). A case study of abalone poaching in South Africa and its impact on fisheries management. *ICES Journal of Marine Science*, 56(6), 1024-1032. <https://doi.org/10.1006/jmsc.1999.0534>
- Hersoug, B. & Rånes, S. A. (1997). What is good for the fishers is good for the nation: Co-management in the Norwegian fishing industry in the 1990s. *Ocean and Coastal Management*, 35, (2-33), pp. 157-172. [https://doi.org/10.1016/S0964-5691\(97\)00031-8](https://doi.org/10.1016/S0964-5691(97)00031-8)
- Hey, D. (1977). The history and status of nature conservation in South Africa. In A.C. Brown (Ed.) *A History of Scientific Endeavour in South Africa* (pp. 132-163) The Rustica Press (Pty.) Ltd, Cape Town.
- Isaacs, M., & Witbooi, E. (2019). Fisheries crime, human rights and small-scale fisheries in South Africa: A case of bigger fish to fry. *Marine Policy*, 105, 158-168. doi: <https://doi.org/10.1016/j.marpol.2018.12.023>
- Isaacs, M. (in review). A Blue Justice agenda for small-scale fishers: Submitted to *Journal of Peasant Studies in November 2020, under review as part of the Special Forum on Fisheries Politics* submitted to the Journal of Peasant Studies Guest editors: Mills, E., Barbesgaard, M. & Isaacs, M.
- Isaacs, M., Dennis T.L., Hara, M. M., Nagle M., & Julies J. (forthcoming) Nothing stays behind: Fish flow during Covid 19 in South Africa. *PLAAS Working Paper Series*.
- Isaacs, M., Ginindza N. J., Mhlanga W. (2022). Small-Scale Fishers in the Time of COVID-19: Reinforcing the Inequalities in the Food, Economic, and Governance Systems in South Africa and Zimbabwe. In S. Jentoft, R. Chuenpagdee, S. Bujaja & M. Isaacs (Eds.). *Blue Justice Small scale fisheries in a Sustainable Blue Oceans Economy*, (Chapter 22). MARE Publication Series 26. https://link.springer.com/chapter/10.1007/978-3-030-89624-9_22
- Isaacs, M. & Nangle, M. (2021). *Policy brief 57*. Institute for Poverty, Land and Agrarian Studies, University of the Western Cape, Cape Town.
- Isaacs, M. (2019). Blue Justice for small-scale fisheries. *Blog*.
- Isaacs, M. (2015). Multi-stakeholder process of co-designing small-scale fisheries policy in South Africa. *Regional Environmental Change*, 16(2), 277-288. <https://doi.org/10.1007/s10113-015-0874-2>
- Isaacs, M. (2011a). Paradigm shift—from individual transferable quotas (ITQs) to collective allocations—a struggle for small-scale fishers in South Africa. *MAST*, 10(2), 63-84.
- Isaacs, M. (2011b). Creating an action space: small-scale fisheries policy in South Africa. In S. Jentoft. (ed.), *Poverty mosaics: unravelling the poverty circle in small-scale fisheries: global experiences*. Dordrecht Heidelberg: Springer Academic Books. https://doi.org/10.1007/978-94-007-1582-0_16
- Isaacs, M. (2006). Small-scale fisheries reform: expectations, hopes and dreams of “a better life for all”. *Marine Policy*, 30(1), 51-59. <https://doi.org/10.1016/j.marpol.2005.06.010>
- International Union for Conservation of Nature. (1996). Proceedings of the World Conservation Congress; Held from 13 to 23 October; In Montreal, Canada. IUCN. Gland, Switzerland.
- Jentoft, S. (1989). Fisheries co-management: Delegating government responsibility to fishers’ organisations. *Marine policy*, pp 137-154. [https://doi.org/10.1016/0308-597X\(89\)90004-3](https://doi.org/10.1016/0308-597X(89)90004-3)
- Jentoft, S. & Mikalsen, K. H. (1994). Regulating Fjord Fisheries: Folk Management or Interest Group Politics? In C.L. Dyer, & J.R. McGoodwin, (eds.), *Folk Management in the Worlds Fisheries: Lessons for Modern Fisheries Management*, (pp. 286-316). University Press of Colorado.
- Jentoft, S., McCay, B. J. & Wilson, D. C. (2010). Fisheries Co-management: Improving Fisheries Governance through Stakeholder Participation. In R.Q. Grafton, R. Hilborn, D. Squires, M. Tait, & M. Williams (eds.), *Handbook of Marine Fisheries Conservation and Management*, (pp. 675-686). New York, NY: Oxford University Press.
- Johnston, S. J., & Butterworth, D. S. (2005). Evolution of operational management procedures for the South African West Coast rock lobster (*Jasus lalandii*) fishery. *New Zealand Journal of Marine and Freshwater Research*, 39(3), 687-702. <https://doi.org/10.1080/00288330.2005.9517345>
- Kepe, T. (1998). The Problem of defining ‘community’: Challenges for the land reform programme in rural South Africa. Land Reform and Agrarian Change in Southern Africa. *The Occasional Paper Series*. No. 6. School of Government, University of Western Cape. <https://doi.org/10.1080/03768359908440089>
- Lau, W. (2018). *An assessment of South African dried abalone Haliotis midae consumption and trade in Hong Kong*. TRAFFIC International, Cambridge, UK.
- Lemon, A. (1991). The apartheid city. In A. Lemon (Ed.), *Homes apart: South Africa’s segregated cities* (pp. 1-25). David Phillip, Cape Town.

- McCafferty, J. R., Ellender, B. R., Weyl, O. L. F., & Britz, P. J. (2012). The use of water resources for inland fisheries in South Africa. *Water SA*, 38(2), 327-344. [10.4314/wsa.v38i2.18](https://doi.org/10.4314/wsa.v38i2.18)
- Nielsen, J. R., Degnbol P., Viswanathan, K. K., Ahmed, M., Hara, M. & Abdullah, N. M. R. (2004). Fisheries Co-Management - An Institutional Innovation?: Lessons from South East Asia and Southern Africa. *Marine Policy*, 28(2), 151-160. [https://doi.org/10.1016/S0308-597X\(03\)00083-6](https://doi.org/10.1016/S0308-597X(03)00083-6)
- Masifundise Development Trust. (2021). COVID 19 LEFT US HUNGRY: The shortcomings of Governance Frameworks in the Inland Fisheries Sector of South Africa through a Lens of the Covid-19 pandemic. Masifundise Development Trust.
- Njaya, F. (2007). Governance challenges of the implementation of fisheries co-management: experiences from Malawi. *Int J Commons*, 1, 137–153. <http://www.thecommonsjournal.org>
- Nunan, F., Hara, M. & Onyango, P. (2015). Institutions and Co-Management in East African Inland and Malawi Fisheries: A Critical Perspective. *World Development*, 70, 203–214. <http://dx.doi.org/10.1016/j.worlddev.2015.01.009>
- Ostrom, E., & Basurto, X. (2011). Crafting analytical tools to study institutional change. *Journal of institutional economics*, 7(3), 317-343. <https://doi.org/10.1017/S1744137410000305>
- Obura, D. O., Katerere, Y., Mayet, M., Kaelo, D., Msweli, S., Mather, K., ... & Nantongo, P. (2021). Integrate biodiversity targets from local to global levels. *Science*, 373(6556), 746-748. <https://www.science.org/doi/full/10.1126/science.abh2234>
- Pomeroy, R. & Berkes, F. (1997). Two to tango: the role of government in fisheries co-management. *Marine Policy*, 21(5), 465-480. [https://doi.org/10.1016/S0308-597X\(97\)00017-1](https://doi.org/10.1016/S0308-597X(97)00017-1)
- Pomeroy, R., Parks, J., Reaugh-flower, K., Guidote, M., Govan, H. & Atkinson, S. (2015). Status and Priority Capacity Needs for Local Compliance and Community-Supported Enforcement of Marine Resource Rules and Regulations in the Coral Triangle Region. *Coastal Management*, 43, 301-328. <https://doi.org/10.1080/08920753.2015.1030330>
- Pomeroy, R. S. (1994). Introduction. In R.S. Pomeroy (ed.), *Community Management and Common Property of Coastal Fisheries in Asia and the Pacific: Concepts, Methods and Experiences*. ICLARM. Manila.
- Rouhani, Q. & Britz, P. J. (2011). Participatory development of provincial aquaculture programmes for improved rural food security and livelihood alternatives. *Water Research Report* No TT 502/11.
- Rouhani, Q. A., Sauer, W. H. H. & Nomvela, N. G. (2021a). Report on the Vanderkloof Dam Kraal Fishery. Special Report of the Rural Fisheries Programme of the Department of Ichthyology and Fisheries Science, Rhodes University, to the Northern Cape Department of Agriculture, Land Reform and Rural Development.
- Rouhani, Q.A., Sauer, W.H.H. & Nomvela, N.G. (2021b). Vanderkloof Dam Experimental Fishery: Final Report on the Process and Social Aspects. Special Report of the Rural Fisheries Programme of the Department of Ichthyology and Fisheries Science, Rhodes University, to the Northern Cape Department of Agriculture, Land Reform and Rural Development.
- Republic of South Africa. (1996). Constitution of the Republic of South Africa, Act 108 of 1996. *Government Gazette, South Africa 17678*, Pretoria.
- Republic of South Africa. (1998a). Marine Living Resources Act 18 of, 1998.
- Republic of South Africa. (1998b). National Environmental Management Act (NEMA) 107 of 1998. *Government Gazette, South Africa 19518*, Pretoria.
- Republic of South Africa. (2015). Operation Phakisa: Unlocking the economic potential of South Africa's oceans.
- Republic of South Africa. (2012a). Policy for the small-scale fishing sector in South Africa. *DAFF Government Notice no 474, Government Gazette 35455*.
- Republic of South Africa. (2012b). *National Development Plan 2030*. Our Future, Make it Work. ISBN: 978-0-621-41180-5.
- Republic of South Africa. (2014a). National Environmental Management of the Ocean White Paper. *Government Gazette No. 37692*, Pretoria.
- Republic of South Africa. (2014b). Marine Living Resources Amendment Act 5 of, 2014.
- Republic of South Africa. (2022). National Freshwater (inland) Wild Capture Fisheries Policy for South Africa. *Government Gazette, South Africa 1790*.
- Saayman, M., Saayman, A., Zeelie, E., Potts, W., Mann, B., Weyl, O., Van der Merwe, P., Wood, A., Raemeakers, S., Cowlet, P., Pledger, J., Bova, C. & Scholtz, M. (2017). Economic significance of a recreational angling in South Africa. *Potchefstroom, Tourism Research in Economics Environs & Society*.
- South African Deep-Sea Trawling Industry Association. (1998). Representation to the Portfolio Committee on Environmental Affairs and Tourism in respect to the Marine Living Resources Bill [B94-97].

- Schutter, M. & Hicks, C.C. (2019). Networking the Blue Economy in Seychelles: pioneers, resistance, and the power of influence. *Journal of Political Ecology*, 26(1), 425-447. <https://journals.uair.arizona.edu/index.php/JPE/article/view/23102/0>
- Sen, S. & Nielsen, J. R. (1996). Fisheries Co-management: a comparative analysis. *Marine Policy*, 20(5), 405-418. [https://doi.org/10.1016/0308-597X\(96\)00028-0](https://doi.org/10.1016/0308-597X(96)00028-0)
- Seychelles Government. (2017). The Nature Conservancy, UNDP, and GEF. 2017. Seychelles Marine Spatial Planning. Available online at: <http://seymsp.com/>.
- Silver, J. J., & Campbell, L. M. (2018). Conservation, development and the blue frontier: The Republic of Seychelles' debt restructuring for marine conservation and climate adaptation program. *International Social Science Journal*, 68(229-230), 241-256. <https://doi.org/10.1111/issj.12156>
- Sowman, M. (2006). Subsistence and small-scale fisheries in South Africa: A ten-year review. *Marine Policy*, 30(1), 60-73. <https://doi.org/10.1016/j.marpol.2005.06.014>
- Sowman, M., Sunde, J., Raemaekers, S. & Schultz, O. (2014). Fishing for equality: Policy for Poverty Alleviation for South Africa's Small-scale fishers. *Marine Policy*, 46, 31-42. <https://doi.org/10.1016/j.marpol.2013.12.005>
- Steinberg, P. E. (2018). The ocean as frontier. *International social science journal*, 68(229-230), 237-240. <https://doi.org/10.1111/issj.12152>
- Sunde, J. & Erwin, K. (2020). Cast out: The Systematic Exclusion of the KwaZulu Natal Subsistence Fishers From the Fishing Rights Regime in South Africa. *Policy Research Report*. Subsistence Fishers Forum and South Durban Community Environmental Alliance (SDCEA). <https://static.pmg.org.za/201027Cast-Out-Policy-Document-2020.pdf>
- Sunde, J. & Isaacs, M. (2008). Marine conservation and coastal communities: who carries the costs? A study of marine protected areas and their impact on traditional small-scale fishing communities in South Africa.
- Sunde, J. (2006). Emerging concerns of fishing communities: sharing on organizing in South Africa. In *Proceedings of the International Collective in Support of Fishworkers (ICSF) Conference, Fortaleza* (pp. 4-9). Cape Town: Masifundise Development Trust.
- Symes, D. (1997). Co-governance in Marine and Coastal Fisheries. *Paper presented at the conference on Co-management co-operation in Management of the North Sea and Wadden Sea Fisheries, Groningen*, 9-10 January 1997.
- Tapela, B. N., Britz, P. J., & Rouhani, Q. A. (2015). Scoping study on the development and sustainable utilisation of inland fisheries in South Africa: Volume 2. Case studies of small-scale inland fisheries. A report to the Water Research Commission. WRC Report No TT 615/2/15. <https://www.wrc.org.za/wp-content/uploads/mdocs/TT%20615-1-14.pdf>
- Tapela, B.N., Rouhani, Q., Britz, P., Hara, M. & Weyl, O. (2013). Indigenous knowledge systems for using fish in South African rural communities. Vol. 2. A report to the Water Research Commission. WRC Report.
- van Sittert, L. (2003) The tyranny of the past: why local histories matter in the South African fisheries. *Ocean and Coastal Management*, 46, 199-219. [https://doi.org/10.1016/S0964-5691\(02\)00135-7](https://doi.org/10.1016/S0964-5691(02)00135-7)
- van Sittert, L. (1993). 'Making like America': the industrialisation of the St Helena Bay Fisheries c. 1936-c. 1956. *Journal of Southern African Studies*, 19(3), 422-446.
- van Sittert, L. (1994). South Africa's sea-going proletariat: the trawler and line fishers's union, 1939-1945. *International Journal of Maritime History*, 6(2), 1-44. <https://doi.org/10.1177/084387149400600203>
- Weyl, O., Potts, W. M., Rouhani, Q. & Britz P. J. (2007). The need for an inland fisheries policy in South Africa: A case study on the Northwest Province. *Water SA*, 33, 497-504. <https://hdl.handle.net/10520/EJC116458>

Vulnerability to Viability (V2V) Global Partnership

The Vulnerability to Viability (V2V) project is a transdisciplinary global partnership and knowledge network. Our aim is to support the transition of small-scale fisheries (SSF) from vulnerability to viability in Africa and Asia. Vulnerability is understood as a function of exposure, sensitivity and the capacity to respond to diverse drivers of change. We use the term viability not just in an its economic sense but also to include its social, political, and ecological dimensions.

The V2V partnership brings together approximately 150 people and 70 organizations across six countries in Asia (Bangladesh, India, Indonesia, Japan, Malaysia, Thailand), six countries in Africa (Ghana, Malawi, Nigeria, Senegal, South Africa, Tanzania), Canada and globally. This unique initiative is characterized by diverse cultural and disciplinary perspectives, extensive capacity building and graduate student training activities, and grounded case studies from two regions of the world to show how and when SSF communities can proactively respond to challenges and creatively engage in solutions that build their viability. Further information on the V2V Partnership is available here: www.v2vglobalpartnership.org.



V2V Global Partnership Secretariat
School of Environment, Enterprise and Development,
Faculty of Environment
200 University Avenue West, EV 3
University of Waterloo, Waterloo, ON, N2L 3G1 Canada
Website: www.v2vglobalpartnership.org
Email: v2vglobalpartnership@gmail.com



**VULNERABILITY TO VIABILITY
GLOBAL PARTNERSHIP**