UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

The case for geographical indication protection of the

Mozambique white prawn

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ACRONYMS

ADNA	National Fisheries Administration's
ARIPO	African Regional Intellectual Property Organization
CCP	Community Fishing Council
EIF	Enhanced Integrated Framework
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FPA	Fisheries Partnership Agreement
FTAs	Free Trade Agreements
GI	Geographical Indication
HACCP	Hazard Analysis and Identification of Critical Control Points
IDEPA	Fisheries and Aquaculture Development Institute
IIP	National Institute of Fisheries Research
INIP	National Institute of Fish Inspection
IP	Industrial Property
IPI	Mozambique Industrial Property Institute
LDCs	Least Developed Countries
MIMAIP	Ministry of Sea, Inland Waters, and Fisheries
PQG	Government Programmes Five-Year (2015–2019)
PROAZUL	Blue Economy Development Fund's
REPMAR	Marine Fisheries' Regulation
REPMAR	Revised Decree 43/2003 on Marine Fisheries' Regulation
SDGs	Sustainable Development Goals
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNCTAD	United Nations Conference on Trade and Development
WIPO	World Intellectual Property Organization

EXECUTIVE SUMMARY

This study analyses the Mozambique experience of protecting and promoting fisheries with an emphasis on exploring geographical indication (GI) protection for the white prawn of Mozambique. It is achieved through an in-depth review of data collected from local stakeholders, reports based on past technical support provided by the United Nations Conference on Trade and Development (UNCTAD), the literature on GIs, and international and regional treaties and reports, among others. Fishery products such as Mozambican prawns are highly recommended for GI certification, as they have high demand from both local and international consumers.

GIs hold great importance to least developed countries (LDCs) such as Mozambique, which have potential products that would receive special status for their unique qualities and would be able to promote those in international markets and generate revenues. The Mozambique white prawn (*Penaeus indicus*), found in shallow waters, is the product with the highest commercial value in Mozambique, contributing to the generation of profits, net income in foreign exchange, the balance of trade of the country, employment, and improvement of the diet of the population.

The GI specification requires a detailed examination of potential products; therefore, consultation from experts and stakeholders is essential to understand whether potential products qualify as GIs. The review and analysis, presented in the form of a technical specification for the Mozambican white prawn registration, confirm that it fulfils the Mozambican national legislation for GI protection. In line with the Mozambican government's commitment to rural development and improving people's lives, the study suggests using GI as a tool for sustainability in Mozambican rural areas. This can be achieved by strong coordination between local actors, relevant stakeholders, and institutional structures to market, monitor, and maintain GIs.

The strong intervention of the Mozambican government, including the Ministry of Sea, Inland Waters, and Fisheries (MIMAIP), to liaise with nodal departments and institutions working in the fisheries sector is essential to ensure the comprehensive technical specification required for GI protection. Similarly, MIMAIP, in coordination with Mozambique Industrial Property Institute (IPI), is encouraged to initiate preparation to develop a post-GI registration strategy for the white prawn to maximize the benefits of GI protection. This should be done by public/private dialogue to acquire consensus on product selection and geographical demarcation for applicable GIs.

The study recommends that all actors be appropriately trained for them to perform their designated roles. For them to achieve their tasks, they should form external collaborations with national and international agencies and bodies to receive technical support and international financial aid. To this end, the draft technical specifications prepared in this study must be discussed through the workshop by bringing together all stakeholders and interest groups working on fisheries. Such an arrangement will allow 'community ownership' in protecting and promoting the white prawn as a GI in Mozambique.

1

INTRODUCTION

Mozambique possesses vast natural resources, both on land and at sea. The utilization of those resources would result in long-term social and economic benefits. Achieving this goal requires a sustainable development approach that could uplift rural communities and local producers by generating revenues and prosperity for inclusive growth.

The extensive oceanic and inland waters make fisheries in Mozambique a relevant sector in both national and global markets. Mozambique's 2,700 km coastline consists of marine and inland water with sufficient marine and freshwater fishery resources (Transtec, 2013), at the national level. Although the fishing sector contributes less than 2 per cent to the country's GDP, the livelihood of 20 per cent of the population of the country's coastline depends on fishing (World Bank, 2018). Given that 66 per cent of Mozambicans live in the coastal zone, of which 20 per cent are dependent on fisheries as a source of income and nutrients, the sector plays an important role in food security, livelihood, and rural development. Considering the fishing sector as an essential source of revenue and livelihood, the Mozambique government has initiated several actions plans to strengthen human and institutional capacity.

For 2019, the **Ministry of Sea Inland Waters and Fisheries (MIMAIP)** estimated 27,000 tons production from industrial and semi-industrial fishing, about 388,000 tons from artisanal fisheries, and about 5,000 tons from aquaculture. This estimate would have led to 9 per cent growth in national fisheries' production, compared to the 2018 forecast of 8 per cent in the production of artisanal fisheries, 51 percent in aquaculture, and 11 per cent in industrial and semi-industrial fishing. To this end, Mozambique targets exporting about 14,000 tons of fishing and aquaculture products valued at $85 million (MIMAIP, 2019). In 2019, the level of fishing and aquaculture production was high. Growth in the order of 5.9 percent was seen compared to 2018. However, the heavy rains and floods in some provinces, including Sofala and others, affected production and exports (MIMAIP, 2020).

These data show possibilities for a reasonable increase in the production and exports of fisheries. However, they do not truly reflect the potential fisheries sector in Mozambique, which remains an underperforming sector (World Bank, 2018). Despite the action plans of the Mozambique government, there is still a gap in maximizing the potential of the fishing sector to benefit local communities that would lead to inclusive growth and sustainable development. One such potential way to maximize fisheries in Mozambique is by tagging potential products under geographical indications (GIs) protection. GIs have a distinctive impact on development compared to other forms of trade-related intellectual property rights (IPRs) because of their link between the territory and the uniqueness of a product.

In recent decades, the **United Nations Conference on Trade and Development (UNCTAD)** has been influential in providing technical support to developing and least developed countries (LDCs) in assisting them to integrate into trade and development issues. Since 2010, UNCTAD has supported LDCs and rural communities in identifying potential GIs, developing legal policies, and informing the relevance of GI systems to governments, stakeholders, and rural communities. The 2016 UNCTAD publication titled *'Why Geographical Indications for Least Developed Countries'* captures the international legal framework for GI protection. It focuses on nine LDCs as a case study to examine the option of using GIs to enhance trade and reduce poverty and consider environmental aspects. The study recommended that producers in LDCs must be supported with long-term policies and programmes to promote collective actions to maximize GI protection. To this end, organizational capacity and capacity building have been emphasized as key indicators for building and protecting GIs. Therefore, a carefully designed GI system with coordination between stakeholders, producers, and consumers will likely promote rural development and increase exports, thus increasing revenues for both government and producers. Moreover, the proper implementation of the GI system would improve the lives of women and marginalized groups working in the fishing sector.

This study reviews and analyses fishery sectors and the prospects of GIs in Mozambique, focusing on the white prawn as a case study.[1] The analysis is drawn based on the data collected and reports submitted by local authorities' consultants.

[1] The previous consultant reports interchangeably use white prawn and white shrimp. For the sake of consistency, this study uses white prawns instead of white shrimp.

The purpose of this study is to provide an understanding of:

1. The fishery sectors and potential gains to be had by the artisanal fisheries
2. The potential for developing a GI for the Mozambique white prawn from a trade and development perspective
3. What policy initiatives are required to strengthen the system to promote geographical indications

While examining the issues mentioned above, the approach taken in this study is national and comparative. The analysis is mainly focused on Mozambique's national laws, regulations, and practices. However, the study adopts a comparative approach by referring to the international legal framework of GIs and national practices adopted in other LDCs where it is required.

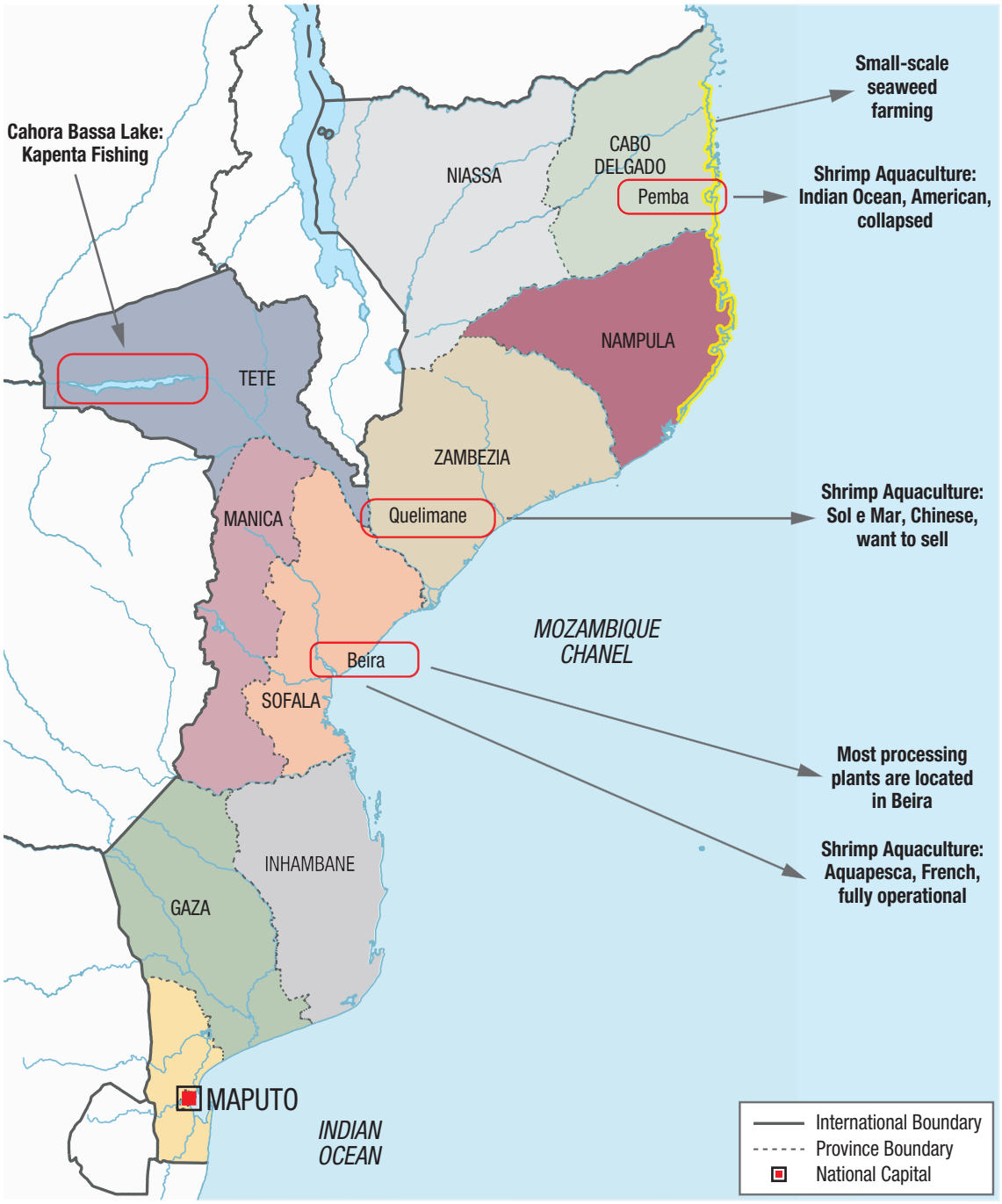
2

THE FISHERIES SECTOR OF MOZAMBIQUE

2.1 Overview of Different Fishers

Mozambique's fishing industry can be divided into artisanal, semi-industrial, and industrial. Artisanal fishing provides livelihoods for many coastal families and supplies food for a large proportion of the population. Artisanal fishers use handlines, beach seines, canoe trawling, and gillnets. The semi-industrial sub-sector consists mostly of Mozambique companies with up to four vessels, usually foreign charters. Vessels target mainly shrimp.

Figure 1 Crustacean Processing Plants



Source: Mapsoftworld.com

Figure 1 shows that most crustacean processing plants are located in Beira, close to the Sofala Bank and aquaculture prawn facilities. Accordingly, three main fleets exploit shrimp resources: artisanal, semi-industrial, and industrial. The semi-industrial and industrial fleets are the most important in terms of the volume of catches, accounting for around 83 per cent of the total shrimp catch each year. The most common varieties of prawns found in the Sofala Bank are the white prawn (*Penaeus indicus*) and the brown, or ginger, prawn (*Metapenaeus monoceros*), which together make up over 90 per cent of the prawn catch in the Sofala Bank (USAID, 2021). The management plan for prawn fishing in the Sofala Bank, prepared by the Ministry of Fisheries, aimed to maximize total net benefit (economic, social, and financial) to society to poverty reduction within a framework of sustainability of the resources in general and the aquatic ecosystem in particular. The fishing sector is divided into three main sectors: (i) industrial fisheries, (ii) semi-industrial fisheries, and (iii) artisanal fisheries, as explained below:

Box 1. Overview of the Fishing Sector

Industrial fisheries provide a net benefit and maximum economic yield, which is attractive for companies, and are operating within a framework of strict containment of fishing efforts. They contribute effectively to the economic and social development of the country.

Semi-industrial fisheries provide net benefits, significant economic and social profitability for operators, contribute to economic and social development, and supply seafood for local and international consumers. According to National Institute of Fisheries Research (IIP), industrial and semi-industrial fisheries have successfully targeted between 84% and 93% of shrimp catches (2017).

Artisanal fisheries provide significant social benefits to communities dependent on fishing through income distribution from local processing of fish and prawns. Small-scale artisanal fishing constitutes 90 per cent of fishing activities in Mozambique (IFAD, 2021). This is carried out using motorized and non-motorized vessels (IDEPA, 2019).

2.2 Legal Framework

Three main legal instruments that regulate domestic and export compliance for the fisheries sector are detailed below:

The legal basis of the Mozambican fisheries is given in **Fisheries Law No. 22/2013**, which repealed the previous Fisheries Act of 1990. The Fisheries and Aquaculture Law (2013) broadly regulates fishing activities and establishes the fishing development plan's legal regime for fishing policy. It sets out the hygiene and health requirements, authorization procedures, inspections, and other activities related to fishing. It mainly provides a participatory model of fisheries management, which engages fishing communities in planning and management activities. Similarly, the 2013 legislation establishes the Committee of Co-Management of Fisheries, representing all interested groups to coordinate for conservation and sustainable use of fishery resources.

Decree 57/2008 Approving the Regulation on Inland Fisheries provides a general guideline on the requirements for carrying out all inland fishing activities. It defines different types of fishing areas, fishing methods, and authorized fishing periods; specifies the administrative procedures for obtaining a fishing licence; defines fishing vessels' markings; establishes competent authorities to carry out control checks (Chap. III); and sets out the fishing requirements to be met in Lake Niassa, the Cahora Bassa Basin, and in other water basins that artisanal fishers can only fish.

Decree 43/2003, the Marine Fisheries' Regulation (REPMAR), defines marine fisheries and sets out various regulations relating to licensing, fisheries management, conservation measures, allowable catch, fishing quotas and related authorization releases, participatory fishery management procedures, the classification of fishing vessels and fishing types (artisanal, semi-industrial, and industrial), fishing gear/methods, and the monitoring and inspections procedure. The Regulation defines the functions, structure, and competencies of the Fishery Management Commission.

Box 2. Other Sub-ordinate Fishing Sector Related Legislations

Other sub-ordinate legislations that are related to the Fishing sectors include:

A. General Regulation for Control of Hygienic and Sanitation of Food from Aquatic Origin, Decree 76/2009 of 15/12
B. Decree 57/2008 Approving the Regulation for Inland Water Fisheries
C. General Aquaculture Regulation, Decree 35/2001
D. Regulation for Inspection and Guarantee of Quality of Fish Products (Revokes Decree 10/98 of 17 of March), Decree 17/2001 of 12/06
E. Decree 49/2014 Approving the Amateur Diving Regulation
F. Decree 74/2017 Approving the Regulation for the Concession of Fishing Rights and Fishing Licensing
G. Decree 51/99 Approving the Regulation of Recreational and Sport Fishing

2.3 Institutional Framework

Many institutions are responsible for the public administration of the fisheries sector, which mainly operates under the MIMAIP. Before the MIMAIP, the Ministry of Fisheries was responsible for designing and implementing policies on fisheries. In 2015, after the general election, there was an institutional change in the administration of fisheries, which led to the creation of MIMAIP, encompassing the previous Ministry of Fisheries. This was achieved through Presidential Decree (17/2015).

MIMAIP is the central state body that promotes and oversees the fishery administration system. The main objectives of MIMAIP are to design, regulate, and implement policies and strategies related to the fishing sector. MIMAIP coordinates and supervises different institutions that have representation at the provisional level to ensure the effective implementation of the policies and provides necessary support to fishers. MIMAIP is responsible for coordinating the implementation of policies through guidance and control of the performance of various bodies established under the purview of MIMAIP. The following bodies directly engage in fisheries activities:

The National Fisheries Administration's (ADNAP) task is to monitor, license, and supervise the fishing activity. It contributes to the conservation of living aquatic resources susceptible to fishing through efficient and sustainable management, based on scientific and legal precepts and the participation of all beneficiaries, to optimize present and future economic and social benefits for the country.

The Fisheries and Aquaculture Development Institute (IDEPA) seeks to promote the development of fisheries and aquaculture, paying particular attention to contributing to the improvement and well-being of fishers and aquaculture communities through increased food production.

The National Institute of Fish Inspection (INIP) aims to promote the sustainable development of fisheries and aquaculture activities by maintaining the quality of recognized domestic and international practices. In other words, it ensures compliance with the market's hygiene and sanitary, consumer protection, animal health and welfare, and environmental requirements.

The Blue Economy Development Fund's (PROAZUL) objective is to promote and manage financing resources intended to promote sustainable activities related to fishing and aquaculture. It engages with both private and public sectors, including civil society, to ensure that financial resources are aligned to ensure the sustainable use of natural resources. It aims to generate and carry out financing activities to support the government of Mozambique in its fulfilment of sustainable development goals (SDGs), namely goal 14: the conservation and sustainable use of oceans, sea and marine resources for sustainable development.

The National Institute of Fisheries Research (IIP)'s task is to carry out fisheries and aquaculture research studies that promote the sustainable development of fisheries and aquaculture activities.

2.4 National Plans and Policy Reflecting the Fisheries Sector

The Government of Mozambique has established different framework instruments to promote sustainable fishing practices that would improve the living conditions of communities, increase food security, and improve the utilization of fishery resources in general. These are either national or sector-related instruments.

Agenda 2025 presents a strategic reflection on the future of Mozambique to create a long-term national vision and prepare a national development strategy through a participatory process. The fulfilment of these objectives will enable an increase in the capacity of the government, institutions, and stakeholders to define and implement national economic policies, programmes, and projects. This will ensure consistency in short- and long-term social and economic policies and undertake leadership in the coordination and the management of development cooperation.

The National Development Strategy 2014–2035 underlines the strategies for development and enlists priority areas, namely, agriculture, fisheries, and forestry, to increase national wealth and help to reduce rural poverty. The main objectives are to improve the lives of populations, transform the economy, and diversify national products. The actions prescribed in the strategy emphasize the transformation of agricultural and fishing sectors to increase food security, generate foreign exchange earnings, develop infrastructure support for small-scale fisheries, and develop aquaculture through public investment. These strategies further promote economic growth and efforts towards achieving social development goals and the eradication of poverty.

These strategic goals are implemented through the **five-year (2015–2019) government programmes (PQG)**. The 2015–2019 PQG focuses on increasing employment and productivity to improve livelihoods in rural and urban areas with inclusive, participatory governance. The government plan identifies priority areas, and each of those priorities is supported through the pillars of good governance, a balanced environmental and sustainable approach, and international cooperation. Despite the COVID-19 surge, the recently adopted **2020–2024 PQG** emphasizes improving health by establishing more hospitals and other health facilities. In line with Mozambique's adoption of the **National Development Strategy 2014–2035, the Mozambique Country Strategy Paper (CSP) 2018–2022**, prepared by the African Development Bank Group, emphasizes reaping the benefits of regional integration.

Previously, the relevant instruments for developing fisheries and aquaculture, such as the **Fisheries Master Plan 2010–2019**, focused on increasing food security and improving the livelihoods of communities working in fishing and aquaculture. Although the policies concentrated directly on the fisheries sector, the aim was towards eradicating poverty in Mozambique.

In line with the **Fisheries Master Plan 2010–2019**, many strategic plans related to artisanal fisheries and aquaculture were implemented, such as the Strategic Plan of the Sub-Sector of Artisanal Fisheries Sector; the Strategy for the Development of Aquaculture in Mozambique; the Strategic Plan for Fishery Inspection; the National Plan of Action to Prevent, Impede, and Eliminate Illegal, Unreported, and Unregulated Fishing; and the Development Plan for Tuna Fishery in Mozambique, among others.

Box 3. Extract from the Fisheries Master Plan (2010–2019)

The FMP grouped the major issues affecting the sector in the following manner:

i. The supply of fish products to the population is low and uneven throughout the country;
ii. Industrial fisheries, aquaculture and small-scale fishing are not contributing all they could to the country's economic and social development, i.e. the fight against poverty;
iii. The sector's contribution to the Balance of Payments has not reached its potential and communities of small-scale artisanal fishermen and aquaculture farmers are still poor;
iv. Simultaneously, the public administration of fisheries does not have the necessary capacity to eliminate these problems and addresss other crosscutting issues both within the sector (Environment, Lake and Marine Conservation Areas) and outside it (Governance, HIV/AIDS and Gender).

Box 3. Extract from the Fisheries Master Plan (2010–2019) *(cont.)*

The FMP is aimed at addressing six main issues:

vii. Restructuring the industrial and semi-industrial shrimp fishing fleets;

viii. Diversification and growth of industrial and semi-industrial fisheries production;

ix. The growing role of private initiative as the engine driving national development and the corresponding reduction in State intervention in the productive sphere;

x. Construction of a Fisheries Public Administration focusing on policies and strategies, development plans, fisheries legislation, creation of an economic environment favorable to investment and conflict arbitrations;

xi. Improved standard of living for artisanal fishermen;

xii. Human resource develpment.

Source: MIMAIP, 2014.

These strategies are revised periodically and, based on the assessments made, new approaches and policies are implemented to sustainably manage fishing sectors that ensure the social and economic uplift of rural communities working in fisheries.

The Mozambican government signed a Fisheries Partnership Agreement (FPA) with the European Union (EU) to support fisheries policy in the country, covering the period 2007–2011.

There is also an active engagement of artisanal communities implementing and disseminating co-management schemes along the coast to responsibly exploit natural resources and alleviate conflicts among fishers and between fishers and other stakeholders. The impact of these shared responsibilities in managing aquatic resources is positively evaluated, mainly in law enforcement and fishing effort control for the most sensitive coastal resources. A significant number of artisanal fisheries associations and co-management committees have already been established with the assistance of the Fisheries Public Administration, and there is an ongoing process aiming to adopt a legal framework to formalize these initiatives.

Box 4. The Decree 43/2003 on Marine Fisheries' Regulation and the Community Fishing Council

Decree 43/2003 empowered local fishing communities to participate in fisheries management through the Community Fishing Council (CCP), a community-based organization of fishers that supports the government in monitoring and enforcing sustainable fishing practices. Furthermore, CCPs aim to promote licensing practices and limit illegal fishing. CCPs have successfully managed fishing resources, but Decree 43/2003 does not clearly establish the roles, responsibilities, and functions of CCPs, which has resulted in a lack of enforcement of measures taken by CCPs (Pilcher & Williams, 2018). To tackle this concern, in January 2021, the Mozambican government issued the revised Decree 43/2003 on Marine Fisheries' Regulation (REPMAR), which clarifies that CCPs can become legally recognized entities and allows local fishers to design community-managed fishing areas (Vyawahare, 2021).

3

THE PROSPECTS OF PRAWNS FISHERY AS GEOGRAPHICAL INDICATIONS IN MOZAMBIQUE

3.1 International Framework for Geographical Indications

At the international level, the first attempt to provide international protection for GIs under the Industrial Property (IP) framework was through the **Paris Convention for the Protection of Industrial Property** in 1883. Even though the Convention provides international norms for GIs, its coverage includes trademarks, designs, and patents. The Convention does not explicitly use the term 'geographical indication'; instead, it uses 'indication of source or appellations of origin', without defining that phrase. It provides protective measures for false or misleading uses of GIs, not the use of GIs in general (Calboli, 2006).

The **Madrid Agreement for the Repression of False or Deceptive Indications of Sources of Goods (1891)** extends the Paris Convention but does not afford a higher level of protection. The Madrid Agreement resulted from a collective voice for a more comprehensive form of Regulation by widening the scope of indication of the source to include 'deceptive' elements within the definition of indication of the source (Rangnekar, 2003). The intention was to curtail intellectual property abuse. Article 1(1) of this Agreement provided that all goods bearing a false or deceptive indication by one of the signatory countries or to a place in that country shall be seized on importation. Like the Paris Convention, it also did not define 'indication of source', but it added a level of protection for GIs related to wine (Calboli, 2006). Despite the extended protection of GIs from deceptive use, the Madrid Agreement was not well received by trading nations, including the United States, Germany, and Italy, mainly because of 'home rule' for registration and a lack of Agreement about generic GIs (Blakeney, 2012).

The **Lisbon Agreement for the Protection of Appellations of Origin and their International Registration (1958)** is an international registration system and protection of appellations of origin. The Agreement raised the benchmark for the protection of 'appellation of origin' referred to in the previous two international agreements. It was the first Agreement to have a complete definition of 'appellation of origin' as 'the geographical denomination of a country, region, or locality, which serves to designate a product originating therein, the quality or characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors. In other words, it means all indications of the source are an appellation of origin, but not all appellations of origin are an indication of the source. Additionally, the Lisbon Agreement provides a comprehensive system of protection from misleading and deceptive use to encompass 'any usurpation or imitation, even if the true origin of the product is indicated or if the appellation is used in translated form or accompanied by terms such as "kind", "type", "make", "imitation", or the like'.

The Agreement also provides a system of international registration of 'appellation of origin' at the World Intellectual Property Organization (WIPO) as they are recognized and protected 'as such' in their country of origin. Gangjee explains that the Lisbon Agreement is 'the high-water mark in the international protection of IGOs' (Gangjee, 2012); still, like the Madrid Agreement, the Lisbon Agreement has failed to attract support from many countries. WIPO data shows only 28 contracting parties since 1958. The primary reason for this is the strict definition of appellation of origin 'as such' to negate the countries having protection under other forms of legal protection. The Agreement remained silent on issues where GIs have become generic.

The **Trade-Related Aspects of Intellectual Property Rights (TRIPS)** gave universal recognition to GIs (Vivas-Eugui & Spennemann, 2006). Article 22(1) defines geographical indication as '[i]ndications which identify a good as originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation or other characteristics of the good is essentially attributable to its geographical origin'.

The definition broadens the scope of the appellation of origin under the Lisbon Agreement by introducing 'reputation' from a place of origin without having a quality or other characteristic essentially

attributable to its geographical origin (Lertdhamtewe, 2014). Therefore, the TRIPS agreement provides qualifications to seek protection as a GI; first, the GI must identify the goods and their area of geographical origin. Second, it must possess a given quality, reputation, or other characteristics. Third, it must be essentially attributable to its area of geographical origin (Blakeney, 2010).

Article 22(2) of the Agreement safeguards the consumer by providing accurate information about goods originating from a place (Sanders, 2005). The Article prohibits an act of misleading use of GIs using 'designation or presentation of a good that indicates or suggests that the good in question originates in a geographical area other than the true place of origin. This means that infringement of GI is determined when goods have been falsely, deceptively, or misleadingly described as goods originating in geographical areas other than the true place of origin (Rai, 2009). Such conduct is treated as an act of unfair competition within the meaning of Article 10b of the Paris Convention. The TRIPS agreement gives liberty to the member state to protect GIs utilizing '*sui generis*' protection or through other forms of remedy, such as unfair competition. Similarly, Article 22(3) guarantees freedom to member states to address the issues of GIs in the context of trademarks. Likewise, Article 22(4) prohibits an act that falsely represents to the public that the goods originate in another territory, even though it is 'literally true as to the territory, region, or locality in which the goods originate …'.

In addition to the general protection of GIs, TRIPS provide additional protection for wines and spirits in Article 23 of the Agreement. The literature identified three major components for additional protection enshrined under Article 23:

Box 5. Major Components for Additional Protection within the TRIPS Agreement

I. The provision of the legal means for interested parties to prevent the use of a geographical indication identifying wines and spirit, not originating in the place indicated by the geographical indication.

II. Protection for the geographical indication for wines in the case of homonymous indications; and (Evans and Blakeney, 2007).

III. The call for future negotiations aimed at increasing protection for individual geographical indications for wines and spirits (Otieno-Odek, 2005).

Article 23.1 goes beyond the general protection of GIs by prohibiting the use of GIs identifying wines and spirits 'even where the true origin of the goods is indicated, or the geographical indication is used in translation or accompanied by expressions such as "kind", "type", "style", "imitation", or the like'. This prohibition protects a particular production technique or production characteristic and protects GIs from a kind of dilution of a reputation for superior quality (Sanders, 2005). It signifies that GIs related to wines and spirits are protected broadly, and there is no requirement that their use misleads the public or represent an act of unfair competition. This is referred to as an 'absolute form of protection'. The relationship between GIs and trademarks is highlighted in Article 23.2, where a trademark containing or consisting of a geographical indication of wines or spirits shall be refused or invalidated.

Article 23.4 encourages negotiation to facilitate the protection of geographical indications for wine to establish a multilateral system of notification and registration of geographical indications for wine. Until recently, when the Geneva Act (discussed below) was introduced, there was no sign of a system of notification and registration of GIs. Perhaps the absence of collective ownership of such a system has made GIs a controversial issue in the current negotiations on GI protection within TRIPS (Calboli, 2006).

Art 24.1: allows Members to enter into negotiations to increase the protection of individual geographical indications under Article 23. The primary mandate of Article 24.1 is to enter negotiations to increase the protection of individual geographical indications under Article 23.

In 2015, the Diplomatic Conference adopted the **Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications**. This widened the scope of the Agreement by allowing all beneficiaries of geographical indication to file an application for international registration, administered by WIPO (Sanders, 2016). The Geneva Act incorporated the language of the TRIPS definition on geographical indication and dropped the 'as such' language. Furthermore, it provides freedom to choose legislation under which it establishes the protection stipulated in the Geneva Act. Dropping the term 'as such' may solve the terminology quandary for countries not using the notion of 'appellation of origin' in their legal system (Gervais, 2017). Despite few initiatives at the international level, countries continue to protect geographical indications through free trade agreements (FTAs). Often, FTAs include the obligation to protect GIs through a *sui generis* system with a clear and transparent rule for maintaining GI registration (Vásquez Callo-Müller & Upreti, 2021; Inama, 2017). Some FTAs adopt a detailed approach; for example, the EU-Canada CETA includes agricultural products and foodstuff in the definition of GIs to ensure a higher standard of protection (Frankel, 2017) for non-wines and spirits. Similarly, the restriction on the use of GI names and expressions such as 'kind', 'type', 'style', 'imitation', or the like will ensure the safeguarding of the interests of EU producers.

3.2 Geographical Indications Protection in Mozambique

GIs hold great importance to LDCs like Mozambique, which have potential products that would receive special status for their unique qualities and would be able to promote those in international markets and generate revenues. Mozambique is aware of these prospects; hence, they have participated in the WTO Doha Round negotiations as active sponsor group members that engaged in the draft modalities for GI registration and the extension of protection beyond wines and spirits (WTO TN/C/W/52, 2008). Therefore, Mozambique has shown commitment in supporting the expansion of GI protection at the international level.

At the domestic level, Mozambique has taken initiatives by developing its GI system with the same spirit. The GIs first received recognition through the **Industrial Property Code** (approved by Decree No. 04/2006 of 12 April 2006) and later **Regulation on Appellations of Origin and on Geographical Indications** (approved by Decree No. 21/2009 of 3 June 2009).

Subsequently, in 2015, the revised **Industrial Property Code** (approved by Decree No. 47/2005 of December 31, 2015), which came into force on 31 March 2016, addresses several issues on IPR, including GIs. The Mozambique Industrial Property Institute (IPI) administers the IPR system in Mozambique, implementing the rules established under the Industrial Property Code. Article 2 of the 2016 Industrial Property Code explains that the objective of the Code is to establish:

> *Specific rules applicable to the protection of industrial property rights and defines the rights and obligations arising from the granting or registration of industrial property rights, including monitoring mechanisms and the sanctions stemming from the infringement thereof, with the objectives of promoting innovation, transferring, and disseminating technology and protecting the consumer.*

The Industrial Property Code defines GIs and provides rules regulating the protection of GIs. **Chapter V,** *titled* **'Designation of Origin and Geographical Indications'**, details the scope of rights and the procedure for registration, including specifications, grounds for refusal, opposition, and examination, among others. To qualify for GI protection, the product must comply with these specifications. **Articles 166–171** provide the requirements, compliance mechanism, and amendments to the specifications for the protection of GIs.

Box 6. Article 169: Specifications, Industrial Property Code

1. In order to qualify for a protected designation of origin or protected geographical indication, the product shall comply with specifications.
2. The specifications shall contain:
   a) The name of the product, including the designation of origin or geographical indication;
   b) The description of the product, including raw materials, if any, and the main physical, chemical, microbiological or organoleptic characteristics of the product;
   c) The demarcation of the geographical area;
   d) The factors that prove that the product originates in the defined geographical area;
   e) The description of the method used to obtain the product and, if necessary, the unvarying and authentic local methods used, as well as any information concerning its packaging whenever the group launching the application decides and justifies that the packaging must take place in the defined geographical area, to safeguard its quality, warrant its origin or ensure its control.
3. If there are no demarcated boundaries of the geographical area to which a designation of origin or geographical indication refers, such boundaries shall be declared by the officially recognized authority responsible for the respective area and production, taking into account the uses and customs as well as the higher interests of the national or regional economy.
4. The specifications shall also contain the factors which justify:
   a) In case of a designation of origin, the relationship between the quality or the characteristics of the product and respective geographical environment; or,
   b) In case of a geographical indication, the relationship between a specific quality, reputation or other characteristics of the product and its geographical origin;
   c) The name and address of the authorities or bodies that check compliance with the provisions of the specifications and their specific responsibilities;
   d) Any specific labelling rule for the product in question;
   e) Any requirements laid down by other national regulations.

Box 7. Article 170: Compliance with the Specifications, Industrial Property Code

1. With regard to geographical indications and designations of origin relating to a geographical area in Mozambique, the verification of compliance with the specifications before it is placed on the market shall be done by the competent authorities to be designated by supplementary legislation or by control authorities operating as product certification bodies.
2. With regard to designations of origin and geographical indications relating to geographic areas outside Mozambique, the verification of compliance with the specifications before it is placed on the market shall be done by the competent authorities to be designated by the competent authorities designated by the third country or by bodies designated for this purpose.
3. The operators shall bear the cost of such verification of compliance with the specifications subject to those controls.
4. The authorities referred to in paragraphs 1 and 2 shall provide adequate guarantees of objectivity and impartiality and shall have at their disposal the qualified staff and resources necessary to perform their duties of verification of compliance with the specifications in question.

Box 8. Article 171: Approval of amendments to the specifications, Industrial Property Code

1. Any group which has a legitimate interest and satisfies the conditions established may request the approval of an amendment to the specifications, particularly to take into account scientific and technical developments or to revise the demarcation of the geographical area.
2. The application shall describe the proposed amendment and present the reasons, therefore.
3. Whenever the amendment gives rise to one or more amendments to the single document, the application for approval of an amendment shall be subject to the procedure established in articles 21, 167, 172, 173, 177 and 178 of this Code.
4. For minor amendments, the IPI shall decide on the approval of the amendment without following the procedure in the preceding paragraph.
5. An amendment shall be considered minor if it:
   a) Is not aimed at the essential characteristics of the product;
   b) Does not change the relationship;
   c) Does not change the name of the product or a part thereof;
   d) Does not affect the demarcated geographical area;
   e) Does not increase the trade restrictions imposed on the product or its raw materials.
6. On approval, the IPI shall publish the updated single document in the Industrial Property Bulletin and reference the publication of the updated specifications.

3.3 A Case of White Prawns

The Mozambique white prawns, found in shallow water, is the product with the highest commercial value in Mozambique, contributing to the generation of profits, net income in foreign exchange, the balance of trade of the country, employment, and improvement of the diet of the population. This fishery is essentially divided into three sectors: artisanal, semi-industrial, and industrial, which exploit the stock of the most important species, *P. indicus*. The Mozambique white shrimp, obtained mainly in the regions of Sofala Bank, Maputo Bay, and the mouth of the Limpopo River, receives special attention in the international market and is recognized by the locals due to its very peculiar organoleptic characteristics, of which the taste, very pleasant and distinguishable by the appreciators of the product, stands out.

As explained in the preceding section, the specification of a product is essential to seeking GI protection. The specification requires a detailed examination of potential products; therefore, consultation from experts and stakeholders is essential to understand whether potential products qualify as GIs. In this regard, UNCTAD has worked closely with Mozambique IPI and IIP in developing a technical specification book (cuaderno) for the registration of the white prawn. The below specification is organized based on the past work of UNCTAD on Mozambique and technical reports provided by previous consultants.

3.3.1 Product Description

The name **Prawn of Mozambique:** Protected Geographical Indication shall refer to the fresh, i.e., unprocessed, shallow-water shrimp of the *Penaeidae* family, belonging to the species *Penaeus indicus*, which occur and are fished in the geographical areas defined below and with the characteristics described below:

Taxonomy	Kingdom:	*Animal*
	Phylum:	*Arthopoda*
	Subfilo:	*Crustacea*
	Class:	*Malacostraca*
	Order:	*Decapoda*
	Sub-order:	*Penaeoidea*
	Family:	*Penaeidae*

3.3.1.1 External Morphology of Prawn

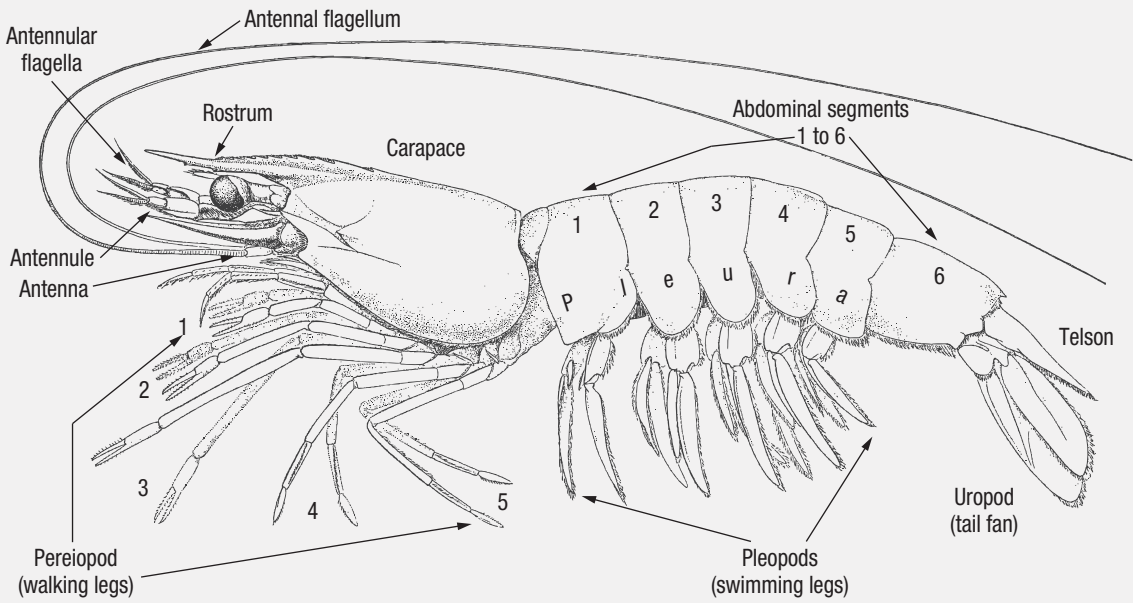
Morphological Characteristics

The main morphological characteristics of the species *P. indicus* fall within the description of the general morphology of the shrimp of the family *Penaeidae* presented below:

- Laterally long body, divided into cephalothorax (fusion of head and thorax) and abdomen
- The anterior cephalothorax is rigid and covered by a carapace that covers the back and lateral areas
- The carapace extends forward to form the rostrum, which may vary in length and shape according to the species
- In the cephalothorax are located two pairs of antennae (sensory organs) and a pair of compound eyes, which are usually located at the end of two peduncles.
- Five pairs of thoracic (decapod) legs on the cephalothorax, called pereopods, serve defence, attack, food capture, and locomotion on the seabed. The first three pairs of pereopods end in pincers (chelicerae) and are used for defence or food seizure

The abdomen has six segments and ends by forming the telson. A shell or pleura cover the abdominal segments. The ventral part of the abdomen has five pairs of legs for swimming (pleopods) and egg transport in females.

Figure 2 External Morphology of Prawn



3.3.1.2 Specific Characteristics of *P. indicus*

The specific characteristics of *P. indicus* are as follows:

- Rostrum with 7 to 9 dorsal teeth and 3 to 5 ventral teeth
- Hepatic crest not present
- Telson without fixed or movable thorns
- It has a pale yellowish-pink, semi-translucent colour, with olive-green spots to bluish-grey

As adults, males reach a total length of up to 184 mm and females 228 mm.

Figure 3 *Penaeus indicus* (white prawn)

3.3.2 Product Characterization

Organoleptic Characteristics

The **Mozambique white prawn** has quite peculiar organoleptic characteristics, of which the taste stands out, very pleasant and distinguishable by connoisseurs of the product. The unique and differentiated taste and texture are since the shrimp grow freely in their natural environment, in areas close to their birthplace, and with a natural diet.

The flesh of the Mozambique white shrimp is tender, fairly compact, and fat-free. The taste is typical of marine shrimp, with a mild smell of fresh seaweed. The texture is described as firm to the touch; the meat is difficult to detach from its shell and has a higher edible part yield than freshwater shrimp. Thus, the white prawn of Mozambique has a differentiated quality and has a name enshrined in tradition and effective use. As a result, it is widely accepted in national and international markets and is preferred by consumers who distinguish it by the characteristics described above.

Organoleptic vs. Sensory Analysis of Mozambique White Prawn

Sensory analysis is used to measure, analyze and interpret reactions to characteristics of food and materials as perceived by the senses of sight, smell, taste, touch, and hearing. Sensory evaluation techniques are used to assist in the consumer development phase of a particular product, usually in the phase before market launch.

Despite technological developments (e.g., electronic noses and tongues), some stimuli are only perceived by the biological senses, while others are too complex for the analytical instruments. In some situations, such as in the freshness assessment of fish, the (instrumental) physico-chemical and microbiological methodologies do not produce usable results in ‘good time’.

The sensory analyses carried out in our laboratories for white prawns are based on the organoleptic controls according to the criteria and limits for examinations and tests in the official Control Scope Applicable to Food Products of Aquatic Origin, following the table of criteria for shrimp appreciation found in the same notice.

The differences between sensory analysis and organoleptic testing are described in the table below:

Sensory Analysis	Organoleptic tests
Scientific method	Non-scientific procedures
Measuring with the senses	Record sensations
Sensory test (trained or untrained testers)	Taster's experience
Periodic training and/or selection of tasters	Confusion between quality and hedonic evaluations
Statistical analysis of the results	No assessment of the accuracy of the results

3.3.3 Life Cycle and Ecology of the Mozambique White Prawn

The life cycle of penaeid prawn (*P. indicus*) can be divided into a marine phase and an estuarine phase. In general, penaeid shrimp spawn in oceanic waters at different distances from the coast depending on the local hydrology, mainly freshwater coming from rivers along the coast. Larvae hatch in the open ocean and are naturally moved to estuaries where mangroves exist or to the coast as they develop, through the interaction between their diurnal behaviours and local currents (tides). They continue their growth and develop into juveniles and sub-adults, which then migrate back to the sea (natural recruitment to the fishing area), reaching the fishing area at around four months of age, thus completing their life cycle.

Penaeus indicus

Generally referred to as white prawn, this main target species is normally distributed up to approximately 60 m depth, although they are more concentrated at depths below 25 metres (Palha de Sousa, 1989). This species has an annual life cycle, with growth to maturity and spawning over a year.

The mature female of this species spawns in the open ocean in most months. Development areas of *P. indicus* are typically in shallow estuaries with freshwater influence, where they grow from the post-larval to the sub-adult stage. There is a migration of pre-spawning prawns back to ocean waters in summer, where they show peak recruitment to the fishery in March.

This species exhibits typical white prawn behaviour. It is active during the day, has limited ability to burrow on the seabed, and is generally associated with turbid waters.

3.3.4 Geographical Fishing Area

Given the distribution of the shallow water prawn resource along the Mozambican coast, Mozambique's white prawn fishing zone is restricted to three main areas, namely (1) the Sofala Bank region, (2) Maputo Bay, and (3) the mouth of the Limpopo River. The Sofala Bank region is the most important fishing area in terms of extension and volume of production.

3.3.4.1 Sofala Bank Region

The Sofala Bank region is located in the central part of the country, between the Angoche district (16º05' S) in Nampula province and the Save River (21º30' S) in Sofala province (Figure 3). This region starts from the north up to the Primeiras archipelago with a narrow continental shelf that widens from Pebane up to Beira, where it reaches the greatest width in the country, of about 145 km, narrowing afterwards up to the mouth of the Save river. In this area, the bottom is mainly formed of sand and silt and is therefore draggable to a depth of about 100 m. There is an area of coral between the mouth

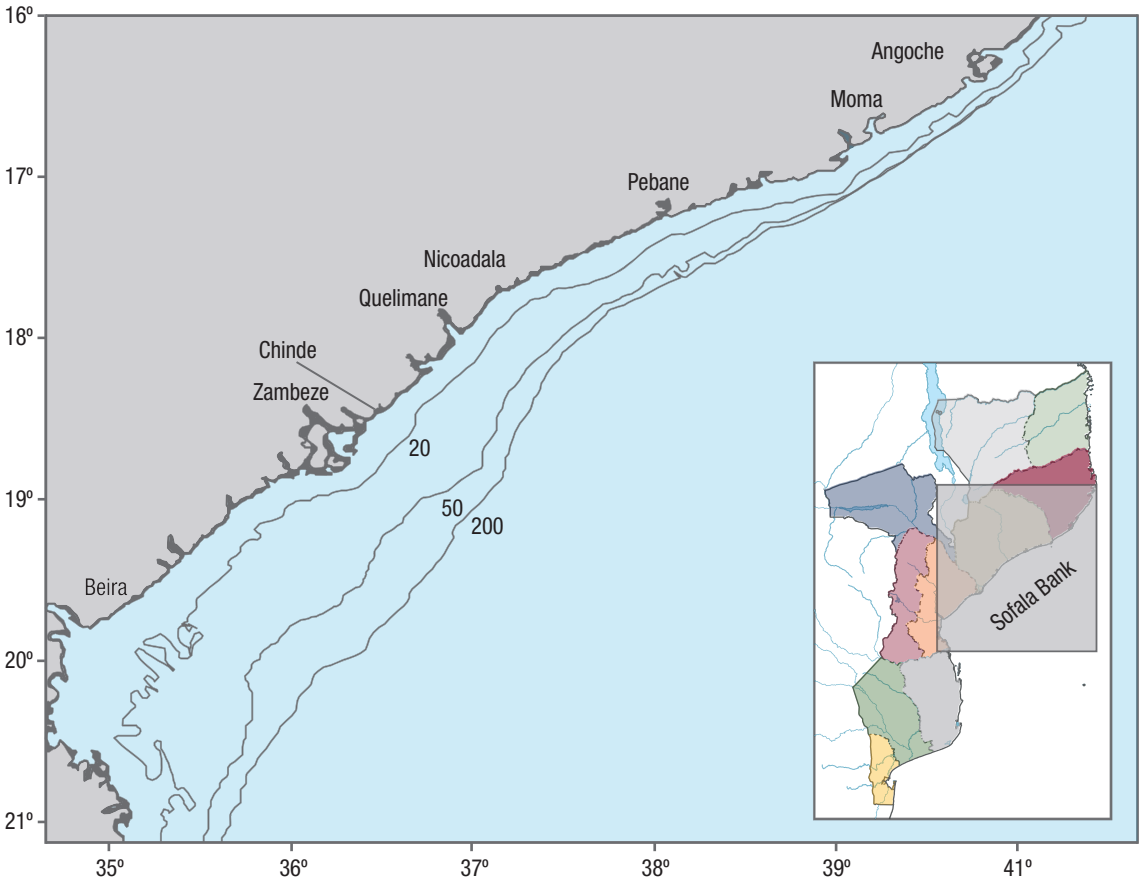
of the Zambezi River and Quelimane, between 40 m and 100 m, where the continental shelf is steep, with sharp edges, and trawling is possible with caution. In the area south of Beira, between 19º30' S and 21º30' S, it is practically impossible to trawl at depths of less than 50 m due to the great oscillations of the seabed.

The entire shoreline of the Sofala Bank consists of extensive areas of mangroves, the largest in the country. Small and large rivers flow along the coastline of the Sofala Bank, two of which, the Save in the south and the Zambezi in the centre, form the largest deltaic systems in the country. The average annual discharge of these rivers is about 120 km3, of which the Zambezi contributes about 95 km3. In this geographical area of white shrimp fishing in Mozambique, the impact of the Zambezi River is considerable due to periodical discharges that cause important fluctuations of salinity, temperature, and turbidity of the water masses that mix with waters of other origins, namely with equatorial waters from the north and subtropical waters from the south. The river runoff is high during the wet season, from November to March, and low during the dry season, from April to October. However, the maximum river discharge is recorded during February and March and the minimum in October.

The general climate is sub-tropical and humid, with an average coastal temperature of 25ºC, ranging between 12ºC in July and 38ºC in December. Rainfall is high in the central coastal region, from Quelimane, which receives over 1350 mm annually, to Beira, with records of around 1500 mm. Rain falls throughout the year, but particularly during the summer between November and March.

Figure 3: Map of the coast of Mozambique, indicating the location of the geographical area of the Mozambique white prawn fishery on the Sofala Bank; bathymetric range 5 to 50 metres (Palha de Sousa *et al*., 2011).

Figure 4 Map of the Coast of Mozambique



3.3.4.2 Maputo Bay

Maputo Bay is located in southern Mozambique, between parallels 25°55' and 26°10' S, and has an approximate area of 1,200 km2, 686 km of which corresponds to the total fishing area. The average depth is 10 m, but the fishing activity occurs at a depth of approximately 5 m. Maputo Bay is connected to the Indian Ocean through an opening to the north; to the east, it is bounded by the islands of Inhaca and Elefantes and the Machangulo peninsula and further west by Catembe.

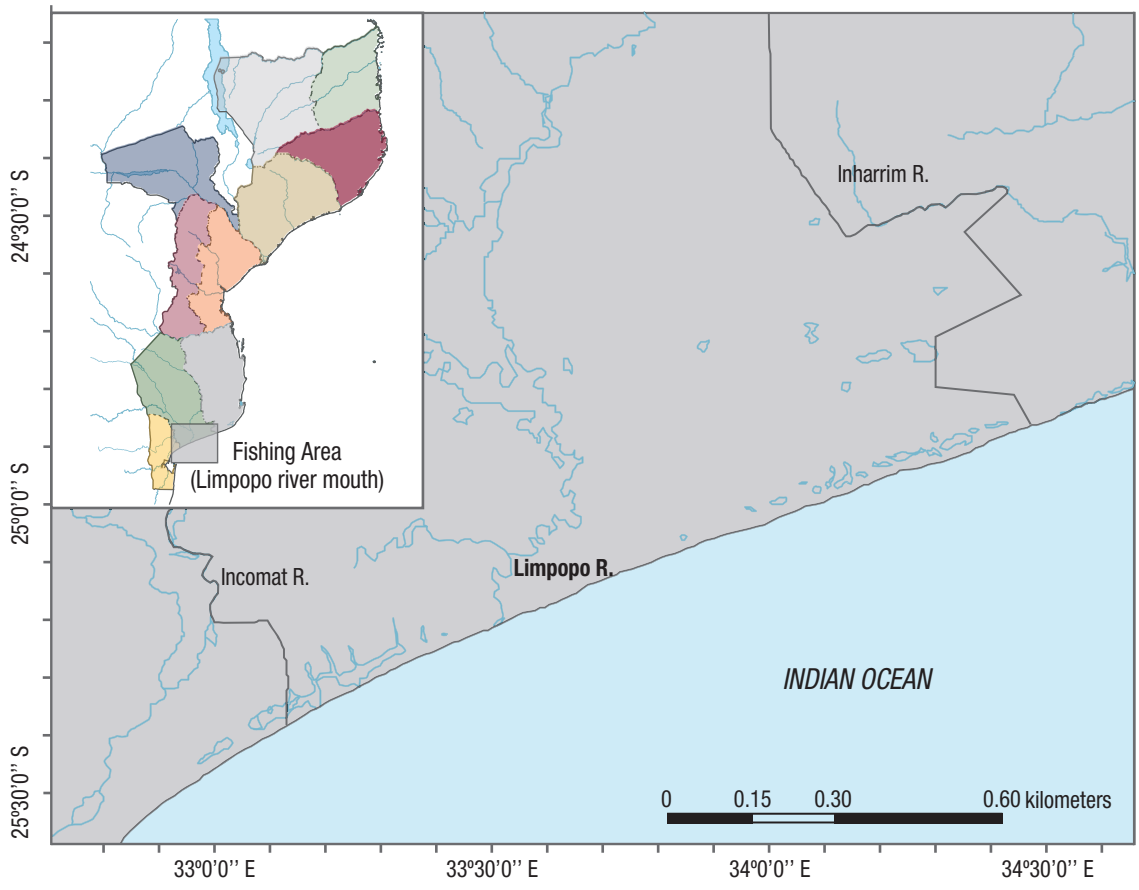
Five rivers flow into the inner bay: the Umbelúzi, Matola, and Tembe to the west, which forms the Espirito Santo estuary; the Incomati to the north; and the Maputo to the south. The total volume of water entering the bay from these sources is about 6 km3 per year, and most of the water is decanted into the bay during the summer.

Maputo Bay is located in a sub-tropical climate region characterized by two seasons: the rainy season from October to March and the dry season from April to September. The average daytime temperature is 31ºC in the summer and 24ºC in winter. The average annual precipitation is 1100 mm.

3.3.4.3 Mouth of the Limpopo River

The mouth of the Limpopo River is located south of Mozambique between the parallels of 25º24' S and 33º20' E and 25º00' E. The fishing area of Foz do Limpopo extends from the Quissico lighthouse up to the Limpopo River mouth, has a bathymetric depth of 10 metres, and is up to an estimated coastline distance of about 20 nautical miles. To the north is Xai-Xai beach, and to the south is the Bilene lagoon.

Figure 5 Indicative Map Showing the Location of the Geographical Area of the Mozambique Prawn Fishery at the Limpopo River Mouth



Source: IIP.

After the Zambezi, the Limpopo River is the longest in Mozambique and serves the largest irrigation system in the country. The total catchment area of the Limpopo River is about 415,000 km^2, spread over four countries (South Africa, Botswana, Zimbabwe, and Mozambique) along its 1,461 km length. In Mozambique, the Limpopo flows 561 km before flowing into the Indian Ocean at Zongoene, 60 km from the town of Xai-Xai. Its flow is very low during the dry season, having greatly reduced in the lower Limpopo (from the Macarretane dam to the river mouth at Zongoene), due to the construction of reservoirs and dams in the upstream countries.

The amount of water varies with the rainfall received north of the catchment area. Most of the rainfall occurs in the warm season, with a peak in January and February. The average annual rainfall varies from 825 mm to 1145 mm.

3.3.4.4 Justification of the Geographical Area

There is a very specific relationship between the geographical area of fishing and the mangrove ecosystem, which in Mozambique occurs along the entire coast, over a length of 1,200 km, and occupies a total area of 400,000 hectares. Of these, about 126,000 hectares are geographically concentrated between the Pebane and Save rivers and between Quelimane and Mocambo Bay. The extensive areas of mangroves associated with the estuaries of the rivers are considered ecologically important zones for being very productive due to the high amount of nutrients, which is characteristic of these areas, thus constituting large natural 'nurseries' for the typical species of these environments, such as fish, molluscs, and crustaceans. The Mozambique white prawn (*P. indicus*) is attracted to the geographical area by the existence of the mangroves and high quantities of nutrients in the development areas, which have unique ecological conditions for the growth of post-larvae and juvenile shrimp. Here, they find the ideal conditions for their protection and the area being a rich environment for food.

The Mozambique white prawn is also attracted to the geographical fishing area by the existence of an extensive river network that discharges into the Indian Ocean, with emphasis on the two main rivers, the Zambezi and the Save, in the Sofala Bank region, which form the only deltaic coastlines in the country. The periodic discharges of these rivers, which cause important fluctuations in salinity, temperature, and turbidity of the water masses, impact the productivity of ecosystems closer to the coast. Other dynamic processes, such as reversibility of currents and anti-cyclonic vortices (in the Angoche and Moma regions) that cause a small *upwelling* and vertical stratification of waters (thermoclines), affect nutrient cycling and primary productivity of waters and, therefore, influence the distribution of species in this region.

3.3.5 Description of the Method of Obtaining the Product

3.3.5.1 Type of Fisheries

Mozambique's white prawn catches, in the geographical fishing areas described above, are obtained by three distinct sectors: a coastal artisanal fishery, with the white shrimp, *P. indicus*, as a secondary target species, and the semi-industrial and industrial fleets, targeting a variety of species in the open sea (Palha de Sousa *et al.*, 2007). The three sectors exploit the stocks of the two main species, *P. indicus* and *M. monoceros*. Fishing for less abundant species, such as *P. japonicus* and *P. latisulcatus*, is predominantly carried out by the industrial fleets.

3.3.5.2 Type of Vessels and Fishing Gear

Small-scale Fishing

The artisanal shrimp fishery is practised along the entire coastline at distances less than 3 miles from the coast to a depth of 10 m (Silva & Sousa, 1987). This fishery is practised by different segments of the population using vessels with some degree of specialization and conventional fishing gear. The

vessels used in artisanal fishing are less than 10 m in total length. The most common type of propulsion is the oar, followed by the sail, and finally the motor, whose vessels can use inboard or outboard and have conditions for autonomy of not less than 24 hours at sea. When motorized, their capacity should not exceed 100 hp or 75 kW. Inboard motorized and enclosed deck vessels fish in the same areas as semi-industrial iceboats, although at slightly different rates. Those using outboard motors are smaller in size and gross tonnage and operate at similar speeds to those boats using oar or sail. In general, artisanal shrimp vessels operate with both shore- and sideboard trawls (the latter in the case of motorboats).

Complying with the traceability system, in 2011, 38 artisanal shrimp fishing vessels were sanitarily licensed, covering 76 fishermen who supply raw material to onshore processing establishments. Shrimp production in artisanal fisheries was 1,825 tons in 2011.

Semi-Industrial Fishing

Semi-industrial shrimp fishing is practised on the Sofala Bank (Angoche and south of Beira), at the Limpopo mouth, and Maputo Bay. Semi-industrial fishing vessels can operate along the coast in marine waters up to 30 miles. With an overall length varying between 10 m and 20 m, these vessels are motor propelled and cannot exceed 350 hp or 259 kW. The semi-industrial shrimp fleet is divided into the following fisheries: (1) semi-industrial ice fishing vessels acquired ashore for fish preservation and (2) semi-industrial vessels with freezers on board. Semi-industrial ice trawlers are stern trawlers and have an autonomy of not less than 48 hours. Trawl fishing with such vessels may only be carried out one mile or more from the coast.

Vessels with freezers on board are small industrial (feather) trawlers and can fish with up to four nets simultaneously. They have autonomy of more than 12 days, and fishing can only be carried out three miles or more from shore and at depths of more than 10 metres.

In 2011, 36 semi-industrial shrimp vessels were licensed and distributed among the shrimp fisheries in Sul da Beira (13), Foz de Limpopo (3), and Baia de Maputo (20), involving about 350 fishers. In 2011, the semi-industrial shrimp sector in the Angoche area did not operate (Palha de Sousa *et al*., 2012).

Industrial Fishing

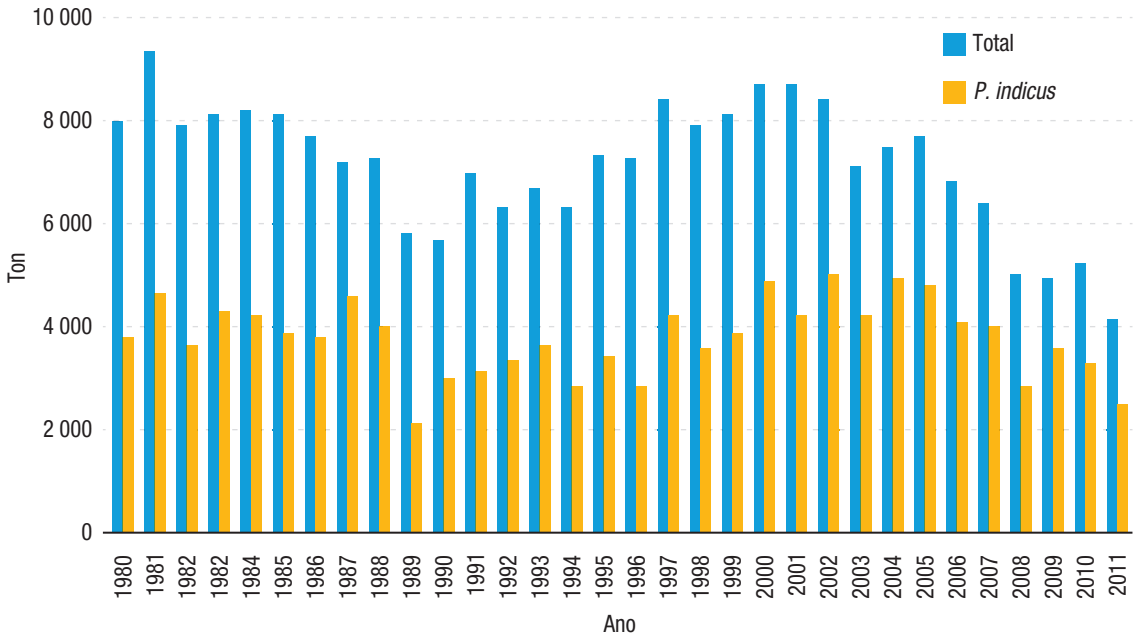
Industrial shrimp fishing operates only on the Sofala Bank between Machese and Angoche, in an area estimated at 18,680 km2 (Silva & Sousa, 1987), without any distance limit in relation to the coastline but being forbidden to fish within three miles of the coastline and at depths less than 10 m. Industrial fishing is practised by vessels with a length equal to or greater than 20 m, with characteristics of a typical industrial shrimp boat propelled by an engine ranging between 360 and 800 hp. These vessels have an autonomy of more than 15 days of travel if supplied with water, fuel, and food. The fishing system used in industrial fishing is bottom trawling with double gear, being able to trawl with two nets simultaneously. It has, therefore, two plumes located horizontally and perpendicularly to each side of the boat.

Industrial fishing vessels are based in only three ports, Maputo, Beira, and Quelimane, and the products are mainly for export after being processed and packed at sea.

The minimum mesh size authorized for trawl nets for any of the fisheries is restricted to: (1) motor trawl: 55 mm, (2) board trawl: 55 mm, and (3) shore trawl: 38 mm.

In the industrial shrimp fishery, 55 vessels (including semi-industrial freezer vessels) operated in 2011. The total catch of industrial fishing was 4,209 tons, with white shrimp (*P. indicus*) contributing about 58.6 per cent (2,466 tons), the lowest level in the last two decades (Palha de Sousa *et al*., 2012). The production of shrimp with high commercial value is destined for export to South Africa and Europe, and that of lower value is sold in the local market. The adjusted standardized effort of 254,000 hours remained well above what is recommended for the fishery (Palha de Sousa *et al*., 2012).

Figure 6 Total Shrimp Catch and *P. indicus* catch at Sofala Bank



Source: Palha de Sousa *et al*.

3.3.5.3 Permitted Fishing Seasons

The shrimp fishing season runs from March to September/October, and shrimp fishing is prohibited during certain months of the year to allow shrimp stocks to be replenished and grow so that they can be caught at a larger size. The closed season period is variable for each fishery and takes place between 1 October and 1 March of the following year. The closure applies to national and foreign fishing vessels licensed to fish in Mozambique's jurisdictional waters, using motor trawling and trawling on board. During this period, any artisanal fishing activities of hand trawling are also prohibited on the continental slope adjacent to the fishery area. In 2012, the closed season for the artisanal shrimp trawl fishery was established on the Sofala Bank during the period from 1 to 31 January 2012.

During the ban, fishery product processing establishments processing Mozambique white prawn are prohibited from acquiring, transporting, handling, or processing new batches of shrimp.

3.3.5.4 Product Processing

Mozambique's **white praw**n processing industry comprises two segments: onboard processing and onshore processing. Onboard processing is done on industrial and semi-industrial freezer vessels that fish and process on board, giving rise to a frozen product that goes directly to the market. Onshore processing comprises medium-sized companies and is carried out in processing establishments located onshore, which receive the fish from semi-industrial and artisanal fishers, giving rise to frozen products. All processing units are licensed sanitarily by the Fish Inspectorate.

While processing **Mozambique white prawns** on board, the shrimp are caught and unloaded to the reception area, where the product's first selection and manual washing is carried out. After calibration, chemical treatment with a food additive is carried out, followed by a second selection, weighing, primary packaging, and labelling, before the product is subjected to ultra-freezing, whereby the product must reach a temperature of -18ºC or less at its thermal centre. This is followed by secondary packaging and labelling for storage in the cold store, which must also be kept at the same temperature of -18ºC or less. The onshore processing establishments receive the product from semi-industrial and artisanal vessels and follow the same process as the processing onboard.

The M**ozambique white prawn** destined for export must comply with the hygiene and sanitation requirements and guarantee food safety for human consumption per the current regulations of importing countries, based on the hazard analysis and identification of critical control points (HACCP) principles. The products processed on the domestic market do not follow these principles.

3.3.5.5 Commercial Presentation

Mozambique shrimp is commercially presented in the following forms:

- Frozen, weighing not less than 9 g
- The Mozambique white shrimp shall be packed at origin in packages of 0.4 kg, 0.8 kg, 1.5 kg, or 2 kg, suitable for use and suitable for packing the product in perfect condition

The packaging must be sufficiently resistant to protect the product. Packaging at origin must guarantee the genuineness of the product so as not to allow the organoleptic characteristics of the product to be damaged or altered, or substances to be transmitted that may be dangerous to human health, nor mixing with other products that are not born and raised in the wild and are not fished under the same conditions.

Selection and packaging may be carried out only in the region of origin, in authorized establishments subject to control and certification by the INIP to guarantee the authenticity of the product.

This measure aims to ensure the complete traceability of the product to protect consumers by providing them with a product genuinely caught and packaged in its region of origin.

Requirements for Package Labelling

The requirements to be observed in the labelling, presentation, and advertising of **Mozambique white prawn** to be supplied directly to the consumer must comply with Ministerial Diploma 247/2011 of 2 November 2011 and have the following elements:

- company name (business name and address)
- name of the vessel/name of the establishment
- approval number
- batch code
- date of freezing
- presentation mode
- product size
- preservation conditions
- method of thawing and preparation
- net weight
- food additives
- origin of the product
- product of marine origin
- fishing zone
- freezing temperature

3.3.5.6 Proof of Origin

Each stage in the production process of the **Mozambique white prawn** is monitored, with the products entering and leaving the preparation units being recorded in specific registers managed by the inspection body. Producers keep production registers and declare the quantities produced, which makes it possible to ensure the traceability of the product back to the region of origin.

3.3.6 A Guarantee of the Geographical Origin of the Product

3.3.6.1 Product Characteristics

Mozambique's white prawn characteristics, particularly the flavour and aroma, are closely linked to the geographical area of production, as described in **sections D and E**. These characteristics, easily discernible and recognizable by local people and regular consumers, must be highlighted on the labelling and the mark of conformity so that other consumers can recognize them.

3.3.6.2 Control System

The control system shall be governed by **a Producers' Group/Manager of the Protected Geographical Indication**, duly registered, per the provisions of the Mozambique Industrial Property Code (Decree No. 47/2015 of December 31, 2015). The existence of a control and certification system is intended to fundamentally guarantee that only shrimp fished in Mozambican maritime waters defined and processed in processing units authorized for that purpose by the Producers' **Group/Manager** of the Protected Geographical Indication can benefit from the use of the Geographical Indication—Mozambique White Prawn.

Associations belonging to the shrimp GI shall be provided with pre-printed sheets for the registration of producers and application forms for the certification of the GI.

Authorization may be granted only to producers who cumulatively:

a. Fish in the geographical area referred to in section D and catch white shrimp there.

b. Catch and commercially process shrimp per the conditions laid down in this specification described in section E.

c. Comply with the legal legislation in force.

d. Undertake in writing to comply with the provisions of this specification.

All products marketed as **Mozambique white prawn**, registered Geographical Indication, are identified with the producer's label and the product-specific logo and the mark of conformity affixed by the entity responsible for verifying compliance with the specification subsequent certification of the product.

3.3.6.3 Actors Involved

Fishing organizations with interest in prawn GI certification:

ANAP — national fisheries association with members of the industrial and semi-industrial sectors; Mozambican owners only.

ASSAPEMO — fisheries association originally for artisanal fisheries but now includes members from other sectors.

ARMAPESCA is a semi-industrial fisheries association; most member companies have 1–3 boats with ice for daily trips. They fish for shrimp and line fish.

AMAPIC — industrial shrimp fisheries association; established in 1996. This association is now basically made up of Pescamar companies. Only one member is independent of Pescamar, namely Bonar-Sociedad Pescuiera.

IPI — the national institution that certificates the GI at the national level; it is also the reference body for the UNCTAD GI mission.

INIP — the competent authority for sanitary fishery. All fishery inspections are performed by this institute, which is composed of trained fishery inspectors and specialized laboratories in all main fishery areas. Inspections are performed especially for processing and organoleptic analysis. All prawn vessels and processing plants must be registered and authorized by this body.

IIP — the agency responsible for delineating areas for fishery extraction. It also provides guidelines for best practices and technical fishing specifications at sea.

Associations of fishermen — the prawn fishing groups from the artisanal, semi-industrial, and industrial sectors of Mozambique.

3.3.6.4 Traceability

To trace the white shrimp throughout all stages of the production chain, including distribution and trade, production units must draw up a traceability plan consisting of the information described below and laid down in the General Regulation for the hygiene and sanitary control of food products of aquatic origin:

- Name of the vessel/establishment/approval number
- Fishing zone (FAO 51)
- Supplier identification (name and address of supplier)
- Labelled products
- Destination of products
- Date of freezing
- Self-monitoring records during processing
- Batch identification
- Weight in kg

3.3.7 Organization

3.3.7.1 Requesting Entity

In accordance with the provisions of the Mozambique Industrial Property Code (Decree No. 47/2015 of December 31, 2015), a legitimate entity could submit the application for registration of the GI of the Mo**zambique white shrimp** to the IPI for the purpose of certification as a registered GI.

The same body is responsible for ensuring that the members of the association or other body comply with the specific rules set out in this specification concerning the catching process, packaging, labelling, and other specific details relating to the characteristics and description of the product.

3.3.7.2 Registration Entity

The IPI is the public institution responsible for the administration of the industrial property system in general, so the application for registration of the white prawn of Mozambique GI is submitted to this public administration body. In the framework of the application for registration of the GI of the Mozambique white prawn, the IPI is particularly responsible for (i) carrying out the formal examination of the application, (ii) proceeding with its publication in the Industrial Property Bulletin, (iii) carrying out the substantive examination, and (iv) publishing its decision.

3.3.7.3 Verification Entity

With regard to verification of compliance with the specifications, both before and following the placing on the market of the product, INIP, in line with the corresponding national and international standards, is the designated GI verification body for **Mozambique white prawn**. It is proposed that INIP, the competent authority for the control of geographical indications, has a functional inspection system in the verification of hygiene and sanitary requirements throughout the production chain in the production of safe food products of aquatic origin for better consumer protection and human health and trained inspectors for the verification of compliance with the rules in carrying out official controls to prevent, eliminate, or reduce to acceptable levels the health risks to humans and animals.

3.3.8 Factors Justifying the Link between Mozambique White Prawn and the Geographical Environment

3.3.8.1 History of the Fisheries Sector

The history of the development of fisheries in Mozambique can be divided into two distinct periods. The first period occurred in the colonial era from the 15th century until 1975, the period before independence. The second period is from 1975 to the present date, the post-independence period. Before independence, the fisheries sector was not well developed for several reasons. One of the reasons is that the country was considered a potential market for Portuguese and Angolan fishery products. The country was a major importer of fish and fish products, and industrial fishing was basically artisanal, geared towards subsistence and the domestic market. However, the main coastal regions of Maputo and Beira were limited by semi-industrial and industrial fisheries in terms of the number of commercially oriented boats. After independence, the semi-industrial and industrial fleets increased in number and capacity, resulting in two phases of the fishery. Due to the massive migration of the Portuguese soon after independence, the fisheries sector collapsed. With the reorganization of the fishing administration, from 1976, new fishing units came into operation, namely shrimp and horse mackerel fishing. In 1987, a reform of the country's economy occurred, in which the government privatized industrial fishing. With the free-market regime, new investors appeared in the fishery sector, and there was a significant increase in annual production, with prawn becoming the main fishery product exported.

3.3.8.2 The Reputation

In view of these ecological and climatic 'coincidences', it is not surprising that prawn fishing is carried out in the geographical fishing area described in this specification, as it is of great economic importance, constituting the public fishery sector's main domestic source of revenue and the main export product of the sector. On the other hand, the reputation of the name 'Mozambique' as a geographical indication for white prawn is enormous. It is sufficient to verify its use in normal commercial circuits in Europe and restaurants and similar places, seeking to attract consumers who recognize the difference in the qualitative characteristics of prawns from Mozambique compared with shrimp from other places or with prawn bred in captivity.

3.3.8.3 Socio-economic Aspects

Prawn fishing in Mozambique contributes significantly to the creation of jobs for thousands of Mozambicans in the industrial, semi-industrial, and artisanal sectors and the processing sectors of this resource. On the other hand, prawn fishing is the main fishing activity in terms of economic contribution to the country due to the large proportion of the product intended for export. The volume of commercial prawn fishery production has a high value and will continue to grow.

3.3.8.4 Poverty Reduction

Under current conditions, prawns from industrial and semi-industrial fisheries are mainly destined for export. In contrast, part of the semi-industrial and artisanal fisheries is intended to supply the domestic market. Therefore, artisanal commercial fishing plays a vital role in improving the living conditions of fishing communities, resulting in the alleviation of poverty conditions in communities dependent on artisanal fisheries and contributing to increased food security.

4

RURAL DEVELOPMENT POTENTIAL OF GEOGRAPHICAL INDICATIONS IN MOZAMBIQUE

4.1 Mozambique's Commitment to Rural Development

In recent decades, rural development has been a central theme of policy initiatives taken by the Mozambican government. The country's national development strategy is oriented towards rural development. Therefore, both at the policy and government organization levels, all actions and initiatives are taken to achieve optimum rural development (Castel Branco, 2015). With regards to artisanal fisheries, policy initiatives are guided through (i) Agenda 2025, (ii) the Poverty Reduction Strategy (2006–2009), (iii) the Strategic Plan for the Artisanal Fishing Sub-Sector, (iv) the Fisheries Master Plan (1995–2005), and (v) the Rural Development Strategy (2007). All these initiatives emphasize poverty reduction and improving the livelihood of fisheries through an increased supply of fishing production.

More recently, the **government's five-year plan 2020–2024 (PQG)** emphasized raising the production and productivity in agriculture through industrialization linked to tourism and infrastructure, among other projects, to create jobs. The rationale of the 2020–2024 PQG is to transform and modernize the agriculture sector to ensure productivity that enables rural producers to generate income. Moreover, an emphasis has been placed on diversifying national production to reduce imported goods. To this end, the **Agriculture Plan 2020–2024** has also prioritized traditional farming and small-scale farmers. This is certainly an encouraging step forward. However, the COVID-19 surge and cyclone Idai in 2019 have disturbed economic growth (Jalles D'Orey, 2020); therefore, the government must take initiatives in the agricultural and fishing sectors to uplift the livelihood of people working in the sectors.

From an IP perspective, the **Mozambique IP Strategy (2008–2018)** acknowledges the use of IPR systems to protect and promote local products that positively affect the economies of rural areas. One of the strategies identified for enhancing Mozambique's innovative and industrial competitiveness was the promotion of geographical indications that would add value to Mozambique products such as shrimp:

Box 9. Extract, Innovation & Industrial Competitiveness (Mozambique IP Strategy (2008–2018))

6.4: Innovation and Industrial Competitiveness

The use of some industrial property rights, such as certification marks, appellations of origin and geographical indications, can add value to competitive Mozambican products such as shrimp, some varieties of sea, river and lake fish, cashew nuts, pineapple, coconut, tobacco, crafts, gourmet products, etc.

The use of certification marks, appellations of origin, and geographical indications for certain products with distinctive characteristics will make it possible to add value to them, conquer markets, and give a greater financial return to the communities involved in producing them. Increasing wealth in the areas of production of these products will help stabilize the population there, create job opportunities, reduce poverty and raise the living standards of the people there. In this context, it will be necessary for each district, as a development hub, to identify products whose value may be increased through intellectual property rights and create the conditions for promoting them.

The IP Strategy (2008–2018) identified geographical areas where the use of resources in those areas could promote development with a competitive advantage.

The government policy initiatives on fisheries read with the national policy on rural development and IP strategy, confirm that GIs are considered a potential tool for rural development and uplift communities' social and economic status. Countries with rich natural resources, including extensive oceanic and inland waters, such as Mozambique, include potential products like white prawn that have a strong link to the territory and could create economic value and distribute a fair share or price premium to producers in those rural fishing communities and improve the lives of the people associated with fishing.

Box 10. Extract, Encourage the development of the district as a basis for incorporating intellectual property into local products, (Mozambique IP Strategy (2008–2018))

6.4.4: Encourage the development of the district as a basis for incorporating intellectual property into local products

Incentivizing the setting up of local structures responsible for identifying, industrializing and marketing typical local products and encouraging an appreciation of them, using certification marks, appellations of origin and geographical indications to add value to them;

Promoting innovation fairs for agro-industrial, inshore fishing, oil, weaving, gourmet and other typical products and incentivizing the protection of these products through the convention intellectual property system or traditional knowledge.

4.2 Promoting Rural Development and Sustainability through GIs

4.2.1 GIs as a Tool for Rural Development and Sustainability

GIs have a unique ability to create value because of their ability to differentiate products from others and fulfil the needs of a targeted audience (Sautier *et al*., 2011). GI protection helps create market value for a product; as a result, the product can see lucrative sales, have high prices (Lee *et al*., 2020), and provide better income levels and employment (Ali, 2014). The literature shows that GIs can positively impact rural areas where the local farmers, manufacturers, and other stakeholders have greater involvement in the process, environmental concerns, and sustainability of social systems (Ali, 2014). Considering that GI products do not require any advanced technological infrastructure or a huge investment in production and marketing, farmers may expect increased income (Dogan & Gokovali, 2012). However, this is not always the case. A successful GI regime requires infrastructure and related investment in development (Frankel, 2017). That being said, GIs as a quality indicator contribute to rural development (Callois, 2004); therefore, the brand value that GIs create helps farmers and local producers to compete with the larger producers (Moran, 1993). Therefore, GIs are key instruments for local development, as they combine factors such as human capital, social capital, citizenship, and sustainability in a system that advances community wellbeing (Medeiros *et al*., 2020).

A study shows that 8 per cent of consumers in the EU are willing to pay a 20 per cent premium for a product with GI labelling compared to a similar non-GI product, while 43 per cent were willing to pay 10 per cent extra premium (Berenguer, 2004). The 2018 report of the Food and Agriculture Organization of the United Nations (FAO) demonstrates evidence-based specific case studies that establish the impacts of GIs on price (Vandecandelaer *et al*., 2018). The study confirms a significant positive effect of GIs on price in two ways. First, GIs reduce asymmetrical information between producers and consumers by providing adequate information about the link to the origin (Lee *et al*., 2020). Second, through institutional arrangements, such as collective organization, the producers control the supply and can determine the price or demand a price premium along the value chain by agreement with stakeholders (Lee *et al*., 2020). This positive association is illustrated through case studies of Colombian coffee, Penja pepper, Manchego, and Tête de Moine cheese (Lee *et al*., 2020). One interesting finding of the report is that Columbian coffee and Darjeeling tea achieve a fair price premium post-GI protection. In addition, the FAO report highlights the impacts of GIs on market access. For example, after registration, Darjeeling tea's number of destination countries rose from 35 in 2004 to 45 in 2015 (Vandecandelaer *et al*., 2018). These data show the potential of a price premium and improved market access, but one cannot ascertain the same results for all GI products (Upreti, 2019).

Contradictory views argue that GIs alone cannot help to translate into significantly more income or benefit a region (Drahos, 2017). Other factors, such as market or industry structure, also play an important role

in determining the success of GIs. It is correct to argue that mere legal protection of geographical indication does not offer a magic improvement in exports or achieve a premium price (Frankel, 2017). Despite these differences, however, GIs play an essential role in raising the living standards of the rural population. Thus, GIs represent a vital policy intervention that promotes positive changes in rural areas (Crescenzi *et al*., 2021).

4.2.2 A Reflection on White Prawn and Rural Development

The preceding section established how GIs as a policy tool enable local producers to compete in the market with premium prices and reputations. The origin link is essential to establish a relationship between product and environment and human features of its area of origin (Zappalaglio, 2021). Therefore, Section A–F of this report has shown the territorial link and reputation of the Mozambique white prawn that qualifies it for GI protection. Even in the international market, white prawns have the potential to achieve high exports because of their unique taste, which can differentiate them from others (Jocitala, 2014). Since there are similar prawns in other countries, such as South Africa, it is possible that the prawns of Mozambique could be mistaken as prawns from South Africa in the markets of South Africa (Jocitala, 2014). Perhaps this has led to the involvement of UNCTAD, which hired experts and organized workshops in Beira and Maputo in 2013 in coordination with the IPI, INIP, IIP, and IPI (Crivelli, 2014).

Despite these efforts, GI registration for white prawns has not been successful to date. To this end, there is no clear empirical evidence to show that securing GI status for the white prawn would be beneficial. Of course, it has been established that most fisheries communities in Safola rely heavily on the production of white prawns for their livelihood. That said, there is no accurate record to demonstrate the increase or decrease of production, consumption in the local market, and export of white prawns. This creates a lack of clarity in stakeholders and other interest groups on the relevance of the GI framework for white prawns. In addition, the lack of awareness of the system and benefits that result from GI protection does not promote eagerness in protecting white prawns through the GI mechanism. Thus, clear empirical evidence on production, consumption, revenue generation, and distribution of white prawns will provide confidence to communities and stakeholders about the impact that GI protection of white prawns would have on improving the lives of communities.

In this context, the role of producers is essential in creating a niche market for the product. Even though white prawn has not received GI registration, producers' groups should engage all interest groups to improve the technical specification, which would further reconfirm the strong territorial connection. It is established that a strong producer group enables the maximization of the rural potential of GIs. Moreover, to ensure that the GI system benefits both producers and workers involved in the production, corporate social responsibility or fair-trade models have been discussed as an alternative (Marsoof and Tan, 2021). However, there is evidence to show that the effect of the GI label is greater if local producers can sell directly to the final consumer (Moran, 1993). These local producers could be independent fishermen who may not be affiliated with the producers' group.

GI protection for white prawns will not enable the creation of new products, but protection is more about maintaining the status quo of a strong link between place and products. GIs act as signalling devices in protecting and promoting local products at premium prices. Therefore, stakeholders, including producers' associations affiliated with white prawns, will be incentivized to improve the GI scheme by understanding potential markets, developing better marketing strategies, improving the certification scheme, maintaining hygiene, etc. Thus, it will ultimately improve quality characteristics (Moerland, 2019). For this to happen, coordination between the Mozambican government, several institutions involved in fisheries, and producer organizations are required to ensure that quality is maintained.

5

WAY FORWARD AND RECOMMENDATIONS

Mozambique's potential for fisheries production has never been doubted; over the years, government policies have shifted the approach from export to domestic production by initiating policies on artisanal fisheries and aquaculture (EIF, 2015). This change has resulted in an uplift in livelihood and has played a pivotal role in poverty reduction. However, fishing communities in Sofala Bank (Maputo and Beira), consisting of rich varieties of prawn (including white prawn), have reaped benefits from its vast production capacity potential. With the assistance of UNCTAD, in coordination with the IPI, stakeholders, and private sector representatives in Mozambique, many rounds of consultations have been organized since 2009. Despite commitment from IPI with coordination with UNCTAD, there has been no success in the registration of the white prawn of Mozambique. It seems that the lack of coordination among the fisheries and different nodal agencies related to fisheries has become a hurdle in approving the technical specification (the cuaderno) for GI registration.

Considering the commitment that the government of Mozambique has shown in improving the lives of rural communities working on fisheries and the recent five-year plan 2020–2024 that emphasizes creating employment and enhancing production capacity to generate rural income, it is relevant to re-engage and coordinate with producers and interest groups related to white prawns to register the product as a GI in Mozambique. The following policy recommendation has been prepared based on this study in coordination with local consultants working with UNCTAD in collaboration with IPI.

Before registration: All stakeholders, interest groups, fishing organizations, and relevant government departments related to fishing must coordinate and work towards revising and improving the technical specification (the cuaderno) for the white prawn. Though this study provided a draft technical specification that clearly demonstrates the link between white prawn and location, more effort on this will further ensure the quality characteristic of the product. Therefore, engaging all stakeholders in drafting technical specifications makes the process participatory and inclusive.

After registration: Countries that have focused on quality and monitoring compliance requirements have successfully maximized the GI system. Therefore, coordination among the different stakeholders is essential because these groups often have different expectations of benefits, they hoped to gain from GI protection (Marie-Vivien, 2020; Carls, 2017). Therefore, understanding these expectations and coordinating with institutions and the main beneficiaries, such as artisanal fishermen, is crucial to improving quality, which will result in a premium price.

Research intervention: It has been established that Maputo and Beira catchment areas consist largely of white prawns. However, the study finds that there is no empirical evidence to show the consumption, production, and distribution of white prawns in local markets. Therefore, it is important to come up with data showing white prawns' consumption, production, and distribution. This will convince stakeholders of the potential of white prawns and prospects of improving rural income through the scheme of GI protection.

Strong MIMAIP intervention: This study, together with previous consultant reports, concludes that there is a need for the active involvement of MIMAP by taking a leadership role to accommodate all the stakeholders and departments to liaison finalization of the technical specification of Mozambique white prawns. To this end, the involvement of IPI in formulating the technical specification and coordinating activities with ministers and other related departments has been influential in making stakeholders aware of the potential of the GI system and how rural communities will benefit from the registration of white prawns as a GI.

Empowering institutional capacity through training and workshops: The progress so far in making steps towards GI registration for white prawns has been due to the efforts of local institutions and actors and other interest groups in general. It is recommended to provide further technical support to local institutions and actors to enhance their understanding of the GI system, both in terms of the requirements of the technical specifications and the due diligence required to maintain the product. Once the national legislation is in place, and its harmonization with international standards is acquired, there is a need to enforce the legal provisions allowing for exploiting the GI's potential in terms of accessing and securing market shares with GI products. The GI legislation implies the designation and functioning of the national

authority responsible for the GI registration and verification processes and, ultimately, the overall administration throughout the country based on networking capacity that goes beyond national boundaries. Today, IPI's mandate and role are defined, yet the Institute's capacity to fully perform its GI role has scope for improvement.

Beyond white prawn and tete goat meat (Cabrito de Tete): It is recommended to identify other agricultural and non-agricultural foods that may have the potential to be registered as GIs. This becomes more relevant in the context of maximizing African regional integration. More recently, tete goat meat, a local goat breed from Tete province in Mozambique, became the first GI registration in the African Regional Intellectual Property Organization (ARIPO). This will enable penetration in national, regional, and international markets and protect local goat meat producers. Therefore, states should engage in identifying potential local GI products that are likely to benefit the rural sector.

Continuation of technical support from international agencies: Efforts should be made to continue coordination with international agencies such as the WIPO, Enhanced Integrated Framework (EIF), FAO and UNCTAD to receive technical support to promote existing products such as white prawn and identify potential products that could benefit rural communities in Mozambique.

REFERENCES

Ali, M. H. (2014). Geographical Indications in Pakistan: The Need for Legal and Institutional Reforms and Economic Development. DPhil thesis, Queen Mary University of London 2014.

Berenguer, A. (2004). Geographical Origins in the World', paper presented at the workshop 'Promoting Agricultural Competitiveness through Local Know-how, Proceedings of the Montpellier Workshop, Washington, DC: World Bank Group; Paris: MAAPAR; Montpellier: CIRAD as cited in WIPO 'Worldwide Symposium on Geographical Indications' Lima, June 22–24, 2011, WIPO Publication No. 798(E), 2012 at 57.

Blakeney, M (2012). Geographical Indications and TRIPS, University of Western Australia-Faculty of Law Research Paper No. 2012–09.

Calboli, I (2006). Expanding the Protection of Geographical Indications of Origin Under TRIPs: "Old" Debate or "New" Opportunity? *Intellectual Property Law Review*, 10 /2: 182–203.

Carls, S. (2017). Thinking outside the box: the legal and non-legal objectives of geographical indications, *WIPO-WTO Colloquium Papers* 8, 1–11.

Castel-Branco, C. N 2015. Challenges of rural development in Mozambique: Critical contribution with debate on basic postulates in Castel-Branco, C N and Massingue N and Muianga C (Eds) *Questions on Productive Development in Mozambique* (pp. 113–147) (IESE).

Crescenzi, R., Filippis, F. D., Giua, M. (2012) Geographical Indications and Local Development: The Strength of Territorial Embeddedness. *Regional Studies*. 1–13.

Crivelli, P (2014). Geographic Indication for the White Prawns of Mozambique: Institutions, Process, Challenges and the way forward, UNCTAD, Division for Africa, Least Developed Countries and Special Programmes, 12 December 2014, Geneva, Switzerland.

Dogan, B and Gokovali, U (2012). Geographical Indications: The Aspects of Rural Development and Marketing Through the Traditional Products. *Procedia-Social and Behavioral Sciences*, 62: 761.

Drahos, P. (2017). Sunshine in a Bottle? Geographical Indications, the Australian Wine Industry, and the Promise of Rural Development in Calboli I and Ng-Loy, W. L (Eds), *Geographical Indications at the Crossroads of Trade, Development, and Culture*. (p.272) Cambridge: Cambridge University Press.

Evans, G and Blakeney, M. (2007). The international protection of geographical indications yesterday, today and tomorrow in Westkamp G (Ed.) *Emerging Issues in Intellectual Property: Trade, Technology and Market Freedom Essays in Honour of Herchel Smith*. (p 270) Cheltenham, UK: Edward Elgar Publishing.

Frankel, S (2017) 'Geographical Indications and Mega-Regional Trade Agreements and Negotiations' in Calboli, I and Ng-Loy, W. L (Eds). *Geographical Indications at the Crossroads of Trade, Development, and Culture*, Cambridge, Cambridge University Press, 150.

Gangjee D (2012) *Relocating the Law of Geographical Indications*. (p127) Cambridge, Cambridge University Press.

Gervais, D (2017). A Look at the Geneva Act of the Lisbon Agreement: A Missed Opportunity? in Calboli I and Ng-Loy, W. L (Eds), *Geographical Indications at the Crossroads of Trade, Development, and Culture*. (p. 127) Cambridge, Cambridge University Press.

IDEPA (2019) Estudo da cadeia de valor da pesca rtisanal do Banco de Sofala, Maputo.

IFAD, *Transforming Food Systems for Rural Prosperity* (Rural Development Report 2021) https://www.ifad.org/documents/38714170/43704363/rdr2021.pdf/d3c85b6a-229a-c6f1-75e2-a67bb8b505b2?t=1631621454882.

IIP (2017) Camarão do Banko do Sofala, Maputo.

Inama, S. (2017). GIs Beyond TTIP: Death or Victory for the 'Living Cultural and Gastronomic Heritage'?. Journal of World Trade, 52(3): 471–493.

Jalles D'Orey M A External Finance for Rural Development, Country Case Study: Mozambique. ODI, December 2020. https://cdn.odi.org/media/documents/odi_mozambique.pdf.

Jocitala, E. (2014). Geographical Indication for the White Prawns of Mozambique: Institutions, Process, Challenges and the Way Forward. UNCTAD, Division for Africa, Least Developed Countries and Special Programmes, 16 December, 2014 Geneva, Switzerland.

Lee, Y.J., Pavasopon N., Napasintuwong O., Jr Nayga, R.M. (2020). Consumer's Valuation of Geographical Indications-Labeled Food: The Case of Hom Mali Rice in Bangkok. *Asian Economic Journal* 34 (1): 79–96.

Lertdhamtewe, P. (2014). The Protection of Geographical Indications in Thailand. *The Journal of World Intellectual Property* 17(3/4): 115.

Marc, J. C (2004). Can quality labels trigger rural development? A microeconomic model with co-operation for the production of a differentiated agricultural good CESAR Working Paper No 2004/6.

Marie-Vivien, D. (2020). Protection of Geographical Indications in ASEAN countries: Convergences and Challenges to awakening sleeping Geographical Indications, *The Journal of World Intellectual Property*, 23 (3/4): 328–349.

Marsoof, A. and Tan, L.T. (2021). A CSR/fair trade inspired policy for fairer eographical indications. *The Journal of World Intellectual Property*, 24: 253–273.

Medeiros, D.L. M., Amaral Terra, A.L, and Passador, J. L. (2020) Geographical Indications and Territorial Development: A soft-System Methodology analysis of the Serro Case, Systems *Research and Behavioral Science*. 37: 82–96.

Mengistie, G. A, Mahop, T., and Blakeney, M (2012) *Extending the Protection of Geographical Indications; Case studies of Agricultural Products in Africa* Abingdon: Earthscan.

MIMAIP (2014) Artisanal Fisheries and Climate Change Project (FishCC) (October 2014).

MIMAIP (2019) Proposal of the Economic and Social Plan 2019, http://www.mimaip.gov.mz/wp-content/uploads/2020/09/PES-2019.pdf.

MIMAIP (2020) Balance of the Economic and Social Plan for January–December 2019, http://www.mimaip.gov.mz/wp-content/uploads/2020/10/Balanco_2019.pdf.

Moerland, A. (2019). Geographical Indications and Innovation, what is the connection? in Drexl J and Sanders, A. K (Eds) *The Innovation Society and Intellectual Property* (pp. 59–86) Cheltenham, UK: Edward Elgar Publishing.

Moran, W. (1993). Rural Space in Intellectual Property, *Political Geography*. 12: 263–264.

Mozambique Country Strategy Paper 2018–2022, Prepared African Development Bank/African Development Fund, 2018 https://www.afdb.org/fileadmin/uploads/afdb/Documents/Boards-Documents/MOZAMBIQUE_-_CSP_2018-2022__Final_.pdf.

Mozambique Industrial Property Code, Decree Nr. 47/2015 of 31 December 2015, https://wipolex.wipo.int/en/text/419716.

Mozambique Intellectual Property Strategy 2008–2018, https://wipolex.wipo.int/en/text/202232.

Otieno-Odek, J (2005). The Way Ahead – What Future for Geographical Indications?. Worldwide Symposium on Geographical Indications, Parma, June, 2005. www.wipo.int/export/sites/www/meetings/en/2005/geo_pmf/presentations/pdf/wipo_geo_pmf_05_otieno.pdf.

Palha de Sousa, L. 1989. Distribuição e Biologia das Espécies de Camarão de Águas Pouco Profundas. *Revista de Investigação Pesqueira* nº 18. Instituto Nacional de Investigação Pesqueira. Maputo. 207 pp.

Palha de Sousa, L., Abdula, S., Brito, A., Maúnde, C., Penn, J. e D. Howell. (2011). O camarão do Banco de Sofala. Relatório Interno de Investigação Pesqueira no 12. Instituto Nacional de Investigação Pesqueira. Maputo.

Palha de Sousa, L., S. Adula, B. Palha de Sousa, J. W. Penn e D. Howell (2012) O camarão do Banco de Sofala 2012. Relatório interno de investigação Pesqueira Instituto Nacional de Investigação Pesqueira: 16.

Pilcher, NJ and Williams J. (2018). Assessment of the Status, Scope and Trends of the Legal and Illegal International Trade in Marine Turtles, its conservation impacts, management options and mitigation priorities in Mozambique https://cites.org/sites/default/files/eng/cop/18/inf/Annex%202.pdf.

Pratyush Nath Upreti, 'Geographical Indications in Nepal: In Search of Identity in Susy Frankel (ed) Is Intellectual Property Pluralism Functional? (Edward Elgar, 2019) 235-265.

Rai, R. K (2009). The TRIPS Article 23 Extension Stalemate Continues: A Way-Ahead for the Developing Countries. *Journal of Intellectual Property Rights*, 14: 407.

Rangnekar, D (2003) Geographical Indications: A Review of Proposals at the TRIPS Council: Extending Article 23 to Products other than Wines and Spirits', *International Centre for Trade and Sustainable Development* (ICTSD), www.iprsonline.org/resources/docs/Rangnekar%20-%20GI%20-%20Blue%204.pdf.

Sanders, A. K (2016). Geographical Indications of Origin: When GIs Become Commodities, All Gloves Come off, *International Review of Intellectual Property and Competition Law*. 46(7): 755.

Sanders, A.K. (2005). Future Solutions for Protecting Geographical Indications Worldwide in Heath C and Sanders AK (Eds). *New Frontiers of Intellectual Property Law: IP and Cultural Heritage- Geographical Indications-Enforcement- Overprotection*. (p.139). Oxford and Portland, Oregon, Hart Publishing.

Sautier, D., Biénabe, E., and Cerdan, C. (2011). Geographical indications in developing countries. In E. Barham and B. Sylvander (Eds.), Labels of origin for food: local development, global recognition (pp. 138–153). Wallingford: CABI.

Transtec (2013) Final Technical Report : Market Study on By-Catch from the Tuna Fishery Industry in the Indian Ocean Region http://acpfish2-eu.org/uploads/projects/id279/FTR_Part%201.pdf.

USAID (2021) Mozambique Marine and Coastal Resources Market Assessment : A Reference Guide (April, 2021) https://pdf.usaid.gov/pdf_docs/PA00XF9M.pdf.

Vandecandelaere, E., Teyssier, C., Barjolle. D., Fournier, S., Beucherie, O. (2018) *Strengthening sustainable food systems through geographical indications*. Food and Agriculture Organization of the United Nations Rome http://www.fao.org/3/a-i8737en.pdf.

Vásquez Callo-Müller, M. and Upreti, P. N. (2021). RCEP IP Chapter: Another TRIPS-Plus Agreement? *GRUR International*, 70(7): 667–671.

Vivas-Eugui, D and Spennemann C (2006). 'The Treatment of Geographical Indications in Recent WTO Discussions and in Regional and Bilateral Agreements', *ICTSD* 6.

Vyawahare, M. (2021) Mozambique's new fisheries law expands protections but old problems persit https://news.mongabay.com/2021/01/mozambiques-new-fisheries-law-expands-protections-but-old-problems-persist/.

World Bank (2018) Communities livelihoods fisheries: fisheries governance and share growth in Mozambique https://bit.ly/2VgizT7.

WTO, Draft Modalities for TRIPS Related Issues (WTO, TN/C/W/52, 2008) https://www.wto.org/english/tratop_e/trips_e/ta_docs_e/5_1_tncw52_e.pdf.

Zappalaglio, A. (2021). *The Transformation of EU Geographical Indications Law: The Present, Past and Future of the Origin Link*. Abingdon: Routledge.

ANNEXES

Annex I: Draft Specification

1. Name

Prawn of Mozambique

2. Description of the Product

Protected Geographical Indication shall refer to the fresh, i.e., unprocessed, shallow-water shrimp of the *Penaeidae* family, belonging to the species *Penaeus indicus*, which occur and are fished in the geographical areas defined below and with the characteristics described below.

The main **morphological characteristics** of the species *P. indicus* fall within the description of the general morphology of the shrimp of the family *Penaeidae* presented below:

- Laterally long body, divided into cephalothorax (fusion of head and thorax) and abdomen
- The anterior cephalothorax is rigid and covered by a carapace that covers the back and lateral areas
- The carapace extends forward to form the rostrum, which may vary in length and shape according to the species
- In the cephalothorax are located two pairs of antennae (sensory organs) and a pair of compound eyes, which are usually located at the end of two peduncles
- Five pairs of thoracic (decapod) legs on the cephalothorax, called pereopods, that serve for defence, attack, food capture, and locomotion on the seabed. The first three pairs of pereopods end in pincers (chelicerae) and are used for defence or food seizure
- The abdomen has six segments and ends by forming the telson. The abdominal segments are covered by a shell or pleura. The ventral part of the abdomen has five pairs of legs for swimming (pleopods) and egg transport in females

The **specific characteristics** of *P. indicus* are as follows:

- Rostrum with 7 to 9 dorsal teeth and 3 to 5 ventral teeth
- Hepatic crest not present
- Telson without fixed or movable thorns
- It has a pale yellowish-pink, semi-translucent colour, with spots of olive-green to bluish-grey

3. Geographical area

Mozambique's white prawn fishing zone is restricted to three main areas, namely (1) the Sofala Bank region, (2) Maputo Bay, and (3) the mouth of the Limpopo river. The Sofala Bank region is the most important fishing area in terms of extension and volume of production.

There is a very specific relationship between the geographical area of fishing and the mangrove ecosystem, which in Mozambique occurs along the entire coast, over a length of 1,200 km, and occupies a total area of 400,000 hectares. Of these, about 126,000 hectares are geographically concentrated between the Pebane and Save rivers and between Quelimane and Mocambo Bay. The extensive areas of mangroves associated with the estuaries of the rivers are considered ecologically important zones for being very productive due to the high amount of nutrients, which is characteristic of these areas, thus constituting large natural 'nurseries' for the typical species of these environments, such as fish, molluscs, and crustaceans. The Mozambique white prawn (*P. indicus*) is attracted to the geographical area by the existence of the mangroves and high quantities of nutrients in the development areas, which have unique

ecological conditions for the growth of post-larvae and juvenile shrimp. Here, they find the ideal conditions for their protection in addition to the area being a rich environment for food.

The Mozambique white prawn is also attracted to the geographical fishing area by the existence of a large river network that discharges into the Indian Ocean, with emphasis on the two main rivers, the Zambezi and the Save, in the Sofala Bank region, which form the only deltaic coastlines in the country. The periodic discharges of these rivers, which cause important fluctuations in salinity, temperature, and turbidity of the water masses, have an impact on the productivity of ecosystems closer to the coast. Other dynamic processes, such as reversibility of currents and anti-cyclonic vortices (in the Angoche and Moma regions) that cause a small *upwelling* and vertical stratification of waters (thermoclines), affect nutrient cycling and primary productivity of waters and, therefore, influence the distribution of species in this region.

4. Production Method

The white prawn processing industry in Mozambique comprises two segments: on-board processing and onshore processing. On-board processing is done on industrial and semi-industrial freezer vessels that fish and process on board, giving rise to frozen product that goes directly to the market. Onshore processing is composed of medium-sized companies and is carried out in processing establishments located on shore, which receive the fish from semi-industrial and artisanal fishermen, giving rise to frozen products. All processing units are licensed sanitarily by the Fish Inspectorate.

During the processing of Mozambique white prawn on board, the shrimp are caught and unloaded to the reception area, where the first selection and manual washing of the product is carried out. After calibration, chemical treatment with a food additive is carried out, followed by a second selection, weighing, primary packaging, and labelling, before the product is subjected to ultra-freezing, whereby the product must reach a temperature of -18ºC or less at its thermal centre. This is followed by secondary packaging and labelling for storage in the cold store, which must also be kept at the same temperature of -18ºC or less. The onshore processing establishments receive the product from semi-industrial and artisanal vessels and follow the same process as the processing on board.

The Mozambique white shrimp destined for export must comply with the hygiene and sanitation requirements and guarantee food safety for human consumption in accordance with the current regulations of importing countries, based on the hazard analysis and identification of critical control points (HACCP) principles. The products processed on the domestic market do not follow these principles.

5. Proof of Origin

Each stage in the production process of the Mozambique white prawn is monitored, with the products entering and leaving the preparation units being recorded in specific registers managed by the inspection body. Producers keep production registers and declare the quantities produced, which makes it possible to ensure the traceability of the product back to the region of origin.

Product Characteristics

The characteristics of Mozambique's white prawn, particularly the flavour and aroma, are closely linked to the geographical area of production. It is these characteristics, easily discernible and recognizable by local people and regular consumers, which must be highlighted on the labelling and the mark of conformity so that other consumers can recognize them.

Control System

The control system shall be governed by a Producers' Group/Manager of the Protected Geographical Indication, duly registered, in accordance with the provisions of the Mozambique Industrial Property Code (Decree No. 47/2015 of December 31, 2015). The existence of a control and certification system is intended to fundamentally guarantee that only shrimp fished in Mozambican maritime waters defined and processed in processing units authorized for that purpose by the Producers' Group/Manager of the

Protected Geographical Indication can benefit from the use of the Geographical Indication—Mozambique White Prawn. Associations belonging to the shrimp GI shall be provided with pre-printed sheets for the registration of producers and application forms for the certification of the GI.

Traceability

To trace the white shrimp throughout all stages of the production chain, including distribution and trade, production units must draw up a traceability plan consisting of the information described below and laid down in the General Regulation for the hygiene and sanitary control of food products of aquatic origin:

- Name of the vessel/establishment/approval number
- Fishing zone (FAO 51)
- Supplier identification (name and address of supplier)
- Labelled products
- Destination of products
- Date of freezing
- Self-monitoring records during processing
- Batch identification
- Weight in kg

Commercial Presentation

Mozambique shrimp is commercially presented in the following forms:

- Frozen, weighing not less than 9 g
- The Mozambique white shrimp shall be packed at origin in packages of 0.4 kg, 0.8 kg, 1.5 kg, or 2 kg, suitable for use and suitable for packing the product in perfect condition

The packaging must be sufficiently resistant to protect the product. Packaging at origin must guarantee the genuineness of the product, so as not to allow the organoleptic characteristics of the product to be damaged or altered, or substances to be transmitted that may be dangerous to human health, nor mixing with other products that are not born and raised in the wild and are not fished under the same conditions.

Selection and packaging may be carried out only in the region of origin, in authorized establishments subject to control and certification by the INIP to guarantee the authenticity of the product. This measure aims to ensure the complete traceability of the product in order to protect consumers by providing them with a product genuinely caught and packaged in its region of origin.

Package Labelling

The requirements to be observed in the labelling, presentation, and advertising of Mozambique white prawn to be supplied directly to the consumer must comply with Ministerial Diploma 247/2011 of 2 November 2011.

6. Proof of Link

History of the Fisheries Sector

The history of the development of fisheries in Mozambique can be divided into two distinct periods. The first period occurred in the colonial era from the 15th century until 1975, the period before independence. The second period is from 1975 to the present date, the post-independence period. Before independence, the fisheries sector was not well developed for several reasons. One of the reasons is that the country was considered a potential market for Portuguese and Angolan fishery products. The country was a major importer of fish and fish products, and industrial fishing was basically artisanal, geared towards

subsistence and the domestic market. However, the main coastal regions of Maputo and Beira were limited by semi-industrial and industrial fisheries, in terms of the number of boats that were commercially oriented. After independence, the semi-industrial and industrial fleets increased in number and capacity, resulting in two phases of the fishery. Due to the massive migration of the Portuguese soon after independence, the fisheries sector collapsed. With the reorganization of the fishing administration, from 1976 new fishing units came into operation, namely shrimp and horse mackerel fishing. In 1987, a reform of the country's economy occurred, in which the government privatized industrial fishing. With the free market regime, new investors appeared in the fishery sector, and there was a significant increase in annual production, with prawn becoming the main fishery product exported.

The Reputation

In view of these ecological and climatic 'coincidences', it is not surprising that prawn fishing is carried out in the geographical fishing area described in this specification, as it is of great economic importance, constituting the public fishery sector's main domestic source of revenue and the main export product of the sector. On the other hand, the reputation of the name 'Mozambique' as a geographical indication for white prawn is enormous, and it is sufficient to verify its use not only in normal commercial circuits in Europe, but also in restaurants and similar places, seeking to attract consumers who recognize the difference in the qualitative characteristics of prawn from Mozambique in comparison with shrimp from other places or with prawn bred in captivity.

Socio-economic Aspects

Prawn fishing in Mozambique contributes significantly to the creation of jobs for thousands of Mozambicans in the industrial, semi-industrial, and artisanal sectors, as well as in the processing sectors of this resource. On the other hand, prawn fishing is the main fishing activity in terms of economic contribution to the country, due to the large proportion of the product that is intended for export. The volume of production of commercial prawn fishery has a high value and it will continue to grow.

Annex II: The Inspection Protocol form and The Form for Health Certification Verification

Formulário 1: Formulário de protocolo de inspecção

REPÚBLICA DE MOÇAMBIQUE **MINISTÉRIO DAS PESCAS** INSTITUTO NACIONAL DE INSPECÇÃO DO PESCADO	PROTOCOLO DE INSPECÇÃO	Edição:

DATA: ___ / ___ / ___
TIPO DE PRODUTO _____
Nº PECS/Códigodo PRI _____
LOTE _____
CÓDIGO DO LIP _____ / _____ / _____
EMPRESA _____

1. CÂMARA DE ARMAZENAMENTO	Satisfaz	Não Satisfaz
Ordem		
Limpeza		
Temperatura ºC	☐	☐
Fardamento	☐	☐
Outros: _____	☐	☐
	☐	☐

2. CARTÃO MASTER	Satisfaz	Não Satisfaz
Conteúdo (Kgs): _____		
Data: _____		
Natureza: _____		
Integridade		

3. CAIXA PRIMÁRIA	Satisfaz	Não Satisfaz
Calibre: _____	☐	☐
Data: _____		
Limpezainterna/externa		
Folhaplástica		

4. PRODUTO	Satisfaz	Não Satisfaz
	☐	☐
Peso Neto: _____	☐	☐
Gelo		
Arrumação/classificacão		
Cor: _____	☐	☐
Cheiro: _____	☐	☐

EXAMES/RECOMENDAÇÕES	Embarcação/estabelecimento: _____ Destinatário: _____ Transporte: _____ Matrícula: _____

Observações: _____
_____

O Inspector Oficial

Formulário 2: Formulário para a verificação de certificação sanitária

REPÚBLICA DE MOÇAMBIQUE **MINISTÉRIO DAS PESCAS** INSTITUTO NACIONAL DE INSPECÇÃO DO PESCADO	PROTOCOLO DE INSPECÇÃO	Edição: 2007

Nº Folha: _____ Nº Pedido CS/Código do PRI: _____ DATA: ___ / ___ / ___

Designo _____ como Inspector desta verificação.

Nº PECS/Código do PRI _____

Instruções _____

_____

_____

O Delegado/O Chefe do DIP

_____

___ / ___ / ___

VERIFICAÇÃO

VERIFICAR	EVIDÊNCIAS OBJECTIVAS
I. ANTECEDENTES SOBRE ESTABELECIMENTOS E CONDIÇÕES DE OPERAÇÃO	
(1) O estabelecimento ou barco-fábrica declarado como produtor do produto a ser exportado, possui uma Licença de Funcionamento/Autorização,Sanitária?	Sim ☐ Não ☐
(2) O nome do estabelecimento ou barco-fábrica encontra-se na lista mais recente de Aprovados para a UE?	Sim ☐ Não ☐
(3) Qual é a classificação deste estabelecimento ou barco fábrica de acordo com o P.R.I.? Quando foi à última vistoria? As recomendações anteriores foram cumpridas? Quais não foram cumpridas?	Excelente ☐ Bom ☐ Regular ☐ Medíocre ☐ ___ / ___ / ___ Sim ☐ Não ☐ _____ _____ _____
(4) Foram verificadas e encontradas satisfatórias as condições de higiene e salubridade do estabelecimento ou barco-fábrica durante os últimos 6 meses? Se não, assinalar as observações encontradas:	Sim ☐ Não ☐ _____ _____ _____
(5) O programa de higiene tem sido implementado e é operacional?	Sim ☐ Não ☐
(6) Foi efectuada alguma análise?	Água: ___ / ___ / ___ Resultado: _____ Contaminantes bacteriológicos: ___/___/___ Resultado: _____ Outras: _____ _____ _____

(7) Foi efectuada recentemente uma verificação da operação do sistema HACCP? Qual foi o resultado?	Sim ☐ Não ☐ _____ _____ _____
(8) Está a ser implementado o rastreamento (o sistema de identificação dosprodutos?)	Sim ☐ Não ☐

INSTRUÇÃO

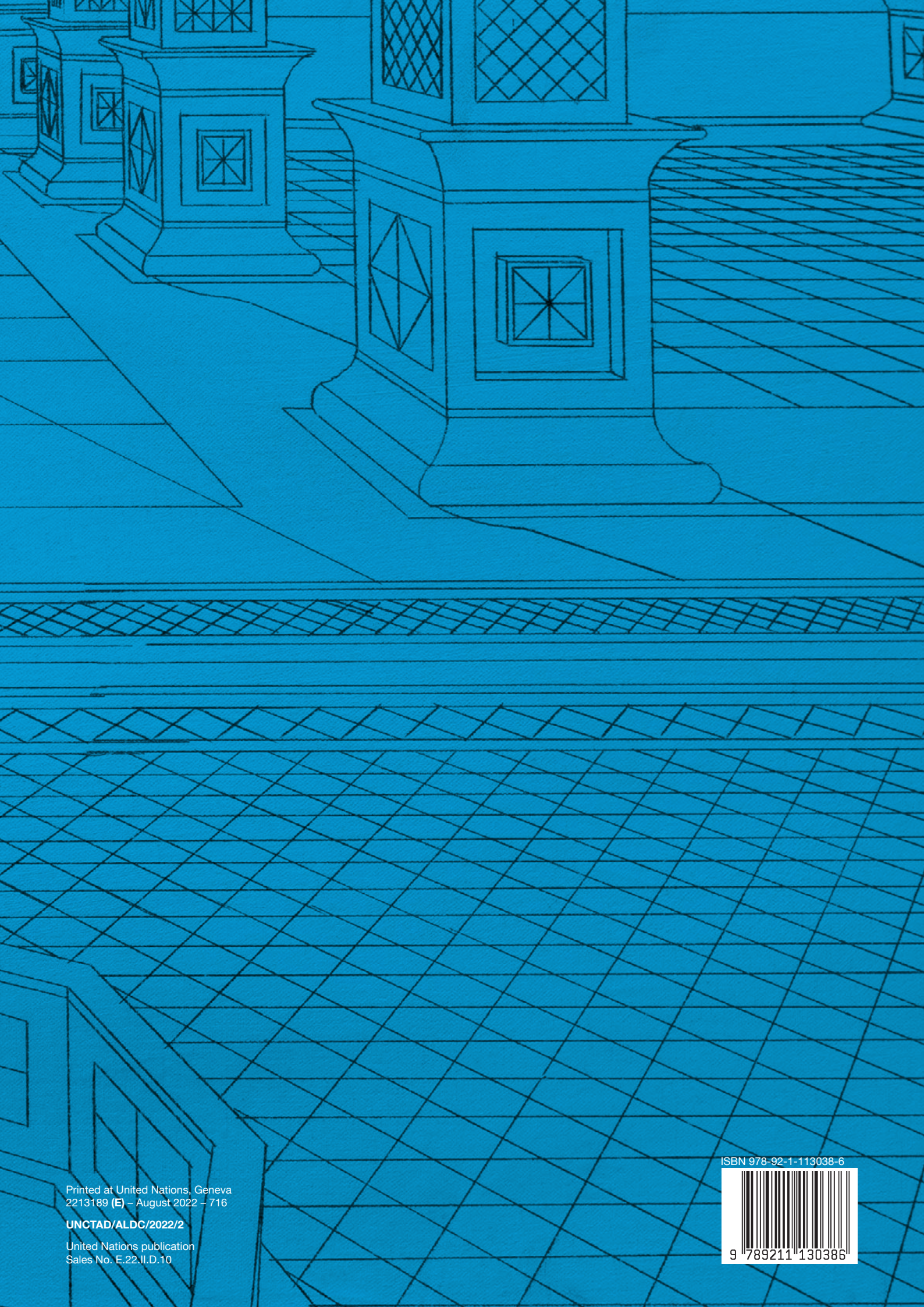
CRITÉRIO DE AMOSTRAGEM

1) De aceitação ☐
2) Verificação ☐
3) Microbiologia ☐
4) Re-amostragem ☐
5) Outros ☐

Observação: _____
_____
_____

VERIFICAÇÃO DO PRODUTO

II. VERIFICAÇÃO DAS CONDIÇÕES DE ARMAZENAMENTO DO PRODUTO A SER EXPORTADO	
(1) É possível identificar claramente o produto proposto para exportação separado de outros lotes?	Sim ☐ Não ☐
Este encontra-se devidamente arrumado?	Sim ☐ Não ☐
Embalagem: Lote com:	Uma (1) marca ☐ Mais marcas ☐ Marcas: _____ _____
Tem autorização para a utilização de todas as marcas?	Sim ☐ Não ☐
(2) Comprovação da quantidade de produto proposto à exportação: a. correcta ☐ b. aparentemente correcta (quantidade estimada) ☐ c. não correcta ☐ d. não é possível verificar ☐	
(3) Condições de armazenamento: verificar temperatura, higiene, etc.	Temp. ambiente: _____ºC Temp. do produto: _____ ºC Boa Higiene do ambiente: _____ Boa Higiene do produto: _____
(4) Condições aparentes do lote: embalagens íntegras, sem manchas ou sinais de descongelação, sem óleo, etc.	Sim ☐ Não ☐
Observações: _____ _____ _____ _____ _____ _____	



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