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Aquatic Foods Recipe Book

Tanzania

Co-implemented by



Aquatic Foods Recipe Book – Tanzania

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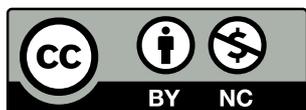
We extend our heartfelt appreciation to the Government of the United Republic of Tanzania, whose unwavering support was crucial in ensuring the successful implementation of PROFISHBLUE. Special thanks goes to the Tanzania Food and Nutrition Centre and other national institutions that provided guidance, technical insights and validation throughout the process.

Finally, we express our gratitude to the small and medium enterprises, chefs, researchers and nutrition experts who contributed their knowledge and experiences. Their invaluable input has enriched this book, making it a practical and inspiring resource for promoting aquatic food consumption and sustainable nutrition practices across Tanzania and the broader SADC region.

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Key message from the AfDB

We are honored to have contributed to the production of the Aquatic Foods Recipe Book – Tanzania, a timely and innovative contribution developed under the Programme for Improving Fisheries Governance and Blue Economy Trade Corridors in the SADC Region (PROFISHBLUE), funded by the African Development Bank (AfDB). This collaborative effort reflects our shared commitment to advancing nutrition-sensitive food systems and unlocking the potential of aquatic resources for healthier communities and inclusive economic growth.

This initiative goes beyond recipes, it is a celebration of Tanzania's rich aquatic biodiversity and a strategic step toward improving nutrition, livelihoods and economic resilience. By promoting the consumption of diverse, nutrient-rich aquatic foods from both inland and marine ecosystems, this book supports the AfDB's Feed Africa Strategy and the Dakar II goals to eliminate hunger and malnutrition by 2030. It also aligns with Tanzania's National Development Vision 2050 and the Country Strategy Paper (2021–2025), particularly in strengthening value chains, building human capital and fostering inclusive growth.

As an institution deeply committed to sustainable development and human well-being on our continent, we are especially encouraged by the potential of aquatic foods to address the triple burden of malnutrition—undernutrition, micronutrient deficiencies and rising obesity. These challenges, particularly affecting women and children, have profound implications for productivity and long-term national development.

Aquatic foods are more than a source of nourishment—they are a gateway to better health, stronger communities and economic opportunity. Rich in high-quality proteins, omega-3 fatty acids and essential micronutrients, they support cognitive development and disease resistance. Promoting their use not only improves diets but also creates jobs and income along the fish value chain, especially for women and youths.

We commend the Government of the United Republic of Tanzania for its leadership in integrating culinary innovation with food systems development. This recipe book is a testament to what can be achieved when tradition, science and creativity come together in service of the public good. It is also a reminder that solutions to complex challenges like malnutrition can be found in our local ecosystems and cultural heritage.

The AfDB is proud to support this initiative and remains steadfast in its commitment to working with Tanzania, the SADC and all partners to build resilient food systems, promote sustainable livelihoods and improve the quality of life for all.



Alex M. Mubiru

Director General, Eastern Africa Regional Office
African Development Bank

Key message from the SADC

Despite the Southern African Development Community (SADC) being endowed with abundant fisheries and aquaculture resources, the region continues to face unacceptably high levels of food and nutritional insecurity. Stunting rates average over 25 percent in most member states, and iron deficiency among women of reproductive age is now recognized as a significant public health challenge. Approximately 18.6 million children in the SADC are stunted, accounting for nearly one-third of all stunted children in Africa. Moreover, the consumption of aquatic foods in many parts of the SADC region is low, with per capita fish consumption estimated at just 12 kg. This is particularly concerning given the critical role aquatic foods play in overall human health as a nutrient-dense and crucial source of high-quality proteins, omega-3 fatty acids and essential vitamins and minerals.

I am pleased to note that through PROFISHBLUE, the SADC is making significant strides toward achieving its health and nutrition agenda of creating healthy communities by improving access to safe and nutritious aquatic foods. The SADC firmly believes that a healthy population serves as a crucial catalyst for economic and social development. The project has demonstrated that, with effective awareness and advocacy, the region can stimulate an increase in the consumption of aquatic foods. Central to this effort is the development and dissemination of this recipe book for the United Republic of Tanzania, which will eventually be incorporated into the SADC's Regional Aquatic Foods Recipe Book.

The recipe book, which includes a variety of finfish (such as tilapia and sardines), octopus, shellfish and seaweed recipes, lays a strong foundation for food literacy. It will enhance knowledge and attitudes regarding aquatic foods and their contributions to nutrition and health. The recipes are based on locally available and affordable aquatic foods, making them beneficial for rural, peri-urban and urban communities alike. Increased consumption of aquatic foods is expected to reduce health inequities, improve the valorization of small and medium-sized fish processing and trade, and promote culinary tourism—another key component of the region's blue economy strategy. The SADC Secretariat will continue supporting the Government of the United Republic of Tanzania to disseminate this recipe book and integrate it into SADC's Regional Aquatic Foods Recipe Book.

I would like to express my sincere gratitude to the AfDB for funding the production of this recipe book through PROFISHBLUE. Additionally, I wish to thank WorldFish for providing technical support to the government in developing this important document, which aims to increase the consumption of aquatic foods in the United Republic of Tanzania and across the Southern African region.



Mr. Domingos Gove

Director of Food, Agriculture and Natural Resources
Southern African Development Community (SADC) Secretariat

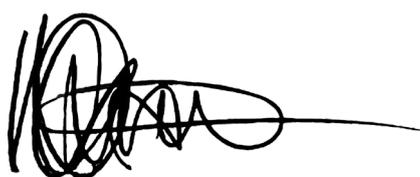
Foreword

The SADC region is endowed with abundant aquatic resources that can enhance food security, nutrition and economic growth. However, despite their availability, aquatic food consumption remains low because of limited awareness and diverse preparation methods. This recipe book, developed under PROFISHBLUE with support from the AfDB, seeks to promote greater consumption of nutrient-rich aquatic foods while preserving Tanzania's culinary heritage. Tanzania still faces high levels of hunger and malnutrition, with over 35 percent of children under 5 years old suffering from stunting and nearly 26 percent of the population living in poverty, despite the country's abundant aquatic resources. Limited dietary diversity and inadequate protein intake contribute to undernutrition, particularly among pregnant and lactating women and young children. Increasing aquatic food consumption offers a sustainable solution to improving nutrition and public health, particularly in the first 1000 days of life, when proper nourishment is critical for development.

This book, featuring traditional and innovative recipes using finfishes such as tilapia and sardines, octopus, shellfish, and seaweed, serves as a practical guide and a knowledge-sharing tool. It aims to promote better health, dietary diversity and market opportunities by inspiring households, chefs and food entrepreneurs to embrace a variety of aquatic food dishes. Aquatic foods provide essential nutrients vital for combatting malnutrition and food insecurity.

This initiative presents economic opportunities for small and medium enterprises (SMEs) in the food service industry that extend beyond nutrition. Restaurants and caterers can contribute to regional integration and trade within the SADC and the African Continental Free Trade Area (AfCFTA) by expanding their menus, diversifying businesses and increasing market connectivity.

This work results from the collaborative efforts between the SADC and WorldFish, alongside the Government of the United Republic of Tanzania, Aquatic BioSolutions Tanzania (ABiST) and other regional stakeholders. Their commitment to food security, nutrition and sustainable development has been instrumental in making this initiative a reality. We invite you to explore these recipes and embrace Tanzania's aquatic food heritage, advancing a healthier and more food-secure SADC region.



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Managing Director
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Preface

Aquatic foods have long been a cornerstone of diets in Tanzania and across the region, providing essential nutrients, economic opportunities and cultural significance. However, despite their availability, their consumption remains below optimal levels, largely because of limited awareness, preparation methods and dietary diversity. This Aquatic Foods Recipe Book Tanzania was developed to showcase the versatility, nutrition and sustainability of aquatic foods, making them more accessible and appealing to households, chefs and food entrepreneurs. Rich in high-quality proteins, omega-3 fatty acids, vitamins and minerals, aquatic foods play a critical role in combatting malnutrition, particularly among pregnant and lactating women as well as young children in their first 1000 days of life. With over 35 percent of Tanzanian children under 5 years of age experiencing stunting, promoting these nutrient-dense foods is vital for improving health outcomes and food security.

This book features 40 traditional and innovative recipes using finfishes such as tilapia and sardines, octopus, shellfish, and seaweed, offering practical ways to integrate aquatic foods into daily meals. By focusing on locally available ingredients and preparation techniques, it ensures cultural relevance while encouraging healthier eating habits. The book also serves as a tool to preserve and promote Tanzania's diverse culinary heritage while inspiring new ways to enjoy aquatic foods. Beyond nutrition, this initiative offers a pathway for SMEs in the food sector to expand their businesses. By incorporating diverse aquatic food dishes into their menus, restaurants, caterers and food entrepreneurs can tap into new markets, boost trade and drive economic growth. Additionally, the book facilitates cross-border culinary knowledge exchange, further strengthening regional integration and market connectivity within the SADC and the AfCFTA.

We extend our deepest gratitude to the SMEs, chefs and researchers who contributed their expertise and creativity to this recipe book. We hope it serves as both an inspiration and a practical guide, encouraging greater consumption of aquatic foods while celebrating Tanzania's rich culinary heritage.



Prof. Yunus Daud Mgaya

Chairman, Aquatic BioSolutions
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Introduction

The Southern African Development Community (SADC), in partnership with WorldFish, launched the Programme for Improving Fisheries Governance and Blue Economy Trade Corridors (PROFISHBLUE) to strengthen aquatic food production, consumption and trade. Funded by the African Development Bank (AfDB) and managed by the SADC Secretariat, the program includes Component 2.5 (Nutrition), implemented in Tanzania and Zambia to promote nutrient-rich aquatic food products and intraregional trade. In Tanzania, WorldFish collaborated with Aquatic BioSolutions Tanzania (ABiST) to support small and medium enterprises (SMEs) in enhancing food security, trade and market connectivity through the African Continental Free Trade Area (AfCFTA).

A key objective was to build the capacity of SMEs in aquatic food processing and trade by equipping them with business development tools, trade knowledge and value-addition skills to enhance market competitiveness and scale up production for national and regional markets.

As part of this effort, ABiST and WorldFish developed this recipe book to promote the consumption and culinary diversity of aquatic foods. It offers nutrient-dense and culturally relevant meal options, featuring both traditional and innovative recipes that use fish, such as tilapia, catfish, snappers, rabbitfish and sardines (*dagaa*), as well as other aquatic foods, like octopus, squid, shellfish (prawns and crabs) and seaweed. The recipes reflect Tanzanian culinary traditions while incorporating modern preparation techniques, making them accessible and appealing to households, chefs and food entrepreneurs alike.

This book serves three purposes:

1. Encourage dietary diversity and improved nutrition, particularly for young children and pregnant and lactating women.
2. Support SMEs by providing ideas to expand product offerings, diversify menus and explore new markets.
3. Enhance trade and regional integration by linking local SMEs to broader markets within the SADC and AfCFTA.

More than a culinary guide, this book is a tool for improving public health, strengthening economic livelihoods and preserving Tanzania's rich aquatic food heritage. Governments, stakeholders and consumers are encouraged to use this resource and share it widely to maximize its impact on nutrition, food security and sustainable development.

Units of measurement

For convenience, the units of measurement and their conversions used for the recipes in this book are found in Table 1. Likewise, local Swahili names and their English translations for fish and cuisines are given in Table 2.

Unit	Volume	Liquid (ml)	Liquid (g)
Cup	1 cup	240	240
Cup	½ cup	120	120
Spoon	1 tablespoon	15	15
Spoon	½ tablespoon	7.5	7.5
Spoon	1 teaspoon	5	5
Spoon	½ teaspoon	2.5	2.5

Note: These conversions are based on the standard that 1 ml of water equals 1 g because of water's density (<https://www.exploratorium.edu/food/measurements/>). However, while this 1:1 conversion holds true for water, the weight of other liquids may vary depending on their density.

Table 1. Units of measurement.

Glossary

Local/Common name	English name
<i>Ugali</i>	Stiff maize-meal
<i>Dagaa</i>	Sardines
<i>Bagia</i>	Deep-fried snack
<i>Kacholi</i>	Deep-fried Indian snack
<i>Chapati</i>	Indian flatbread
<i>Mchemsho</i>	A fish soup with potatoes or bananas or other ingredients
<i>Makange</i>	A tasty and healthy meal made from fish with vegetables and spices

Table 2. Local Swahili terms and their English translations for fish and other cuisines.

Aquatic foods as superfoods: Their dietary contribution and role in bridging nutrition gaps

Aquatic foods, which include fish, shellfish and seaweeds, are increasingly recognized as “superfoods” because of their dense nutrient profiles and significant health benefits. The global burden of malnutrition, encompassing undernutrition, micronutrient deficiencies and diet-related non-communicable diseases presents substantial public health challenges, particularly in low- and middle-income countries (LMICs). Aquatic foods provide high-quality proteins, omega-3 fatty acids and essential micronutrients, all of which are pivotal in addressing these dietary gaps. Their value is further emphasized by their rich nutritional profile, potential health benefits and relatively low environmental impact—especially as concerns about global food security and sustainable diets continue to grow. Consequently, aquatic foods are crucial for many coastal and island communities, as they provide food security, promote cultural practices and support sustainable diets.

Aquatic food products are a valuable source of functional ingredients that provide significant nutritional benefits to human health. Rich in high-quality proteins, aquatic foods contain all essential amino acids necessary for bodily functions. For instance, fish varieties such as mackerel and tuna offer about 20–25 g of protein per 100 g and have a lower saturated fat content compared to terrestrial meats. Shellfish also contribute significantly to dietary protein, which is essential for muscle and immune function.

Furthermore, aquatic foods are particularly noteworthy for their omega-3 fatty acids, especially from fatty fish such as mackerel and sardines. Omega-3s are crucial for brain and cardiovascular health, with a typical serving of mackerel delivering about 2.5 g of omega-3s—significantly more than plant-based sources. Aquatic foods also stand out for their bioavailable micronutrients. Fatty fish provide substantial vitamin D, which optimizes bone health and supports immune function. Seaweeds are exceptional sources of iodine, aiding metabolic regulation, while shellfish, such as octopus and squid, are rich in zinc and iron, helping combat anemia and enhance immune response. Finally, seaweeds are emerging as superfoods, offering a high fiber content, antioxidants and minerals while being low in calories. They are rich in essential nutrients and compounds like fucoidans, which are known for their anti-inflammatory properties.

The nutrients found in aquatic foods are vital in addressing nutritional gaps, particularly malnutrition, within various stratified populations, especially in LMICs. For instance, aquatic foods play a crucial role in combatting malnutrition in regions suffering from protein-energy malnutrition and micronutrient deficiencies. Small fish like *dagaa* offer a cost-effective solution by providing essential nutrients such as calcium and iron, as evidenced by studies conducted in Tanzania.

Moreover, aquatic foods support maternal and child health because of their high content of docosahexaenoic acid (DHA), an omega-3 fatty acid found in fish that significantly aids fetal brain development. Regular consumption of aquatic foods during pregnancy is linked to improved child health outcomes, underscoring their importance in fortifying diets among expectant mothers. In higher-income nations, aquatic foods also help address non-communicable diseases, where diets often high in processed foods can lead to obesity, diabetes and cardiovascular diseases. The omega-3 content and low caloric density of aquatic foods can mitigate these health issues. Furthermore, aquatic foods address nutritional deficiencies in vulnerable populations. For example, older adults can benefit from the anti-inflammatory effects of omega-3s, which may reduce the risk of conditions such as Alzheimer’s disease. Additionally, for food-insecure populations, aquatic foods provide a nutrient-dense alternative to staple crops. Despite their numerous benefits, the integration of aquatic foods into diets in many communities faces several challenges. First, sustainability issues, such as overfishing and habitat degradation, threaten the availability of wild species. Implementing sustainable aquaculture and fisheries management practices is essential for preserving these food sources.

Additionally, accessibility remains a challenge because economic and geographical barriers often limit access to aquatic foods in low-income and landlocked areas. Innovations such as the development of affordable, shelf-stable products can enhance accessibility. Moreover, aquatic foods raise public health concerns because of contaminants, which may dissuade consumption. Awareness campaigns are needed to educate consumers about the risks and benefits, particularly for vulnerable populations like pregnant women. Lastly, cultural preferences often lead to the underrepresentation of aquatic foods in diets, so culinary innovation and educational initiatives are necessary to change perceptions and increase consumption.

In summary, aquatic foods, with their remarkable nutritional profiles, have the potential to significantly enhance global health and nutrition. Their rich offerings of proteins, omega-3 fatty acids and essential micronutrients can help address dietary deficiencies and contribute to disease prevention across various populations. However, to fully realize the potential of these superfoods, it is crucial to address concerns related to sustainability, accessibility and safety. By incorporating aquatic foods into public health strategies and food systems, we can foster a healthier and more equitable future.

Food safety practices

Food safety in aquatic foods, like that of crop-based and other animal-sourced foods, is essential for ensuring the delivery of safe food products. Aquatic foods are highly nutritious, providing high-quality proteins, essential micronutrients and omega-3 fatty acids, all of which play a crucial role in addressing various forms of malnutrition. Therefore, the availability and consumption of safe aquatic foods should be an integral part of food diversification initiatives at both the community and household levels to promote healthier lives. It is important to recognize that food safety is the shared responsibility of all stakeholders in the fisheries and aquaculture value chains, including producers, harvesters, processors and traders, as well as consumers.

Food safety in aquatic foods is important for three key reasons. First, it is vital for public health, as it helps reduce health risks and improves the overall quality and safety of these products. Aquatic food items are highly perishable and, if not handled and processed correctly, can be susceptible to harmful bacteria and parasites that cause foodborne illnesses. Such illnesses can have severe consequences, particularly for vulnerable populations, including children and the elderly. By prioritizing food safety, we can significantly decrease public health costs by reducing the incidence of foodborne illnesses while also preventing nutritional loss and maintaining labor productivity.

Second, adhering to proper food safety practices helps reduce economic losses for businesses and households by minimizing food loss and waste. This reduction not only enhances human health through increased consumption of high-quality proteins, essential micronutrients and omega-3 fatty acids, but it also mitigates the economic and health impacts associated with foodborne illnesses. These illnesses can lead to significant medical expenses and trade-related costs, particularly in international markets, as they can introduce trade barriers. Furthermore, foodborne illnesses can adversely affect the reputation of enterprises, industries and countries, especially when products are linked to such illnesses through food traceability systems. By practicing proper food safety, consumers can access safe and high-quality aquatic foods.

Third, food safety contributes to enhancing consumer confidence, as consumers are more inclined to trust processors and traders who prioritize food safety in their operations. To reduce the risk of foodborne illnesses, processors, traders and consumers of aquatic foods should observe the following seven key practices:

1. **Maintain good hygiene** during storage, processing and consumption of aquatic foods. It is essential for processors, traders and households to ensure that processing facilities, equipment and cooking utensils are kept clean at all times. Additionally, individuals handling aquatic foods must prioritize their own cleanliness. Hands should always be washed before and after preparing and processing aquatic foods.
2. **Maintain proper temperature control** (through refrigeration and freezing) to prevent bacterial growth and ensure the quality of aquatic foods.
3. **Prevent cross-contamination** of aquatic foods by keeping raw and processed (including cooked) aquatic foods separate. This practice helps prevent the transfer of harmful pathogens.
4. **Cook food thoroughly** at appropriate temperatures to eliminate harmful pathogens. For this reason, the consumption of raw aquatic foods should be discouraged.
5. **Use clean water** when processing and cooking aquatic foods. It is equally important that aquatic foods are sourced from production facilities, whether from aquaculture or capture fisheries, that rely on high-quality water that is free from contaminants, including harmful chemicals such as mercury and pesticides resulting from environmental pollution. Addressing these contaminants typically requires a One Health approach to minimize and eliminate risks in the immediate environments of capture fisheries and aquaculture facilities. Otherwise, aquatic foods from these sources can pose food safety hazards because of pathogens and contaminants in their surroundings. The public is encouraged to purchase aquatic food products from sources that are free from toxins or contaminants. It is advisable to buy them from certificated or reputable sources, such as established supermarkets.

6. **Choose safer fish and seafood** to enhance food safety. It is generally recommended to select smaller fish (e.g. 100–300 g for tilapia) and to diversify seafood choices, as this approach helps avoid repeated exposure to contaminants from a single species.
7. **Use preparation techniques** that enhance food safety. Since many pathogens and contaminants tend to concentrate on surfaces such as skin and gills, as well as in internal organs (e.g. the digestive tract, kidneys, spleen and liver) and fatty tissue in shellfish, the following measures are recommended:
 - **Remove the skin and visible fat before cooking.** Trim fat and avoid soft green substances, such as mustard (yellowish-green organs), tomalley (the digestive gland of crustaceans) and the liver or hepatopancreas (serves as both liver and pancreas in crustaceans), as these organs tend to contain high levels of toxins. Additionally, discard cooking drippings.
 - **Use safe cooking methods.** Bake, broil, grill on a rack, steam for at least 2 minutes or boil the food (though boiling reduces harmful substances to a lesser extent).
 - **Avoid reusing cooking water.** Do not use cooking water for stocks or soups, and avoid frying or reusing oil.
 - **Marinate fish in acidic solutions.** Marinate fish for 20 minutes before cooking, and rinse thoroughly afterward.
 - **Maintain cleanliness.** Always wash hands, surfaces and utensils after handling raw aquatic foods to reduce toxins and prevent bacterial contamination.
 - **Stay informed and safe.** To prevent overexposure to contaminants, space out fish meals, particularly for sensitive groups such as pregnant women and young children.

Consumers of aquatic foods are encouraged to observe food safety practices when purchasing and preparing these products to prevent foodborne illnesses. Similarly, processors and traders of aquatic foods are urged to adhere to strict food safety and hygiene protocols to enhance consumer confidence and maintain a positive image of their products. Additionally, aquatic food processors are encouraged to source their products from clean environments.

The hygienic handling of aquatic foods from source (production or harvesting sites) to consumption in the proverbial “farm-to-fork” chain is crucial for delivering safe and nutritious products to consumers. Food safety significantly enhances the contribution of aquatic foods to food and nutrition security by ensuring that these products provide the necessary health benefits to individuals, households and communities. This, in turn, supports the attainment of the UN Sustainable Development Goals, particularly those that promote human development.

Overview

The nutritional benefits derived from a variety of aquatic foods have informed the preparation and development of the Aquatic Foods Recipe Book Tanzania. This book aims to provide comprehensive guidance on preparing dishes using locally available species such as fish, octopus, squid, crabs and various types of seaweeds. It includes aquatic food products sourced from both marine and freshwater species.

Although based on Tanzanian aquatic products, most of the recipes are similar to those from many African countries, especially the Western Indian Ocean region. The book encompasses recipes for finfishes (including *dagaa*), octopus, shellfish and seaweeds. Marine species featured include mackerel, *dagaa*, snapper, milkfish, rabbitfish, crabs, octopus, squid and prawns/shrimps, while freshwater species include cichlids, perch, catfish and *dagaa*. The seaweed species recommended for these recipes primarily consist of commercially farmed red seaweeds *Eucheuma denticulatum* (also known as *spinosum*) and *Kappaphycus alvarezii* (also known as *cottonii*).

Recipes in this book play a vital role in promoting human health by offering high-quality protein, essential fatty acids and a variety of micronutrients that support both physical and cognitive well-being. Incorporating fish, shellfish and seaweed into diets will not only benefit individual health, but also align with broader goals of sustainable food production. By preparing a diverse range of sourced aquatic foods, individuals in the SADC region and the world at large can enjoy their nutritional benefits while contributing to a more sustainable future. The fish and shellfish in these recipes are prepared in different forms, including fresh, barbecued, roasted, fried, grilled and are used in both soups and stews, while seaweed products are used in salads, juice and jelly. They are prepared using simple techniques to maintain natural flavors, making them an important cuisine for many communities.





Finfish-based recipes



F01. Fish Soup



“**Fish Soup**” is a dish made with fish that is easy to prepare and is enjoyed by people of all ages, particularly children. Fish soup (mchemsho) can be made with bananas and/or yams. This type of food is common in many parts of the country where fish is readily available.

Ingredients

- 3 pieces of fish, varying in size from 100 to 130 g
- 1 carrot
- 1 green pepper
- 3 round white potatoes
- 2 garlic cloves, minced
- 1 lemon
- 1 tablespoon ground ginger
- 1L water
- 2 red chilies
- 1 tablespoon Royco, fish masala or curry powder
- 1 teaspoon salt

Preparation

1. Wash the fish pieces well.
2. Peel the potatoes.
3. Wash all remaining ingredients.
4. Cut the carrots and green peppers into pieces of various sizes according to preference.
5. Mince the garlic cloves.
6. Place the fish into a cooking bowl.
7. Cut each potato in half.
8. Add the pieces of carrots and green pepper.
9. Then add all ingredients, except the lemon, masala and salt.
10. Put the cooking bowl on the stove, let the soup boil until the fish starts to soften and then add the masala and salt. Add salt to taste.
11. Stir the soup, then add the squeezed lemon.
12. Let the soup sit for 2 minutes, then add the red chilies whole (without cutting them into pieces).
13. Cover so that the soup retains the chili flavor.

Note: Serve with chapati or bread.

F02. Fish in Coconut Milk



“**Fish in Coconut Milk**” can be served hot with a side of rice or ugali.

Ingredients

- 1 kg of fresh fish (usually local varieties like tilapia or tuna)
- 2 cups coconut milk (or coconut cream for a richer taste)
- 2 medium onions, finely chopped
- 3 large tomatoes, chopped
- 4 garlic cloves, minced
- 1 tablespoon ginger, grated
- 2 tablespoons cooking oil (vegetable or coconut oil)
- 2 tablespoons lemon or lime juice
- 1 green pepper or chili (optional)
- Salt and pepper, to taste
- Water or fish stock
- Vegetables such as carrots, potatoes and spinach (optional)
- A handful of fresh coriander or parsley, chopped

Preparation

1. Clean and gut the fish. (If it is a big fish, cut it into chunks or fillets, according to preference.)
2. Heat the cooking oil in a large pot. Sauté the onions, garlic and ginger until fragrant.
3. Add the chopped tomatoes, and cook until they soften.
4. Add the fish pieces, and cook for a few minutes, allowing the fish to sear slightly.
5. Pour in the water or fish stock, and bring it to a boil.
6. Add the coconut milk, and continue to boil for 10–15 minutes, allowing the flavors to blend.
7. Add vegetables like carrots, potatoes or spinach (if desired), and cook until tender.
8. Season with salt, pepper and lime or lemon juice.
9. Garnish with fresh coriander or parsley.

Note: Serve with ugali, rice or cooked bananas.

F03. Fish Stew



“**Fish Stew**” is a delicious and easy-to-prepare dish that is eaten by people of all ages. It can be served alongside a variety of foods, such as rice, cooked bananas or stiff maize-meal porridge, commonly known as ugali. Fish stew is popular in many parts of the country where fish is readily available.

Ingredients

1 kg of fish fillets or whole cut fish pieces of any type (e.g. tilapia, snapper)

2 medium tomatoes

1 large onion

2 garlic cloves

1 teaspoon ginger

1 teaspoon turmeric powder

1 teaspoon curry powder

1 cup fish stock or water

2 tablespoons vegetable oil

Salt and pepper, to taste

Fresh coriander

Preparation

1. Heat the cooking oil in a large pot and sauté the onions until they are soft.
2. Add the garlic and ginger, and cook for one minute.
3. Stir in the tomatoes, turmeric and curry powder, and cook until the tomatoes become soft.
4. Add the fish fillets/pieces, and pour in the fish gravy or water.
5. Boil for 10–15 minutes until the fish is thoroughly cooked.
6. Add salt and pepper to taste.
7. Garnish with fresh coriander.

F04. Nile Perch in Okra Sauce



“**Nile Perch in Okra Sauce**” is a common dish in the lake zone and other parts of Tanzania. This recipe is prepared by cooking a Nile perch (commonly known as sangara) fillet mixed with okra, forming a flavorful stew-like meal from a blend of spices and other vegetables.

Ingredients

500 g Nile perch fillet
Vegetable oil
2 onions
1 eggplant
5 okra
3 tomatoes, diced
3 fresh green chilies
1 teaspoon paprika
1 teaspoon chili powder
½ cup fresh lemon juice
¼ cup lime juice
Salt, to taste
Fresh coriander

Preparation

1. Place the fish fillet into the vegetable oil, and cook until golden brown.
2. Sauté the onions and tomatoes for 2 minutes.
3. Cook the eggplant and okra for 2 minutes.
4. Add the lemon or lime juice.
5. Transfer the sauce to a pot.
6. Add all spices.
7. Boil for 10 minutes.
8. Add the fried fish.
9. Simmer for 20 minutes.
10. Add salt and pepper to taste.
11. Garnish with fresh coriander.

Note: Serve with rice, ugali or cooked bananas.

F05. Fish in Coconut Milk Stew



“**Fish in Coconut Milk Stew**” is a delightful dish enjoyed by people of all ages. It can be easily and quickly prepared and is often served with various accompaniments, such as ugali, rice or cooked bananas. This type of stew originates from coastal areas, where coconut is grown, but it has since been embraced in many parts of the country.

Ingredients

1 kg of fish fillets (any fish)
1 cup coconut milk
2 tomatoes
1 onion
1 garlic clove
1 teaspoon ground coriander
1 teaspoon turmeric
1 green chilli (optional)
Salt and pepper to taste
Fresh lime juice
Leaves of fresh vegetables
Cooking oil
Cilantro

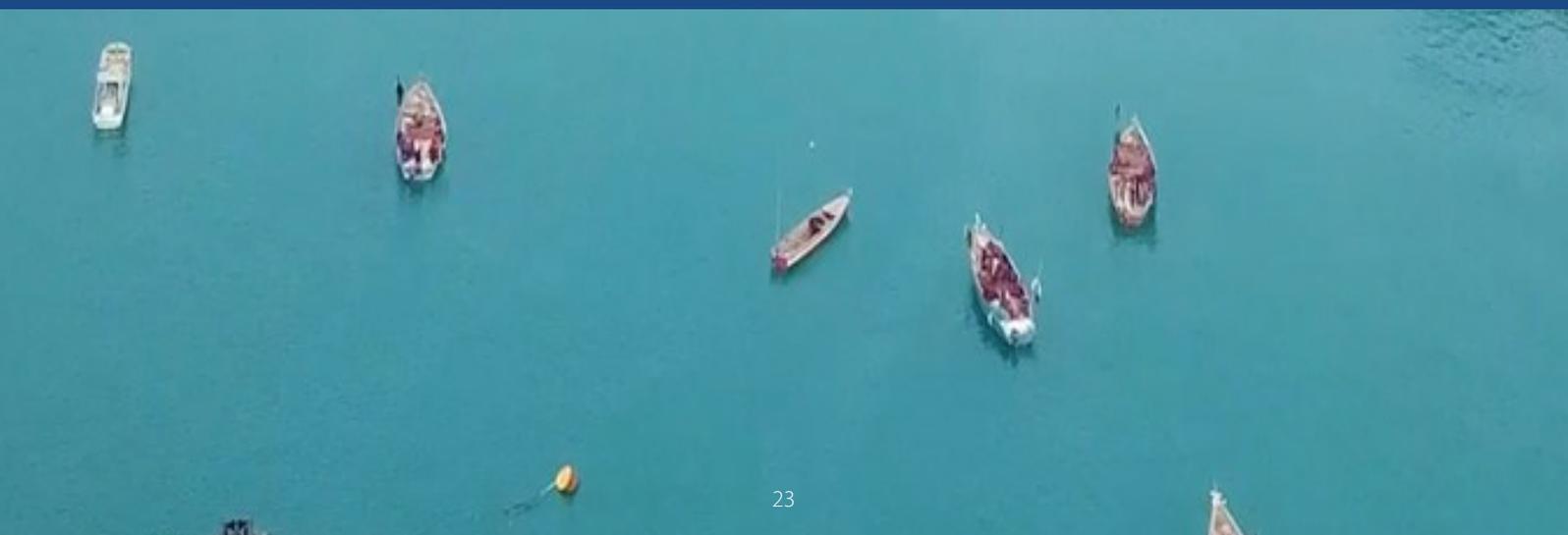
Preparation

1. Heat the cooking oil in a pot, and sauté the onion, garlic and chili until soft.
2. Add the chopped tomatoes, vegetable leaves and turmeric, and cook until the tomatoes are thoroughly softened.
3. Add the fish fillets and coconut milk to the pot.
4. Boil for 10–15 minutes or until the fish is cooked through.
5. Season with salt, pepper and fresh lime juice.
6. Garnish with cilantro.

Note: Serve with ugali, rice or cooked bananas.



The Tanzanian coastline is not only beautiful; it also serves as a vibrant hub for sustainable development, culture and ecology. It supports over 1000 fish species, 8000 species of invertebrates and several endangered species of marine turtles. Its coral reefs and mangroves act as natural buffers against coastal erosion and storm surges. Activities such as aquaculture, artisanal fisheries, shipping and coastal mining contribute to the national gross domestic product as well as food and nutrition security.



F06. Fish Coconut Curry



“**Fish Coconut Curry**” is a basic dish in which fish is cooked in a flavorful, creamy sauce made with coconut milk. The recipe typically originates from coastal areas with plenty of coconut plantations. Coconut is the key ingredient that gives the fish curry its rich and mild taste.

Ingredients

350 g of tilapia, Nile perch or catfish fillet, cubed

1 onion

2 tablespoons curry powder

½ teaspoon chili powder

1 teaspoon ground turmeric

½ teaspoon ground coriander

2 tablespoons ginger and garlic paste

6 plum tomatoes

2 cups coconut milk

1 tablespoon tamarind paste

1 handful coriander leaves, ground

2 tablespoons vegetable oil

Salt to taste

Preparation

1. Heat the vegetable oil in a pan for 5 minutes on medium heat.
2. Add the chopped onions, curry powder, chili powder, turmeric and ground coriander.
3. Cook on low heat for about 7 minutes until softened.
4. Stir in the ginger and garlic paste, and cook for 2 minutes.
5. Add the chopped tomatoes and cook for 5 minutes, stirring so they do not stick to the bottom of the pan.
6. Add the coconut milk, and boil for 30 minutes.
7. Stir in the tamarind paste, then add the fish pieces, making sure they are submerged in the sauce.
8. Simmer gently for about 5-10 minutes until the fish is cooked.

Note: Serve with ugali, rice or chapati.

F07. Fresh Fish in Banana Curry



“**Fresh Fish in Banana Curry**” is a delicious and traditional Tanzanian dish that is often enjoyed as a main meal.

Ingredients

250 g of fresh fish (tilapia or any local fish)
4–5 unripe bananas
1 large onion, chopped
2 garlic cloves, minced
1 ginger, minced
2 tomatoes, chopped
1 tablespoon cooking oil (e.g. coconut oil)
1–2 tablespoons curry powder (adjust to taste)
1 tablespoon turmeric powder
1 teaspoon cumin powder
1–2 cups coconut milk
2 tablespoons chopped coriander (optional)
Salt, to taste
Freshly ground black pepper

Preparation

1. Clean and cut the fresh fish into medium-sized pieces.
2. Season with salt, turmeric and black pepper and set aside.
3. Peel the bananas, using gloves to avoid staining your hands.
4. Cut the bananas into rounds or chunks.
5. Boil the banana pieces for about 10–15 minutes until they are tender. Drain and set aside.
6. Fry the chopped onion until soft and golden.
7. Add the garlic and ginger, and fry for another 2 minutes.
8. Add the chopped tomatoes, curry powder, cumin powder, turmeric and salt.
9. Cook until the tomatoes soften and release their juices.
10. Add the fish pieces to the pan, followed by the coconut milk.
11. Stir the mixture gently, ensuring that the curry sauce covers the fish.
12. Add the boiled bananas and stir to mix.
13. Cook for another 10–15 minutes until the curry sauce thickens.
14. Garnish with freshly chopped coriander (if desired).

F08. Fish in Mango Curry



“**Fish in Mango Curry**” is a sour, delicious and traditional Tanzanian dish that is often enjoyed by all age groups.

Ingredients

- 300 g whole fresh fish
- 1 medium unripe mango
- 2 tablespoons cooking oil
- 1 medium onion
- 2 garlic cloves
- 1 teaspoon ginger paste
- 1 teaspoon turmeric powder
- 1 teaspoon cumin powder
- 1 cup coconut milk
- Salt, to taste
- Fresh coriander leaves
- 1–2 green chillies (optional)

Preparation

1. Clean and cut the fish into pieces.
2. Rub the fish with salt and turmeric.
3. Lightly fry the fish and set aside.
4. Fry the onions briefly until they turn golden brown.
5. Add the garlic, ginger and green chillies, and cook for 1 minute.
6. Stir in the turmeric and cumin powder.
7. Cut the mango into slices, and cook for 2–3 minutes.
8. Pour in the coconut milk, and bring to boil.
9. Add the fried fish pieces to the curry.
10. Boil gently for 5–7 minutes until the fish is cooked and the mango softens.
11. Garnish with fresh coriander leaves.

Note: Serve hot with ugali, rice or chapati.

F09. Barbecued Fish



“**Barbecued Fish**” is a popular dish that can be found in households, as well as in many restaurants and hotels where fish is available. It is enjoyed by people of all ages and is typically served with a variety of accompaniments, such as ugali, cooked bananas and Irish potatoes.

Ingredients

- 1 whole fish (e.g. snapper or tilapia)
- 3 tablespoons olive oil
- 2 garlic cloves, minced
- 1 tablespoon soy sauce
- 1 teaspoon lemon juice
- Salt and pepper, to taste
- 1 cup coconut milk

Preparation

1. Clean the fish and make cuts along the sides.
2. In a bowl, mix the olive oil, minced garlic, soy sauce, lemon juice, salt and pepper. Marinate the fish in this mixture for 30 minutes.
3. Preheat the barbecue grill.
4. Place the marinated fish on the grill.
5. Flip and cook the fish over medium heat for 10–12 minutes on each side or until the flesh becomes moist and opaque.
6. Grill any accompanying vegetables or prepare a salad.

Note: Serve hot with ugali, rice or chapati.

F10. Grilled Fish in Coconut Milk



“**Grilled Fish in Coconut Milk**” is a delicious and nutritious dish that is high in protein, omega-3 fatty acids and healthy fats from the coconut milk, as well as vitamins, minerals and antioxidants. It can be served with rice, ugali, roasted bananas or steamed vegetables.

Ingredients

450-500 g whole fish
2 teaspoons fresh ginger
6 garlic cloves
1 red chili
300 ml (1 can) coconut milk
2 teaspoons tamarind paste
1 teaspoon medium curry powder
Salt, to taste
Cayenne pepper, to taste

Preparation

1. Gut the fish.
2. Remove all scales and clean the fish.
3. Cut a few long gashes down each side of the fish.
4. Grind the ginger, garlic, chili pepper and salt together until it forms a paste.
5. Rub the paste over the whole fish, including the stomach cavity and the gashes on each side.
6. Cover and let sit for an hour.
7. In a saucepan, stir the coconut milk, tamarind, curry powder, salt and cayenne pepper together.
8. Boil the sauce over low heat.
9. Place the fish on an outdoor grill or cook it in an oven or grill.
10. When the fish is half done, begin spooning the sauce over the fish.
11. Spoon more sauce onto the fish each time you turn it. Continue cooking until the color of the fish changes from translucent to opaque.

Note: Serve with rice, ugali, roasted bananas or steamed vegetables.

Ngalawa is a local traditional boat used by fishers when they go out into deep waters to catch diverse species of fish. Over 95 percent of fish production in Tanzania comes from artisanal fisheries, making them the backbone of rural communities. Around 200,000 Tanzanians work directly in the fisheries value chain, and 4.5 million rely on fisheries-related activities for income and nutrition.



F11. Grilled Fish Makange



“**Grilled Fish Makange**” is a tasty and healthy meal packed with protein, omega-3 fatty acids, vitamins, minerals and antioxidants. It can be enjoyed alongside rice, ugali, roasted bananas or potato chips.

Ingredients

350 - 400 g whole fish
1 tablespoon vegetable oil
1 tablespoon lemon or lime juice
½ teaspoon crushed garlic
1 teaspoon ground cinnamon
1 tablespoon crushed ginger
1 tablespoon tamarind paste
2 medium tomatoes, chopped
1 medium onion, chopped
1 green bell pepper, chopped
130 g fresh mixed vegetables, chopped
1 red chili, seeded and chopped (optional)
Lemon wedges
Salt, to taste

Preparation

1. Gut the fish.
2. Remove all scales and clean the fish.
3. Cut a few long gashes down each side of the fish.
4. Grind the ginger, garlic, chilli pepper and salt together until it forms a paste, then add the tamarind paste and lemon juice.
5. Divide the paste into two portions. Rub one portion over the whole fish, including the stomach cavity and the gashes on each side.
6. Cover the seasoned fish, and let it marinate for 1 hour.
7. In a saucepan, add 100 ml of water and the remaining portion of the paste from step 5. Stir and boil over low heat to form a sauce.
8. Heat 1 tablespoon of oil in a saucepan. Add the chopped vegetables and sauté for 3 minutes.
9. Place the fish on an outdoor grill, or cook it in an oven or under a grill.
10. When the fish is half done, begin spooning the sauce over it.
11. Spoon more sauce onto the fish every time you turn it. Continue cooking until the color of the fish changes from translucent to opaque.
12. Place the grilled fish on a plate, add the sautéed vegetable mixture and serve.

F12. Fried Fish



“**Fried Fish**” is a common dish found in households, as well as many restaurants and hotels. It is usually served with a variety of accompaniments, such as ugali, cooked bananas and Irish potatoes and is enjoyed by people of all ages.

Ingredients

- 1 whole fish (e.g. snapper or tilapia) or 250 g fish fillets
- 120 g seasoned flour
- 1 teaspoon paprika (sweet or bell pepper)
- 1 teaspoon garlic powder
- 1 teaspoon salt
- 2 teaspoon vegetable oil

Preparation

1. Gut the whole fish.
2. Remove scales and clean the whole fish.
3. In a bowl, mix the flour, paprika, garlic powder and salt.
4. Coat the fish (whole or fillets) with the seasoned flour.
5. Heat the vegetable oil in a pan.
6. Fry the fish (whole or fillets) for about 3–5 minutes on each side.
7. Flip the fish and continue frying until it is golden and crispy.
8. Dry the fried fish on paper towels, and serve with lemon wedges.

Note: Serve with rice, ugali, roasted bananas or steamed vegetables

F13. Fried Fish with Vegetables and Coconut Milk



“**Fried Fish with Vegetables and Coconut Milk**” is traditionally prepared using tilapia or a variety of other whole or filleted fish species in different parts of Africa. It is typically served with ugali, rice or chapati.

Ingredients

- 350 - 400 g whole fish
- 1 tablespoon vegetable oil
- 1 tablespoon lemon or lime juice
- ½ teaspoon crushed garlic
- 1 teaspoon ground cinnamon
- 1 tablespoon crushed ginger
- 1 tablespoon tamarind paste
- 2 medium tomatoes, chopped
- 1 medium onion, chopped
- 1 green bell pepper, chopped
- 130 g fresh mixed vegetables, chopped
- 1 red chili, seeded and chopped (optional)
- Lemon wedges
- Salt, to taste

Preparation

1. Melt the butter or margarine in a pan on medium heat.
2. Fry the onion, garlic and chili for 5–6 minutes, stirring frequently, until the onion is translucent and soft.
3. Boil the coconut milk and vegetables in a saucepan.
4. Reduce the heat and boil gently for a few minutes until the vegetables have wilted and the coconut milk has reduced a little.
5. Remove the mixture and set aside to cool slightly.
6. Place the mixture in a blender and blend for 30 seconds.
7. Add the blended mixture to the pan with the onion, garlic and chili.
8. Place the whole fish or fillets in a shallow bowl containing the lemon or lime juice.
9. Mix the fresh or powdered garlic, cinnamon, paprika, salt and black pepper and sprinkle over the fish.
10. Cover the fish loosely with clear plastic wrap.
11. Place the mixture in a cool place or refrigerator, and let it marinate for 2 hours.
12. Dip the fish portions in the seasoned flour.
13. Heat a little oil in a large frying pan.
14. Fry the fish until brown.
15. Place the fried fish on a plate, add the coconut milk mixture and serve.

Note: Serve with ugali, rice, and green, grilled or roasted bananas.

F14. Fish Foil Pack



“**Fish Foil Pack**” consists of a whole fish baked in aluminium foil with various seasonings and accompaniments.

Ingredients

300–400 g whole fish (e.g. tilapia, snapper, grouper or any other local fish)

1 tablespoon cooking oil

1 teaspoon spices

1 teaspoon fresh basil

1 tablespoon paprika

2 tablespoons lemon juice

2 courgettes

3 tomatoes

1 onion

2–3 garlic cloves

1 teaspoon paprika

1 tablespoon black pepper

Small handful of fresh parsley

Salt, to taste

Preparation

1. Ensure the fish is scaled, gutted and rinsed thoroughly.
2. Score the fish by making 3–4 shallow slits on both sides to help the marinade penetrate.
3. Combine the fresh basil, paprika, spices and lemon juice and stir until it forms a marinade.
4. Pat the fish dry with a kitchen paper towel, and marinate for about 10 minutes.
5. Combine the chopped vegetables, and season with the basil, paprika and spices.
6. Use a double layer of foil to prevent any spillage, and grease the foil to prevent the vegetables from sticking.
7. Place half of the vegetables in the foil, top them with a whole piece of fish, and then cover the fish with the remaining vegetables.
8. Fold the foil to cover the top. Ensure all edges are enclosed, but remember to fold the foil loosely to allow steam to build up when the fish bakes.
9. Place the foiled fish with vegetables on an oven tray.
10. Heat in an oven at 180°C for 30–40 minutes, depending on the size of the fish.

Note: Serve with ugali, rice, and green, grilled or roasted bananas.

F15. Boiled Fresh Fish in Mixed Vegetables



“**Boiled Fresh Fish in Mixed Vegetables**” is a common dish among Tanzanians that can be eaten with ugali, rice, green bananas, or chapati.

Ingredients

- 300 g whole fresh fish (tilapia or any local fish)
- 2 garlic cloves
- 1 ginger
- 1 onion
- 2 tomatoes
- 1 lemon
- 1 tablespoon mixed spices (cumin, coriander, turmeric and black pepper)
- 3 tablespoons cooking oil
- Salt, to taste

Preparation

1. Gut the fish.
2. Remove the scales and clean the fish.
3. Marinate with lemon juice, salt, black pepper, ginger and garlic for about 30 minutes.
4. Fry the chopped onions, ginger and garlic briefly in a pan until the sauce turns golden.
5. Add the tomatoes and spices, and cook until the sauce thickens.
6. Add the fish to the sauce, and cook for about 10–15 minutes on medium heat until the fish is tender and fully cooked.

Note: Serve the fish hot with the chapati or bananas.

F16. Fresh Fish with Mashed Sweet Potatoes



“**Fresh Fish with Mashed Sweet Potatoes**” is a delicious recipe.

Ingredients

- 300 g fresh fish fillet (tilapia or any other)
- 1 tablespoon olive oil
- 1 garlic clove
- 1 teaspoon lemon juice
- 2 medium sweet potatoes, cubed
- 1 tablespoon butter
- 2 tablespoons milk
- Salt and pepper, to taste
- Spices (optional)

Preparation

1. Boil water in a pot, add the sweet potato cubes and cook for about 10–12 minutes.
2. Drain the potatoes, and transfer them into a bowl.
3. Add the butter, milk, salt and spices (optional).
4. Mash the mixture until smooth.
5. Heat the olive oil in a skillet on medium heat.
6. Season the fish fillets with salt, pepper and garlic.
7. Place the fish in the skillet and cook for 3–4 minutes until the fish becomes opaque and flakes easily.
8. Squeeze the lemon juice over the cooked fish and garnish with spices.

Note: Serve on a bed of creamy mashed sweet potatoes, and add your choice of garnish or side dish, such as green beans or a light sauce.



Photo: The Tanzania Daily News

Fish processing in Tanzania is a vital component of the country's marine and freshwater aquatic food systems. Transforming raw fish into value-added products for both local and international markets plays a crucial role in nourishing communities. Furthermore, fish processing in Tanzania presents significant opportunities for innovation, investment and sustainable development.

F17. Fish Sausages



“**Fish Sausages**” are typically made from finely minced fish meat and seasonings, which are either stuffed into casings or shaped into fish cakes or patties. They are highly nutritious and rich in protein, omega-3 fatty acids, vitamins and minerals. Additionally, fish sausages contain lower amounts of saturated fats and calories compared to traditional sausages, leading to lower cholesterol levels. This type of aquatic food is particularly popular in East and Southeast Asia, as well as in Western cuisine. Although it is not a common food product in Tanzania, its popularity is growing, especially in urban areas. Fish sausages can be packed well and transported to areas where fish is not readily available, providing essential protein to those populations.

Ingredients

- 350 g fish fillets, skinned
- 4 teaspoons salt
- 1 medium size onion, chopped
- 1 teaspoon sugar
- 1 teaspoon vegetable oil
- 1 teaspoon freshly ground black pepper
- 1 teaspoon potato starch
- 20 sausage casings
- 2 tablespoons water

Preparation

1. Chop the fish fillets.
2. Grind the fish and salt together until the mixture reaches desired consistency in the bowl of a food processor.
3. Transfer the fish to a large bowl, and add the vegetable oil and onion.
4. Gently stir the mixture, using gloved hands or a spatula.
5. Add a small amount of cold water (no more than 60 ml) if the mixture does not mix well.
6. Add black pepper and sugar, and mix gently.
7. If using sausage casings, slide the casings onto the sausage horn of a meat grinder and fill until well packed. Then tie off, twist and continue filling.
8. Refrigerate or freeze the raw sausages or cook immediately.
9. Fry in a hot, dry pan for about 10–15 minutes until the sausages are thoroughly cooked and until the fat has rendered. You can also use other cooking methods such as baking, roasting and boiling.

Note: Serve hot with vegetables and either rice or potatoes.

F18. Fish Fingers



“**Fish Fingers**” are highly nutritious and high in protein, omega-3 fatty acids, vitamins and minerals. They are particularly popular among consumers who prefer the convenience of ready-to-eat foods that are affordable and have a mild taste. These qualities appeal to a broad audience, especially children. Although not commonly found in Tanzania and other African countries, fish fingers are increasingly being adopted, particularly in urban areas.

Ingredients

500 g fish fillets, cut into finger-sized pieces

1 cup breadcrumbs

1 cup flour (120 g)

2 eggs, beaten

Salt and pepper, to taste

Vegetable oil

Preparation

1. Season the fish with salt and pepper.
2. Coat the fish in flour, then dip it in the eggs and breadcrumbs.
3. Fry in hot oil for 3–4 minutes until golden and crispy.

Note: Serve with a dipping sauce.

F19. Fish Balls



“**Fish Balls**” are a popular choice in various cuisines. Although they are not commonly found in Tanzania and other African countries, their adoption is increasing, particularly in urban areas. They provide a convenient way to incorporate fish into the diet, especially for individuals who may not enjoy the texture or taste of whole fish.

Ingredients

500 g fish fillets, finely chopped

1 onion, finely chopped

1 garlic clove, minced

1 tablespoon soy sauce

1 egg

½ cup breadcrumbs

Salt and pepper, to taste

Vegetable oil

Preparation

1. Mince the fish fillets in a kitchen mincer.
2. In the bowl of a food processor, mix the fish and salt together until the mixture reaches the desired consistency.
3. Add the onion, garlic, soy sauce, egg, breadcrumbs, salt and pepper into the bowl, and continue mixing until a uniform consistency is reached.
4. Transfer the mixture to a large bowl, then add the vegetable oil and onion.
5. Gently mix together using gloved hands or spatula.
6. Add a small amount of cold water (no more than 60 ml) if the mixture does not mix well.
7. Add black pepper and sugar, and mix gently.
8. Shape the mixture into small balls.
9. Heat the oil in a pan and fry the fish balls until they are golden brown.

Note: Serve with sauce or enjoy as a snack.

F20. Fish Kebabs



“**Fish Kebabs**” are a delicious and healthy seafood, commonly prepared in East African coastal cuisines, including Tanzania and Kenya. They are grilled and often marinated with spices and lemon juice for additional flavor.

Ingredients

250 g fresh fish fillets, skinned
1 teaspoon garlic paste
1 teaspoon ginger paste
1 teaspoon paprika
1 teaspoon cumin powder
1 tablespoon lemon juice
2 tablespoons breadcrumbs (optional for binding)
1 egg (for binding)
Salt and pepper

Preparation

1. Chop the fish fillet into small cubes.
2. Mix the fish with the garlic, ginger, paprika, cumin, lemon juice, breadcrumbs (if used) and an egg.
3. Season with salt and pepper.
4. Chop the vegetables into small pieces, like the fish cubes.
5. Load the fish and veggies on skewers, alternating pieces of fish with the variety of veggies.
6. Heat the oil in a non-stick pan.
7. Cook the kebabs on medium heat for 3–5 minutes until they turn golden brown.
8. Alternatively, you may grill the kebabs.

Note: Serve with ugali, rice or potatoes.

F21. Dried Fish in Okra Sauce



“**Dried Fish in Okra Sauce**” is a dish prepared by using dried fish cooked with okra, typically in a soup or stew. This combination is common in many African cuisines, particularly in regions where dried fish is readily available.

Ingredients

- 1 piece of dried fish
- 2 cups okra
- 1 onion
- 1 tomato
- 2 garlic cloves
- 1 tablespoon vegetable oil
- 1 teaspoon turmeric powder
- 1 teaspoon ground ginger
- Salt, to taste
- Fresh chili (optional)

Preparation

1. Heat the vegetable oil in a large pan on medium heat.
2. Add the chopped onions and garlic.
3. Fry briefly until soft and fragrant.
4. Add the chopped tomato, turmeric and ginger.
5. Stir to combine, and cook until the tomato softens.
6. Stir in the dried fish pieces, and cook for about 5 minutes.
7. Add the chopped okra to make a stew.
8. Boil for 10–15 minutes or until the okra is tender.
9. Adjust seasoning with salt and chili (if desired).
10. Cook until the okra and the fish are well integrated.

Note: Serve hot with rice or ugali.

F22. Dried Fish in Eggplant Sauce



“**Dried Fish in Eggplant Sauce**” is a traditional dish in Tanzania, often prepared using local ingredients. It is a staple in many Tanzanian households, especially in coastal and lake regions where fish preservation is common. It is usually soaked to reduce saltiness and then cooked with eggplant, tomatoes, onions and spices.

Ingredients

200 g dried fish
4 medium eggplants
1 onion
1 tablespoon garlic paste
1 tablespoon ginger paste
2 medium tomatoes
½ teaspoon turmeric powder
1 teaspoon chili powder
1 teaspoon coriander powder
3 tablespoons cooking oil
Fresh coriander leaves
2 tablespoons ground peanuts, roasted
2 tablespoons coconut, grated
1 teaspoon turmeric powder
Salt, to taste

Preparation

1. Clean the fish, soak in water for 15 minutes and then drain.
2. Mix the roasted peanuts, grated coconut, a pinch of salt and turmeric powder in a bowl.
3. Cut the eggplants down the middle, stuff with the mixture and set aside.
4. Fry the fish for 2–3 minutes, and set aside.
5. Fry the chopped onion briefly until it turns golden brown.
6. Add the garlic and ginger paste, and fry briefly until the raw smell disappears.
7. Add the turmeric powder, chili powder, coriander powder and chopped tomatoes.
8. Cook until the oil separates.
9. Add the fried dried fish and cook for 3–4 minutes, stirring gently.
10. Add the stuffed eggplants to the pan, and gently coat them with the masala.
11. Boil on low heat for 10–15 minutes until the eggplants are soft and cooked.
12. Garnish with fresh coriander leaves.

Note: Serve hot with rice or ugali.

F23. Smoked Catfish with Green Bananas



“**Smoked Catfish with Green Bananas**” is a delicious dish that is popular in Tanzania’s banana-growing regions, including Kilimanjaro, Mbeya and Kagera.

Ingredients

- 1 whole smoked catfish (400–500 g)
- 3 unripe bananas, peeled
- 5 roasted and ground oyster nuts or 250 g roasted and ground peanuts
- 1 large onion, sliced
- 1 carrot, diced
- 1 tablespoon curry powder
- 1 tablespoon fish masala
- 2 tomatoes, chopped
- 1–2 tablespoons lemon juice
- 4 African eggplants
- Salt, to taste

Preparation

1. Clean the fish and cook for 15 minutes.
2. Prepare and mix the lemon juice, salt, carrot, onions, tomatoes and African eggplant.
3. Cook the mixture for 10 minutes.
4. Add the curry, fish masala, roasted ground oyster nuts (or roasted ground peanuts) and stir well for 2 minutes.
5. Add the fish to the mixture, cover and cook on low heat for 5 minutes.
6. Split each banana in half lengthwise, then cut horizontally to create 3–4 pieces.
7. Boil the bananas for 5 minutes.
8. Add the cooked bananas to the fish pot and boil for an additional 10–15 minutes, or until both the fish and bananas are cooked thoroughly.

Note: Serve with cooked green vegetables.



Dagaa (sardine) recipes



F24. Fried Dried *Dagaa*



Ingredients

300 g *dagaa*
2 green and 2 red tomatoes
2 onions
1 garlic clove
1 lemon / 10 ml vinegar
1 green pepper
1 carrot
Salt to taste
1 pepper
¼ tablespoon of coriander
¼ tablespoon of ginger powder or black pepper
3 tablespoons of cooking oil
200 g of Okra
200 g of African eggplants

Preparation

1. Clean the *dagaa* by removing the heads, stones and sand (if using fried sardines, skip this step).
2. Soak *dagaa* in warm water for 5 minutes.
3. Rinse the soaked *dagaa* with cold water.
4. Set the cleaned *dagaa* aside in a clean pot.
5. Prepare all the ingredients.
6. Fry the *dagaa* over low heat until crunchy.
7. Transfer them to a clean container to drain excess oil.
8. In a different pot, add oil and fry the onions for about 6 minutes.
9. Add green tomatoes, green pepper, carrots, okra, African eggplant and continue frying until tender.
10. Add tomatoes, *dagaa*, and salt, cover, and cook for 2 minutes.
11. Mix all the ingredients thoroughly.
12. Add lemon juice from 1 lemon or 10 ml of vinegar and mix well.

Note: The dish is ready to be served with either ugali or rice alongside some vegetables.

F25. Fried Dry Sardines in Coconut Milk



Ingredients

300 g *dagaa*
3 green tomatoes
2 onions
1 garlic clove
10 ml cooking oil
200 g okra
200 g African eggplant
1 lemon / 10 ml vinegar
1 green pepper
1 carrot
Salt, to taste
¼ tablespoon of coriander
¼ tablespoon of ginger powder or black pepper
250 ml coconut milk

Preparation

1. Remove the heads from the *dagaa* (if using fried *dagaa*, skip this step).
2. Clean the sardines to remove stones and sand.
3. Soak the *dagaa* in warm water for 5 minutes.
4. Rinse the soaked sardines with cold water.
5. Set the cleaned sardines aside in a clean pot.
6. Fry the sardines over low heat.
7. Transfer them to a clean container to dry excess oil.
8. In another pot, add oil and fry the onions for about 6 minutes.
9. Add green tomatoes, green pepper, and carrots, add 200 g of okra and 200 g African eggplant (optional) and keep frying until tender.
10. Add *dagaa* and salt, cover the pot, and cook for 2 minutes.
11. Mix all the ingredients thoroughly.
12. Add a piece of lemon or 10 ml vinegar and mix well.
13. Add the coconut milk, mix thoroughly, and boil for 5 minutes.

Note: The dish is ready to be served with either ugali or rice alongside some vegetables.

F26. Dried Sardines in Coconut Stew



Ingredients

200 g dry *dagaa*

1 cup coconut milk

1 medium onion, chopped

1 tomato, chopped

1 teaspoon garlic paste

1 teaspoon ginger paste

1 green chilli (optional)

1 teaspoon turmeric powder

1 tablespoon cooking oil

Salt, to taste

Fresh coriander leaves

Preparation

1. Rinse the *dagaa* thoroughly in warm water to remove dirt and excess salt.
2. Soak in warm water for 10 minutes to soften (if necessary).
3. Heat the cooking oil in a pan, and fry the onions briefly until they turn golden brown.
4. Cook the garlic, ginger and green chili for 1–2 minutes.
5. Cook the tomatoes and turmeric powder until the tomatoes become soft and form a thick sauce.
6. Add the rinsed *dagaa* to the pan and stir gently to coat with the sauce.
7. Pour in the coconut milk, stir and bring the mixture to a boil.
8. Cook for 8–10 minutes on low heat, allowing the flavors to blend.
9. Add salt to taste and garnish with fresh coriander leaves.



***Dagaa* (Sardines)**

Dagaa is the local name for sardines in Tanzania. They are consumed by many people, including those in rural areas, because of their availability and affordability. *Dagaa* are rich in omega-3 fatty acids, which are essential for heart, eye, skin and mental health. They also provide an excellent source of protein, which is crucial for muscle repair, immune function and energy production.

Dagaa are high in vitamins such as B12 and D, which support energy metabolism, nerve function and immune health. Additionally, they are also rich in calcium, phosphorus and selenium, all vital for bone health, cellular protection and antioxidant support.

F27. Fried Fresh *Dagaa*



Ingredients

200 g fresh *dagaa*

3 tablespoons of cooking oil

1 garlic clove

¼ tablespoon ginger powder

1 fresh pepper

½ tablespoon of black pepper

Salt, to taste

1 lemon or 10 ml vinegar

Preparation

1. Rinse the *dagaa* thoroughly in warm water to remove dirt and excess salt.
2. Clean the sardines by removing heads, stones, and sand.
3. Grind all the ingredients together.
4. Grind 1 garlic clove and 1 fresh pepper.
5. Mix ¼ tablespoon of ginger powder, salt and ½ tablespoon of black pepper.
6. Combine the ground ingredients with the *dagaa*, including the lemon.
7. Let the mixture sit for 15 minutes to allow the flavours meld.
8. Heat oil in a frying pan.
9. Add the mixture of *dagaa* and other ingredients to pan.
10. Fry this mixture over low heat until they turn golden brown.
11. Once cooked, transfer them to a clean container to drain excess oil.

Note: Serve with either ugali, rice or cooked bananas, accompanied by some vegetables.

F28. Grilled Fresh Sardines



Ingredients

500 g fresh *dagaa*

3 tomatoes

2 onions

1 garlic clove, minced

1 lemon or 10 ml vinegar

1 green pepper, sliced

1 carrot, grated or diced

Salt, to taste

1 whole pepper or additional pepper (as preferred)

¼ tablespoon coriander

¼ tablespoon ginger powder

½ tablespoon black pepper

Preparation

1. Clean the *dagaa* thoroughly in warm water to remove dirt and excess salt.
2. Place the *dagaa* in a pan.
3. Grind 1 garlic clove and fresh pepper together.
4. Dice onions and tomatoes.
5. Mix ¼ tablespoon of ginger powder, ¼ tablespoon of coriander, ½ tablespoon of black pepper and salt.
6. Mix the ground ingredients, diced tomatoes and onions, carrots, lemon or 10 ml vinegar and dry mixture with the *dagaa*.
7. Grill for about 5 to 10 minutes.

Note: Serve with either ugali, rice, cooked bananas, Irish potatoes, mashed Irish potatoes, or boiled potatoes, accompanied by some vegetables. Grilled sardines can also be eaten as they are.

F29. Boiled Fresh Sardines



Ingredients

500 g fresh raw *dagaa*
3 tomatoes, peeled
2 onions, sliced
Salt to taste
1 pepper (optional)
1 tablespoon of spices (optional)
2 lemons
1 lime
Cooking Oil

Preparation

1. Clean the *dagaa* to remove any stones and sand.
2. Add the tomatoes, onions, and spices and mix them with the *dagaa*.
3. Place the *dagaa* in a pan.
4. Add the spices or include them directly before boiling.
5. Boil for 1 hour for normal cooking, or for 1½ hours if you want them well done.
6. Add some cooking oil and cover the pan while waiting for the desired flavour and consistency.
7. Add lemon or lime, along with salt to taste.

Note: Serve with either ugali, rice, bananas, potato chips, mashed potatoes, or boiled potatoes, accompanied by some vegetables.

F30. Fried *Dagaa* with Lemon Juice



Ingredients

- 1 cup *dagaa*, dried
- 2 tablespoons cooking oil
- 1 onion, chopped
- 2 garlic cloves, chopped
- 1 tomato, chopped
- 1 teaspoon lemon juice
- 1 teaspoon paprika
- ½ teaspoon black pepper
- Salt, to taste
- 1 tablespoon chopped fresh parsley (optional)

Preparation

1. Rinse the *dagaa* thoroughly.
2. Soak in warm water for about 10 minutes to soften, then drain and set aside.
3. Fry the *dagaa* until golden brown and crispy. Remove and set aside.
4. Fry onion and garlic briefly until soft and fragrant.
5. Add the tomatoes and cook until they form a thick paste.
6. Stir in the paprika, black pepper and salt.
7. Add the lemon juice and mix well.
8. Add the fried *dagaa* to the lemon juice, and stir to coat evenly.
9. Garnish with any spice.

Note: Serve hot with rice or ugali.



Octopus recipes

Generally, octopus is low in fat and calories while being high in protein, making it an excellent food choice for those aiming to maintain a healthy weight or build lean muscle mass. The omega-3 fatty acids found in octopus have been shown to reduce inflammation and lower the risk of heart disease.

Additionally, omega-3 fatty acids boost immunity and support brain development in children.



F31. Octopus Soup



“**Octopus Soup**” is a nutritious and natural remedy for breastfeeding mothers experiencing low milk production. This soup can be enjoyed by people of all ages and genders. Although octopus is primarily eaten by people living in coastal communities in Tanzania and East Africa, it is increasingly being embraced by other communities. People in coastal communities believe that octopus soup improves libido in men.

Ingredients

1 kg octopus, softened or refrigerated

1 litre of water

Salt to taste

1 lime

Additional ingredients such as bell peppers, carrots, and others may be added if desired

Preparation

1. Remove the eyes and mouth parts.
2. Wash the softened or refrigerated octopus thoroughly to ensure it is completely clean.
3. Cut it into pieces and place them in a clean pot.
4. Add a moderate amount of salt and lime.
5. Pour enough water.
6. Place the pot on the stove and let it boil for half an hour.
7. Make sure the octopus is well-cooked.

Note: Serve hot with chapati or bread.

F32. Octopus in Coconut Milk Sauce



“**Octopus in Coconut Milk Sauce**” is a unique and flavorful dish with a rich, creamy texture and oceanic flavors. It is eaten in Tanzania and many coastal communities along the Indian Ocean and is increasingly being embraced by various other communities.

Ingredients

500 g octopus, softened or refrigerated
350 ml light coconut milk
350 ml heavy coconut milk
3 medium-sized tomatoes
1 medium-sized onion
2 garlic cloves (minced)
1 small piece of ginger (grated)
1 medium-sized carrot (sliced or diced)
1 medium-sized green pepper (sliced)
1 chilli (sliced)
Salt to taste
1 tablespoon Royco (optional)
5 lady fingers (okra)
1 tablespoon tomato paste
Juice from 1 lemon
Some water

Preparation

1. Rinse all ingredients thoroughly with clean water.
2. Chop the tomatoes, onion, green pepper, garlic cloves, and ginger, then add to a blender and blend well.
3. Chop the carrot into circular slices.
4. Rinse and clean octopus thoroughly.
5. Cut the octopus into pieces according to your preference.
6. Trim the ends of the okra, then cut them in half to yield 10 pieces.
7. Place the octopus pieces in a pot and let them boil without salt or water for 30 minutes.
8. When the octopus turns red/maroon, add some water and continue boiling until tender.
9. Once tender, add the tomato mixture to the pot.
10. Allow it to boil and then add salt to taste.
11. Add the carrot slices, okra, and tomato paste, then stir the mixture.
12. Incorporate preferred seasoning and stir again.
13. Add chilli, then pour in the light coconut milk and let it boil until the sauce slightly reduces, but do not stir further.
14. Pour in the heavy coconut milk until the sauce becomes thick, making sure not to stir.

Note: Serve with rice, ugali, or bread.

F33. Octopus Stew



“**Octopus Stew**” is a dish that is cooked over low heat. This stew is healthy because it is low in calories and rich in vitamins and minerals, including vitamins B5, C and K, and folate, calcium, magnesium, iron, and carbohydrates. Moreover, it is rich in healthy fats, including omega-3 fatty acids, which are beneficial for heart and brain health and have anti-inflammatory properties.

Ingredients

- 1 kg octopus, softened or refrigerated
- 120 ml cooking oil
- 1 teaspoon salt, to taste
- 1 teaspoon grated fresh ginger
- 1 teaspoon crushed garlic
- 1 tablespoon of spices (optional)

Preparation

1. Wash the softened or refrigerated octopus thoroughly, then cut it into pieces according to preference.
2. Add the ginger, garlic and spices (if desired) and salt to the octopus.
3. Let it marinate for half an hour to absorb the spices.
4. Place the octopus in a pot without any added water, then cover and place on the stove.
5. Cook over medium heat until it releases its own water and turns a maroon color.
6. Once cooked, pour out all the water and transfer the octopus to a bowl or plate, keeping only the octopus.
7. Add oil to a frying pan, and heat it for about 5 minutes.
8. Add the octopus to the pan and allow it to fry, turning it every 10 minutes until it changes color.

Note: Serve with rice, ugali or bread.

F34. Calamari



“**Calamari**” specifically refers to squid that has been prepared for cooking, typically sliced into rings or left as tentacles, while “squid” denotes the entire mollusk. Although calamari is commonly fried, it can also be grilled, braised or stuffed for various dishes.

Ingredients

500 g calamari rings
½ cup all-purpose flour
1½ teaspoon salt
1 teaspoon garlic powder
250 ml milk x 2
1 lemon wedges
2 cups cooking oil

Preparation

1. Cut the cleaned squid tubes into ¾-inch (1.9 cm) thick rings.
2. Soak the rings in milk for 3 hours.
3. In a medium bowl, combine ½ cup of milk with 1 teaspoon of table salt. Add the squid rings and toss to coat. Refrigerate for 30 minutes.
4. In another bowl, combine flour, salt, garlic powder and parsley flakes. Mix well and set aside.
5. Heat the cooking oil in a wok or deep pot until it reaches the appropriate frying temperature.
6. Remove the squid from the milk, and let excess liquid drain off. Dredge the calamari rings individually in the flour mixture, ensuring they are completely coated.
7. Carefully place the coated calamari rings into the hot oil, and fry for about 2 minutes or until they turn light brown.
8. Use a skimmer or strainer to remove the fried calamari from the oil. Allow any excess oil to drain off.
9. Transfer the fried calamari to a serving plate.
10. Serve with lemon wedges for added flavor.

Note: Share and enjoy as a starter or appetizer.



Shellfish recipes

Shellfish are low in calories while being rich in protein and omega-3 fatty acids, which are beneficial for heart health by managing cholesterol levels. They also provide high amounts of iron, zinc, magnesium and vitamin B12. Additionally, shellfish contain a significant amount of lean protein that is more easily digested compared to other protein sources. Consuming an adequate amount of protein supports muscle growth and repair and can help prolong lifespan. Aquatic food products that can be prepared from shellfish include prawn stew in coconut oil, fried prawns and steamed crab with garlic.

These dishes are primarily consumed by coastal communities in Southern African countries. The health benefits and recipes for shrimps/prawns are relatively similar, except for variations in the required ingredients.



F35. Shrimp/Prawn Stew in Coconut Milk



Ingredients

500 g peeled and deveined prawns, cleaned

120 ml coconut milk

1 tomato, chopped

1 onion, chopped

1 garlic clove, minced

1 teaspoon turmeric powder

1 teaspoon curry powder

1 tablespoon vegetable oil

Salt and pepper, to taste

Preparation

1. Heat the vegetable oil in a pot.
2. Add the onions, garlic and tomatoes to the hot oil and mix well.
3. Cook the mixture until it becomes soft.
4. Add the shrimps/prawns and coconut milk to the pot.
5. Boil for 5–7 minutes until the prawns are well cooked.
6. Season with salt and pepper.

Note: Serve the stew with ugali or rice.

F36. Fried Shrimp/Prawns



Ingredients

500 g peeled and deveined prawns, cleaned

120 g flour

1 teaspoon paprika

1 teaspoon garlic powder

Salt and pepper, to taste

Cooking oil

Preparation

1. Season the prawns with the paprika, garlic powder, salt and pepper.
2. Coat the seasoned prawns in flour.
3. Heat the cooking oil in a pan, and fry the prawns for 3–4 minutes until they are golden and crispy.
4. Drain the prawns.

Note: Serve with your choice of dipping sauce.

F37. Steamed Crab with Garlic



“**Steamed Crab with Garlic**” is not a very popular dish in Tanzanian cuisine, but are often prepared in tourist hotels and restaurants.

Ingredients

- 2 mud crabs
- 6 garlic cloves, chopped
- Small pieces of ginger, grated
- 2 green onions, chopped
- 2 tablespoons soy sauce
- 2 tablespoons cooking wine (optional)
- 2 tablespoons vegetable oil
- Salt and white pepper, to taste
- Cilantro/coriander
- Red chili, sliced (optional)

Preparation

1. Wash the crab thoroughly with clean water.
2. Marinate the crab.
3. Cut the crab in half using a sturdy knife.
4. Combine all the ingredients in a mixing container.
5. Mix the ingredients with the prepared crab.
6. Let the ingredients marinate for 15–20 minutes.
7. Prepare a large steamer with enough space for the crab.
8. Add water to the steamer and bring to a boil.
9. Steam the crab on the racks of the steamer and cover it.
10. Steam the crab for 12–15 minutes on high heat, depending on its size, until the shell turns orange. Be careful not to overcook, as this will harden the meat.
11. Serve and (if desired) garnish with cilantro/coriander and red chili.

Note: Enjoy your steamed crab with garlic.



Seaweed recipes

Seaweed is rich in antioxidants and beneficial nutrients, including iodine, tyrosine and vitamins A, C, E, and K, as well as minerals such as folate, zinc, sodium, calcium, and magnesium. Consuming seaweed-based food products can support heart and gut health while balancing blood sugar levels. Aquatic food products derived from seaweeds include seaweed flour, juice, salad and gels.

These food products are primarily eaten by coastal communities in Southern African countries. The health benefits of eating seaweed products are relatively similar, except for variations in the required ingredients.



F38 Seaweed Juice



Ingredients

Fresh seaweed, such as *Eucheuma* or *Kappaphycus* spp.

500 ml water

10 to 20 g sugar or honey (to taste)

10 to 15 ml lemon or lime juice

Preparation

1. Season the prawns with paprika, garlic powder, salt, and pepper.
2. Rinse the seaweed thoroughly under running water to remove any sands, debris, or salt.
3. Soak the seaweed in a large bowl filled with enough water to fully submerge it for six hours.
4. Add approximately 2 cups (240 ml) of fresh water and blend using a kitchen or commercial blender until you achieve a smooth, consistent mixture.
5. Pour the blended mixture through a strainer or cheesecloth into a clean jug or bowl to remove any solids.
6. Add a sweetener (sugar or honey) and, if desired some lemon or lime juice to enhance the flavour.
7. Refrigerate the seaweed juice and serve it cold, with ice if preferred

Note: Enjoy your seaweed juice with or without meals.

F39. Seaweed Salad



Ingredients

30 g fresh seaweed
3 tomatoes
1 onion, chopped
1 green pepper, chopped (optional)
1 carrot, chopped
1 cucumber, chopped
Salt, to taste
1 lemon (optional)

Preparation

1. Clean the seaweed to remove any sand and debris.
2. Cut the seaweed into small pieces.
3. Chop the tomatoes, onion, carrot, cucumber and green pepper (if desired) as you would for any ordinary salad.
4. Add the seaweed and mix it with the vegetables, adding salt to taste.
5. Combine the vegetables thoroughly.

Note: Enjoy your seaweed salad with ugali, rice or chapati.

F40. Dried Seaweed Salad



Ingredients

- 20 dried seaweed
- 3 tomatoes, chopped
- 1 onion, chopped
- 1 green pepper, chopped
- 1 carrot, chopped
- 1 cucumber, chopped
- Salt, to taste
- 1 lemon (optional)

Preparation

1. Soak the dried seaweed for up to 6 hours or until it is soft enough to be cut into small pieces.
2. Cut the seaweed into small pieces.
3. Chop the tomatoes, onion, green pepper, carrot and cucumber as you would for any ordinary salad.
4. Add the seaweed and mix it with the vegetables.
5. Add salt to taste.
6. Combine the vegetables thoroughly.

Note: Enjoy your seaweed salad with ugali, rice or chapati.

Preparation of common ingredients/condiments derived from aquatic food products

C1. Fish Flour



“Fish Flour” is typically made from dried and ground fish. It is highly nutritious, boasting a high protein content, omega-3 fatty acids and an abundance of vitamins and minerals. Fish flour can be used as a dietary supplement to enhance the nutritional profile of various foods, particularly in areas with limited access to protein sources, including fish protein. It is suitable for weaning children from the age of 6 months and older.

This type of aquatic food is particularly popular in East and Southeast Asia, as well as in Western cuisine. Although not a common food product in Tanzania, fish flour is increasingly being adopted, especially in community nutrition programs aimed at addressing protein deficiencies among children and vulnerable groups. It can be added to porridge or other staple foods to increase the protein content affordably.

Additionally, fish flour serves as an ingredient in animal feed for poultry and aquaculture.

Ingredients

Fresh whole fish (of any size) or thin fish fillets

Preparation

1. Clean and rinse the fish thoroughly using tap water.
2. For a large fish, remove the head, tail and bones, then cut the fish into small fillets.
3. Boil the fish in a large pot of water for about 10–15 minutes to cook thoroughly. You can also steam the fish to preserve more nutrients.
4. Preheat the oven to 70°C–80°C.
5. Dry the fish or thin fish fillets in the oven for 4–6 hours, or 6–12 hours for thicker fillets, until completely done.
6. Dehydrate the fish by arranging them in dehydrator trays at a temperature of 70°C–80°C for 6–12 hours until fish is completely dry.
7. You can also sun-dry the fish by placing it in a sunny, well-ventilated area for 2–5 days.
8. Ensure the fish is thoroughly dry, then cut it into smaller pieces and grind using a food processor or dedicated grinder until it turns into a fine powder.
9. Sift the ground fish through a fine mesh sieve to remove larger particles.
10. Store the fish flour in airtight containers or bags to keep it fresh.
11. Store it in a cool, dry place

C2. Seaweed Flour



“**Seaweed Flour**” serves as a versatile base ingredient in many dishes. It can also be used individually as a thickener, nutrient booster or binding agent in various recipes.

Ingredients

500 g seaweed, fresh or dried

Preparation

1. Clean the seaweed thoroughly using clean, safe running water to remove any sand, salt and debris.
2. If using dried seaweed, soak it in water for 6 hours.
3. Drain and dry the seaweed. You can use an oven preheated to 50°C–60°C, or sun-dry the seaweed by placing it on a rack in a sunny, well-ventilated area. This may take 2–3 days.
4. Once the seaweed is completely dried, break it into smaller pieces, if necessary, then grind it using a grinder or heavy-duty food processor until it becomes a fine powder.
5. Sift the ground seaweed through a fine sifter to remove any larger particles and achieve a consistent flour mixture.
6. Store the seaweed flour in an airtight container in a cool, dry place to preserve its freshness.

Note: Use as a versatile ingredient in many dishes.

C3. Fish Oil



“Fish Oil” is an excellent source of omega-3 fatty acids, which are known to support heart, eye and brain health. Additionally, fish oil can help manage rheumatoid arthritis and supports fetal brain development. Although obtaining omega-3s directly from fish is generally more beneficial, fish oil supplements offer a good alternative for individuals with limited fish consumption or those experiencing heart, eye and brain health issues. The production of fish oil is a new innovation in SADC countries and is particularly recommended for consumption by pregnant and nursing women.

Ingredients

Whole fish

Preparation

1. Hold a filleting knife just behind the gills of the fish for cutting.
2. Cut the head and tail from the fish.
3. Insert the tip of the knife into the vent (also known as the anus), which is the lower portion of the fish.
4. Tilt the fish at a 45-degree angle, with the front part facing away from you.
5. Look for a small opening near the tail on the underside.
6. Insert the knife about 1 inch into the vent.
7. Carefully slice down toward the neck of the fish, being careful not to cut too deeply, as this could rupture an organ, resulting in a messy and unpleasant situation.
8. Remove the entrails from inside the fish, using your fingers to grasp the intestines, stomach and other internal organs. Pull them out until the fish is left with only a hollow cavity.
9. Cut the fish into 1-inch (2.5 cm) chunks. Cutting the fish into smaller pieces will allow it to break down faster and release the oils inside them.
10. Place the chunks of fish into a larger bucket or plastic container that closes securely.
11. Put the bucket in the sun for 2 weeks to allow the tissues release the oil.
12. Place the container of fish in an area where people will not be disturbed by the smell. The fish in the container will start to liquefy as it breaks down and releases its oils.
13. Pour the liquid through a cheesecloth and into another clean container to remove any solid particles.
14. Pour the strained liquid into jars and cover them. Allow the jars to sit for 1 day so the fish oil separates.
15. Scoop the separated oil into a clean container. Once the fish tissues have separated, the oil will form a large glob on top of the water in the jars. Carefully dip a spoon into the jar and scoop the fish oil into another container.

Note: The prepared fish oil can be consumed together with solid foods such as bread.

C4. Seaweed Gel



“**Seaweed Gel**” serves as a versatile base ingredient in many dishes. It can also be used individually as a thickener, nutrient booster or binding agent in various recipes.

Ingredients

500 g seaweed, dried

2 cups sugar

Milk (optional)

Strainer

Preparation

1. Sort the seaweed to remove any debris and sand.
2. Wash the seaweed thoroughly using tap water.
3. Soak the seaweed in tap water for 6 hours until it becomes soft and resembles fresh seaweed. (If you are using fresh seaweed, soaking is not necessary to make seaweed gel.)
4. Remove the soaked seaweed, and place it in a clean pan.
5. Add water (or a mixture of water and milk) and bring to a boil, cooking the seaweed until it melts into a thick gel.
6. If the gel becomes too thick, add more water as necessary to achieve the desired consistency for filtering.
7. Strain the gel through a strainer.

Note: Enjoy your seaweed gel or add it to any food or beverage.

Conclusion

This recipe book was created during the implementation of PROFISHBLUE to enhance aquatic food production and consumption. It is anticipated that these recipes will play a crucial role in promoting human health by providing high-quality protein, essential fatty acids and a variety of micronutrients that support both physical and cognitive well-being. Additionally, the recipes featuring fish, shellfish and seaweed are expected to add value to the spectrum of aquatic products, thereby fostering the economic development of SMEs within the SADC region.

About AfDB

The African Development Bank (AfDB) is the group's parent organization. The agreement establishing the AfDB was adopted and opened for signature at a conference in Khartoum, Sudan, on August 4, 1963. This agreement entered into force on September 10, 1964, and the AfDB began effective operations on July 1, 1966. Its main role is to contribute to the economic and social progress of its regional member countries, both individually and collectively. As of December 31, 2023, the AfDB's authorized capital is subscribed to by 81 member countries made up of 54 independent African countries (regional members) and 27 non-African countries (non-regional members). The institution's resources come from ordinary and special resources. Ordinary resources comprise the subscribed shares of the authorized capital, a portion of which is subject to call in order to guarantee AfDB borrowing obligations; funds received in repayment of AfDB loans; funds raised through AfDB borrowings on international capital markets; income derived from AfDB loans; and other income received by the bank, such as income from other investments. Under Article 8 of the agreement establishing the AfDB, the bank is authorized to establish or be entrusted with administering and managing special funds that are consistent with its purposes and functions. In line with this provision, the African Development Fund was established with non-African states in 1972 and the Nigeria Trust Fund with the Nigerian government in 1976.

For more information, please visit www.afdb.org/en/about/mission-and-strategy

About SADC

The Southern African Development Community (SADC) is political and economic institution that provides a framework for regional integration in the region. The main objectives of the SADC are to achieve development, peace and security, and economic growth, alleviate poverty, enhance the standard and quality of life of the peoples of Southern Africa, and support the socially disadvantaged through regional integration, built on democratic principles and equitable and sustainable development. Headquartered in Gaborone, Botswana, the SADC is a subregional body of 16 Southern African countries: South Africa, Botswana, Lesotho, Swaziland, Namibia, Zambia, Zimbabwe, The Democratic Republic of the Congo (DRC), Angola, Malawi, Tanzania, Mozambique, Madagascar, Mauritius, Seychelles and Comoros.

For more information, please visit www.sadc.int

About WorldFish

WorldFish is a leading international research organization working to transform aquatic food systems to reduce hunger, malnutrition and poverty. It collaborates with international, regional and national partners to co-develop and deliver scientific innovations, evidence for policy, and knowledge to enable equitable and inclusive impact for millions who depend on fish for their livelihoods. As a member of CGIAR, WorldFish contributes to building a food- and nutrition-secure future and restoring natural resources. Headquartered in Penang, Malaysia, with country offices across Africa, Asia and the Pacific, WorldFish strives to create resilient and inclusive food systems for shared prosperity.

For more information, please visit www.worldfishcenter.org

About ABiST

Aquatic BioSolutions Tanzania (ABiST) is a non-profit, non-governmental organization dedicated to addressing the critical challenges of environmental degradation and the loss of aquatic biodiversity in Tanzania. It acts as a crucial bridge connecting the government, international organizations and local communities. The organization's core activities focus on strengthening aquatic research, raising public awareness and providing expert consultancy and training. ABiST aims to advance aquatic sciences and promote long-term environmental sustainability, which in turn protects vital ecosystems, improves public health and supports the livelihoods of the Tanzanian people.

For more information, please visit: <https://www.abist.or.tz>