



National Fisheries and Agricultural Policy 2019-2029

MINISTRY OF FISHERIES, MARINE RESOURCES AND AGRICULTURE OF
THE REPUBLIC OF MALDIVES

In cooperation with the Food and Agriculture Organization of the United
Nations



July 2019



LIST OF FIGURES

- Figure 1: Contribution of the fisheries and agriculture sectors to the GDP in Maldives, 2003 to 2017
- Figure 2: Fisheries catch per species in Maldives, 2005 to 2017
- Figure 3: Maldives fish exports volume by species, 2016 to 2018
- Figure 4: Evolution of fish catch rate in Maldives, 2005 to 2017
- Figure 5: Estimated national consumption of fisheries products in Maldives, 2014 to 2017
- Figure 6: Main crops traded in Male market, 2009 to 2017
- Figure 7: Population and tourists flows in Maldives, 2014 to 2017
- Figure 8: Consumer Price Index of food and non-alcoholic products in Maldives, 2005 to 2017

LIST OF TABLES

- Table 1: Share of the main sectors to the GDP in Maldives, 2013 to 2017
- Table 2: Registered fishers in Maldives, 2012 to 2017
- Table 3: Maldives fisheries exports value and share, 2006 to 2018
- Table 4: Estimated national consumption of fisheries products in Maldives, 2014 to 2017
- Table 5: Registered farmers in Maldives, in 2019
- Table 6: Maldives food imports value and share, 2006 to 2017
- Table 7: List of applicable laws to Maldives' fisheries and agricultural sectors
- Table 8: List of sustainable development goals

FOREWORD



Fisheries and Agriculture industry has been crucial for the livelihoods of Maldivians for generations, especially for those living in the rural communities. Both industries have been playing a vital role in developing our economy through ensuring food security and decreasing our dependency on imports. In order to reach new heights and to develop these sectors further, we need stronger policies that will create sustainably managed industries and contribute to socioeconomic growth, food security and sustainable management of natural resources.

To realise the broader vision for the sectors, it is important to have policy documents that drive coherent investment and development. The fisheries and agriculture national policy for the next 10-years has been prepared in this regard, with the generous support from the Food and Agriculture Organization (FAO). This document will act as the primary basis for guiding the formulation of future policies for the fisheries and agriculture sectors.

This policy document was prepared through a consultative process, and addresses all current issues pertaining to the fisheries and agricultural sectors as well as reflects on potential future challenges. This document was pivotal in the formulation of the new Strategic Action Plan (2019 – 2023) of the Ministry of Fisheries, Marine Resources and Agriculture.

FAO has been highly instrumental in the development efforts of the Fisheries and Agriculture sectors of the Maldives. I would like to express my gratitude to FAO for providing the technical assistance and for all the support FAO has provided in the past to strengthen the fisheries and agriculture sectors of the Maldives.

ACKNOWLEDGMENT

This document is the first National Fisheries and Agricultural Policy (NFAP) formulated by the Ministry of Fisheries, Marine Resources and Agriculture (MoFMA) of the Republic of Maldives. It is the result of extensive consultations conducted at various levels in order to ensure balanced representation and inclusion of relevant issues pertaining to each sector.

The policy framework presented here reflects a process of desk-top research, consultations and reviews facilitated by FAO, involving MoFMA staff and senior officials, other Ministries and agencies at national and sub-national level, private sector representatives, researchers and

policy makers as well as other development partners.

Thus, the author wishes to acknowledge the invaluable contribution of all the stakeholders consulted throughout the development of this national policy framework. In particular, the author would like to thank Her Excellency Minister Zaha Waheed for her support. In addition, a special note of thanks is extended to Mrs. Shafia Aminath for her guidance. Finally, sincere appreciation is provided towards Mr. Ismail Rasheed and Mrs. Shafiya Naeem for their great contributions.

Author: Malaika M. Musampa



EXECUTIVE SUMMARY

The fisheries and agriculture sectors play a vital role in the Republic of Maldives for various reasons.

On one hand, statistics show that on average fish consumption contributes to nearly 71% of the animal-source protein intake of the population's diet, that is the highest percent in the world (Bennett and al., 2018). This ranks the Republic of Maldives as the world first fish-dependent country.

On another hand, it appears that the steadily growth of the population, along with the continuous influx of tourists, attract a high demand for fish and agricultural products (FAO, 2012). In this regard, statistics show that the current population rose to 533,942 in 2019 with an expected growth rate of 23% for the next decade. Meanwhile, the tourism sector attracted 1,484,274 visitors in 2017, generating nearly 20% of the Maldives' GDP at current prices, which is the highest share of all sectors in the country (NBS, 2018).

Despite this growing internal demand for fish and agricultural products, it is worth noticing that the primary sector's own share of the GDP only reached 5.6% in 2017 (NBS, 2018). Furthermore, national records indicate that less than 10% of the national food requirement is met through domestic production and the country still remains 100% dependent on imports for staple food items such as flour, rice and sugar (FAO, 2012).

In view of such context, it has become crucial to better assess the challenges and opportunities pertaining to the fisheries and agriculture sectors in order to develop sound policies that will

effectively trigger greater benefits for all, namely fishers, farmers, consumers, and other industry stakeholders. (FAO, 2012).

Hence, this document endeavors to present Maldives' first national policy framework for the fisheries and agricultural sectors.

The first section exposes the background context, rationale, applicability, and scope of the policy framework. The second section presents the fundamental components of the policy, that is the mission, vision, values, guiding principles, focus areas and pillars. Then, the third section details the policy statements that shall lead the sustainable development of the Maldives' fisheries and agricultural sectors in the next ten years. Sections 4 and 5 focus on the institutional, legal and regulatory framework whereas section 6 discusses the implementation process. Lastly, section 7 addresses key factors to consider in order to ensure proper monitoring and evaluation of the policy enactment.

As it stands, the fisheries and agriculture sectors are likely to attract greater national attention in the upcoming years. This is because both sectors have a unique potential to alleviate poverty through greater economic empowerment, as well as to improve food security, the nutritional state and the overall health status of the population while significantly contributing to sustainable environmental management.

Therefore, it is hoped that this first national fisheries and agricultural policy framework will lead both sectors to deliver their promises of a better future for the Maldivian people.

1. INTRODUCTION

1.1. BACKGROUND CONTEXT

This NFAP was developed following recommendations made by various stakeholders in three separate documents.

Firstly, in its 2010-2025 Agricultural Development Master Plan, MoFMA stated that its main goals would henceforth be to: “1. reduce dependence on imports and improve national food security; 2. promote agriculture for economic diversification and poverty reduction; 3. improve national food security status by strengthening the agriculture sector; 4. strengthen value-chain in agriculture; and 5. ensure equitable access to support in agriculture.” What is more, it emphasized that: “The agriculture sector is envisioned to evolve as the third important driving force (pillar) in the economy after tourism and fishery in expanding livelihood options for the rural people, in enhancing employment and income opportunities, and in improving food security and nutritional status of the Maldivian people.”

Secondly, the 2018-2020 Country Programing Framework for Maldives later stipulated that: “The agriculture and fisheries sectors need(ed) to be analyzed for their contribution to the reduction of the double burden of malnutrition, micronutrient deficiencies and poor dietary consumption.” Furthermore, it mentioned that “it (was) necessary to assess the capacity of the agriculture sector to contribute to nutritional outcomes and rural incomes, despite its minimal share in the economy and marginal level of engagement by the rural population.”

Thirdly, the 2018 Project for the Formulation of a Master Plan for Sustainable Fisheries (MASPLAN) confirmed that: “Developing the fisheries sector is a priority for the Government of Maldives.”



1.2. RATIONALE

The Maldives is comprised of roughly 1,190 islands, out of which 188 are populated. In 2018, the national government reconfirmed its commitment towards the development of the fisheries and agriculture sectors by issuing and / or renewing 21-year leases for 15 uninhabited islands dedicated to commercial fisheries, 50 uninhabited islands for commercial agriculture and 8 additional uninhabited islands for both commercial fisheries and agriculture.

Recently, a thorough assessment of both sectors was conducted by all divisions of MoFMA during the National Development Plan exercise. The review resulted in the identification of numerous challenges for both sectors including, but not limited to, high dependency on imported inputs and goods, insufficient capacity-building opportunities and institutional support, lack of market access, inadequate transport system, as well as poor environmental management and insufficient food safety control.

More specifically, the primary sector in the Maldives face specific issues as described below (FAO, 2012).

For the fisheries sector, the major problems are:

- Lack of existing policies and regulations that could ensure sustainable fish catch management and biodiversity preservation, notably for the main live baits
- Inadequate air cargo and sea transportation which limits production and sale flows
- Decline of fish catches due to environmental and economic factors
- Poor branding, marketing and quality control of fishery resources which could eventually stimulate higher market prices, especially for tuna eco-friendly products, reef fisheries and salted dried tuna (commonly known as “Maldivefish”)
- Unfair competition in the labor force market, resulting from a growing influx of foreign cheap labor, mostly to the detriment of local women who are thought to account for one third of the national taskforce in the fisheries sector
- Unawareness of good aquaculture practices and high-value market products potential among local fishers and processors
- Insufficient development in the aquaculture sector, which induces lower production levels and prevents access to lucrative markets.



For the agricultural sector, the main challenges include:

- Inadequate communal land attribution system that is detrimental to sustainable use of fertile area (because farmers are awarded different plots each year with the aim of maximizing production without considering Good Agricultural Practices - GAP)
- Shortage of rural labor
- Low technical skills among farmers, as well as low capital and financial investment
- Insufficient access to extension services, especially in remote islands
 - Difficult access to financial credits, including microcredit, due to unsuitable terms and conditions set by financial institutions
 - Uncoordinated vital data collection, analysis and dissemination to all sector’ stakeholders
- Increased population density which competes with farm land use
- Ageing farmer population and lack of youth involvement which prompts more expatriates to make use of available farm lands
- Insufficient control of cheap and low-quality imported inputs
- Poor knowledge of the state of forest resources and their availability, except coconut and breadfruit
- Absence of policies and regulations for proper management of mangroves which are crucial for preserving forest ecosystems and production.

In addition to these issues, other cut-across challenges are relevant to both sectors.

For instance, climate change has negatively affected the sea and soil quality in numerous islands, prompting lower levels of water due to increased evaporation, higher sea temperatures, and most importantly, a rise in the infiltration of salted water in the ocean and fertile land areas.

What is more, Maldives' primary sector has historically been highly dependent to external markets, whether it be for exports (fisheries sector) or imports (agricultural sector). This has put a major strain to sustain national food security as well as to secure or enhance the livelihoods of local farmers or processors who are mainly women.

Notwithstanding the above-mentioned issues, it is evident that the fisheries and agriculture sectors could play a key role in fostering socioeconomic development, enhancing food security and promoting sustainable environmental management in the Maldives. Therefore, it is paramount to develop a comprehensive policy framework that can effectively address and, most importantly, overcome said challenges.

1.3. APPLICABILITY AND SCOPE

Maldives' first NFAP will span over a period of ten years, from 2019 till 2029.

The policy applies to the fisheries sector (i.e. oceanic fisheries, reef fisheries, aquaculture and post-harvest sub-sectors) as well as all crop and animal production systems encompassing the agriculture sector.

In addition, it targets all stakeholders involved in both sectors, at any stage of the value-chain, namely input provision, production, processing, transport, marketing, consumption as well as production and domestic waste management.

Furthermore, it also covers activities conducted by support organizations such as training centers, research institutes and financing institutions.

Finally, it extends to the various ministries and agencies equally addressing cross-cutting issues, such as economic development, social inclusion, health and environmental protection, to name a few.

1.4. OVERVIEW OF THE FISHERIES AND AGRICULTURE SECTORS

According to figure 1 and table 1, Maldives' fisheries and agriculture sectors have historically accounted for a relatively smaller share of the GDP (less than 6% combined) in comparison to other prominent sectors such as tourism (more than 20%).

Figure 1: Contribution of the fisheries and agriculture sectors to the GDP in Maldives, 2003 to 2017

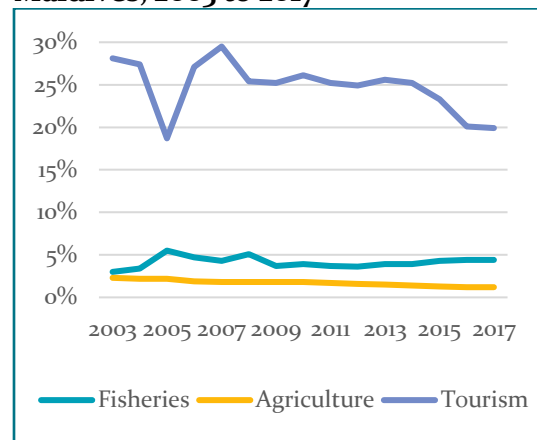


Table 1: Share of the main sectors to the GDP in Maldives, 2013 to 2017

	2013	2014	2015	2016	2017
Percentage of GDP, at current price					
Fisheries	3.9	3.9	4.3	4.4	4.4
Agriculture	1.5	1.4	1.3	1.2	1.2
Tourism	25.6	25.2	23.3	20.1	19.9
Primary	5.4	5.3	5.6	5.6	5.6
Secondary	8.1	8.4	10.7	11.9	12.8
Tertiary	75.6	75.4	72.3	69.3	67.4
Transfers (taxes less subsidies)	11.0	10.9	11.4	13.1	14.2
Total GDP	100	100	100	100	100

That being said, both sectors still play a key role in maintaining the socioeconomic viability of the country. Indeed, they greatly influence the trade balance bringing in valuable foreign currencies (mostly in the fisheries sector) while contributing to food security through subsistence farming.

Presently, there are 15 uninhabited islands solely leased for commercial fisheries and 8 additional uninhabited islands leased for both commercial agriculture and fisheries activities. In Maldives, the fisheries sector is subdivided into 4 main subsectors which are: oceanic fisheries, reef fisheries, aquaculture, post-harvest and value-addition. In 2017, table 2 shows that 17,589 fishers were officially registered (NBS, 2018).

Table 2: Registered fishers in Maldives, 2012 to 2017

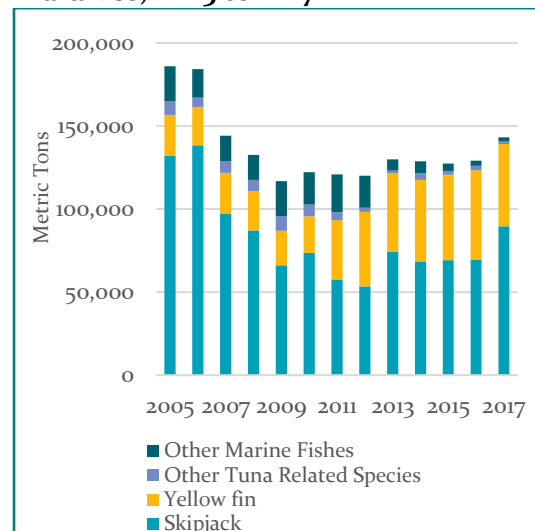
2012	2013	2014	2015	2016	2017
Number					
9,973	9,284	8,596	7,909	7,045	17,589

The number of registered fishers was much higher in 2017 than in previous

years because more efforts were put into registering them in said year.

Furthermore, figure 2 shows that skipjack and yellow fin tuna are the two dominant species being caught in the Maldives with the latter steadily increasing its share since 2011. The predominance of these two species presumes a lack of sector diversification which in turn prevents local fishers and processors from obtaining higher prices and accessing more lucrative markets for greater profit margins.

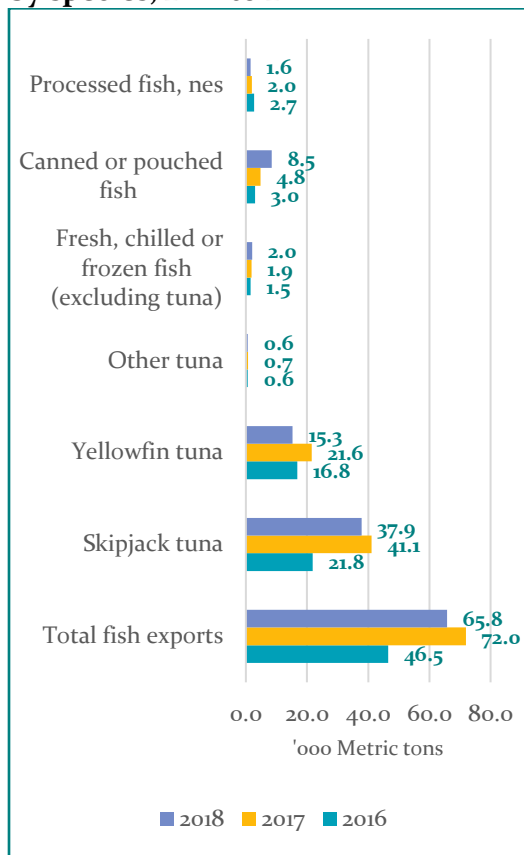
Figure 2: Fisheries catch per species in Maldives, 2005 to 2017



Among the unique characteristics defining Maldives' fisheries sector, it is also worth noting that two main catch techniques prevail among local fishers, that is: the pole-and line technique (sharing 76% of fish catch in 2017) and the handline technique (sharing 22% of fish catch in 2017). These fishing methods are internationally recognized as eco-friendly and could potentially attract higher sale prices for local fishers if proper branding and marketing strategies were to be put in place (FAO, 2012).

In general, it appears that local fishers and processors tend to target specific markets for their products. For instance, national statistics indicate that tuna fish (especially yellowfin tuna and skipjack tuna species) are largely sold in the national market whereas see cucumbers, groupers and various other specialty fisheries products are almost exclusively destined to export markets. Notwithstanding what precedes, it stands that large quantities of skipjack and yellowfin tuna are also exported (figure 3).

Figure 3: Maldives fish exports volume by species, 2016 to 2018



Maldives Customs Service' statistics also indicate that the fisheries sector accounted for nearly 96% of the country total merchandise export in value in 2018, that is about 2.7 billion of Maldivian rufiyaa (USD 229.2 million). In this

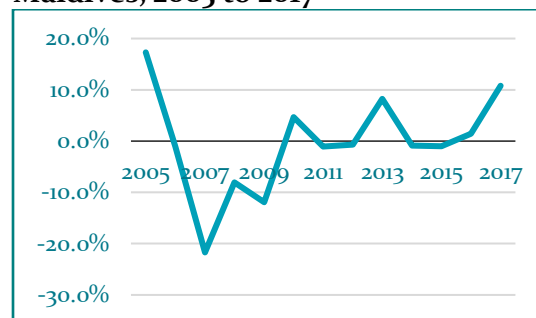
regard, table 3 shows that the fisheries sector's contribution to export volumes has always been high, which confirms its importance for the national economy.

Table 3: Maldives fisheries exports value and share, 2006 to 2018

Year	Total exports	Fisheries exports	Share
	MVR (Billions)		%
2006	1,736	1,692	97%
2007	1,385	1,357	98%
2008	1,617	1,592	98%
2009	981	947	97%
2010	950	903	95%
2011	1,770	1,709	97%
2012	2,483	2,428	98%
2013	2,559	2,506	98%
2014	2,228	2,170	97%
2015	2,215	2,152	97%
2016	2,146	2,106	98%
2017	3,067	2,993	98%
2018	2,797	2,695	96%

Amidst its capacity to attract foreign cash receipts, Maldives fisheries sector remains fragile in view of the overall fish catch rate which suffered significant fluctuations over the past decade. Figure 4 indicates that a significant decline of fish catches occurred in 2006, following a rise in fuel cost combined with a sudden fall of fish population caused by climate change-induced rise of sea temperature and a lack of sustainable catch practices among local fishers in previous years (FAO, 2012).

Figure 4: Evolution of fish catch rate in Maldives, 2005 to 2017



It is also worth noting that the estimated national consumption has steadily increased over the years, reaching a significant peak in 2016 due to an exceptional imported quantity of frozen skipjack tuna from Thailand (figure 5 and table 4).

Figure 5: Estimated national consumption of fisheries products in Maldives, 2014 to 2017

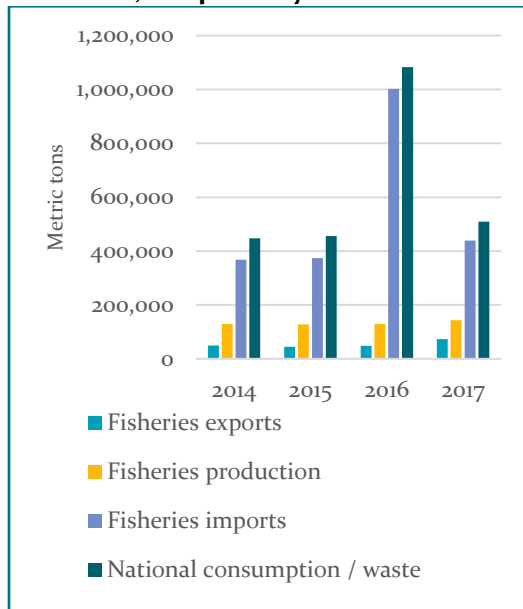


Table 4: Estimated national consumption of fisheries products in Maldives, 2014 to 2017

	2014	2015	2016	2017
'000 Metric tons				
Fisheries exports	49,6	45,0	48,6	72,6
Fisheries production	128,7	127,4	129,2	143,2
Fisheries imports	368,3	373,4	1,002	438,7
National consumption / waste	447,3	455,8	1,083	509,3

In the end, these statistics illustrate the fact that the Maldives fisheries sector is

vulnerable against both internal factors (i.e. climate change, infrastructures, management, rural labor, etc.) as well as external factors (i.e. imports).



In regard to Maldives' agriculture sector, there are currently 50 uninhabited islands solely leased for commercial agriculture while 8 additional uninhabited islands have been leased for both agriculture and fisheries. National records indicate that there are 4,000 hectares of arable land over a total of 30,000 hectares. However, only 573 hectares are being cultivated currently (FAO, 2012).

In addition, the farmers' registry indicates that 7,536 farmers are officially registered (table 5). They are mostly subsistence or smallholder farmers and live across 77 inhabited islands. Out of the grand total, a majority are female farmers (53%).

Table 5: Registered farmers in Maldives, in 2019

	Number	Share
Female	3992	53%
Male	3544	47%
Total	7536	100%
Hectare	573.16	

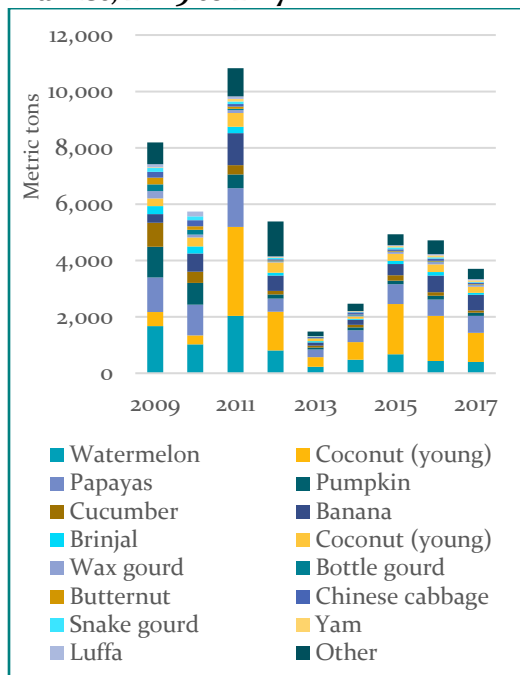
In terms of production, the main crops cultivated throughout the country are

papayas, bananas, watermelons as well as root crops (tuber, cassava, etc.), chilis, pumpkins and mangos. Also, southern atolls such as Laamu, Gaafu Dhaalu and Seenu specialize in taro production.

As for livestock production, poultry and goats are mostly reared across the country, albeit in relatively small scale.

More specifically, Figure 6 displays the estimated volume of the main agricultural crops sold at Male market, which is the national trading platform.

Figure 6: Main crops traded in Male market, 2009 to 2017



Based on the above-mentioned market data, it appears that throughout the past decade, the Maldives' agricultural sector has not been able to maintain a steady supply of products commonly consumed by locals and / or tourists. Indeed, the statistics included in table 6 prove that the country heavily relies on imports to meet the nutritional needs of its ever-growing resident and tourist population.

As such, the relative share of food items in the total value of imported merchandise remains rather high, that is up to 20% in 2017.

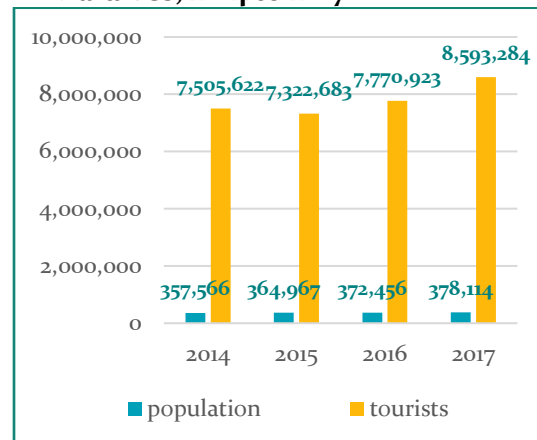
Table 6: Maldives food imports value and share, 2006 to 2017

Year	Total imports	Agriculture imports	Share
	MVR (Billions)		%
2006	11,860	1,912	16
2007	14,033	2,347	17
2008	17,760	2,847	16
2009	12,369	2,769	22
2010	14,017	3,155	23
2011	20,486	4,327	21
2012	23,885	5,101	21
2013	26,635	6,039	23
2014	30,649	6,502	21
2015	29,148	6,482	22
2016	32,706	6,911	21
2017	36,320	7,368	20

Note: Food imports include both agriculture and fisheries products.

Such level of dependency to imports of food products is a risk-factor that is likely to garner greater attention as Maldives' population and tourist growth rates expand (figure 7).

Figure 7: Population and tourists flows in Maldives, 2014 to 2017



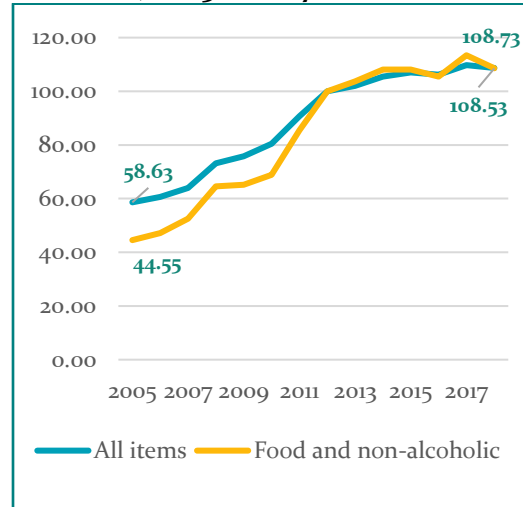
Finally, it is worth mentioning that the the consumer price index for food and non-alcoholic products has risen much

faster (+144%) than the equivalent measure for all items (+85%) comprising the consumer's basket (figure 8). This means that prices for fisheries and agricultural products have increased significantly more than the rest of the goods and services commonly purchased by Maldivians. It is likely that several factors have come to play a part in this rise. As it has been exposed in the previous paragraphs, these factors can be associated with higher fuel costs, a loss of productivity due to low investments in the fisheries and agricultural sectors, climate change-induced environmental hazards such as droughts and flooding, insufficient capacity-building and access to extension services as well as a heavy dependency towards imports.

Hence, this NFAP aims at addressing these challenges with sound policy statements that will successfully lead Maldives Ministry of Fisheries, Marine

Resources and Agriculture to engage all relevant stakeholders towards the sustainable development of both sectors, namely the fisheries and agriculture sectors.

Figure 8: Consumer Price Index of food and non-alcoholic products in Maldives, 2005 to 2017



Note: The base period is June 2012.



2. POLICY FRAMEWORK

The framework of this NFAP essentially consists of 7 core elements, namely:

a mission, a vision, values, guiding principles, focus areas, pillars and policy statements.

Maldives Ministry of Fisheries, Marine Resources and Agriculture (MoFMA)		
Mission		
<ul style="list-style-type: none"> To strengthen the fisheries sector in order to increase its competitiveness and sustainably manage all marine living resources in the maritime zones of the Maldives. To strengthen the agriculture sector through enhancing the capacities of crop and livestock producers and improving the value of agriculture produces through linking the farmers to market in order to achieve national food security and sustainable socio-economic development. 		
Vision		
To transform the fisheries and agriculture sectors into a sustainably managed and market-oriented system that contribute to socioeconomic growth, food security and sustainable management of natural resources.		
Values		
Beneficiary-oriented, technology-driven, evidence-based, efficient, fair and transparent to the public.		
Guiding Principles		
Food security and safety, socioeconomic development, harmonized compliance with international regulations, integrated data collection and analysis, market access, value-maximization of local resources, climate-smart approach, stakeholders' engagement, community development, human resources development, and gender equality.		
Focus Areas		
1. Sustainable Management of Natural Resources	2. Market Access and Economic Growth	3. Institutional Capacity-Building
Pillars		
1.1. Ecological Resilience (SDG 7,12,13,14)	2.1. Value-Chain Coordination (SDG 8,9)	3.1. Education, Research and Technology (SDG 4,9)
	2.2. Food Security and Nutrition (SDG 2,3)	3.2. Institutional Support (SDG 16)
	2.3. Community Empowerment (SDG 1,5,8,10,11)	3.3. National and Multisectoral Partnerships (SDG 16,17)
Policy Statements		

2.1. MISSION

- To strengthen the fisheries sector in order to increase its competitiveness and sustainably manage all marine living resources in the maritime zones of the Maldives.
- To strengthen the agriculture sector through enhancing the capacities of crop and livestock producers and improving the value of agriculture produces through linking the farmers to market in order to achieve national food security and sustainable socio-economic development.

2.2. VISION

To transform the fisheries and agriculture sectors into a sustainably managed and market-oriented system that contribute to socioeconomic growth, food security and sustainable management of natural resources.

2.3. VALUES

Henceforth, MoFMA commits to provide a service that is: beneficiary-oriented, technology-driven, evidence-based, efficient, fair and transparent to the public.

2.4. GUIDING PRINCIPLES

All policy statements, strategies and actions that will result from this policy framework are guided by the following principles: food security and safety, socioeconomic development, harmonized compliance with international regulations, integrated data collection and analysis, market access, value-maximization of local resources, climate-smart approach, stakeholders'

engagement, community development, human resources development, and gender equality.

2.5. FOCUS AREAS

This policy framework spans over a period of ten years and is the first of its kind to be developed by the Maldivian government. For that matter, the NFAP seeks to be comprehensive enough to address all current issues pertaining to the fisheries and agricultural sectors as well as to reflect on forthcoming challenges to concentrate on in the upcoming decade. Thus, following a wide consultation with stakeholders and an in-depth desk review, three focus areas have been selected: **1. sustainable management of natural resources, 2. market access and economic growth, 3. institutional capacity-building.**

2.6. PILLARS

It is worth mentioning that the pillars of this NFAP covers all SDGs. Therefore, it is intended to have a broad impact and effectively mobilize resources.

For each focus area, the following pillars have been identified:

Focus Area 1:

Pillar 1.1. Ecological Resilience (SDG 7,12,13,14)

Focus Area 2:

Pillar 2.1. Value-Chain Coordination (SDG 8,9)

Pillar 2.2. Food Security and Nutrition (SDG 2,3)

Pillar 2.3. Community Empowerment (SDG 1,5,8,10,11)

Focus Area 3:

Pillar 3.1. Education, Research and Technology (SDG 4,9)

Pillar 3.2. Institutional Support (SDG 16)

Pillar 3.3. National and Multisectoral Partnerships (SDG 16,17)



3. POLICY STATEMENTS

Based on the selected pillars, several objectives have been identified. The following policy statements derive from these objectives.

3.1. FOR THE FISHERIES SECTOR

Pillar 1.1. Ecological Resilience (SDG 7,12,13,14)

Objective 1.1.1. Ensure that stakeholders prioritize activities that are environmentally sustainable for all the fisheries sub-sectors, i.e. reef fisheries, oceanic fisheries, aquaculture, and post-harvest (processing).

1.1.1.A. Adopt ecological transport systems (fleets and vessels) with lower emission rate of greenhouse gases (GHGs), in order to reduce the environmental externalities associated with the distribution of fisheries commodities.

1.1.1.B. Adopt integrated production systems that maximize the value of resources, as well as infrastructures and equipment that rely on clean

energy, in order to improve the sustainable use of natural resources as well as productivity in the fisheries sector.

1.1.1.C. Adopt programs, tools and equipment that can contribute to biodiversity protection and effective control of fish species population and coral.

1.1.1.D. Ensure that ecologically friendly and resilient production cycles are adopted in all fisheries sub-sectors, in order to ensure sustainable waste management and promote value-addition.

Objective 1.1.2. Strengthen the management of reef fisheries.

1.1.2.A. Improve the system of collection and analysis of scientific and statistical data, in order to design appropriate reef fisheries management plans.

1.1.2.B. Enhance compliance with regulations targeting the reef fisheries sub-sector, including limits on the sizes of grouper exports and protection of grouper spawning areas.¹

1.1.2.C. Design or review existing reef fisheries management plans and ensure their proper implementation.

1.1.2.D. Strengthen the capacity of fishers, transporters and processors who take part in reef fisheries resource management.

Objective 1.1.3. Strengthen the management of oceanic fisheries.

1.1.3.A. Improve the existing Monitoring Control Surveillance (MCS) system, including the licensing of subsistence fishing and local market fleets, in order to ensure that marine resources are used sustainably and that

international best practices are adopted at all stages of the supply chain.

1.1.3.B. Strengthen MoFMA's monitoring capacity by establishing new cost-effective and innovative MCS systems, in order to ensure that international requirements are fulfilled at minimum cost for the industry, including control of heavy seasonal poaching in Maldives water.

1.1.3.C. Promote modern-day fisheries management principles and approaches among fishing communities in order to increase their knowledge and awareness of regulations related to proper marine resources use.

1.1.3.D. Reinforce sustainable use of bait fish and improve the implementation of the existing bait fish management plan.

Objective 1.1.4. Strengthen the development of the aquaculture.

1.1.4.A. Support the establishment of milkfish seed production facilities to provide bait in sufficient quantities, in order to support the sustainable growth of the aquaculture sub-sector.

1.1.4.B. Encourage the production of domestic fish feeds using by-products of local fish-processing activities, in order to support the sustainable development of the aquaculture sub-sector.

Pillar 2.1. Value-Chain Coordination (SDG 8,9)

Objective 2.1.1. Ensure that the competitiveness of the fisheries sector is promoted, improved and sustained in both domestic and foreign markets.

2.1.1.A. Strengthen the role of state-owned companies to effectively link-up fishers to the other value-chain stakeholders such as input providers and marketers in order to foster greater productivity and profitability.

2.1.1.B. Establish standards for technological equipment of on-board vessels in order to improve access to premium markets.

2.1.1.C. Support the establishment of small and medium-scale processing facilities throughout the country such that processing activities can be increased in local fishing communities in order to stimulate value-addition and generate alternative income sources.

2.1.1.D. Facilitate the establishment of a fish marketing system whereby all stakeholders can have access to information on prices and market opportunities.

2.1.1.E. Facilitate stakeholders' access to techniques, tools, equipment and infrastructures that can effectively and sustainably improve the production, post-harvesting and processing of fisheries species in order to generate greater value-addition.

2.1.1.F. Support the production, processing and marketing of species targeted for both primary and niche markets in order to drive greater employment opportunities and profitability in the fisheries sector.

Objective 2.1.2. Strengthen the technological capacities of stakeholders involved in tuna harvesting activities, in order to gain greater market access.

2.1.2.A. Promote and facilitate access to improved live-bait stocking systems in pole-and-line fishery.

2.1.2.B. Promote and facilitate the development or acquisition of new equipment and technologies, in order to increase the efficiency and sustainability of tuna harvesting activities.

Objective 2.1.3. Strengthen explorative activities that can lead to the diversification of the oceanic fisheries sub-sector.

2.1.3.A. Investigate, identify and facilitate the use of underdeveloped or unexploited fisheries resources, in order to secure diversification of food supply and increase foreign currency earnings.

2.1.3.B. Identify and / or facilitate the implementation of financial mechanisms that can effectively stimulate private investments for explorative oceanic fisheries activities.

Objective 2.1.4. Develop the technical and technological capacities of stakeholders involved in the aquaculture sub-sector.

2.1.4.A. Encourage the production of fingerlings through a government-owned central hatchery in order to stimulate subsidiary / supplementary activities for greater aquaculture production capacity.

2.1.4.B. Promote and facilitate access to applicable new technologies in order to foster the development of the aquaculture sub-sector.

2.1.4.C. Develop demonstration centers and programs aiming at

testing existing technologies, refining them to local conditions and showcasing them to the public in order to facilitate the implementation of new applicable technologies.

2.1.4.D. Facilitate the engagement of the private sector toward operating large-scale hatcheries, including mass seed production system and preparation of quality formula feed using local materials as well as toward providing extension services through centers for technical development, seed distribution and technical training.

2.1.4.E. Facilitate the dissemination of information and transfer of technology in the aquaculture sub-sector through technical training programs and demonstration centers.

Objective 2.1.5. Develop the marketing capacities of stakeholders involved in the aquaculture sub-sector.

2.1.5.A. Facilitate the implementation of financing instruments and credit facilities, targeting viable and bankable production, post-harvest, processing and product distribution models in order to foster the development of the aquaculture sub-sector.

2.1.5.B. Provide better market access for local products of the aquaculture sub-sector through relevant incentive programs and tools.

2.1.5.C. Facilitate foreign investments in order to stimulate the development of the aquaculture sub-sector.

Objective 2.1.6. Ensure that fish catches quality is improved in order to strengthen post-harvest and value-addition activities in the sector.

2.1.6.A. Promote and facilitate access to improved on-board handling techniques for tuna handline fishery in order to sustain post-harvesting activities.

2.1.6.B. Promote and facilitate access to technologies and techniques that aim at improving ice-making facilities in order to raise the quality of the catches.

Objective 2.1.7. Ensure that the value of the fisheries products is optimized in order to stimulate greater profit margins.

2.1.7.A. Facilitate access to inputs at affordable prices in order to sustain product quality throughout the fisheries sector.

2.1.7.B. Facilitate the establishment of a market-oriented pricing mechanism based on product quality in order to improve the branding and marketing of fisheries products targeted for processing and exports.

Pillar 2.2. Food Security and Nutrition (SDG 2,3)

Objective 2.2.1. Ensure that the fisheries sector significantly increases its contribution to food security and nutrition.

2.2.1.A. Facilitate the preparation and implementation of a national regulatory program for traceability, quality inspection and control systems, before and after harvest, as well as during transport, storage, processing, and export of all fisheries products.

2.2.1.B. Adopt initiatives aimed at raising awareness about the multiple health benefits associated with the consumption of fisheries products.

Pillar 2.3. Community Empowerment (SDG 1,5,8,10,11)

Objective 2.3.1. Ensure that relevant regulations, standards and programs are implemented, in order to enhance the livelihoods of fishing communities.

2.3.1.A. Adopt initiatives aimed at raising awareness about the opportunities that lie in the fisheries sector, notably in terms of job creation and income generation.

2.3.1.B. Facilitate the implementation of small and medium enterprises as well as their access to advisory services and financial support, including insurance, loan schemes and subsidies in order to enhance commercial activities in the fisheries sector.

2.3.1.C. Research, select and adopt technology-driven solutions that can effectively reduce the geographical constraints caused by nation-wide dispersed natural resources which tend to increase socioeconomic gaps in fishing communities.

2.3.1.D. Promote the inclusion of disadvantaged groups in fishing communities (i.e. women, youth, people living with disabilities) through sensitization, positive discrimination and measures facilitating accessibility in order to increase the participation and contribution of these groups of people in the fisheries sector.

2.3.1.E. Facilitate the implementation of a platform through which traditional and new science-based knowledge could be effectively transferred in order to attract and retain youth engagement in the fisheries sector.

2.3.1.F. Facilitate the implementation of mentoring and entrepreneurship programs that can effectively turn subsistence fishing and fishery production into profitable and sustainable ventures.

2.3.1.G. Facilitate the implementation of employment schemes in the fisheries sector, especially for target groups, including women, youth and people living with disabilities.

Pillar 3.1. Education, Research and Technology (SDG 4,9)

Objective 3.1.1. Ensure that challenges and opportunities pertaining to the reef and oceanic fisheries sub-sectors are effectively addressed through education, research and innovative projects.

3.1.1.A. Facilitate the implementation of activities and programs aimed at building capacities and anchoring best practices for fish production as well as for processing and marketing activities.

3.1.1.B. Facilitate the inclusion of fishing activities in the education system, right from childhood as well as the inclusion of training programs and job fairs in the curricular of primary, secondary and university students in order to raise awareness, knowledge and capacities of younger generations towards the fisheries sector.

3.1.1.C. Support research and innovation efforts made toward the value maximization of local species and facilitate the dissemination of the findings in order to raise national awareness about health benefits and / or lucrative market prospects for fisheries products.

Objective 3.1.2. Strengthen the management of the aquaculture sub-sector through education, research and innovative projects.

3.1.2.A. Mobilize resources for relevant marine scientific research to be conducted in order to improve the maintenance of marine ecosystems as well as the sustainable management and development of marine and fisheries resources.

3.1.2.B. Promote and monitor the conduct of marine scientific research by private and public parties, in territorial sea, in exclusive economic zones as well as on the continental shelf.

3.1.2.C. Support scientific research efforts, in order to expand knowledge of the marine environment and its resources.

3.1.2.D. Promote and monitor explorative activities that can lead to the diversification of the aquaculture sub-sector.

3.1.2.E. Establish a repository of marine scientific research activities and ecological survey results conducted in the Maldives in order to keep all stakeholders well informed of the actual state of the aquaculture sub-sector.

3.1.2.F. Establish, update and periodically publish a catalogue of living marine organisms in the Maldives in order to keep all

stakeholders well informed of the actual state of the aquaculture sub-sector.

3.1.2.G. Facilitate the incorporation of aquaculture-related subjects / modules into the formal education system in order to disseminate relevant knowledge and enhance technical extension service.

Pillar 3.2. Institutional Support (SDG 16)

Objective 3.2.1. Ensure that the capacity and the role played by MoFMA, as well as the other competent authorities, are strengthened in regard to coordinating and monitoring the activities of all stakeholders involved in the use and management of fisheries and marine resources.

3.2.1.A. Implement a development plan aimed at building the technical, managerial and technological capacities of personnel working for the Ministry in order to effectively tackle workforce shortage and low-staff retention.

3.2.1.B. Identify, promote and support opportunities aimed at strengthening the managerial, technical and technological capacities of affiliated centers, such as the Marine Research Centers.

3.2.1.C. Identify and facilitate access to technical and technological resources that can effectively strengthen the role of extension service officers at the grassroot level, especially in remote areas and for long-term needs specific to the aquaculture sub-sector.

3.2.1.D. Support the development of a legal framework and certification system that can enable the enforcement of national standards, in compliance with international regulations in the fisheries sector, which will help harmonize the quality of national products, improve sustainable use of natural resources as well as facilitate access to international markets.

3.2.1.E. Improve the implementation of a comprehensive licensing system that will allow the Ministry to keep track of fishing fleets as well as production and trade data in the fisheries sector.

3.2.1.F. Develop a legislative framework that is conducive to the development of the aquaculture sub-sector.

3.2.1.G. Plan aquaculture development in order to effectively address production needs as well as environmental and biosecurity challenges in the aquaculture sub-sector.

3.2.1.H. Establish certification mechanisms for aquaculture commodities in order to improve their marketing as well as profit margins.

3.2.1.I. Provide aquatic animal health services to stakeholders of the aquaculture sub-sector in order to sustain biosecurity and control the spread of aquatic diseases.

3.2.1.J. Facilitate the establishment of a training program which focus on fish and fishery products quality inspection in order to upgrade human resources capacity in the fisheries sector.

Objective 3.2.2. Enhance public service to fishers involved in oceanic fisheries activities.

3.2.2.A. Support to improve infrastructures, including fishers' marinas, fisheries harbors and ice banks in order to improve the contribution of extension officers in the oceanic fisheries sub-sector.

3.2.2.B. Facilitate access to fuel through incentive programs or other initiatives for fishers involved in the oceanic fisheries sub-sector in order to lower their transportation costs.

Pillar 3.3. National and Multisectoral Partnerships (SDG 16,17)

Objective 3.3.1. Ensure that meaningful partnership opportunities are fostered with various governmental institutions, private companies, non-profit organizations, and other countries.

3.3.1.A. Foster interactions with the other relevant ministries and agencies in order to increase national awareness on the challenges and opportunities that are specific to the fisheries sector.

3.3.1.B. Establish partnerships with relevant local and international parties in order to stimulate research on both aquaculture and marine ecosystems.

Objective 3.3.2. Ensure that institutional and legal frameworks are strengthened in order to sustain the development of the fisheries sector.

3.3.2.A. Develop national standards and regulations for quality assurance of fisheries products.

3.2. FOR THE AGRICULTURE SECTOR

Pillar 1.1. Ecological Resilience (SDG 7,12,13,14,15)

Objective 1.1.1. Ensure that stakeholders of the agriculture sector prioritize activities that are environmentally sustainable.

1.1.1.A. Promote and facilitate access to ecological transport and logistics systems with lower emission rate of greenhouse gases (GHGs) in order to reduce the environmental externalities associated with the distribution of agriculture commodities.

1.1.1.B. Promote and facilitate access to integrated production systems, agroecology-based principles as well as infrastructures and equipment that rely on clean energy in order to improve the sustainable use of natural resources as well as productivity in the agriculture sector.

1.1.1.C. Promote and facilitate access to programs, tools and equipment that can contribute to biodiversity protection as well as effective control of plants, beneficiary insects, including pollinators, and other animals.

1.1.1.D. Promote and facilitate access to technologies, tools and infrastructures that can sustainably increase access to clean water, including efficient irrigation systems.

1.1.1.E. Promote and facilitate access to technologies, tools and infrastructures that can mitigate the erosion of land in order to

sustain production activities in the agriculture sector.

1.1.1.F. Promote and facilitate the implementation of ecologically friendly and resilient production systems for farmers, such as on-site compost and biofertilizers production, in order to increase value-addition and improve sustainable waste management.

1.1.1.G. Promote and facilitate access to technologies, tools and equipment that can effectively manage climate change effects, including rise of temperatures, higher frequency of droughts and storms, sea water evaporation, excessive salted water infiltrating cultivable lands, deprivation of natural ecosystems and shortage of access to clean water for animal and plant species

Pillar 2.1. Value-Chain Coordination (SDG 8,9)

Objective 2.1.1. Ensure that the competitiveness of the agriculture sector is promoted, improved and sustained in both domestic and foreign markets.

2.1.1.A. Facilitate the sustainable use of local agricultural resources for the production of fertilizers, pesticides, animal feeds and other inputs when possible in order to effectively reduce the dependency on imports.

2.1.1.B. Strengthen the role of state-owned agencies mandated to effectively link-up farmers to other value-chain stakeholders, notably the State Trading Organization (STO), in order to foster higher profitability.

2.1.1.C. Facilitate the implementation of medium-scale

processing facilities throughout the country in order to diversify income sources, add value to produces, and reduce losses, especially during peak production periods.

2.1.1.D. Strengthen the entrepreneurial capacities of farmers, especially in regard to their management and commercial skills.

2.1.1.E. Support the production, processing and marketing of commodities targeted for both primary and niche markets in order to drive greater employment opportunities and profitability in the agriculture sector.

Pillar 2.2. Food Security and Nutrition (SDG 2,3)

Objective 2.2.1. Ensure that the agriculture sector significantly increase its contribution to food security and nutrition.

2.2.1.A. Facilitate the implementation of an origin-based and quality certification system that will focus on tracing local and imported produces in order to assert their quality, increase their appeal to consumers and contribute to improving the nutritional health of the population.

2.2.1.B. Foster the production and marketing of selected field crops in which the country has the potential to attain self-sufficiency (such as breadfruit, drumstick, taro, banana, watermelon, pumpkin, papaya and eggplant). and promote highly nutritious commodities (such as avocado,

nuts, etc.) to enhance nutritional status.

Pillar 2.3. Community Empowerment
(SDG 1,5,8,10,11)

Objective 2.3.1. Ensure that relevant regulations, standards, and programs are implemented in order to enhance the livelihoods of agriculture-dependent communities.

2.3.1.A. Promote social marketing and behavioral change communication channels that would aim at raising awareness about the benefits of agriculture in order to help enhance livelihoods and improve food security.

2.3.1.B. Foster initiatives that aim at promoting community farming activities, such as community gardens and household therapeutic farming, in order to positively impact the well-being, mental health and physical state of the population.

2.3.1.C. Facilitate access to advisory services and financial support, including insurances, loan schemes and subsidies, in order to encourage commercial activities in the agriculture sector.

2.3.1.D. Promote and facilitate access to technology-driven solutions (e.g., use of drones) in order to overcome the geographical constraints that lead to socioeconomic gaps among farming communities.

2.3.1.E. Promote the inclusion of disadvantaged groups in farming communities (i.e. women, youth, people living with disabilities) through sensitization, positive discrimination and measures

facilitating accessibility, in order to increase the participation and contribution of these groups of people in the agriculture sector.

2.3.1.F. Facilitate the implementation of a platform to attract and retain youth engagement in agriculture.

2.3.1.G. Promote and facilitate the adoption of regulations, techniques, tools and equipment aimed at harmonizing and effectively managing equitable land use.

2.3.1.H. Facilitate the implementation of innovative and income-diversification programs that can effectively turn farming production systems into more profitable and sustainable business ventures (e.g. agritourism).

2.3.1.I. Facilitate the implementation of entrepreneurship programs, internships, subsidized job placements, and other employment schemes in the agriculture sector, especially for target groups, including women, youth and people living with disabilities.

Pillar 3.1. Education, Research and Technology (SDG 4,9)

Objective 3.1.1. Ensure that challenges and opportunities pertaining to the agriculture sector are effectively addressed through research and innovative projects.

3.1.1.A. Facilitate the implementation of harmonized capacity development activities and programs aimed at anchoring best practices for crop and livestock production as well as for

processing and marketing activities.

3.1.1.B. Promote and facilitate access to techniques, tools, equipment and infrastructures that can effectively and sustainably improve the production, post-harvesting and processing of agricultural commodities in order to generate greater value-addition and profit margins.

3.1.1.C. Facilitate the inclusion of farming activities in the education system through training programs and job fairs in the curricular of primary, secondary and university students in order to raise awareness, knowledge and capacities of younger generations towards the agriculture sector.

3.1.1.D. Strengthen the capacities of new or existing laboratories, especially in adaptive and applied research, in order to stimulate the transfer of scientific knowledge to practical use in the agriculture sector.

3.1.1.E. Facilitate the establishment of partnerships between public, academia and private entities in order to promote higher quality research projects and create incentives to technology investments in the agriculture sector.

Pillar 3.2. Institutional support (SDG 16)

Objective 3.2.1. Ensure that the role played by the Ministry is strengthened in regard to coordinating and monitoring the activities of all stakeholders involved in the use and management of agricultural resources.

3.2.1.A. Facilitate the implementation of a development

plan aimed at building the technical, managerial and technological capacities of human resources working for the Ministry in order to effectively tackle workforce shortage and low-staff retention.

3.2.1.B. Identify, promote and support opportunities aimed at strengthening the managerial, technical and technological capacities of affiliated centers, such as the Agriculture Research Centers.

3.2.1.C. Enhance the presence of extension service at the grassroots level, especially in remote areas in order to promote and facilitate access to technical and technological resources for farmers.

3.2.1.D. Support the development of a legal framework and certification system that will lead to the establishment of national standards for product quality and sustainable use of natural resources, in compliance with international regulations.

3.2.1.E. Support the establishment of a comprehensive licensing system that will allow the Ministry to keep track of production and trade data in the agriculture sector.

3.2.1.F. Develop mitigation plans to constrain mass infections and outbreaks resulting from animal-borne diseases, pest infestations or food poisoning in order to ensure effective control of activities at all stages of the value-chains in the agriculture sector.

Pillar 3.3. National and multisectoral partnerships (SDG 16,17)

Objective 3.3.1. Ensure that partnership opportunities are fostered with relevant institutions in order to improve MoFMA’s capacity to access relevant data and mobilize resources.

3.3.1.A. Facilitate proper collection, aggregation, analysis and dissemination of reliable data in order to effectively mobilize resources toward long-lasting initiatives.

3.3.1.B. Foster interactions with other relevant ministries and agencies in order to increase national awareness on the challenges and opportunities that are specific to the agriculture sector.



4. INSTITUTIONAL FRAMEWORK

In order to achieve its policy objectives, MoFMA will work closely with various ministries, public agencies and international institutions including, but not limited to, the following ones: the Marine Research Center, the Southeast Asian Fisheries Development Center, NACA, ARCs, RGCs, Maldives Food and Drug Authority, the Ministry of Environment, the Ministry of Economic Development, the Local Government Authority (Parent body for all Island Councils), the Ministry of Finance, the Ministry of Foreign Affairs, the Republic of Maldives Customs Service, Food and Agriculture Organization, United Nations

Development Program, Consultative Group of International Agriculture Research, Bank of Maldives Development Banking Cell, Asian Development Bank, World Bank, International Fund for Agriculture Development, and Japan International Cooperation Agency, as well as the other country partners. It is expected that MoFMA will strive to coordinate its efforts with these partners to conceive development plans, to mobilize resources as well as to put in place programs that can effectively address cut-across issues such as gender inclusion, environmental protection and livelihood enhancement.

5. LEGAL AND REGULATORY FRAMEWORK

It is essential that the present policy be in accordance with national and international regulations affecting its implementation. For that matter, a detailed list of applicable national laws is provided below, notwithstanding the fact that it remains non-exhaustive.

Table 7: List of applicable laws to Maldives’ fisheries and agricultural sectors

Applicable Laws
Fisheries Law (*currently under review)
Plan Protection Law
Uninhabited Islands Management Law
Small and Medium Enterprises Law
Cooperatives Law
Agriculture Bill (*draft, to be submitted during next Parliament session, after May 2019)
Pesticides Bill (*draft, to be submitted during next Parliament session, after May 2019)
Animal Health Bill (*draft, to be submitted during next Parliament session, after May 2019)

6. IMPLEMENTATION

MoFMA is the national body who has the authority to develop and implement strategies and actions that will derive from the NFAP. In that regard, detailed strategic action plans which could span over a period of ten years should be the next step in order to enact this policy. Moreover, core elements of the strategic action plans should use SMART (Specific, Measurable, Achievable, Relevant and Time-bound) approach and show the expected results indicating key resources, impact, outcome and output activities to be carried out.

7. MONITORING AND EVALUATION

The monitoring and evaluation of the NFAP implies that indicators be properly set in order to ensure that the implemented activities ultimately meet the policy objectives. Hence, there is a need to identify a team of personnel who will be dedicated to collecting, compiling and analyzing relevant data sourced from collaborating ministries, agencies or institutions. In addition, they should closely monitor and ensure that the link between the SDGs and selected strategic goals and actions be effective.

Table 8: List of sustainable development goals

SDGs
1. No poverty.
2. Zero hunger.
3. Good health and well-being.
4. Quality education.
5. Gender equality.
6. Clean water and sanitation.
7. Affordable and clean energy.
8. Decent work and economic growth.
9. Industry innovation and infrastructure.
10. Reduced inequality.
11. Sustainable cities and communities.
12. Responsible production and consumption.
13. Climate action.
14. Life below water.
15. Life on land.
16. Peace, justice and strong institutions.
17. Partnerships for the goals.

8. KEY REFERENCES

Bennett Abigail, Pawan Patil, Kristin Kleisner, Doug Rader, John Virdin, and Xavier Basurto (2018), Contribution of Fisheries to Food and Nutrition Security: Current Knowledge, Policy and Research.

Food and Agriculture Organization - FAO (2012), Maldives Country Programming Framework 2013 - 2017.

Maldives Customs Service - CS (2019), Statistics 2006 - 2019. www.customs.gov.mv

National Bureau of Statistics - NBS (2018), Statistical Yearbook of Maldives 2004 - 2018. www.statisticsmaldives.gov.mv.