Food and Agriculture Organization of the United Nations

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وزارة البيئة والمياه والزراعة
Ministry of Environment Water & Agriculture

Situation analysis report on agricultural cooperatives in the Kingdom of Saudi Arabia

COP/051/2022/3

Strengthening MoEWA's Capacity to implement its Sustainable Rural Agricultural Development Programme (2019-2025) (UTF/SAU/051/SAU)

Food and Agriculture Organization of the United Nations

Riyadh, Kingdom of Saudi Arabia

Disclaimer

This report was prepared with funding from the Government of the Kingdom of Saudi Arabia and approved within the framework of the FAO-Saudi Technical Cooperation Program for Sustainable Rural Agricultural Development (SRAD) Program within NTP and Saudi Vision 2030. The views expressed in this report do not necessarily reflect the views of the Government of the Kingdom of Saudi Arabia.

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Abbreviation and Acronyms

ADF	Agricultural Development Fund
BoD	Board of Directors
CCCI	Council of Chambers of Commerce and Industry
CEI	Cooperative Economy Index
COPAC	Committee for the Promotion and Advancement of Cooperatives
CSC	Cooperative Societies' Council
FAO	Food and Agriculture Organization of the United Nations
FGD	Focus Group Discussion
GA	General Assembly
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
ICA	International Cooperative Alliance
ILO	International Labour Organization
KII	Key Informant Interview
KSA	Kingdom of Saudi Arabia
MoCI	Ministry of Commerce and Industry
MoEWA	Ministry of Environment, Water, and Agriculture
MoHRSD	Ministry of Human Resource and Social Development
MoMRA	Ministry of Municipalities and Rural Affairs
NAS	National Agriculture Strategy
NGC	New General Cooperative
NPO	National Program Officer
NTP	National Transformation Program
SAR	Saudi Arabia Riyal
SAS	Saudi Aquaculture Society
SC	Supervisory Committee
SDB	Social Development Bank
SMEA	Small and Medium Enterprises Authority
SPI	Social Progress Index
SRAD	Sustainable Rural Agriculture Development
SSE	Solidarity and Social Economy
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TA	Technical Advisor
TNA	Training Needs Assessment
UI	User Interface
UNDESA	United Nations Department for Economics and Social Affairs
UNDP	United Nations Development Program
USD	United States Dollar

Foreword

The Sustainable Rural Agricultural Development (SRAD) Program (2019-2025) has been jointly formulated by FAO and the Ministry of Environment, Water, and Agriculture (MoEWA). The Government of the Kingdom of Saudi Arabia (KSA) has requested, through MoEWA - from the FAO to support the implementation of this program.

The SRAD Project comprises nine components including the development of coffee Arabica production, processing and marketing; development of beekeeping and honey production; development of Rose production and trade; development of sub-tropical fruits production, processing, and marketing; strengthening of the capacity of artisanal fishermen and fish farmers; strengthening the capacity of small-scale livestock herders; development of rain-fed cereals production; enhancing value addition from smallholdings and rural activities; and strengthening MoEWA's capacity in sustainable management of rangelands, forests and natural resources to support rural livelihoods.

The comprehensive situation analysis of the cooperatives in the target agricultural sectors was important to establish their status and understand the direction for their capacity building and strengthening. This report is therefore important for the cooperative practitioners in the Kingdom, who are mandated or obligated to promote and develop the respective agricultural cooperatives.

FAO Program Director
Saudi Arabia Country Office

Saudi Arabia Vision 2030

On April 25, 2016, the Kingdom of Saudi Arabia adopted its Vision 2030, which constitutes an ambitious plan to transform the Saudi economy away from its dependence on oil. The Saudi Arabia's Vision 2030 is built around three themes: a vibrant society, a thriving economy, and an ambitious nation. The Vision 2030 has 6 overarching objectives (level 1), 27 branch objectives (level 2) and 96 strategic objectives (level 3). Building rural institutions such as agricultural cooperatives is important in part of achieving the vision.

Acknowledgements

This report benefited significantly from the contributions of several people.

First, appreciations go to the Sustainable Rural Agricultural Development (SRAD) program's senior team members in the Kingdom of Saudi Arabia, who guided the situational assessment process, and report development process: Dr. Abubakr Mohamed (FAO Programs Director); Dr. Kakol Gosh (Chief Technical Advisor), Dr. Shami Saeed (Programme Development and Implementation Support Expert), and Dr. Rajiv Mehta (Senior Economist), and Nuru Mohammed (TA - Beekeeping and Honey Component), Hassan Balhareth (NPO – Beekeeping and Honey Component).

Finally, special acknowledgements to the Government senior officers, for their receptivity on this noble course to rethink, refresh and re-energize the development of the cooperative in the agriculture sector. They include Eng. Saliman Sale Al Gtily (MoEWA – Director of Cooperatives and marketing); Maan Alangari (MoHRSD – Director-General for Cooperatives Development); Dr. Abdullah Kidman- President, Cooperative Society Council; and all the leaders and managers from the participating cooperatives across KSA. Appreciations are further extended to the cooperatives and cooperative leaders and officers across the regions, who gave their views concerning their views on their respective cooperative organizational capacities. Special acknowledgements for the support of the Cooperative Societies Council (CSC) for giving guidance in the field, and respective Director Generals of MoEWA across the regions.

Executive Summary

Agricultural cooperatives are considered important tools under the Saudi Vision 2030 for the balanced rural development and agricultural sector development that is predominantly smallholders, according to the General Authority for Statistics (GAS) – 2015 Agriculture Census. The first cooperative was established in 1962. Since then, there have been several institutional developments to promote and development of cooperatives including the latest review of the Cooperatives Law (Royal Decree No. M/14) issued on March 10, 2008, following the Council of Ministers Resolution No. 73 on March 9, 2008. The cooperatives' development function is in the ambit of the Ministry of Human Resource and Social Development (MoHRSD). Under Article 41 of the law, the agricultural cooperatives' capacity-building roles are under, and the Directorate of Cooperatives and Marketing at the Ministry of Environment, Water and Agriculture (MoEWA).

According to the Ministry of Human Resource and Social Development 2018/2019 Report, there were 248 registered cooperatives across various socio-economic sectors; out of which, 27 per cent are in the agriculture sector. However, the penetration rate of the agricultural cooperatives among the smallholders is still very low. The ratio of women to men, and youth and the aged in the cooperatives, is substantially low. The awareness of the concept of cooperative organizations among the populace is still very low, given the socio-cultural and family orientation. Their governance and management models are not clear. The business models for most of them are weak for sustainability. They exhibit over-dependence on government subsidies and other investment initiatives.

Nonetheless, from the value chain analyses, the cooperatives in the target agricultural value chains of fish, beekeeping and honey, cereals, livestock, sub-tropical fruits, rose flowers, and coffee arabica, have the potential to form and thrive. This is about the gaps between the existing value chain actors (or the would-be competitors), vast national and international commodities markets, and product diversification through value addition.

The report, therefore, makes some suggestions for respective agricultural cooperative sub-sectors. The suggestion can be considered by the government and cooperative stakeholders: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats.

This report is to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for agricultural sub-sectors and rural economies; while helping the smallholder beekeepers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and the development of compatible business models.

1. Introduction

1.1 Background

This analysis was developed under the Sustainable Rural Agricultural Development (SRAD) Project (2019-2025). The project has been jointly formulated and implemented by FAO and the Kingdom of Saudi Arabia's (KSA) Ministry of Environment, Water, and Agriculture (MoEWA). Among other components, the project targets the development of smallholders in the beekeeping and honey sector. One of the SRAD project outputs is to strengthen smallholders' rural agricultural cooperatives and associations. It is on this basis; the situation analysis of the existing agricultural cooperatives in target regions was conducted.

1.2 Objective of the Assessment

The objectives of this assessment were to:

1. Understand the development of the cooperative in KSA
2. Understand the KSA target agricultural sector and the respective cooperatives
3. Identify and understand the unique situation (strengthen, weaknesses, opportunities, and threats) of respective agricultural cooperatives in KSA
4. Make suggestions on the areas for strengthening respective agricultural cooperatives in KSA.

1.3 Scope of the Assessment

The scope of the assessment was to analyse the situation of KSA cooperatives in general and specifically, the agricultural cooperatives.

1.4 Assessment Methodology

The assessment involved primary data collection through multiple methods, including observation, key informant interviews (KIIs), and focus group discussions (FGDs), as well as secondary data collection through a desk research of existing literature and legislation. The assessment was carried out in two phases:

1. **Desk research:** Available literature was gathered including published and unpublished research reports and articles, cooperative law, data from the Ministry of Human Resource and Social Development (MoHRSD), MoEWA, Cooperative Society Council (CSC), and other agencies including the Agricultural Development Fund (ADF), General Authority for Statistics (GAS) among others. This provided a framework for the primary data collection process.
2. **Field research:** Primary data was collected through key informant interviews (KIIs) and focus group discussions (FGDs) in the target regions of the Kingdom. Semi-structured interview checklists and unstructured FGD guidelines were developed ahead of time and were checked and commented upon by a cooperative expert before implementation. KIIs were conducted with the MoHRSD, MoEWA, CSC, and ADF at the national level and regional offices. KIIs and FGDs were conducted among several agricultural cooperatives in the target regions of the Kingdom, mainly targeting the cooperative leaders, managers, and members.

1.4 Limitations of the Assessment process

Notwithstanding the design, this assessment process had its limitations.

1. Limited literature and data on the cooperatives in the Kingdom.
2. Shallow primary data collection from Key Informant Interviews on primary agricultural cooperatives mainly in the regions.
3. In some cases, findings from the analysis pointed to the need for wider analysis and investigation, as the mixed situation was noted among the individual cooperatives within the target value chains or the same region.

1.5 Outline of the Assessment Report

This report is organized into 9 sections. Section 1 introduces the report with the justification of and approach to the situation analysis. Section 2 discusses the general cooperative development in the Kingdom. It gives historical development perspectives and major milestones in the development of the cooperatives in the country. It furthers cooperative development strategies, cooperative organization, cooperative registration and data, capacity building, funding and supervision, and monitoring. Section 3 to 9 focuses on the analysis of the

respective agricultural cooperatives, by a quick review of the respective sector analyses and map in the kingdom. Then it analyses the specific situation for the respective cooperatives in terms of strengths, weaknesses, opportunities, and threats; and then finally highlights the suggestions for consideration in strengthening the respective agricultural cooperatives in the Kingdom.

2. General Cooperatives Development

2.1 Cooperatives Identity

The concept of a cooperative has several definitions which are driven by a general understanding among practitioners that cooperatives are people-centred enterprises owned, controlled, and run by and for their members to realize their common economic, social, and cultural needs and aspirations.

Nonetheless, the most commonly used definition adopted by the International Cooperatives Alliance (ICA) states that a cooperative is an "autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise". For this assessment, a cooperative is defined as "a **user-owned** and **user-controlled** business from which **benefits** are derived and distributed equitably based on use or as a business owned and controlled by the people who use its services"[1].

This common understanding is put into practice by adhering to certain values and principles, which have been revised several times by ICA. Cooperatives are driven by values, not just profit, cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity.

There are seven globally agreed-upon cooperatives principles as illustrated in Table 1 below:

Table 1: The universal cooperative principles

No.	Principle	Definition
1.	Voluntary and open membership	Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political, or religious discrimination.
2.	Democratic member control	Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary cooperatives, members have equal voting rights (one member, one vote) and cooperatives at other levels are also organized democratically.
3.	Member economic participation	Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all the following purposes: developing their cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; supporting other activities approved by the membership.
4.	Autonomy and independence	Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.
5.	Education, training, and information	Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.
6.	Cooperation among cooperatives	Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional, and international structures.
7.	Concern for community	Cooperatives work for the sustainable development of their communities through policies approved by their members.

Source: ICA website

2.3 Understanding agricultural cooperatives in the World

According to FAO, cooperatives play important roles in supporting small-scale farmers and overcoming barriers facing them. Thus, the sole purpose of the cooperative, including the agricultural cooperative, is to

[1] USDA (2011) Understanding Cooperatives: Cooperative Business Principles

help one achieve his objectives while at the same time assisting others in achieving theirs. An agricultural cooperative as a special type of cooperative is defined as “agricultural producer-owned enterprises whose primary purpose is to increase members’ production and incomes by helping with a better link to finance, agricultural inputs, information, and markets.

The permeability of agricultural cooperatives makes them dynamic for socio-economic development. According to the ILO (2020) report, agricultural cooperatives are grouped under producer cooperatives. In this grouping, members’ interest relates to the production activity. Members share a common short-term interest in covering production costs and long-term interest in reduced risk, a sustainable source of income and market development. Considering the importance of the economic functions associated with these different purposes regarding calculating their economic contribution or performance, agricultural cooperatives may eventually be developed into sub-types, such as 'marketing cooperatives', 'processing cooperatives', 'supply or purchasing cooperatives', and 'multi-purpose cooperatives' as their combination, as well as 'undetermined' when no specific purpose is indicated. For internationally comparable statistics, it would be preferable to check which is the principal activity of these cooperatives following the method of treatment of mixed activities in the UN International Standard Industrial Classification (ISIC)[2] .

Irrespective of the sectoral classification, agriculture and food-oriented cooperatives are continuing to grow across the world. According to research McKinsey and Company (2012) report, agriculture and food industry-oriented cooperatives grow at a rate of 7.7 per cent compared to companies in the same industry which are growing at a rate of 6.3 per cent.

2.3.1 Performance of the agricultural cooperatives globally

In terms of global patronage and reach, agricultural cooperatives are also the highest in number and reach out to and serve more population than any other type of cooperatives around the world. The UNDESA 2014 report indicates that the agricultural cooperatives movement compared to other sectoral cooperative movements in the world, with 48.7 per cent proportionality. Figure 1 illustrates this market share scenario.

[2] UN, 2008; pp. 22–27

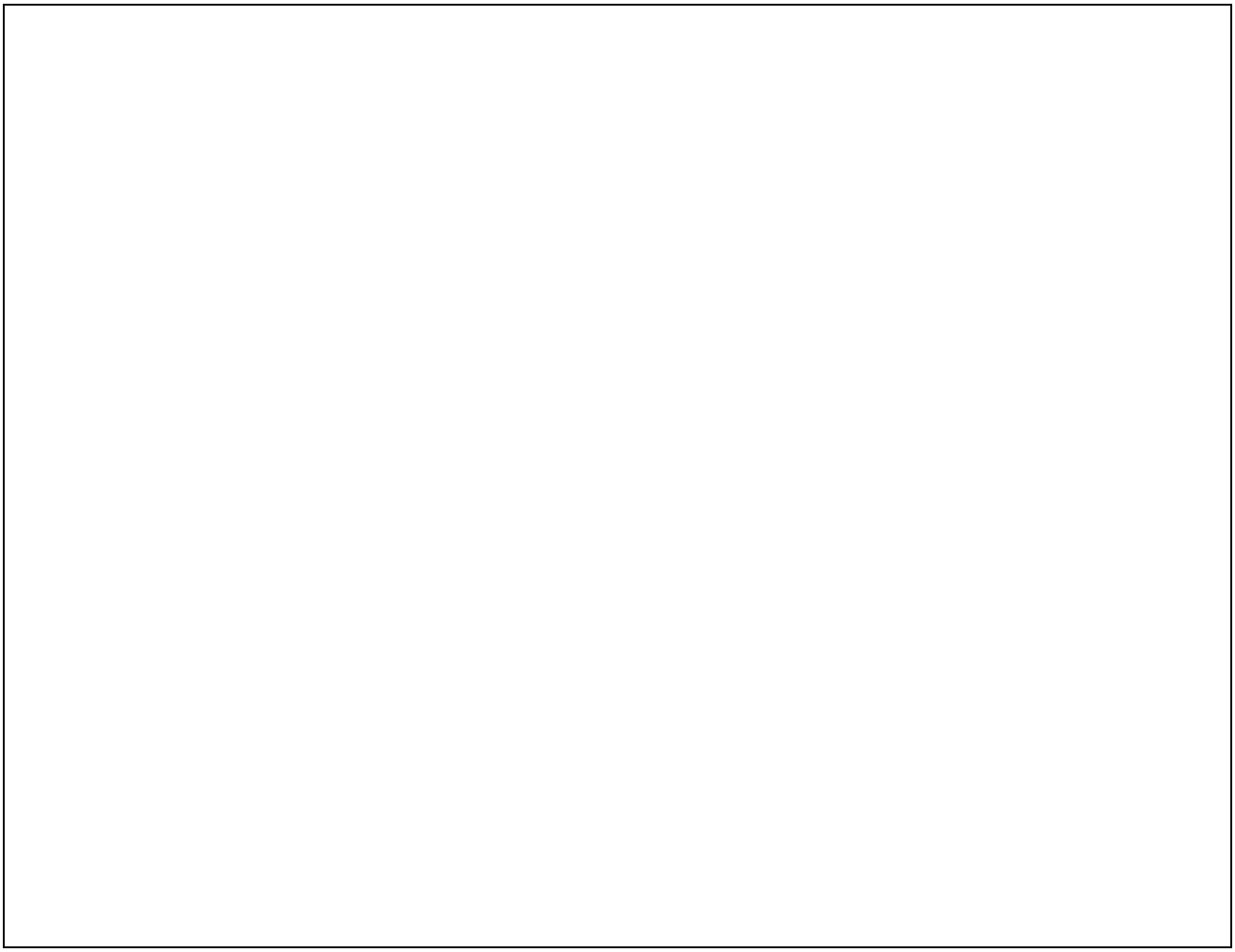

Figure 1: Proportionality of agricultural cooperatives of the overall global cooperative movement
Source: Adapted from UNDESA (2014)

According to the World Cooperative Monitor 2021 Report, the agriculture sector is still the leading sector in terms of usage of the cooperatives model with the agricultural-oriented cooperatives having over 28 per cent share of the cooperatives movement. Agricultural cooperatives are cooperatives that operate along the entire agricultural value chain, starting from the cultivation of agricultural products and livestock farming to the industrial processing of agricultural products and animals. This sector includes both agricultural producers' cooperatives and consortia of cooperatives (or similar arrangements) that carry out the processing and marketing of agricultural goods for their members.

Agricultural cooperatives exist in almost every country around the world – both developed and emerging economies. They are very well represented in both developed and emerging economies and contribute to food security and poverty reduction in different areas of the world. They help farmers increase their returns and income by pooling their resources to support collective arrangements and economic empowerment.

Box 1:

Common operating areas of agricultural cooperatives

1. Marketing – ranging from helping members sell their products at the first handler level, to processing, distributing, retailing, brand positioning and exporting
2. Supplying high-quality products at reasonable prices to members.
3. Providing specialized services such as credit, utilities, insurance, quality assurance and maintenance, supplementing extension services to farmers, common infrastructures, and utilities.

2.3.2 Ranking of specific agricultural cooperatives in the World

Using a turnover in USD and turnover in international dollars, this 2021 World Cooperative Monitor report showed that there are great performing agricultural cooperatives across the world. Out of the 300 top-performing cooperatives with over 2,180.01 billion USD, 98 cooperatives are agriculture and food-oriented. The report has ranked the top 10 agricultural-oriented cooperatives across the world as highlighted in Table 2.

Table 2: Global ranking of individual agriculture and food industry-oriented cooperatives: The top 10!

Rank	Agriculture and Food Industry oriented cooperative	Country	Brief Description	Annual Turnover (Billion US $) 2015
1.	Zen-noh	Japan	Formed in 1972, *ZEN-NOH* is the National Federation of Agricultural Cooperative Associations in Japan. It was formed by the joining of the ZENHANREN group and the ZENKOREN group.	**55.13**
2.	Nonghyup (National Agricultural Cooperative Federation - NACF)	Republic of Korea	Founded in 2012 *NH Nonghyup (NACF)* is a multipurpose cooperative with four main business divisions: agricultural marketing and supply, livestock marketing and supply, banking and insurance, and the extension service. NACF now serves its members and customers through 27 subsidiaries and two affiliate organizations. It represents 2.44 million individual members from 1,165 member cooperatives, out of which over 80 per cent are Korean farmers.	**40.49**
3.	CHS Inc.	USA	Founded on January 15, 1931, *CHS Inc.* is a Fortune 100 business owned by United States agricultural cooperatives, farmers, ranchers, and thousands of preferred stockholders.	**31.90**
4.	Bay Wa	Germany	Founded in 1923, *BayWa* shareholder structure is determined by the cooperative sector and focuses on Retail and agribusiness conglomerate - Trading of agricultural products, fertilizer and seeds, sale of agricultural equipment, fruit distribution	**19.09**
5.	Dairy Farmers of America	USA	Founded in 1998, *Dairy Farmers of America Inc.* is a national milk marketing cooperative in the United States. It is owned by and serves more than 13,000 dairy farmer-members representing more than 7,500 dairy farms in 47 states with a Head office in Kansas City, US.	**15.80**
6.	Land O'Lakes, Inc.	USA	Founded on July 8, 1921, *Land O'Lakes, Inc.* is an American member-owned agricultural cooperative based in the Minneapolis-St. Paul suburb of Arden Hills, Minnesota, United States, focusing on the dairy industry.	**13.89**
7.	Hokuren Federation of Agricultural Cooperatives	Japan	Founded on April 18, 1919, the *Hokuren* Federation of Agricultural Cooperatives operates as a business association. The Company offers agricultural material joint purchasing, agricultural product sales, and technical support services. Hokuren Federation's products include rice, vegetables, dairy products, livestock products, and gardening products.	**13.87**
8.	Fonterra Cooperative Group	New Zealand	Founded on October 16, 2001, *Fonterra Cooperative Group Limited* is a New Zealand multinational publicly traded dairy cooperative owned by around 10,500 New Zealand farmers and is responsible for approximately 30 per cent of the world's dairy exports.	**13.25**
9.	FrieslandCampina	Netherlands	Founded on December 31, 2008, *Royal FrieslandCampina N.V.* is a Dutch multinational dairy cooperative which is based in Amersfoort, Netherlands. It is the result of a merger between Friesland Foods and Campina, with the Head Office in Amersfoort.	**12.64**
10.	Arla Foods Amba	Denmark	Founded on April 17, 2000, *Arla Foods amba* is a Danish multinational cooperative based in Viby, Denmark, and the largest producer of dairy products in Scandinavia. Arla Foods was formed as the result of a merger between the Swedish dairy cooperative Arla and the Danish dairy company MD Foods with a Head	**11.78**

Rank	Agriculture and Food Industry oriented cooperative	Country	Brief Description	Annual Turnover (Billion US $) 2015
			office in Viby City	

Source: Adapted from World Cooperative Monitor 2021 Report.

These data sets indicate how the agricultural cooperatives are value-chain growth-engines, contributing and/or can contribute to the paradigm of sustainable food systems development. Figure 7 summarizes this concept.

In Figure 7 illustration, agricultural cooperatives are increasing agricultural output, which is created by labour (including self-employment), across various core value chain processes (i.e., the multiplier loop) as the food supply for the consumer benefit. This labour is acquired by the incomes and salaries offered. This labour is also being paired with capitalization (e.g., good agricultural practices (GAP)), which in turn requires increased investment and working capital. This capital can be derived from member shareholding, retained profits or, borrowing from the financial sector driven by the accrual of domestic wealth (i.e., investment loop). Because they are formal, agricultural cooperatives make value chains develop, become larger, and more profitable. This increases the tax base and thus makes improvements in the enabling environment, and social well-being, more fiscally sustainable for even continued social support to other vulnerable people in the society (i.e., progress loop).

2.4 Historical landmarks of the cooperatives movement in the world

The cooperative movement began in Europe in the 19th century when the industrial revolution and the increasing mechanism of the economy transformed society and threatened the livelihoods of many workers.

Major historical landmarks of the modern cooperative movement development have been outlined in Table 3 below:

Table 3: Historical landmarks of cooperatives development in the World

Period	Development issues
1761	The first documented consumer cooperative was founded in 1761 in Scotland where local weavers in Fenwick formed the Fenwick Weavers' Society to sell oatmeal at a discount price
1812	After the establishment of the Fenwick Weavers' Society, several cooperative societies were formed including Lennox town Friendly Victualling Society, founded in 1812 and by 1830, there were several hundred cooperatives.
1831	The first cooperative congress was held in Manchester, England
1844	The Rochdale Society of Equitable Pioneers (in England) is established as a prototype for modern cooperatives as we understand them today with cooperative principles
1848	Friedrich created an association that helped small farmers to acquire cattle without mortgaging their assets and going into debt. The association quickly evolved into a credit-cooperative society
1850	The first agricultural cooperatives were created also in Europe in the second half of the nineteenth century to about 1899
1862	Raiffeisen Cooperative banks in Germany Europe are established as the early credit unions – named after Friedrich Wilhelm Raiffeisen, a German mayor and cooperative pioneer
1895	The International Cooperative Alliance (ICA) was founded as an independent association that unites, represents, and serves cooperatives worldwide
1937	ICA defined cooperative principles for the first time
1959	The national agricultural cooperatives created the General Committee for Agricultural Cooperation in the European Union (COGECA[3]) as the European cooperative umbrella organization
1960	The ICA Regional Office for Asia and the Pacific (The International Cooperative Alliance Asia-Pacific) was established in New Delhi, India
1966	ICA defined cooperative principles for the second time
1968	The ICA Regional Office for Africa (Alliance Africa) was established with two offices in Tanzania and Burkina Faso.
1971	ILO and FAO established the Committee for the Promotion and Advancement of Cooperatives to

[3] COGECA stands for Confédération Générale des Coopératives Agricoles de l'Union Européenne

Period	Development issues
	Promote Agricultural Cooperation (COPAC[4]).
1990	The ICA Regional Office of the Americas (Cooperatives of the Americas) was established in San José, Costa Rica.
1995	The ICA revised cooperative principles to the current edition
2006	The ICA Regional Office for Europe (Cooperatives Europe) was established in Brussels.
2009	COGECA launched the European Award for Cooperative Innovation to raise awareness and promote innovation in European agricultural cooperatives.
2012	United Nations (UN) celebrated the international year of cooperatives and declared the 2020 Cooperatives Decade
2014	The United Nations Department for Economic and Social Affairs conduct global cooperatives' development and performance rankings.
2016	The United Nations Educational, Scientific and Cultural Organization (UNESCO) inscribed "Idea and practice of organizing shared interests in cooperatives" on the Representative List of the Intangible Cultural Heritage of Humanity

2.5 Historical Developments of Cooperatives in Saudi Arabia

The cooperatives' development in the Kingdom of Saudi Arabia (KSA) began in 1961 with the establishment of the first multipurpose cooperative in Riyadh in 1962. Table 4 below highlights the major efforts and phases of the cooperative movement development in KSA:

Table 4: Historical landmarks of cooperatives development in the Kingdom

Period	Development Issues
1961	The first discussion begins with the establishment of the cooperative movement, and cooperatives begin to emerge to help with social amenities issues such as the provision of water and gas.
1962	Cooperative Law No. 26 (1962) is enacted on June 25, 1962. Under the Act, a cooperative is an organization in which persons, living in a defined area, voluntarily associate themselves with the principles of cooperatives, on a basis of equality, for the promotion of their economic and social interests. Conditions for registration include membership of at least 20 founder members and the approval of the Ministry of Labour and Social Development. Provides for an executive body, elected by the general assembly, in charge of the day-to-day work of the society and its employees and representatives. Specifies that the Minister of Labour and Social Affair issues rules regulating the audit system for society. The general assembly is the supreme authority of the society and sanctions all the matters related to the affairs of the society like- inter alia- the distribution of net surplus. Cooperative Societies are under the supervision of the Ministry of Labour and Social Development. Other provisions cover the dissolution of cooperative associations. Also, it is in 1962 that the first cooperative – the *Diri'ya* Cooperative Society was established in Riyadh.
1963	Multipurpose Cooperative in Almadinah Almunawarah was established, which since then has been providing some agricultural services and inputs to its members.
1964	The Enaizah area, Qassim region, was established as the first cooperative specialized in the agriculture sector.
1966	Decree No. 1365/1/1 of 5-9-1386 (1966): Rules for Cooperative Lending. This Act applies to agricultural cooperative societies and multipurpose cooperative societies in which agricultural services constitute a major part of their activities. The decree set up that the Saudi Arabian Agricultural Bank (henceforth the Bank) when granting loans, shall deal with farmer members through cooperatives. It granted preferential treatment and loans to cooperatives. Determined a maximum limit for each kind of loan granted to cooperatives. Other provisions covered were the security of short-term and seasonal loans. Regulates the applications for a loan from the Bank. The decree also set forth exceptional loans exceeding the limit fixed for it.
1972	By 1972, only a total of 40 cooperatives had been established in the Kingdom. Out of these, only 2 were specialized agricultural cooperatives and 5 multipurpose cooperatives with some agricultural activities. The

[4] COPAC members are: United Nations Department of Economic and Social development (UNDESA), Food and Agriculture organization of the United Nations (FAO), International Labour Organization (ILO), International Cooperative Alliance (ICA), and World Farmers Organization (WFO).

Period	Development Issues
	total membership in agricultural-oriented cooperatives stands at 1,064.
1973	This year, 7 more seven agricultural cooperatives and 8 multipurpose cooperatives were established.
1974	Council of Ministers' resolution No. 1622 dated 17 May 1974: The imposition of Zakat and exemption of cooperatives from all other taxes
1977	Royal court decree No. 4/F/2866 dated 31 January 1977: Exempt of cooperatives from previous orders prohibiting granting and sale of government land
1985	By 1985, there were 117 cooperatives had been established in the Kingdom, out of which 15 were agricultural cooperatives with a total membership of 6,444 members.
1991	A new executive order of the cooperative law was enacted, to rejuvenate the cooperative promotion and development
2001	Council of Ministers resolution No. 9349/8/7 dated 06 August 2001: Request Ministry of Labour and Social Development and Ministry of Environment, Water and Agriculture (MoEWA) to establish agricultural marketing cooperatives
2003	By 2003, the number of cooperatives registered had increased to 139 cooperatives; out of which 19 were agricultural cooperatives with a total membership of 7,257 members.
2005	Council of Ministers Resolution No. 162 on support and subsidies to agricultural cooperatives is made on July 17, 2005, to among others: ▪ Allocate adequate land with symbolic price for cooperatives to build offices, sorting and grading stores, cold stores, and outlets in the vegetable and fruit markets ▪ Simplify procedures to be taken when cooperatives deal with various government lending funds, including procedures related to collateral ▪ Facilitate procedures for cooperatives when importing fertilizers, pesticides, seeds, spare parts, and equipment. ▪ Encourage and support cooperatives that export their members' products ▪ The MoEWA is to provide technical supervision and support for agricultural cooperatives in their activities in extension, agricultural services, and plant protection. ▪ The MoEWA and MoHRSD are to implement programs to raise farmers' awareness of cooperatives and demonstrate the importance and role of agricultural cooperatives. ▪ Form a committee from the MoEWA, MoHRSD, and Agriculture Development Bank (ADB) to follow up on the activities of agricultural cooperatives and address problems they may face
2008	Council of Ministers' resolution No. 73 dated 17 March 2008: Approval of inclusion of the Ministry of Labour and Social Development subsidies and benefits provided to cooperatives in the cooperative law (Royal Decree No. M/14) Cooperative Society Council (CSC) is formed on March 17, 2008, under Article 29; with a leading role and initiative to support cooperative societies in the Kingdom. Under Article 41 of the law, the agricultural cooperatives' capacity-building role is under the Directorate of Cooperatives and Marketing at the Ministry of Environment, Water and Agriculture (MoEWA).
2009	Royal court decree No. 9/M dated 16 February 2009: The Agricultural Development Fund Law which includes the provision of loans to agricultural cooperatives
2014	Royal Court Decree No. 16836 dated 06 March 2014: Directing the Ministry of Municipal and Rural Affairs and the Ministry of Housing on the allocation of 5,000 square meters of sites for each cooperative for cooperative markets. Ministerial Order No. 49987 dated 06 August 2014 to facilitate cooperative access to 1500 square meters of land to establish headquarters/premises is made.
2015	Council of ministers' resolution No. 46/M dated 25 March 2015: Saudi Labour Law Regulating Employers and Employees By 2015, the total number of cooperatives established had increased to 248 cooperatives. Out of these, 44 were agricultural cooperatives
2016	CSC is affiliated with International Cooperative Alliance on January 28, 2016. The Kingdom of Saudi Arabia adapts its Vision 2030 on April 25, 2016 (See Saudi Vision 2030). Vision 2030 constitutes an ambitious plan to transform the Saudi economy away from its dependence on oil. Saudi Arabia's Vision 2030 is built around three themes: a vibrant society, a thriving economy, and an ambitious nation.
2017	Council of Ministers Resolution No. 271 on Human Resource Support to cooperatives is made on February

Period	Development Issues
	6, 2017, among other issues: ▪ Approve the provision of support to agricultural cooperatives with the expertise of some employees of the MoEWA through secondment according to the following conditions: o The secondment period shall be one year renewable for two more periods of one year each o The employee who has completed the maximum secondment limit must not be seconded before at least three years from the date of the previous secondment o The number of seconded officers to one cooperative during a year shall not exceed three employees o The number of seconded employees from the MoEWA during a year shall not exceed one hundred employees o The MoEWA may add any conditions as he deems necessary Agricultural Development Fund Bylaw dated 22 August 2017: Agricultural Development Fund Bylaw for lending agricultural cooperatives
2018	By this year, KSA had 248 registered cooperatives with a total membership of about 75,375[5]. Out of these 68 were agricultural cooperatives, with a total membership of about 11,760 members.
2019	National Agriculture and Environment Strategies are set and among other strategic programs, Sustainable Rural Agricultural Development (SRAD) Program (2019-2025) is developed to among other issues promote cooperatives, especially in the agriculture sector along with the coffee, beekeeping/honey, fish, cereals, livestock, subtropical fruits (dates) and Rose flowers value chains; in 8 out of 13 regions of the Kingdom. Royal Decree No.1366 approved budgetary allocations for the SRAD Project implementation in collaboration with FAO.
2021	The cooperative law under review, and re-structural of the cooperative office by the introduction of the: ▪ Director-General of Cooperatives office at MoHRSD, and ▪ Director of Cooperatives and Marketing office at MoEWA Agricultural cooperatives are being placed at the centre of the new dispensation of rejuvenating the cooperative movement in the Kingdom. The Gulf Cooperation Council (GCC) held a third Cooperatives Development Forum under the theme: "role of Cooperatives under Market Economy and its Mechanisms".

Source: Discussions with MoHRSD, MoEWA, and CSC officers and related reports

The cooperatives in KSA are generally, therefore, described by 5-phase-periods of development (1) the inception phase (1961 to 1972 period) that so initiation and scale-up of cooperatives; (2) the growth surge phase (1973-1985 period) that received significant push for the cooperative establishment; (3) the stagnation phase (1986 – 2003 period) that exhibited slow growth of cooperatives sector; (4) the growth momentum phase (2004-2015 period) with important reforms that stimulated the growth of cooperatives particularly of the agricultural sector; and (5) towards realizing Saudi Vision 2030 (2016 – and the period beyond) that is to bring a positive transformation in economy and society with employment generation, economic diversification and improvement in quality of life using cooperatives.

Box 2: Initiation of Cooperative in KSA

Cooperatives in Saudi Arabia began in 1961-1962, about 120 years after the first modern cooperative in history was formed in Rochdale, close to Manchester, England in 1844. Major cooperative development efforts have only been witnessed since Mid-2000 and gained tangible momentum from about 2014 with deliberate government efforts to support the cooperatives.

The development of the cooperatives in KSA is likely to experience a positive trajectory with possible regulations, restructuring, system, set-up, and strategy development for the promotion of the cooperatives, including those in the agriculture sector as envisaged by Saudi Vision 2030, and GCC resolutions.

Box 3: The 2021 Resolutions of the Gulf Cooperation Council (GCC) on Cooperatives Development

In January 2021, the GCC held a third Cooperatives Development Forum under the theme: "role of Cooperatives under Market Economy and its Mechanisms". Among other proposals for the development and

[5] CSC 2017, Strategic Plan

strengthening of the cooperative movement were:

1. Need to adhere to the ICA principles of cooperatives and the interests of citizens;
2. Importance of and the need for training members, boards of directors, and executive management;
3. Establishment of a national institute for cooperatives to raise the technical capacity of cooperatives; unify the financial, administrative, and accounting systems in all cooperative societies;
4. Reduce the restrictions that limit the freedom of movement and creativity for cooperative societies;
5. Strengthen mutual trust between the government and cooperatives and avoid interference;
6. Collaboration among cooperatives on sales and marketing;
7. Emphasis on the authority of the General Assemblies in the regulatory and operational policies for the development of cooperatives' work; and
8. The establishment of a Gulf Cooperative Development Fund to provide financial support for the development of cooperative sectors.

2.6 Cooperative Development Strategies

The strategic approach for the development and growth of the cooperative sector gained momentum with the establishment of the Council of cooperative societies in KSA in 2008. In 2017, the Council formulated its strategy for cooperatives. This strategy reflects the Saudi vision 2030 and the themes set in the national transformation program to achieve governmental operational excellence, improve economic enablers and enhance standards of living. Priority theme 4 of the NTP aims at spreading the culture of volunteerism, improving effectiveness and available opportunities as well empowering the non-profit sector, and expanding the services of non-profit organizations. Under priority theme 3, ensuring the sustainability of vital resources and the support to and improvement of the performance of agricultural cooperative societies is one of the identified initiatives of the NTP.

2.6.1 Cooperatives Development Strategies in Cooperative Societies Council Plan

The cooperative Society Council (CSC) developed its strategic plan in line with the Saudi Vision 2030. CSC envisions a sustainable cooperative development that makes Saudi Arabia in 2030 among the top ten countries in the world in the field of the cooperative economy. The strategic goals set by the Council in its strategy are as follows:

1. Enhance the level of social capital
2. Promote the principle of solidarity and social justice among members of society
3. Promote sustainable development based on the human element while rationally investing resources
4. Implement government policies in the area of commodity provision and price stability
5. Provide new job opportunities for a wide range of young men and women
6. Contribute to solving the housing problem
7. Achieve the Ministry of Human Resource and Social Development plan to shift from giving humanitarian and social assistance to developmental activities
8. Enhance rural development and reduce migration from rural areas and villages to major cities

The Cooperative Societies Council's strategic plan evolved and identified five main dimensions of cooperative action:

1. **The customers and shareholders' dimension:**

   The main objective in this dimension is to increase shareholders and improve the services provided to shareholders and customers. Its main elements are:

   a) Increase the population participation rate in the cooperative societies from the current 55 thousand to 150,000 in five years and to 400,000 in 2030, by increasing the number of shareholders in the current associations and increasing the number of cooperatives to 2,000 by 2030.
   b) Improve the services provided to customers and associations.
   c) Simplify and facilitate government administrative procedures related to the establishment of associations and cooperative work, in general, to reach the target number of cooperative societies in the Kingdom in 2030.
   d) Spread the culture of cooperative work in the Kingdom, consolidate its concept in society and among members, and strengthen its international relations.
   e) Generate new job opportunities for the youth of both sexes by doubling the job opportunities in the cooperative sector in five years and raising it to 200,000 jobs by 2030.

The plan identified 36 initiatives (or implementation mechanisms) required to increase membership and improve services to shareholders and customers.

2. The council's work and performance dimension:

The main objective in this dimension is to activate the role of the CSC to improve its performance to participate in development. Five objectives have been set to achieve this goal as follows:

a) Obtaining privileges and concessions from government ministries and agencies to participate in the implementation of their development projects with a focus on projects that respond to social needs and have economic returns.
b) Marketing of local agricultural products and participation in the management of central markets for vegetables, meat, and fish and providing health care and feed for livestock.
c) Improving Cooperative Societies Council effectiveness and efficiency.
d) Follow-up the implementation of the objectives of the CSC as stipulated in Article 54 of the Cooperative Executive Order of the cooperative law on the formation of the Cooperative Societies Council issued on 8/7/1429 H (August 8, 2008).
e) Provide the necessary support to the cooperative societies per the terms and conditions for cooperatives' support.

The plan identified 72 initiatives (or an implementation mechanism) required to activate the role of the Cooperative Societies Council.

3. Improvement and development dimension:

The main objective in this dimension is the development, training, and encouraging innovation and the use of modern administrative techniques and methods in all businesses. Three objectives have been identified to this end:

a) Developing the administrative competencies of the employees of the CSC and the cooperatives.
b) Carry out research and studies that contribute to the development of the work of cooperatives and improve their efficiency.
c) Supervising the governance of cooperative work in cooperative societies.

The plan has identified 11 initiatives or (implementation mechanisms) required for the development, training, innovation, and use of modern administrative techniques and methods in all businesses.

4. The financial dimension:

The main objective in this dimension is developing the cooperative sector resources and doing all business efficiently with the minimum cost possible. Four objectives have been identified for this purpose as follows:

a) Expanding cooperative sector lending sources, simplifying procedures, and managing loans effectively to oblige borrowing cooperatives to repay.
b) Increase the capital of the cooperative sector and reduce the cost of services.
c) Contribute to the implementation of government policies in providing goods, stabilizing prices, counteracting monopolies, and reducing the trend of the price increase.
d) Increase cooperative contribution to agricultural GDP by 3% by 2030.

5. The environmental dimension

The main objective in this dimension is to support the government's efforts to achieve sustainable development that rationally exploits natural and environmental resources and maintains a clean environment. Two objectives have been identified for this purpose as follows:

a) Expansion in environment-friendly industries.
b) Optimal use of energy and water resources

2.6.2 Cooperative Development strategies in the National Agricultural Strategy

There is no specific strategy for agricultural cooperatives development in KSA. However, the National Agricultural Strategy (NAS) has recognized the important roles of agricultural cooperatives in contributing to several of the objectives of agricultural and rural development and in supporting small-scale producers to benefit from economies of scale and increase their competitiveness. These agricultural cooperatives' roles include the following:

1. ***Improved input provision:*** Cooperative societies play a major role in negotiating large contracts with suppliers of various agricultural inputs such as fertilizers, seeds, machinery, vaccines, etc. Cooperative can use their size and experience to achieve lower prices and better conditions for their members.

2. ***Improved operation and maintenance of agricultural machinery and equipment:*** This is especially true for young people who cannot afford routine and/or specialized maintenance because of the small size of their farm. Cooperatives can benefit from their network of relations and exchange labour, machinery, and logistics services to provide services by themselves or through service providers
3. ***Improve marketing and sales:*** Improve small and young farmers' access to the wholesale and retail markets through cooperative societies that negotiate sales contracts and achieve better marketing conditions. Cooperatives can develop their marketing and sales channels and take advantage of their size to secure long-term contracts
4. ***Support services:*** large cooperatives can play a major role in defending and expressing the interests and concerns of small farmers. Cooperatives, especially large ones, can benefit from their access to decision-makers and the ability to put pressure on agricultural policies and support formulation.

Similar to CSC, NAS has also identified several limitations and performance constraints faced by most agricultural cooperatives. Consequently, NAS has devoted two initiatives to agricultural cooperatives development:

1. ***The agricultural cooperative models' initiative***, aims at:
   a) Review the institutional and regulatory framework of agricultural cooperatives
   b) Formulate operating models for different types of agricultural cooperatives
   c) Provide training and enlightenment to cooperative staff regarding successful experiences and good practices
   d) Design and organize awareness campaigns to increase farmers' understanding of the roles, benefits, impacts, and operating models of successful agricultural cooperatives
2. ***Agricultural cooperatives' capacity development initiative,*** aims at:
   a) Design and implement a comprehensive program to support and improve the performance of cooperatives through capacity building and development (organizational structure, focus areas, operating models, knowledge of the cooperative work system and its principles and advantages, accounting and finance, etc.).
   b) Promoting the culture of performance and ensuring that the government links the provision of support to measurable performance indicators.

2.7 Cooperatives' Organisation Structure

In the Kingdom of Saudi Arabia, cooperatives are organized at two tiers/levels – the primary cooperative and the apex council (i.e., CSC). A cooperative could engage in a single activity such as production, marketing, saving and credit, catering, bakery, etc., or it could be involved in multiple activities, in which case it is called a multipurpose cooperative. Accordingly, there are producers' cooperatives, marketing cooperatives, consumers' cooperatives, handcrafts cooperatives, housing cooperatives, and service cooperatives, among others.

2.7.1 Primary cooperatives

A cooperative in which membership consists of 12 or more individuals with similar economic and social interests. According to the Ministry of Human Resource and Social Development 2018/2019 Report, the cooperative movement in KSA has approximately 248 registered cooperatives from different sectors including agriculture, insurance, and transport industries. The distribution of the status of cooperatives per sector in KSA is as in Table 5 below:

Table 5: Number of registered cooperatives in the Kingdom

Region	Type of Cooperative Society								
	Agricultural	**Fishermen**	**Multi-Purpose**	**Consumptive**	**Professional**	**Marketing**	**Artisan**	**Services**	**Total**
Al-Riyadh	15	0	33	0	1	0	2	3	**54**
Makkah Al-Mokarramah	8	3	17	2	0	0	1	1	**32**
Al-Madinah Al-Monawarah	5	1	11	1	0	0	0	3	**21**
Al-Qaseem	7	0	12	2	0	1	1	0	**23**
Eastern Region	6	1	15	1	0	1	0	0	**24**
Aseer	7	1	22	1	0	0	0	1	**32**
Tabouk	1	1	2	0	0	0	0	0	**4**
Hail	7	0	18	0	0	0	0	0	**25**
Northern Borders	2	0	1	0	0	0	0	0	**3**
Jazan	2	1	3	0	0	0	0	0	**6**
Najran	1	0	6	0	0	0	0	0	**7**
Al-Baha	5	0	4	3	0	0	0	0	**12**
Al-Jouf	2	0	3	0	0	0	0	0	**5**
Total	**68**	**8**	**147**	**10**	**1**	**2**	**4**	**8**	**248**

Source: MoHRSD – 2018/2019

Multipurpose cooperatives are constituting the majority of the cooperatives in the Kingdom. Most of the multipurpose cooperatives also undertake agricultural activities, exhibiting a high level of specialized agricultural cooperatives in the Kingdom. This makes it difficult to specifically quantify the contribution of cooperatives in the agricultural sector. The most specialized agricultural cooperatives in the Kingdom are the livestock cooperatives (which were 13, as at end of 2021) beekeepers' cooperatives (which were 10, as at end of 2021), and fishermen cooperatives (which were 8, as at end of 2021).

Specifically, agricultural-oriented cooperatives are the cooperatives that generally operate in three broad areas.

1. First, is the agricultural marketing that enables members to sell their products at the first-handler level, to processing, distributing, retailing, and exporting and thus enhancing the market integration of producers.
2. Secondly, in accessing the supply of high-quality inputs and material products at reasonable prices the members.
3. Thirdly, it enables the provision of specialized services to the member producers such as credit, extension, utilities, insurance, quality maintenance, common infrastructures, and utilities.

In summary, agricultural-oriented cooperatives have the potential to render wide-ranging benefits to the agriculture sector:

1. Assured sources of input supply at a reasonable cost
2. Improved service access and delivery
3. More marketing power through greater size, brand identification, quality control, etc.
4. Reduced per-unit handling or processing costs
5. Dividends are based on how much each member uses and invests in the cooperative
6. Engagement in policy dialogues
7. Education to help members improve business practices
8. Support for family farms o Income generated in the local community
9. Better opportunities for smallholders with information, communications, technologies, training, and warehouses.

Box 4: Issues on Primary Cooperatives' Organisation

It was established that:

1. There is still limited knowledge and understanding of cooperative work among various segments of the society in the Kingdom. There is still some social attitude toward forming and/or joining cooperatives in the Kingdom, with less than 5% of the population being members and users of the cooperatives.
2. There is still an unclear cooperative's objective and role in the cooperative organization. Some cooperative societies are formed for social privilege or to get government support and not necessarily for the provision of goods and services to their members. Cooperatives are still largely considered community-based

organizations.

3. Cooperatives are often established in a specific geographical area and cover a wide range of agricultural products (dates, livestock, poultry, etc.), as well as functions (irrigation, animal health, etc.) and do lack focus on a specific product or function. For instance, we have more multi-purpose cooperatives with different agricultural functions, compared to the specialized agricultural cooperatives.
4. Cooperatives have an inappropriate business and operating model. Cooperatives have mostly feasibility study reports, which are not translated into business and operational plans. Cooperatives' business function operations are not clear, and most management teams lack a vision that is based on viable business principles and management. Absence of self-financing and limited pre-emptive approaches.
5. Cooperatives have inappropriate organizational systems. The structures lack clear roles and responsibilities for General Assemblies, Board of Directors, and Management staff. There are gaps in the check and balances of eh cooperatives. Management systems are not well developed and integrated for the efficient running of most cooperatives. Most cooperatives lack internal rules, strategies, and business and action plans.
6. Most cooperatives lack competencies. There is no mechanism to attract and develop effective administrative competencies for the management of cooperative societies. There is limited knowledge among the existing members, leaders, and managers on cooperative work systems, principles, and advantages. Some cooperatives lack qualified personnel in key areas of member-customer relations, accounting, financial management, marketing, advocacy, and support.

2.7.2 Apex (and federal) cooperatives

Article 29 of the Saudi cooperatives law provides for the formation of the semi-autonomous Cooperative Society Council (CSC). CSC was formed on March 17, 2008. The primary cooperatives are affiliated with CSC. CSC is composed of 4 nominees from the relevant government agencies and 13 representatives of the cooperatives, one from each of the 13 regions. CSC aims to support cooperative societies in the Kingdom by activating the role of the Board of Cooperative Societies, the deployment of collaborative work culture, building human, financial, and technical capabilities, and establishing effective partnerships to establish collaborative work culture for the benefit of the community and the Saudi economy.

Box 5: Issues on CSC Organisation

It was established that:

1. The weak organizational structure, weak competencies, and administrative challenges of the Cooperative Societies Council are limiting it to perform its roles and tasks.
2. There is still poor communication between the Council of Cooperative Societies and the primary cooperative societies in the regions
3. The current cooperative law does not provide for the formation of cooperation among cooperatives, to strengthen the CSC structure in the regions, enhance economies of scale and scope, and negative the Cooperative Principle 6.
4. There is no consolidated national cooperatives development strategy to guide the development of the cooperatives in the Kingdom.
5. The legal and regulatory framework lacks full compliance with some cooperative principles and international standards that would adequately promote cooperatives.

2.8 Cooperatives' Registration and Database

The first cooperative was registered in 1962. By 2021, there were 248 registered cooperatives in the kingdom, implying that the average rate of registration of agricultural cooperatives in the Kingdom to the year 2020, has been one agricultural cooperative per year. These low numbers could be still justifiable and advantageous if the fewer cooperatives' performances are high in terms of members, asset base, revenues, and even percentage revenue contribution to the GDP. Moreover, this may be due to low cooperative consciousness among the population regarding the establishment of cooperatives.

The registration process of an agricultural cooperative in KSA:

1. A request is submitted to MoHRSD or one of its branches indicating the desire of the applicants to establish a cooperative and clarify the objectives of the proposed association and its services area. The

request is usually signed by one of the persons authorized on behalf of the applicants or by a group of them, provided that the application is attached. Statement of the founders of the cooperative.

2. After receiving the application to the Department of Cooperative Societies in the MoHRSD, arrange with the applicants to meet with them and discuss the idea of the cooperative to determine the availability of its success factors.
3. A preliminary report is prepared to request the establishment of the association, including clarifying the objectives of the association and all aspects related to the founding of the association.
4. After studying the report and the conviction of the feasibility of the cooperative, the Minister for MoHRSD undertakes the preliminary approval of the idea of the cooperative and completes the steps of its establishment.
5. To address the relevant authorities (the Minister - the Ministry of Agriculture - the Agricultural Development Fund), which are usually in the city or province where the cooperative will be established, to get their views on the establishment of the applying cooperative.
6. After receiving the views of the relevant authorities, coordination with the applicants to fill the legal justification of registration, which is three copies of each of the registration applications - the memorandum of association - the basic regulations of the cooperative.
7. The founders of the cooperative are then required to prepare the initial establishment contract and the basic bylaw after coordination with the supervising authority in the MoEWA and ratify it from the branch of the MoHRSD, which is in the supervising area.
8. Applicants are then required to submit a technical and economic study of the activities of the proposed association.
9. After completing the registration justification, the founders are baptized by collecting capital, depositing it in a bank, and providing the supervising authority with a bank certificate representing the final balance of the collected capital.
10. The offer is made to His Excellency the Minister by requesting the approval of the cooperative's registration and a certificate is given.
11. The cooperative then acquire a legal personality once the registration and publicity process stipulated in the Law has been completed and published in two local newspapers and commences its activities.
12. To open a branch or an outlet, the cooperative is required to again apply and receive a license from MoHRSD, which may take the registration process route, by the regulations.

Importantly, the registration process by MoHRSD at least mitigates the human resource capacities and administrative at the Ministry-in-charge (see the cooperative society system link).

Box 6: Issues with cooperatives' registration and data

It was established that:

1. There is a lack of regularly updated and properly disaggregated (by purpose, geographical, and demographic parameters) databases on cooperative work in the Kingdom. The cooperative data is not well institutionalized. There are three sources of data that are not in coherence with each other – the MoHRSD, MoEWA, and CSC. Sometimes the numbers reported include those cooperatives that are still under the registration process.
2. Conditions for registration include membership of at least 12 founder members (or 5 members under special cases) and the approval of the Ministry of Human Resource and Social Development (MoHRSD). This may not be feasible for
3. The registration process is automated (see Cooperative Society System link), but not easily navigated by the smallholders. The cooperative registration process is reportedly cumbersome, and sometimes issuance of a certificate takes six months to two years – with no clear communication of the stage of the application. This is contrary to the stipulated 60-day provision as per Article 12 of the cooperatives law.
4. There is a lean government structure for cooperatives development to fast-track the registration process and database management

2.9 Cooperatives' Business Operations

The cooperatives in the Kingdom are largely considered as associations – with larger community development mandate – and as such their regulation is largely domiciled under the MoHRSD. Cooperatives with business activities are expected to register those business activities separately under the Ministry of Commerce and Industry[6] (MoCI). In such circumstances, cooperatives are subjected to the same licensing and tax treatment as other business establishments, eroding their uniqueness. The business[7], tax[8], and finance policies and statutes (See Annex 3 on the list of policies and decrees consulted) in the Kingdom have no special and incentivizing policy and regulatory provisions for the cooperatives with business-like activities that will sustain their operations, without government direct financial support. This, in turn, leads to a high level of dormancy, and or potential collapse of many cooperatives. In the spirit of Saudi Vision 2030, the policies should be harmonized to encourage the self-financing of the cooperatives, as they equally contribute to community development and the national economy.

Moreover, the vibrancy of the specific agricultural and fishery-oriented cooperatives is largely affected by the respective regulation of the agricultural sector. Fishery[9], Beekeeping and honey, coffee[10], and livestock[11] sectors are well regulated, hence potential success and sustainability. There is a need to develop and adequately regulate other target sectors such as cereals, fruits, and Roses.

2.6 Cooperatives' Capacity Building

The whole cooperative development function of promotion, registration, and development is squarely under the ambit of the MoHRSD. Until recently, under Article 41 of the Cooperatives' Law, cooperatives' capacity building has been relegated to sector ministries. For instance, the promotion and training function of agricultural cooperatives has now been incorporated in MoEWA, with the establishment of the office of the General Director of Cooperative Associations.

The General Directorate of Cooperative Associations MoEWA[12] directly liaises with the deputy minister for Agriculture, with the overall objective of studying and improving agricultural marketing and its marketing mechanisms, and supervising, developing, and supporting cooperative and civil associations, and civil institutions in the agricultural sector. The roles of MoEWA's cooperative office are:

1. Preparing clear criteria and controls for value-added chains and agricultural marketing mechanisms and services and ensuring that they meet the requirements of beneficiaries.
2. Cooperating with cooperative societies, outside parties, and other specialized companies to develop the mechanisms of marketing operations locally and abroad.
3. Study the regional and international target markets and ensure their dissemination to the concerned authorities.
4. Developing policies, frameworks, and mechanisms aimed at developing and improving the role of agricultural associations in the technical and marketing fields.

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[6] See: https://mci.gov.sa/en/pages/default.aspx

[7] See: https://www.lw.com/thoughtleadership/doing-business-in-saudia-arabia; https://agriexchange.apeda.gov.in/IR_Standards/Import_Regulation/Food%20and%20Agricultural%20ImportRegulationsandStandardsReportRiyadhSaudiArabia432019.pdf

[8] See: https://www2.deloitte.com/content/dam/Deloitte/xe/Documents/tax/me_doing-business-guide-ksa-2021.pdf

[9] See: http://extwprlegs1.fao.org/docs/pdf/sau4907E.pdf : This Regulation is composed of 3 Parts: Artisanal Fishermen's Boats (I); Modern Fishing Boats (II); Licences and Permits (III). Provisions of Part I and II specify technical requirements for traditional and modern boats. Provisions of Part III apply to fishing licences granted to Saudi nationals and permits for the employment of foreign workers on Saudi vessels.

[10] See: https://thosecoffeepeople.com/a-guide-to-importing-coffee-beans-into-saudi-arabia/ ; https://mc.gov.sa/en/mediacenter/News/Pages/17-09-20-02.aspx; https://old.sfda.gov.sa/ar/food/about/administration/management_regulations/Documents/InstantCoffee-en.pdf

[11] See: https://www.mewa.gov.sa/en/MediaCenter/News/Pages/News-23-7-2018.aspx; http://riyadhshelter.org/wp-content/uploads/2020/09/saudi-animal-welfare-laws-en.pdf

[12] See: https://www.mewa.gov.sa/en/Ministry/Agencies/AgencyofAgriculture/Departments/Pages/General-Directorate-of-Communities.aspx (Accessed in June 12, 2021)

5. Providing technical support to agricultural associations and others and enabling them to make full benefit from means of support provided by the Ministry.
6. Encouraging the establishment and sponsorship of associations, activating their role in the development of agricultural production, increasing the participation of farmers, and training its employee and studies that contribute to the development of its functions.
7. Act as a link between associations and organizational units concerned in the Ministry to meet their needs and provide the necessary support.
8. Assessing the current state of agricultural cooperative associations based on local data from reports, field visits, market surveys, and questionnaires to develop a detailed plan for the Ministry's vision for agricultural associations and cooperatives.
9. Coordinating all matters related to operationalizing and supporting agricultural cooperatives associations with governmental and private bodies.
10. Coordinating with multi-purpose cooperative societies which include agriculture in their activities.
11. Proposing programs of empowerment, technical support, sustainability, and long-term and specialized investment programs for civil and cooperative societies.
12. Encouraging communication and visits and exchange of information and experiences between the agricultural cooperative associations, and organizing periodic meetings in coordination with the concerned authorities
13. Studying the current situation of the agricultural cooperative associations that are stalled or halted, addressing challenges encountered and creating unique models that could be replicated.
14. Examining new license applications (for civil cooperative societies) and coordinating with the competent sectors within the Ministry.
15. Supervising the preparation of the executive regulations for the technical supervision of the civil and cooperative associations and coordinating with the specialized advisory bodies and relevant bodies in the Ministry.

Box 7: Issues on cooperatives' capacity building

It was established that:

1. The MoEWA cooperative office is still in its nascent stage of structuring and set-up. The cooperative development team is still small, both at the national and the sub-national levels.
2. The officers in the mandated institutions – MoEWA, MoHRSD, and CSC – have inadequate knowledge and skills in the promotion and development of the target cooperatives.
3. Cooperative awareness and training program is not institutionalized to build the capacity of the cooperative members, officers, leaders, and managers. The pieces of training are ad-hoc by consultants engaged on an irregular basis by the mandated institutions.
4. There is a lack of studies and research on cooperatives to stimulate, promote and develop cooperative work in the Kingdom.
5. There is no proper leveraging on such other bodies as the Council of Chambers of Commerce and Industry (CCCI) and Small and Medium Enterprises General Authority (Monsha'at) that could collaborate with CSC and agricultural cooperatives to advance market issues. The media agencies inadequately publicize cooperatives in the Kingdom.
6. There is no academic program with higher learning institutions or blended-in community and business schools/departments of such institutions to develop cooperative professionals and experts.
7. There is still an ineffective marketing communication plan (media and advertising) to publicize the cooperative work in the Kingdom and the importance of their role and role of the Cooperative Societies Council and its importance in the development and activation of cooperative work in the Kingdom.

2.10 Cooperatives' Funding and Incentives

The Saudi cooperatives' total shareholding is estimated at SAR 0.4 billion. Cooperatives are much financial support from the government. Articles 30 to 35 of the Cooperatives law provide for 12 cooperative subsidies, and incentives for government loans, land, facilities, and importation procedures. These are meant to capitalize and quickly operationalize the cooperatives.

Box 8: The Government Subsidies for Cooperatives

1. A one-time subsidy not exceeding 20% of an association's capital, upon registration of the said association, to help with the start-up costs.
2. A subsidy for constructing the association's offices, to carry out its business and activities, provided that the subsidy does not exceed 50% of the estimated construction costs paid in instalments according to construction stages and does not exceed 50% of the actual construction costs.
3. A project subsidy not exceeding 50% of the project's costs if an association undertakes a production or marketing cooperative project within the scope of its objectives.
4. A risk subsidy is for an association that suffers a substantial loss due to force majeure, provided that the subsidy does not exceed 90% of the said loss.
5. A management subsidy if an association appoints a competent and adequately qualified full-time Saudi manager, provided that the subsidy does not exceed 50% of the manager's monthly salary for three years. Such a subsidy may be extended for additional years, subject to the Minister's approval.
6. A subsidy for the remuneration of members of the Board of Directors when Board meetings become regular and not less than twelve per year. Said subsidy shall not exceed 20% of the association's annual profits.
7. An operation subsidy not exceeding 50% of the average wage of three machine operators if an association owns not less than three machines continuously operating for more than three months a year in the area served by the association.
8. A training subsidy for members of staff of an association enrolled in courses, seminars, or conferences in the field of cooperation within the Kingdom or abroad. Said subsidy shall not exceed 90% of the costs, provided that the Ministry does not bear the costs of more than two individuals a year.
9. An accounting subsidy for the association in the following cases:
    a) If an association agrees with a registered accounting firm to audit its closing accounts and balance sheet, provided that the subsidy does not exceed 50% of agreed-upon costs for two years. Such a period may be extended subject to the Minister's approval, provided that the subsidy does not exceed 20% of the costs.
    b) If an association agrees with an adequately experienced accountant, provided that the subsidy does not exceed 50% of the accountant's salary for two years and 20% for the third year.
10. A study and research subsidy not exceeding 50% of the costs.
11. A technical subsidy to aid the association, when necessary, to develop its business, including assigning some Ministry staff to work at the association for specified periods.
12. A social service subsidy not exceeding 50% of the amounts spent from the funds allocated for such purpose in the association's budget.

Moreover, the government has set in place distinct programs (especially in MoEWA) that cooperatives can tap into to enhance their service delivery to members and the community. For instance, there is the "Seventh Initiation" for fisheries development by MoEWA and ADF) supports incentives to promote fisheries development (i.e., 1 million MT fish production by 2029) and youth employment (400,000 jobs).

There are also established loan facilities for agricultural ventures. They include the Agriculture Development Fund (ADF) which is available for agricultural cooperatives. Since its establishment in 1963, ADF (based on its 56th (2019) annual report,) has issued over SAR 8.8 billion among the producers with agricultural projects by 2019.

Table 6: Agriculture projects loaned by the Agricultural Development Fund from 1963 to 2019

Project type	Loans count	Capacity	Unit	Value (in SAR)
Broiler chicken	956	10,861,770	1000 birds/year	3,373,178,022
Laying chicken	281	109,340,798	1000 eggs/year	886,036,535
Dairy production	70	37,450	Cow	735,049,698
Fattening calves	11	42,600	Animal/year	44,451,788
Breeding and fattening sheep	170	315,343	Animal/year	879,703,117
Greenhouses	435	456,552	Ton/year	2,029,497,141
Fish	20	4,533	Ton/year	46,015,110
Caviar and fish eggs	2	420	Ton/year	15,254,490
Fish and shrimp	5	645	Ton/year	11,119,280

Project type	Loans count	Capacity	Unit	Value (in SAR)
Breeding fish in fence cage	3	25,300	Ton/year	190,563,983
Shrimp breeding	19	39,192	Ton/year	599,053,618
Fishing boats	7	2,161	Ton/year	7,879,690
Agricultural investment abroad	2			644,217,000
Total	**1,979**			**8,817,802,472**

Source: ADF Report 2019.

In the same fiscal year 2019, ADF approved 11 loans for various agricultural marketing activities, with a value of over SAR 257 million) for: Automatic slaughterhouse (SAR 157 million), Agricultural Products Marketing Centre (SAR 28 million), Dates factories (SAR 25 million), Cold stores (SAR 13 million), and Feed factories (SAR 13 million).

In addition, ADF reported having processed 112 agricultural cooperative loans amounting to SAR 394,697,341. The cooperative societies are funded with 85 per cent for the first SAR 3 million of the total investment costs, which the ADF approves. Such cooperatives are funded with 75 per cent in case the loan alone or what the society owes exceeds SAR 3 million. To cover the value of the inputs of plant, animal, and fish production, and the fields and projects directed to raise production, service, and marketing efficiency.

Table 7: Agricultural Development Fund (ADF) loan and subsidy approvals for cooperatives in 2019

Branches	Number of Beneficiaries cooperatives	Number of Loans	Loan Value (in SAR)
Riyadh	10	29	49,302,822
Makkah	2	4	404,044
Qassim	6	21	69,028,807
Asir	4	6	195,247,736
Eastern Province	0	0	0
Al Madinah	3	6	1,242,746
Hail	8	14	837,877
Al Jawf	2	4	1,940,963
Jazan	2	4	31,407,579
Tabuk	1	3	1,662,441
Al-Kharj	5	15	24,536,459
Najran	2	5	670,959
Al Baha	1	1	18,414,908
Northern Borders Province	0	0	0
Total	**46**	**112**	**394,697,341**

Source: ADF Report 2019.

Social Development Bank (SDB) also provides funding for cooperatives. The *Sharia'h* banking practices are applied in KSA, and so the loans attract zero-per cent interest (see the SDB website) with a grace period of up to 18 months. But in most cases, about a 2 per cent processing fee is charged by the financial institutions.

Box 9: Feature of the Funding for Cooperative Societies at Social Development Bank (SDB)

1. Interest-free financing
2. Funding up to 10 million Saudi Riyals
3. A grace period of up to 18 months.
4. If the investment cost of the project is more than 500,000 riyals, it is required that the self-contribution required by the applicant should not be less than 8 per cent of the investment cost of the project, and not more than 50 per cent.
5. The total duration of the financing contract is divided as described in the following table:

The maximum duration of the financing contract	Maximum repayment period	Maximum grace period	Statement
90 months	84 months	6 months	Ready-to-operate projects
102 months	84 months	18 months	Projects under foundation

6. The amount of funding is disbursed following the exchange procedures and the financing distribution plan adopted in the program.
7. The beneficiary is obliged to pay the amount of funding in regular monthly instalments, which are specified in the financing agreement.
8. The beneficiary is late in payment (default) if the maturity date of the instalment passes for six months from the date of maturity and the bank is entitled to claim payment of the financing disbursed and take the necessary legal action to preserve its right.
9. Funding payments are disbursed in one or two of the following ways, according to the Bank: - directly for the association's account or Payment to contractors and suppliers.

Furthermore, recently, with the COVID-19 pandemic, when the government introduced the 15 per cent value-added tax (VAT), there was no taxation. But based on Islamic practices, cooperatives have always been paying 2.5 per cent *Zakat*[13] from their surplus. The cooperatives also are to pay customs and government licensing fees annually. Agricultural cooperatives are decrying multiple annual licenses for various cooperative business activities and services they run. They further decry delays in accessing the promised incentives. Furthermore, the agricultural cooperatives also do not get some import and export tax reliefs they expect. These make them no different from other forms of businesses such as companies. However, according to PwC, the government of Saudi Arabia has granted tax concessions (to attract more investment even by cooperatives) to the six less-developed regions in Saudi Arabia, including Hail, Jazan, Najran, Al-Baha, Al-Jouf, and Northern territory[14].

Box 10: Issues on cooperatives' funding

It was established that:

1. Cooperative internal funding is relatively low compared to their respective objectives, focus, and roles. Member involvement as investors in the cooperatives is low.
2. There is an over-reliance on government subsidies and programs. This dependence syndrome stagnates cooperatives' internal growth processes, and most of the time leads to the collapse of such cooperatives.
3. About 5 per cent of cooperatives are poised to be applying for loans from lending institutions, as some decry the long process. Additionally, banks do not adequately recognize cooperatives as unique businesses eligible for a loan, to even make customized cooperative loan products. This could be because of the high GNI, or failure of the cooperatives to seize these finance opportunities, or because smallholders have not adequately organized themselves to seek credit finance for agriculture development.
4. There are no tax reliefs and incentives for cooperatives as unique forms of business, to encourage the establishment of more cooperatives.

2.11 Cooperative Supervision and Monitoring

The cooperative development function in the Kingdom is the ambit of the MoHRSD. The Minister in charge has the power to the control registration, operation, audit, and dissolution of cooperatives.

Box 11: Article 36 of Cooperatives Law on cooperative control

1. Cooperative associations shall be subject to the Ministry's control, which includes examining the association's activities to ensure compliance with the laws, the basic bylaws, and the resolutions of the General Assembly, as well as monitoring the association's accounts by auditors.
2. The Minister may stay the execution of the General Assembly's resolutions if they violate the laws or the association's basic bylaws.
3. The Ministry shall have the right to act on behalf of the General Assembly in recovering its dues.

[13] Zakat is one of the five pillars of Islam, and in various Islamic polities of the past was expected to be paid by all practicing Muslims who have the financial means (*nisab*)

[14] See, PwC Website: https://taxsummaries.pwc.com/saudi-arabia/corporate/taxes-on-corporate-income.

These Ministerial powers compromise the adherence to cooperatives principles as envisaged by ICA and ILO Recommendation No. 193[15], 2002 on Policy Framework and Role of Governments.

Box 12: Issues on cooperatives' supervision and regulation

It was established that:

1. The MoHRSD exhibits weakness in follow-up and guidance as it focuses on the direct provision of financial support to cooperatives without monitoring expenditures and performance mechanisms. This inefficiency and ineffectiveness affect the optimization of such government support.
2. There is a limited mechanism to evaluate the effectiveness of cooperative societies to develop cooperative work in the Kingdom.
3. Some cooperatives abscond from the legal requirement for annual financial auditing. This is attributable to sometimes, irregular government supervision.
4. There are few officers at the mandated institutions to adequately supervise the increasing number, at the national or branch levels; and to continually monitor and evaluate the performance and capacities of the cooperatives.
5. There is a lack of performance and compliance systems and tools (concerning Cooperative Economic Indexes and Social Progress Indexes), that could be digitalized to aid cooperatives' self-regulation, and also performance monitoring.

In conclusion: (1) the development of the cooperative began on a low tone of development with slow growth, (2) the patronage and contribution of the cooperatives to Saudis and the economy is still low; (3) the cooperative organization system and structure is partially weak; (4) the government deliverable policy and investment support in cooperatives triggers rapid cooperatives growth; and (5) the national transformation agenda (Saudi Vision 2030) and the regional call for cooperatives development, is likely to strengthen the cooperatives in the Kingdom due to the government goodwill. Conversely, there are still several issues to streamlining the cooperative sector at both the government and individual cooperative levels.

[15] R193 - Promotion of Cooperatives Recommendation, 2002 (No. 193)

3. Cooperatives in Coffee Sector

Synopsis

In the Kingdom of Saudi Arabia, Coffee Sector is under MoEWA – with no distinct directorate. The recently registered coffee farmers' cooperative portrays a mix of situations concerning their value chain outlook, strengths, weaknesses, opportunities, and threats.

Currently, there is only one specialized coffee farmers' cooperative with 40 members and a share capital of SAR, 1,000,000 – the Coffee Cooperative in Jazan. Coffee farmers that also engage in other agricultural activities such as fruit -farming patronize the unspecialized agricultural cooperative associations. However, the potential of cooperatives in the coffee value chain in the Kingdom still faces several internal and external challenges. These include delayed organization and registration of the cooperatives in all coffee farming regions, negative social attitudes and limited knowledge of cooperatives, negative mindset toward the coffee good agricultural practices, low coffee production and productivity, market competitions, inadequate membership and facilities to optimize cooperative business operation, erratic climatic conditions that affect coffee production and productivity.

The situation analysis report, therefore, makes some suggestions for consideration by the government and cooperative stakeholders: to think of an overall coffee cooperatives' development strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: registration of specialized cooperatives in the target coffee growing regions, develop the new coffee farmer cooperative's capacities; development of coffee cooperative business models; strengthening coffee cooperative governance structures; creating awareness to change the perception of cooperatives; and strengthen the government agencies' capacity.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for the coffee value chain and Al Baha, Jazan, and Aseer regions' economies; while helping the smallholder coffee farmers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and development of compatible business models.

3.1 Coffee Arabica Chain Outlook

3.1.1 Coffee Arabica Production

In KSA, MoEWA aims to make the Jazan region an important source of coffee, to meet local market needs by planting over 200,000 coffee trees in the first stage and nurturing them until the production stage. The overall target is one million coffee trees producing 2,000 tons of clean coffee by 2030. The average production per tree in KSA averages to be 2.0 to 4.0 kg of coffee cherries. The government has set up the Agriculture Development Fund to assist farmers to procure farm equipment and other operational activities.

What sets the Kingdom of Saudi Arabia apart from other regions is its rich coffee traditions that evolved before European coffee cultures and still exist today. Coffee is "almost a language" in Arabic culture. Q*ahwa*, the Arabic word for coffee, is the root of the words "coffee" and "café" used today. While there is no denying the social role that coffee plays in most countries, the coffee-drinking etiquette of the Middle East is complex and deeply entrenched.

Saudi coffee farmers are mainly in the Jazan, Aseer, and Al Baha regions of the Kingdom (See Khalid, et. al., 2020), and some engage foreign labourers to work on the farms (see Map in Figure 1).

One of the greatest challenges is the extension of services to coffee farmers and farmer cooperatives to enhance collective action among farmers for coffee production and marketing activities. As such, the coffee production rate is currently at an average of 4Kgs per coffee tree. The statistics for Jazan Region[16], (in Table 8 below) highlight the region's coffee production levels.

Table 8: Coffee production in the Jazan region of the Kingdom

Governorate	No. of Farmers	No. of Coffee Trees	No. of Coffee producing Trees	Average Production (Kgs)
Al Dayer	919	171,926	122,926	489,820
Faifa	324	51,955	23,218	92,872
Aidaby	132	17,447	3,617	14,468
Harub	38	5,707	5,017	20,068
Al Aridah	79	11,982	7,909	31,636
Al Raith	104	9,993	9,168	36,672
Total	**1,596**	**269,010**	**171,384**	**485,536**

Source: Jazan Mountains Development Authority (JMDA) (2020)

[16] Data from Aseer and Al-Baha regions on coffee production, which are part of the SRAD Project target regions was not accessed.

Figure 2: Map of the coffee-growing areas of the Jazan, Aseer, and Al Baha regions of the Kingdom

The production economics of Coffee Arabica in KSA is as illustrated in Table 9 below:

Table 9: Production practices and management economics

Expenses	Cost (in SAR)	Notes
Water 4 tanks per month	5,600	During the 4 months dry period; 4 tanks per month at SAR 350 per tank
Labours (crop management, harvesting)	24,000	Permanent labour at SAR 2000 per month
Manure	0	Using from own farm animals
Pest management	0	No pesticides used
Drying	125	One-time cost (SAR 500), for the drying bed that can be used 4 years;

Expenses	Cost (in SAR)	Notes
Hulling	1,125	750 Kg cherries give 375 kg dry cherry at 50%. Hulling of 375 x 0.6 gives 150 kg green beans. Green beans at roasting lose 25% moisture, so 1 kg of green beans gives 0.75 kg of coffee, the cost of hulling is SAR 3 per kg
Packaging and transportation	50	Rough estimate
Expenses	30,900	
Sales at SAR 400 per Kg	48,000	375 Kg green beans yield 150 kg of dry beans at 0.6%) to give 120 Kg of the final product with 20% moisture loss.
Sales at SAR 600 per Kg	72,000	
Net income at SAR 400 per Kg	17,100	
Net income at SAR 600 per kg	41,100	
Source: Bandar Alfaifi, FAO KSA		

3.1.2 Coffee Value Chain Analysis and Map

The coffee value chain can be described in Table 10 below.

Table 10: Coffee value chain analysis

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Source of origin	Local	Mainly import, local	Import	Import
End market products	Green coffee, coffee roasted, coffee powder	Green coffee, coffee roasted, coffee powder, coffee substitutes, Coffee drinks	Packaged instant coffee (multiple brands)	Coffee drinks (hot and cold)
End products packing	Loose	Loose, small packs and gunny bags	Glass bottle and polythene packs of varying sizes	Paper and plastic cups
End markets	Retailers and roasters	Wholesaler-cum-retailers, roasters coffee houses/bars	Branded retail chains such as Carrefour, Lulu, Panda	Big coffeehouse retail chains such as Starbucks
Final product destination	Domestic	Domestic and export	Domestic	Domestic
Channel used by farmer	Direct to retailers and consumers	Limited access	Not accessible	Not accessible
Products sold by the farmer	Loose and ungraded	Loose and ungraded	Not applicable	Not applicable
Price paid by consumer (in SAR) Local: per kg Imported: per kg	 120-180 25-45	 120-180 25-45	 Not applicable, Not applicable	 Not applicable, Not applicable
Price to the farmer (in SAR) Local: per kg Imported: per kg	 80-100 Not applicable	 80-100 Not applicable	 Not applicable, Not applicable	 Not applicable, Not applicable
Operational model	Farmers supply directly to local retailers-cum-roasters. Some roasters-cum-importers contract	Trading houses import green, roasted, extracts, substitutes, and husks and supply through network of wholesalers and	Big retail chains import through their procurement systems and sell through their chain of outlets	Big coffee house chains import green coffee beans directly, roast it and sell various speciality

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
	small quantities directly from farmers (SAR 120-160 per kg) to supply speciality coffee to local coffee houses Producers sell at the Jazan coffee festival	retailers, and coffee houses Some importers are processors also who make coffee products and supply in domestic and export markets.	Retail chains also procure from local importer trading houses and sell through their chain of outlets Retail chains sell packed instant coffee in their brand name	coffee drinks and products Small coffee house chains also procure green coffee beans from local roasters
Price fixing mechanism at the farmer's end	Price fixation by negotiation	Price fixation by negotiation	Not applicable	Not applicable
Farmer's say in price fixation	High	Medium	Not applicable	Not applicable
Key deciding factors for the price fixation by the channel	Consumer preference to purchase local-quality beans	Demand and supply situation Shape, size, cleanliness, grade	Brand name, type, and variety of coffee and international prices	Type and variety of coffee
Farmer's awareness of prices in end markets	Yes	Yes/No	No	No
Is cost-benefit analysis done by the producer	No	No	Not applicable	Not applicable
Volume of sale through channel domestic produce (Rank)	Rank 1	Rank 2	Rank 3	Not applicable
Volume of sale through channel import included (Rank)	Rank 4	Rank 1	Rank 2	Rank 3

Source: FAO-KSA Coffee Value chain Report (2019)

The economic value of the coffee sector in KSA is subsequently highlighted in Table 11 below.

Table 11: Economics of coffee production in KSA for farmers

Description	Unit	Region			Average
		Al Baha	Jazan	Aseer	
Capital cost	'000 USD/Ha	307.02	180.19	243.60	243.60
Operational cost	'000 USD/Ha	80.98	88.08	84.53	84.53
Total cost					
Operational cost	'000 USD/Ton	3.24	3.14	4.03	3.47
Productivity	Ton/Ha	25.02	27.98	21.00	24.67
Local market price	'000 USD/Ton	6.93	7.33	8.09	7.45
Net revenue	'000 USD/Ha	130.18	150.96	117.50	132.88
Return on investment	Percentage (%)	42.40	83.78	48.24	58.14
Payback period	Year	2.4	1.2	2.1	1.9

Source: Ahmed M Al-Abdulkader, Ali A Al-Namazi, Turki A Al-Turki, Muteb M Al-Khuraish, Abdullah I Al-Dakhil, optimizing coffee cultivation and its impact on economic growth and export earnings of the producing countries: the case study of Saudi Arabia, 2017.

The coffee value chain map is illustrated in Figure 3 below, indicating that the local Arabica coffee is expensive but farmer returns are not being maximized.

Figure 3: Coffee value chain map in KSA

3.1.3 Coffee value chain activities

The opportunities available for the cooperatives in the coffee arabica value chain are as follows – input supply, harvesting, wet milling, drying, marketing, and roasting.

Table 12: Global Coffee Value Chain Actors and Activities a cooperative and members can engage in.

	Growing	Picking	Wet Milling	Drying	Dry Milling	Exporting	Importing	Roasting
Grower	■	■	■	■	■	■		
Wet Mill		■	■	■	■	■		
Consolidator				■	■			
Dry Mill					■	■		
Exporter					■	■		
Importer							■	
Roaster							■	■
The actor that often performs the process				■	Source: Wienhold K. (2016)			
The actor that sometimes performs the process				■				

3.1.4 Coffee Export Market

Coffee Arabian coffee, cherished by taste lovers was exported to several countries by Saudi Arabia. This is a re-export of imported coffee from different countries. The export data for coffee reexports for the year 2019 reflects the United Arab Emirates to be the top export destination with 30 per cent of coffee exports by KSA worth 713 thousand USD. The data is presented in the following table:

Table 13: Saudi Coffee Export Data (2019)

S/No.	Export destination	% Share for Saudi Coffee Exports	Value (thousand USD)
1.	United Arab Emirates	30	713
2.	Kuwait	28	648
3.	Bahrain	10.9	253
4.	Yemen	9.85	228
5.	Turkey	4.41	102
6.	Jordan	4.23	97
7.	United Kingdom	3.36	77
8.	Egypt	2.03	47
9.	Malaysia	1.62	37
10.	Germany	1.33	30
Source: https://trendeconomy.com/data/h2/SaudiArabia/0901			

The value of exports of coffee (group 0901 described as "Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes containing coffee in any proportion" from Saudi Arabia totalled USD 2.31 million in the year 2019. Sales of coffee from Saudi Arabia decreased by 69 per cent in value terms compared to 2018. Exports of coffee from KSA decreased by USD 5.39 million (cumulative exports of commodity group 0901 from Saudi Arabia amounted to USD 7.7 million in 2018).

Table 14: Coffee import-export from KSA for 2015-2019 along with year-on-year growth (%)

Year		2015	2016	2017	2018	2019
Export	Value (USD)	7,420,009	5,067,809	6,166,894	7,707,391	2,315,765
	Value Growth (year-on-year growth (%))	- 5.42	- 31.70	21.68	24.98	- 69.95
Import	Value (USD)	196,119,178	164,557,805	221,507,247	212,719,221	247,471,462
	Value Growth (year-on-year growth (%))	1.49	- 16.09	34.60	- 3.96	16.33
Source: https://trendeconomy.com/data/h2/SaudiArabia/0901						

Some of the leading regions and countries KSA can consider exporting coffee Arabica are Europe, the USA, Japan, Russia, and Canada.

Table 15: Importing Countries (Coffee year: October-September)

World Coffee Consumption (in Thousands of 60-kg bags)						
S/No.	**Country**	**2017/18**	**2018/19**	**2019/20**	**2020/21**	**% Change (2107/18 to 2020/21)**
1	European Union	44070	45622	43650	44191	0.10%
2	The USA.	26112	27759	26651	26982	1.10%
3	Japan	7750	7561	7355	7386	-1.60%
4	Russia	4324	4691	4631	4681	2.70%
5	Canada	3829	4020	3929	4011	1.60%
Source: International Coffee Organization data as of January 2021						

3.1.5 Coffee Products Diversification

In coffee-producing countries, coffee wastes and by-products constitute a source of severe contamination and a serious environmental problem. For this reason, since the middle of the last century, efforts have been made to develop methods for its utilization as a raw material to produce feeds, beverages, vinegar, biogas, caffeine, pectin, pectic enzymes, protein, and compost. The use of fresh or processed coffee pulp has been the subject

of numerous studies which, in general, lead to the conclusion that coffee by-products and wastes can be used in a variety of ways. Some of the by-products are listed below:

Table 16: Some major uses of coffee by-products in the food sector

By-product	Possible Use	Description
Flower	Beverages; Coffee blossom tea	**Flowers:** Coffee plants form white, multi-flowered, cymose inflorescences. Every year, an adult coffee tree produces 30,000–40,000 flowers. When the flower is starting to wilt on the plant, the blossoms are plucked, so that the payload of coffee cherries is not affected. After drying, the flowers could be brewed as a tisane[17].
Leaves	Beverages; coffee leaves tea	**Leaves:** The shiny, waxed leaves on the side of the main stem of the coffee plant are typically green. For some species or varieties, the young leaves can be bronzed-tipped and are green or dark green when an ageing but never brown, except when they are stressed or when they fall. The leaves of *C. arabica* and *C. canephora* experience a lifetime of 8 months and 7–10 month, respectively, until they reach a length of up to 15 cm. The leaves of the coffee plants have been used for a long time to prepare tea-like drinks. Especially in West Sumatra, Ethiopia, Jamaica, India, Java, and South Sudan, the infusion is consumed as traditional food. Before preparing the drink, there are different production methods to obtain coffee-leaf tea. Most of them include leaf steaming, rolling, and drying. Alternatively, the leaves can also be fermented[18].
Coffee Pul	Jam, juice, concentrate, jelly Coffee pulp flour for bread, cookies, brownies, pasta, sauces and beverages,	**Cherry Pulp:** A large part of the coffee cherry is the cherry pulp, which also typically contains the skin. It represents around 29% of the dry matter. Cherry Pulp is a by-product of all wet processing methods which are not prevalent in Saudi Arabia due to scarcity of water. Possible uses of cherry pulps are jam, juice, concentrate, and jelly. Coffee pulp flour can be used for bread, cookies, mu_ns, squares, brownies, pasta, and sauces[19].
Husks, Cascara	Caffeine Beverages (tea), Spirits, qishr (mixture with spices), dietary fibre source, extraction of caffeine	**Cherry Husk:** During dry processing, coffee cherries are dried in the sun, and then the beans are mechanically removed from the dried husks. The remaining husks are composed of skin, pulp, and parchment. The production of a refreshing and stimulating beverage called cascara is a major utilization of cherry husk. During the preparation, the husks are infused with hot water, and the result is commonly known as coffee cherry tea or cascara. Traditional beverages from coffee cherries have been consumed in Arabian Peninsula[20].
Green unroasted beans	Dietary supplement, beverages (tea): "white coffee"	**"Green coffee"** beans are coffee seeds (beans) of Coffea fruits that have not yet been roasted. The roasting process reduces amounts of a chemical called chlorogenic acid. Therefore, green coffee beans have a higher level of chlorogenic acid compared to regular, roasted coffee beans. Chlorogenic acid in green coffee is thought to have health benefits[21].
Silver Skin	Dietary fibre source,	**Silver Skin**: The coffee silver skin forms a thin tegument, which is located directly around the two beans of

[17] Nguyen, et.al, (2019). Use of coffee flower as a novel resource for the production of bioactive compounds, melanoidins, and bio-sugars. Food Chem. 2019, 299, 125120.
[18] Rilma, et al., (2018): Traditional knowledge of a coffee leaf herbal tea from West Sumatera, Indonesia. J. Ethn. Foods 2018, 5, 286–291.
[19] Torres-Valenzuela et al., (2019): Coffee by-products: Nowadays and perspectives. IntechOpen.
[20] Iriondo-DeHond, et al, (2019). Validation of coffee by-products as novel food ingredients. Innovative Food Sci. Emerging Technol. 2019, 51, 194–204.
[21] Marcason, W., (2019). What is green coffee extract? J. Acad. Nutr. Diet. 2013, 113, 364.

By-product	Possible Use	Description
	bakery products (bread, biscuits), beverages (tea), smoke flavour additive	the coffee cherry. It accumulates in large amounts as a by-product of the roasting process. The coffee silver skin is composed to a large extent of dietary fibre. The coffee silver skin contains phenolic compounds and has high antioxidant activity. The caffeine content in roasted coffee silver skin ranges between about 0.8 and 1.4 g/100 g. Coffee silverskin has the potential to be used as a natural and sustainable ingredient in foods. Primarily coffee silver skin could be deployed as a source of antioxidant dietary fibre in foods. For example, coffee silverskin extracts may be used as a natural colourant and as a source of dietary fibre in biscuits[22].
Spent coffee grounds	Bakery products, dietary fibre source, coffee flour, confectionery, snacks, ready-to-eat products, and fertilizers. *(Historically, it was also used for coffee adulteration)*	**Spent Coffee Grounds:** Spent coffee grounds are formed both during the extraction of coffee powder with hot water to produce a coffee beverage and during the production of instant coffee preparations. For each kg of instant coffee, 2 kg of wet spent coffee grounds waste is produced. In the food industry, coffee grounds could be used as a source of dietary fibre or in bakery Products[23].
Parchment 	Food preservative, antioxidant	**Parchment:** Coffee parchment is a lignocellulosic material that has been rarely studied and not efficiently utilized. Parchment was suggested as an antifungal additive with potential uses for food preservation. Extracts of parchment can also be used as bio components with antioxidant activity. It is also a promising low-calorie functional ingredient for dietary fibre enrichment in foods to regulate blood glucose and reduce the concentration of serum lipids[24].

Source: Adapted from FAOSA 2021 – Coffee Value Chain Assessment Report

[22] Ate¸s, G. and Elmacı, Y., (2018). Physical, chemical and sensory characteristics of fiber-enriched cakes prepared with coffee silverskin as wheat flour substitution. Food Measure 2019, 13, 755–763.

[23] Kaffe Bueno ApS. Coffee Flour (Defatted Coffee Arabica Seed Powder). Available online: https://ec.europa.eu/food/sites/food/files/safety/docs/novel-food_sum_ongoing-app_2018-0698.pdf

[24] Miron-Merida, et al., (2019). Valorization of coffee parchment waste (Coffea arabica) as a source of caffeine and phenolic compounds in antifungal gellan gum films. LWT Food Sci. Technol. 2019, 101, 167–174.

Based on the above potentials, the cooperative business model for smallholder coffee farmers should be structured with strategies and systems that appropriately position the farmers in the coffee value chain for viability and profitability.

3.2 The Analysis of the Coffee Farmers' Cooperatives in KSA

The recently registered Cooperative Association of Khawlani Coffee in Jazan (CAK-CJ), KSA, besides the general cooperative movement, exhibits several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measure as highlighted below.

3.2.1 Strengths

1. **Registered coffee farmers' cooperative in Jazan**
   - There is a recently registered Cooperative Association of Khawlani Coffee in Jazan (CAK-CJ), in August 2021 (www.kcoffee.sa) – the first specialized coffee cooperative in the Kingdom of Saudi Arabia. This will be able to bring together coffee farmers for collective action in the coffee value chain.
   - Other unspecialized agricultural and marketing cooperatives in the coffee-growing regions are supporting coffee farmers who engage in other activities such as fruit farming.
2. **Existing apex cooperative organization**
   - The apex cooperative body, CSC, is established under the law and has a 12-year strategy (2018-2030) that highlights several specific objectives of the Cooperatives Sector.
   - CSC is affiliated with Internal Cooperatives Alliance (ICA). CSC is rejuvenating the cooperatives, including coffee cooperatives.

3.2.2 Weaknesses

1. **Delayed cooperative business operations**
   - The established coffee cooperative is yet to begin business operation and service delivery to member
2. **Limited cooperative operation coverage**
   - The established cooperative is only to cover the Jazan region, leaving out other coffee-producing regions of Aseer and Al Baha.
   - There is also an unproportioned presence of coffee cooperatives in the other coffee-farming regions of Aseer and Al Baha
3. **Limited Good Agricultural Practices (GAP) by cooperative members'**
   - Some of the coffee farmers in the cooperative are not practising GAP, hence limiting cooperative production levels that would be optimal for the cooperative's business activities.

3.2.3 Opportunities

1. **Saudi Coffee's sentimental value**
   - Saudi coffee arabica has a rich heritage of thousands of years, and a strong sentimental value from the household level. This implies the production of Coffee is part and parcel of the Saudi culture and coffee cooperatives. The Saudi government (through the Saudi Heritage Preservation Society) has asked UNESCO[25] to protect the tradition of Khawlani[26] coffee cultivation[27].
   - The coffee value chain is largely a "producer-driven"[28] value chain, and therefore the coffee farmers, through the cooperative, can co-invest in "upgrading" the value chain (from subsistence to market-orientation), adapt supply chain structure and relationships and adapt buying practices and product propositions (Lundy, et. al., 2012).

[25] It is envisaged that, by the inscription of the Khawlani coffee (cultivation process) in UNESCO, it will help promote (Khawlani coffee beans) throughout Saudi Arabia and encourage the nation to help these farmers.
[26] In 2017 the Ministry of Interior cited more than 76,390 Khawlani coffee trees farmed by 724 farmers, producing 227,156 kilograms of coffee from an average production of 4 kilograms per tree.
[27] See: https://www.arabnews.com/node/1613806/saudi-arabia
[28] Producer driven value chain is where the producers themselves are mostly interested and controlling the value chain, with objective for new markets, high prices, stabilize their market position and focus on extra supply volumes (Lundy, et. al., 2012).

- The year 2022 has been declared the "Year of Saudi Coffee"[29] by the Ministry of Culture[30]. This seeks to celebrate Saudi coffee as a distinctive cultural product of the Kingdom and contribute to its marketing locally and internationally, in addition to encouraging related products and activities. The Cooperative Association of Khawlani Coffee in Jazan (CAK-CJ) can capitalize on the year to bolster operations.

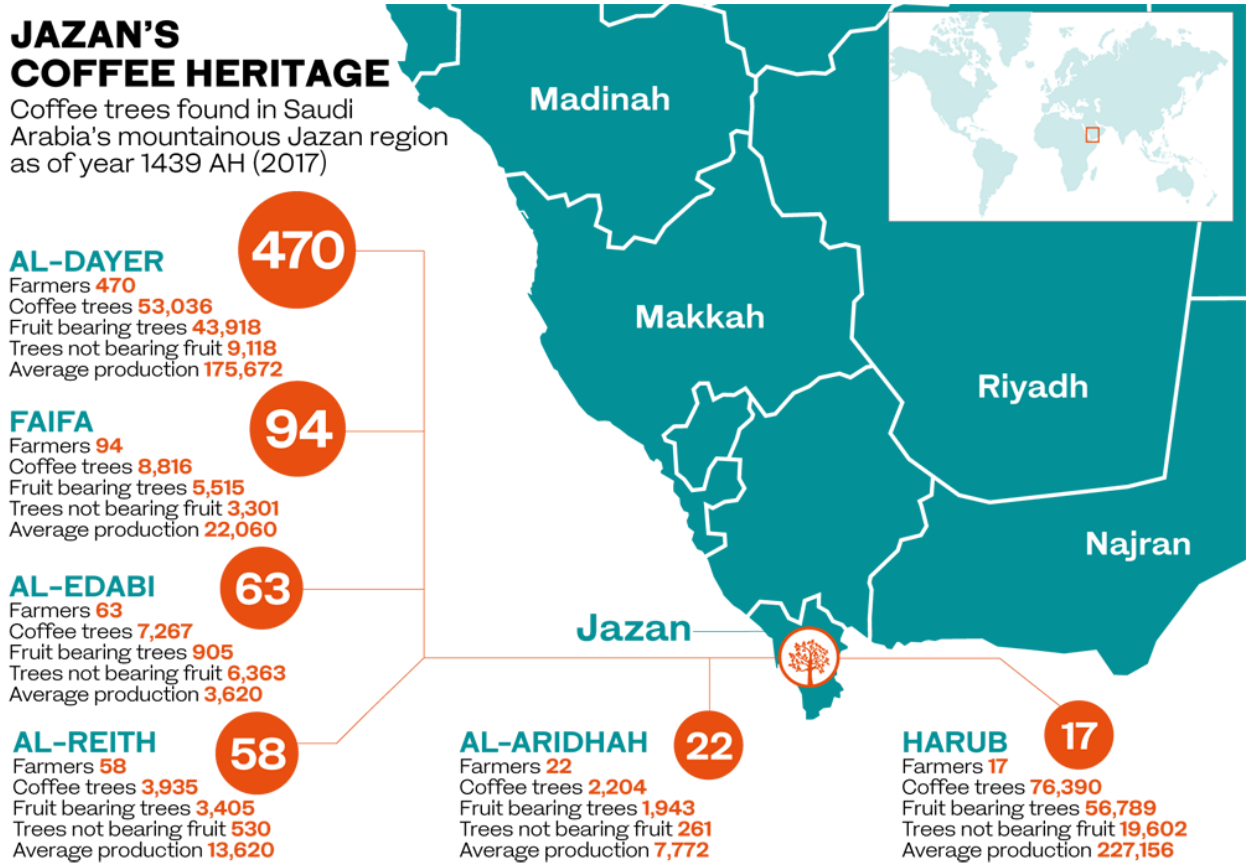

Figure 4: Map illustration of Jazan's Coffee Heritage
Source: https://www.arabnews.com/node/1613806/saudi-arabia

2. **Unexploited local coffee markets and other value-chain activities**
   - Saudis are ranked as one of the biggest consumers of the beverage. However, the coffee farmers are yet to recognize the need for the market orientation farming of Saudi Coffee Arabica.
   - The farmers are yet to explore other coffee value-addition opportunities in the chain, including the flower, leaves, cherry pulp, green coffee, silver skin, spent coffee grounds, and parchments. The cooperatives can help farmers exploits this array of business opportunities for job creation and increased incomes.
3. **Government support**:
   - Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives. MoEWA seeks to enhance the production of the coffee crop in agricultural terraces by establishing 60 model coffee farms to boost production and food security in rural areas, optimize renewable water sources, and enhance the productivity and profitability of smallholder farmers. This is through guiding farmers to adopt proper practices of cultivation, rainwater harvesting, rationalizing irrigation water, establishing water reservoirs, rehabilitating agricultural terraces, and constructing retaining walls, in addition to extending drip irrigation networks, and providing production inputs.

[29] See: https://www.arabnews.com/node/1996186/saudi-arabia
[30] See: https://engage.moc.gov.sa/year-of-saudi-coffee

- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government is planning to develop a coffee factory in Jazan, which the newly registered can operate for the benefit of members and the community.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of agricultural and fishery cooperatives.
- The government is "privatizing" the extension services, to mitigate the low extension system to ensure accessibility among, coffee farmers to improve production and productivity.

4. **The success of coffee cooperatives' identity and experience around the world:**
    - With the perspectives around the globe and the Arab world, cooperatives are among the most important value chain growth engines for the smallholders participating in the value chains, with the potential to help them address the value chain core processes of production, aggregation, processing, and distribution. There are many successful Coffee cooperatives around the world – especially in Africa and Latin America promoting their countries' coffee, creating jobs, and contributing to respective economic growths.
    - Some of the development actors in advancing cooperatives, like FAO, which is a member of the Committee for the Promotion and Advancement of Cooperatives (COPAC) is currently offering technical support to the Kingdom that the Coffee Famers' Cooperatives could leverage.

3.2.4 Threats

1. **Market Competition:**
    - Saudi is still a net coffee importer country. Moreover, due to the limited market orientation of the Saudi coffee farmers, the coffee market in the country is likely to continue experiencing competition from imported coffee, especially from neighbouring countries like Ethiopia and Yemen.
2. **Negative social attitude and knowledge gap:**
    - There is still a negative social attitude and mindset toward cooperatives, which has led to delays in the establishment of the cooperatives among the coffee farmers, despite the coffee farming itself being part of the Saudi rich heritage
    - There is a big information gap and a lack of understanding of the cooperative concept and model among the media fraternity, and hence the limited publicity of the cooperatives by the mainstream media, limits awareness of the cooperatives and cooperative work among the people.
3. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.
    - The framework lacks flexibility in the internal governance structure of coffee cooperatives. There are no separate frameworks or unique provisions in the law for coffee cooperatives
    - The framework has no provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains

The strengths and opportunities in coffee farmers' cooperatives are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these issues in the coffee farmers' cooperatives, the KSA's stakeholders need an overall-cost leadership strategy[31], a differentiation strategy[32], and a focus strategy[33], to drive the coffee sector to market orientation. The subsequent section suggests key actionable areas for the foundation and strengthening of agricultural cooperatives.

[31] Overall-cost leadership strategy: Producing large volumes at an average cost level, lower than that of all competitors. This requires open membership

[32] Differentiation strategy: Offering what market need not what members produce or service or offer to avoid the most competitive markets. Direct the members' production or services or labour in terms of qualities, or volumes, or both

[33] Focus strategy: Like differentiation except that the product or services range is narrower and focused for target members and market.

3.3 Recommendations for Developing and Strengthening Coffee Cooperatives

The coffee farmers' cooperatives can be critical actors in the coffee sector in the Kingdom. They can engage in the:

1. Farmer sensitization and mobilization, including women and youth, to understand the importance of the cooperatives in the coffee sector de and patronize the cooperative organization.
2. Disrupting the current value chain organization and ensuring inclusivity of the smallholders in the value chain while addressing the market failures.
3. Development and operationalization of ownership and organizational structure and business model that is profitable and sustainable.
4. Developing initiatives for improved farmer/member extension services and good agricultural practices in coffee production.
5. Financing and development of the cooperative office facilities and aggregation and pulping centres and equipment.
6. Managing other value chains (such as cereals, fruits, or Rose), the coffee farmer members are also part of, undertaking multiple functions.

Strong Coffee Farmers' Cooperatives are important for the responsive and beneficial involvement of the fisherfolk in the fisheries sector. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing fishery cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

3.3.1 Registration of more coffee farmers' cooperatives

The potential role of cooperatives to bolster the rich heritage of the coffee sector in the Kingdom, which is largely smallholder oriented, cannot be overemphasized. Therefore, there is a need to:

1. Register at least one coffee cooperative in each of the other coffee growing regions – Al Baha and Aseer; OR,
2. Encourage the formation of coffee development units in the existing agricultural cooperatives in those regions.

3.3.2 Develop coffee cooperative business models

Coffee farmers' cooperatives should be supported to develop and review their business models[34] to help them operate successfully and sustainably. The Government and the cooperative stakeholders should be involved in and support efforts to establish coffee cooperative business models that other cooperatives will follow. Therefore, there is a need to:

1. Develop coffee cooperative business models that are cognisant of the cooperative scope of purpose and coverage[35], ownership and financing structures[36], governance structures[37], and marketing structure

[34] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building, and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

[35] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

[36] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook,

strategies. Based on the nature of the coffee sector in the Kingdom, the New Generation Cooperative[38] (NGC) type of cooperative is proposed for coffee farmers.

2. Guide the coffee farmers' cooperatives to adopt different business models that will help them to create, deliver and capture value. The business activities for member value proposition may include input supply, extension services, value addition, and collective marketing.
3. Support coffee cooperatives to undertake business feasibility studies and business, operational and financial plans.
4. Guide coffee farmers' cooperatives on resource mobilization – human, material, and financial – through project proposal writing, and subsidy and loan application.
5. Guide coffee-oriented cooperatives on the establishment of trading relationships, through vertical and horizontal integration; for example, as illustrated in Figure 4 below.

Figure 5: Guiding trading relationships for smallholders and their cooperatives

3.3.3 Develop coffee farmer cooperatives' capacities

The capacities of cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[39] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

1. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing coffee cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the coffee cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the coffee cooperatives; financing and finance management in coffee cooperatives; and performance monitoring of coffee cooperatives (e.g., on auditing and inspection, regulation of cooperatives).

M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[37] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[38] New generation cooperatives are designed to enable producers to profit from the production and marketing of value-added products made from their raw commodities.

[39] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

2. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
3. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
4. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

3.3.4 Strengthen the coffee cooperative governance system

Cooperatives[40] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors, management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide coffee farmer cooperatives to adopt best-fit governance structures[41] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[42]. The structure can take the delegates system that includes the representatives of various governorates and several coffee farms.
2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the cooperative boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management and conduct regular internal and external auditing.
4. Support the fishermen's cooperative development and adopt digitally integrated management systems, e-marketing or e-auction system, and (through CSC by its participation ICA) develop or change their websites (for instance, the Cooperative Association of Coffee in Jazan - www.kcoffee.sa) using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

3.3.5 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The awareness level of the public concerning the cooperative business model for coffee is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[43]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the public. Cooperative information should be available for everyone (ILO 2018), and cooperative awareness creation can equally ensure information dissemination to the public.

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[40] A fishery cooperative, based on the cooperative definition, is not only an association of fisherfolk but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[41] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[42] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

[43] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[44], International Coffee Day[45], and throughout 2022 as "the Year of Saudi Coffee") to improve fisherfolk knowledge sharing and understanding of cooperatives' roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

3.3.6 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of cooperative development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology.
2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the fishery and aquaculture cooperatives.
3. Support mergers of fishery and aquaculture cooperatives s, and cooperation among cooperatives within the regions or by the coffee sector to ensure economies of scope and scale and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the coffee cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated for by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly integrated, it as an Online Application and into the individual cooperatives s websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage fishery and aquaculture cooperatives s change their website domains to the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.
6. Re-organize the cooperatives register, with clear and consistent coffee cooperative certificate names.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at the Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extent the MoHRSD, CSC and Coffee Cooperatives.

3.4 Success Story for Coffee Cooperatives Business Case

3.4.1 Tierra Nueva in Nicaragua

Tierra Nueva (COSATIN) cooperative describes the business development and market empowerment of a small farmers' organization in Nicaragua. The cooperative was formed in 1997 by 23 farmers to deal with the marketing of organic coffee. Small coffee farmers in Boaco, Central Nicaragua, were used to selling their coffee bags to middlemen circulating the villages – with "take it" or "leave it" prices. Farmers had little knowledge of the market situation and did not have much choice in whom to sell their products. Given the farmers' low market power and lack of processing, the price they were getting was low. Adding the poor productivity and ageing plantations farmers saw their future quite pessimistically. *Tierra Nueva* was initiated in a situation where the producers themselves thought that Boaco coffee is of inferior quality compared to other coffee-growing areas of Nicaragua.

[44] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[45] International Coffee Day held on every 1 October, is an occasion that is used to promote and celebrate coffee as a beverage, with events now occurring in places around the world.

With the support of the International Solidarity Foundation of Finland (ISF), the cooperative acquired advanced tasting systems. It was found that several local communities produce coffee with special characteristics concerning its sweetness, low acidity and delicious flavours and aromas, which are very popular among some segments of buyers.

In 2000, the cooperative obtained Fairtrade and organic certificates. These have offered farmers of the cooperative higher than the standard price of their products. The guaranteed minimum price was extremely important during the collapse of coffee prices at the beginning of the millennium. With the Fairtrade premium, the cooperative has been able to offer direct benefits for farmers. Benefits include education, health services, improvement of roads, microloans, renovation of communal buildings etc.

Nowadays *Tierra Nueva* takes care of most phases of production: picking, wet process (unpeeling), cleaning, drying, hulling, sorting, grading, packing, storing and transportation to the port. The increased control of the value chain has improved quality control and added value to the product. Tierra Nueva has a new approach to the market: the promotion of speciality coffees to targeted markets, identifying the origin and traceability required by customers. The result has been a significant increase both in demand and sales prices.

The process of its business development has changed the identity of the cooperative's "poor" to "farmer and entrepreneur" and strengthened both the cooperative and the capacities of members so that it has succeeded in creating a competitive company that can operate successfully in the domestic and international markets.

Tierra Nueva currently has a membership of over 650 producers. The cooperative has shifted from an exporter of 23 bags to an exporter of 23 containers per year. The organization annually exports certified organic and Fairtrade coffee with a total value of over a million dollars and the export value of honey is expected to exceed the coffee in a couple of years. Tierra Nueva is the largest exporter of honey in Nicaragua, which is an outstanding achievement for a cooperative of small producers.

Currently, *Tierra Nueva* exports coffee and honey to Fairtrade markets in Europe and North America with nearly two million U.S. dollars annually. The success of Tierra Nueva is based on the systematic training of more than 600 members and the creation of a network of peer mentors and quality inspectors who ensure the smooth management of export products. Tierra Nueva as a company has also managed to identify the products (different types of coffee and high-quality organic honey) in specific agro-ecological conditions in operation and has a growing demand among international buyers.

Tierra Nueva is a cooperative organization that promotes strong indigenous development of rural communities in an economically and ecologically sustainable way. Although they are not rich yet even by local standards, the cooperative members have increased their income and their socioeconomic conditions are more favourable than the rural population in general.

3.4.2 Pachamama Coffee Cooperative in the USA

Pachamama Coffee Cooperative (https://pachamamacoffee.com/pages/about) is headquartered in Northern California and is a global cooperative, whose mantra is "from seed – to – cup" was initiated in 2000 when coffee farmers in Peru found that producing speciality coffee was not profitable for small farmers. The commodity price for coffee was near historic lows and third-generation coffee farms were going broke. These farmers thought of how they could roast their coffee on their own.

In 2003, Pachamama was established and is composed of four coffee cooperative unions: COCLA from Peru, PRODECOOP from Nicaragua, Manos Campesinas from Guatemala, La Unión Regional from Mexico, and OCFCU from Ethiopia. They hired Thaleon Tremain as the co-op's first employee in California to build the business. Pachamama Coffee Cooperative is defined by the shared dream of the cooperative founders and the journey that the collective has taken.

In 2006, the cooperative found its niche. It sold its first pound of roasted coffee to the Davis Food Cooperative in California. The first farmer-owned coffee brand found a niche in the independent grocery market and grew fast. In 2010, Pachamama introduced Traceable Coffee, a World Bank-funded platform enabling consumers to "Tip the Farmer" on the platform Know Your Farmer. The Pachamama coffee is certified organic and is

labelled for each country. In 2011, Pachamama's started offering subscriptions. Its direct-to-consumer subscription service (Coffee C.S.A.) began and attracted coffee-drinkers from all over the United States. In 2013, the cooperative started expanding into retail. Roasting on our own. The cooperative opened its first in a series of retail cafes and shortly thereafter began roasting its coffee in Sacramento, California.

The story of Pachamama Coffee is the story of thousands of family farmers that own the cooperative. Families that - for the first time - have the opportunity to deal directly with the consumers. That is good for the farmer, the environment and the consumers' cup of coffee.

3.4.3 The Oromia Coffee Farmers' Cooperative Union (OCFCU Ltd) in Ethiopia

The Oromia Coffee Farmers' Cooperative Union (OCFCU Ltd) (https://www.oromiacoffeeunion.org/) is a smallholder coffee growers-owned cooperative union in Ethiopia that groups 129 cooperatives with 128,361 households and 800,000 families. OCFCU is a perfect example of **Cooperatives, Fair Trade and the Community.** OCFCU is a democratic member-owned business operating under cooperative principles. All the cooperatives work in line with fair trade principles and 28 of them are fair trade certified. Seventy per cent of the Union's profits from export sales are distributed back to the 129 cooperatives. The cooperatives then distribute 70 per cent of the net profit as dividends back to the member farmers and use the remaining 30 per cent for capacity building, investment in fixed assets, social services and reserves. So far, OCFCU has accomplished 74 community development programmes with the fair-trade premium and the Union's social fund in areas such as water development, education, health and electricity.

This guide is not exhaustive of the process of analysis, selection and design, implementation, and monitoring of the agricultural cooperative business models. Additional insights may be given by the technical teams supporting the target agricultural cooperatives in all the processes.

4. Cooperatives in Rose Sector

Synopsis

In the Kingdom of Saudi Arabia, Cooperatives in the Rose value chain portray a mix of situations concerning sector outlook, strengths, weaknesses, opportunities, and threats.

Of the registered agricultural cooperatives in KSA, there is one recently registered specialized Rose farmers' cooperative in Taif, and one general Agricultural Cooperative Association of Taif Governorate. The former has 40 members with a total shareholding of SAR 1 million, but are yet to begin business operations; while the latter has 67 members out of which 25 are women with a total shareholding of SAR 400,000, 3 women staff members, and offers low-priced input to Rose farmers. The Rose sector is a high-value crop with various value-added opportunities to create jobs for women and increase incomes for farmers – to make cooperatives more relevant, successful and sustainable.

However, the Rose farmers' cooperatives in the Kingdom still face several internal and external challenges. These include limited cooperative business operations, undeveloped Rose cooperative business models, exploitative lead firms and traders in the value chain, unfavourable climatic conditions affecting production cycles and productivity unconsolidated, cooperative information and knowledge gaps, and limited cooperation among and between cooperatives.

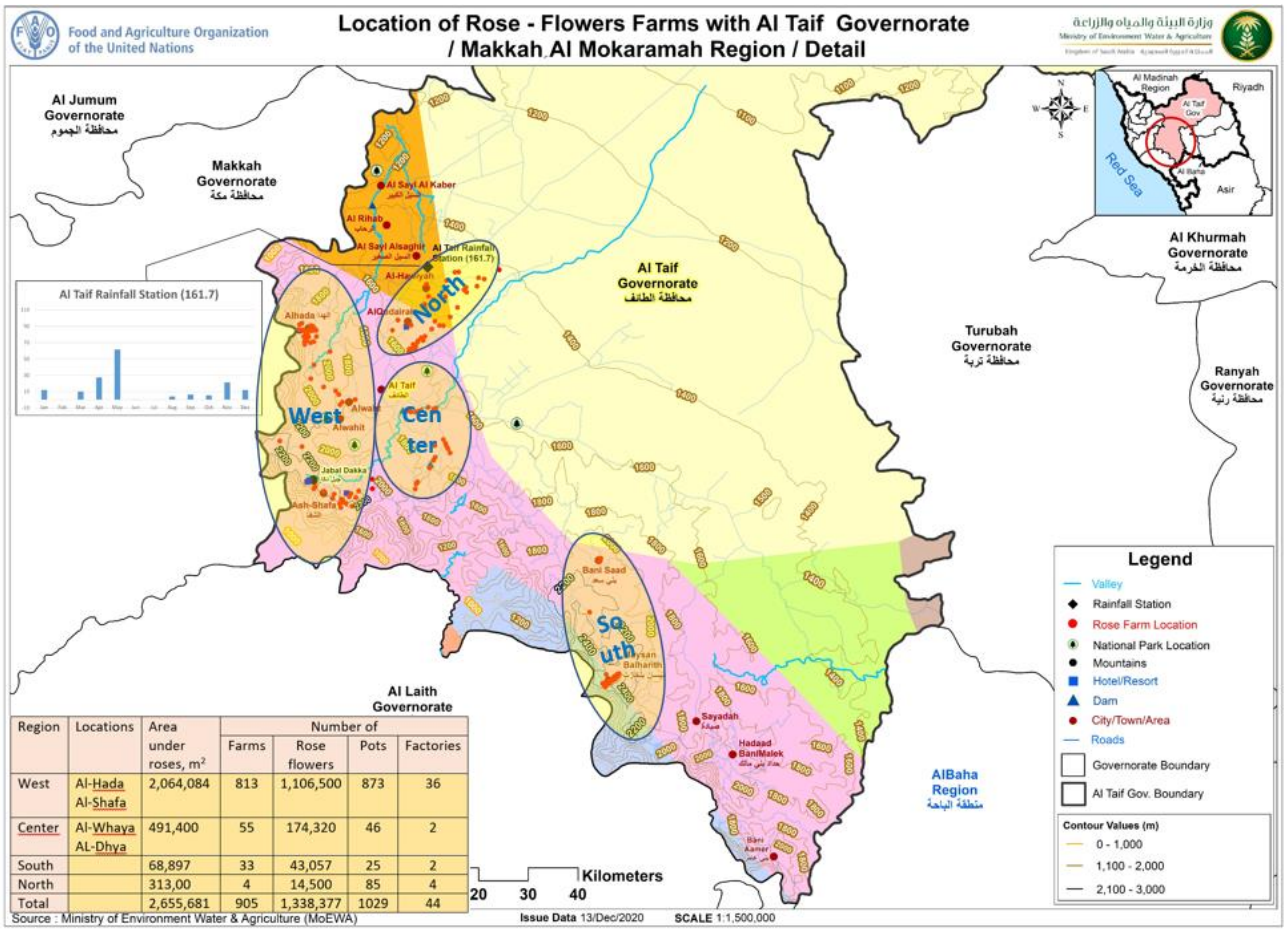
The report, therefore, makes some suggestions for considerations by the government and cooperative stakeholders to strengthen the cooperatives in the Rose value chain: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: develop Rose farmer cooperatives' capacities; develop Rose farmer cooperative business models; develop Rose farmer cooperative governance structures; create awareness to change the perception of cooperatives; and strengthen the government agencies' capacity including set-up of digital system and development of Rose sector regulations.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for the Rose value chain; while helping the smallholder Rose farmers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperative, cooperative awareness creation, organization and business capacities and development of compatible business models.

4.1 Rose Value Chain Outlook

4.1.1 Rose Production

The cultivation of Roses in KSA is a centuries-old practice, largely pursued in the Taif governorate of the Makkah region and is traditionally recognized for making Rose oil and perfumery products. Rose farming has distinct features, and its specialized cultivation is undertaken in the variable altitudes of the mountains (>1200 meters above sea level) in the North, West, and South of Taif city, concentrated within a diameter of 50-60 km (i.e., Al-Hada, Al-Shafa, Al-Dahia, and Al-Ghadeerain). There are about 400 Rose farmers on 908 Rose farms with nearly one million Rose plants spread over the about 270-hectare area. The regional distribution of Rose farming and its processing is illustrated in Figure 6:



Region	Locations	Area under roses, m²	Number of			
			Farms	Rose flowers	Pots	Factories
West	Al-Hada Al-Shafa	2,064,084	813	1,106,500	873	36
Center	Al-Whaya AL-Dhya	491,400	55	174,320	46	2
South		68,897	33	43,057	25	2
North		313,00	4	14,500	85	4
Total		2,655,681	905	1,338,377	1029	44

Figure 6: The main areas of Rose cultivation in Taif governorate

The Rose cultivation in Taif is integrated into its processing for Rose oil and related by-products such as Rosewater (https://archive.aramcoworld.com/). Thus, the Rose sector needs to be identified from the cultivation along with 72 local processing factories (i.e., distillation units, big and small, for processing Rose oil and Rosewater.). Rose oil is a high-value product, and this small sector produces a total of about 400 kg of Rose oil per year with estimated revenue of SAR 54 million SAR (about USD15 million). This translates to about USD 350 per 10 ml. Rose oil is almost entirely used in the domestic market for the perfumery industry. This small sector in terms of area cultivated has a relatively high potential for employment, and it is estimated that more than 8,000 people are employed in all the supply and value chains of the Rose sector.

According to the GAS accessed April 2021, Rose flower cultivation (in over 20 species) is being cultivated by 3,735 households on an estimated area of 1,672.878 donum. The total Rose flower production is 13,521.1 tons. The 2018 description of the Rose production was as indicated in Table 14 below.

Table 17: Rose production in the Kingdom

Region Altitude	**Locations**	**The area under Roses, M²**	**Number**			
			Farms	**Rose plants**	**Rose production KG**	**Pots**
West 2600-1700 m ASL	Al- Haada Al-Shafa	2,064,084	816	1,106,500	553,250,000Rosebuds 1,580,714Kgs	873
Centre 1600-1400 m ASL	Al-Waht AL-Dahya	491,400	55	174,320	87,160,000 Rosebuds 249,028.5Kgs	46
South 2600-1700 m ASL	Wadi Liah Maysan	68,897	33	43,057	21,528,500 Rosebuds 61,510 Kgs	25
North < 1400 m ASL	Al Qudaira Al Sayl	313,00	4	14,500	7,250,000 Rosebuds 20,714 Kgs	85
Total		**2,655,681**	**908**	**1,338,377**	669,188,500 Rosebuds	**1,029**

Region Altitude	Locations	The area under Roses, M^2	Number			
			Farms	Rose plants	Rose production KG	Pots
					1,911,967 Kgs.	

Source: SRAD Project – Rose Component NPO – 2018 Data

The Rose production is done once a year, from mid of March to the end of April, for around 45 days. The major Rose varieties grown in the kingdom include Taif Rose, Rosa *Damascena*, Domestic Rose, Medina Rose, and Musk Rose (*Rosa Canina*). The local Taif Rose and Rosa *Damascena* varieties, due to their higher oil content, are popular and famous for Rose oil and Rosewater production. Other Rose varieties are grown mainly for gift and ceremony purposes.

In one hectare, 4000-5000 Rose trees can be planted and each tree may give flowers for up to 15 years. Farmers, the mission met, grow up to 15,000 Rose plants. The production per plant may vary between 2,000 to 2,500 per season per year and rise to 3,000 flowers for mature plants. The consumption of fresh-cut Roses is limited in the kingdom and most of the Rose production gets processed into Rose oil and Rosewater. About 10,000 to 15,000 handpicked Roses are required to produce one tolah (11.66 grams) of the Rose oil, mostly using traditional copper equipment and practices. The Rose petals of Rosa *Damascene* contain about 0.08-0.12% of essential Rose oil. The by-product is Rosewater, generally of two types; type 1 is known as virgin Rosewater and it is the first water collected after the distillation process of Rose petals, Rosewater type 2, is the refined water after distillation several times. Rosewater is available in varying concentrations for sale. The pulp residue left after the distillation is sold to cattle farmers and is also used as fertilizer and organic mulch.

The production and management economics of Rose farming is as illustrated in Table 18 below:

Table 18: Production practices and management economics of Rose farming

Small Farmers Income from 2 dunams (1200 shrubs-yield 600,000			
S/No.	**Expenses**	**Total (in SAR)**	**Notes**
1.	Water 53 tanks * SAR 100 /2	2,650	10 L/3days (42.4Ton/moth
2.	Labours SAR 900 *12 moths	10,800	One
3.	Fertilizer SAR 2400 *1	2,400	
4.	Pest	600	
5.	Pruning	600	
6.	Harvesting	600	
	Total	**17,650**	
A	Net income SAR 50/1000buds	12,350	600*50 SR = 30,000
B	Net income SAR 45/1000buds	9,350	600*45 SR= 27,000
Source: Dr. Salih Bazaid, FAOSA			

4.1.2 Rose Value Chain Analysis and Map

The major Rose products in the national market include the following:

1. ***Fresh Flower:*** The Rose is the most popular flower in the Saudi market and the highest-selling colour every week is the Red Rose which is the most demanded. The demand emanates from the traditional Saudi culture of love and care reflected in the shape of Rose flower gifts on different occasions. The preference goes for Large opening buds, long and thick stems, saturated colours and fantastic foliage are some of the characteristics that attract Saudi buyers for cut Roses in the major cities of Riyadh, Jeddah, Mecca, Medina, Al-Ahsa, Ta'if, Dammam, Abha, Buraidah, Khobar and Tabuk. Roses are either sold in pieces or in the shape of bouquets with variable prices ranging from (SAR 4-5 per piece for local and SAR 7-11 for imported) single Roses. The bouquet gets a variable price ranging from 50 to SAR 400 depending upon the flower varieties, colours, arrangement, and size. The big urban localities have exclusive retail shops as well as megastores. A new trend of selling roses online is gradually gaining pace in upscale urban localities.
2. ***Rose oil:*** The most important product of Saudi Rose is its traditional and unique Rose oil extracted in traditional distilleries through a cumbersome process and fetching prices often exceeding that of gold. Being a highly precious commodity, Rose oil is sold in the market based on grams (locally in tolas),

where a tola generally fetches SAR 1,800 to SAR 2,500. The Rose oil is available for sale at the local large distilleries' outlets, branded outlets, and high-end markets.

3. ***Rosewater:*** In the processing line, this is the second most important product which is used for many purposes including health and skincare product. In the retail market, its packaging varies from 250 ml to 750 ml. Imported Rose oil is also available widely across the kingdom at grocery shops and branded retail outlets.
4. ***Rose perfumes:*** Rose oil is utilized to make these speciality perfumes which are marketed locally and internationally by Saudi brands like Abdus Samad Al Qurashi in attractive packing and packaging at prices ranging from SAR 150 to more than SARs 3,000 depending upon the quality of the perfume. These are available at exclusive retail shops and branded outlets.

Table 19 below highlights the Rose flower value chain analysis to help the existing and potential cooperatives in the Rose sector to identify gaps and develop business structures and strategies that benefits the smallholder Rose farmers.

Table 19: Rose value chain analysis

Major channels	**Channel 1**	**Channel 2**	**Channel 3**	**Channel 4**
Final product destination	Domestic	Export/Import	Domestic/Export	Domestic/ Export
Source of origin	Local	Local and imported	Local and imported	Local and imported
End markets: Cut flower Rosewater and oil	 Retailers -	 Big suppliers -	 - Retail chains	 - Retailers
End products	Cut Rose flower	Cut Rose flower	Rosewater and oil	Rosewater and oil
Channel used by farmer	Direct to big suppliers	Traders	Traders	Direct to distillation
Price paid by consumer Imported Rose (SAR/Piece) Local Rose (SAR/piece)	 6-12 4-5	 6-12 4-5	Lebanon product: 300ml (10 fl.oz)- 5.50 500ml (16.9 fl.oz)-9.95 750ml (25 fl.oz)-10.40 Local product: 280ml (70%) – 50 280ml (30%)- 10	Lebanon product: 300ml (10fl.oz)- 5.5 750ml (25fl.oz)-10.40 Local product: 280ml (70%) – 50 280ml (30%)- 10
Price to farmer Imported Rose -SAR/piece Local Rose – SAR/unit	NA 50-100 per 1000 pieces	NA 50-100 per 1000 pieces	NA 50-100 per 1000 pieces	NA 50-100 per 1000 pieces
Operational model	Rose farmers sell cut flowers directly to local big suppliers who after aggregation distribute to wholesalers and retailers throughout the major cities/ towns in the kingdom. Farmers sell to cut flowers in a pack of 1000.	Rose farmers sell to a local trader who aggregates from several farmers and supplies to the big suppliers who are also engaged in the import and export of flowers, distribute throughout the kingdom through a channel of wholesalers and retailers	Rose farmers supply to a local trader who aggregates and supplies to a local distillation lab engaged in Rose oil and water processing. Big suppliers also the supply of cut flowers to distillation labs. Distillation labs contract with big retail chains in the kingdom.	Rose farmers supply directly to distillation labs that distribute Rosewater and oil through a channel of wholesalers and retailers in KSA Distillation labs also export Rosewater and oil to some countries, developed through Haj and Umrah pilgrims.

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Weight and price-fixing mechanism at farmer's end	Cut flowers sold in a pack of 1000 units Price fixation by negotiation	Cut flowers sold in a pack of 1000 units Price fixation by negotiation	Cut flowers sold in a pack of 1000 units Price fixation by negotiation	Cut flowers sold in a pack of 1000 units Price fixation by negotiation
Farmer's say in price fixation	Low/Medium	Low/Medium	Low/Medium	Low/Medium
Key deciding factors for the price fixation	Local Rose variety	Demand and supply situation Source of origin and variety	Local Rosewater/oil, demand and supply Source of origin and variety	Local supply Source of origin and variety
Farmer's awareness of prices in end markets	No/Yes	No	No	No
Is cost-benefit analysis done by farmer	No	No	No	No
Volume of sale through channel domestic produce (Rank)	Rank 2	Rank 4	Rank 1	Rank 3

Source: FAO-KSA Roses Value Chain Report (2019)

The Rose flower value chain map is illustrated in Figure 7, indicating limited coordination of the smallholder fruit farmers.

Figure 7: Rose value chain map in KSA

4.1.3 Rose cultivation visa-a-vis marketing

As stated above, KSA Rose production has long-term established practices, traditions and reputation recognized throughout the country. The government through MoEWA is offering an opportunity to expand production geographically and elevate this sector to a much higher productivity and profitability level. This

includes the encouragement of organic farming of roses, where Rose cooperative could be a good facilitator in this direction.

Moreover, the national significance of the Rose sector is in the high value of its product and its growth potential for both domestic and export markets. The Kingdom of Saudi Arabia maintained a gradual increase in flower imports from USD 63.56 million in 2017 to USD 83.17 million in 2018 and then USD 85.48 million in 2019.

Table 20: World major importing countries of floriculture

S/No.	Importing country	Year of Importation					
		2017		2018		2019	
		Qty (MT)	Value (Mill USD)	Qty (MT)	Value (Mill USD)	Qty (MT)	Value (Mill USD)
1	Germany	801062.93	2825.91	829313	3027.5	834864.66	2924.44
2	USA	330160.47	2277.85	386719.7	2435.24	465736.05	2585.84
3	Netherland	1328781.2	2356.82	1061622	2508.54	977284.04	2423.55
4	United Kingdom	417327	1550.52	744246.8	1755.01	414086.95	1496.7
5	France	349405.24	1212.34	295003.1	1300.61	374335.73	1274.65
6	Japan	107315.14	585.67	98592.89	605.8	106074.89	600.74
7	Italy	226670.9	562.6	180305.7	603.15	169723.11	581.08
8	Switzerland	193983.85	560.4	197793.3	593.95	203585	570.58
9	Russia	182251.21	567.91	218038.4	599.22	242292.84	563.45
	……...	…	…	…	…	…	…
33	**Saudi Arabia**	**14892.33**	**63.56**	**27339.08**	**83.17**	**21606.39**	**85.48**

Source: Adapted from UN Comtrade-2019 - https://comtrade.un.org/

Therefore, for addressing the issues concerning the Rose sector and focusing on its strategic development, it is important to consider the following distinctive features of the Rose sector:

1. Rose cultivation is in plantations and has a very small season of flowering from March to May every year.
2. The harvest produced in Rose farming has no food function and the producers must rely on other crops or markets to meet their consumption needs.
3. The volatility of the Rose oil contained in the flowers makes the harvesting procedure only manual during a short period in the morning
4. It is quality sensitive crop and has high losses due to inappropriate picking and during transportation when exposed to high temperatures.
5. The high value of the product with substantial addition at each value chain tier and corresponding price spread from farm to finished product.

Strong Rose cooperatives would play a critical role in capitalizing on these production and marketing opportunities, especially in the target governorate of Ta'if.

4.1.4 Rose products diversification

The life of "cut and lose" flowers is very short. At present, the harvested rose flowers in Taif are used predominantly for the production of rose oil, and water. The diversification of rose flower products could be of great importance for the future development and expansion of the rose industry. The diversification of the rose flower products could provide new dimensions for the traditional rose-growing industry, increasing its flexibility and rose flower market volumes and demands besides increasing income and employment opportunities and business continuity over a longer period. This value addition through processing results in the increased value of the product compared to the raw product.

Besides Rose oil and Rosewater, several other products can be derived from roses:

1. ***Dried flowers:*** The dried buds and petals of the rose are sold in groceries as a flavour and laxative agent. In many countries, dried flowers are used as laxative agents and flavouring in foods.
2. ***Rosehips:*** Rose hips are berry-like fruits under the petals of flowers. They are rich in vitamins, minerals, fatty acids, polyphenols, carotenoids, and tannins. The vitamin C content of rose hips juice is higher than citrus fruits.
3. ***Rose concrete:*** Rose concrete, a red-orange Vaseline mass is extracted by nonpolar solvent extraction and is the main material for the production of rose absolute.
4. ***Rose absolute:*** Rose absolute or the ethanol extract of rose concrete has an orange-red liquid with a rose aroma.
5. ***Gulkand:*** Gulkand is a sweet product made of rose petals and sugar. Rose petals and sugar are placed in layers in a wide-mouthed jar for 3-4 weeks with stirring on alternate days. Gulkand is also used as a tonic for the reduction of eye inflammation, treatment of acidity, improves appetite and digestion, and many other health benefits.
6. ***Jams:*** Rose petals macerated and mixed with sugar and/or other products give an excellent aromatic jam liked by many for consumption.
7. ***Cosmetics:*** Some of the factories in Taif are producing cosmetic products from roses including rose soap, rose lotion, rose powder, rose hair gel, etc.

From the analysis, cooperatives in the Rose sector can play a critical role in improving the entire sector and particularly benefitting smallholder Rose farmers and workers.

4.2 The Analysis of the Cooperatives in the Rose Value Chain

The Rose-oriented Cooperatives in KSA, besides the general cooperative movement, exhibit several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measures as highlighted below.

4.2.1 Strengths

1. **Existing Rose-oriented Cooperatives**

- There is one already registered specialized Ta'if Rose farmers' cooperative, with a total membership of 40 members and a share capital of SAR 1 million. There is also an unspecialized Agricultural Cooperative Association of Taif Governorate (www.acataif.com.sa), serving Rose farmers, with 67 members, out of which 25 are women and have a shareholding of SAR 400,000.
- The patronage of the cooperative model among the 400 rose farmers in Ta'if is about 26.8%

Table 21: Registered Rose Farmer Cooperatives in KSA

No.	Region	Name of the Cooperative	Estimated members	Established share capital (in SAR)
1.	Makkah	Agricultural Cooperative Association of Taif Governorate	67	400,000
2.	Makkah	Taif Rose Cooperative Association	40	1,000,000
Total			107	**1,400,000**

- The most important role of these cooperatives is seen as the provision of quality inputs at lower prices as well as resolving the issue of a labour shortage during peak harvest periods of rose.
- The Agricultural Marketing Cooperative, at Taif has three employees all of whom are women.

2. **Existing apex organizations for cooperatives**

- Cooperatives in the Rose value chain are by default in the apex cooperative body, CSC. CSC is established under the law, is affiliated with Internal Cooperatives Alliance (ICA), and has a 12-year strategy (2018-2030) that highlights several specific objectives for the rejuvenation of the cooperatives, including those in Rose.

4.2.2 Weaknesses

1. **Limited business operations**

- The specialized Rose farmer cooperative is yet to begin operation, even though. The business operation of other cooperatives is still low-scale – as they are mainly on input markets and not output markets. This leaves the farmers at the mercy of the intermediaries and the lead firms.

2. **Undeveloped business model**

- The Rose cooperatives are yet to develop a business model that can address the increasing market failure and exploitation in the Rose value chain.

3. **Unconsolidated leadership Rose farmer community**

- There are splinter collective action endeavours among the 400 target Rose farmers in Taif. This is tantamount to a possible delay in the take-off of the strong Rose cooperatives.

4.2.3 Opportunities

1. **Demographic structure and character**

- There are about 400 farmers with 908 Rose farms in the target region, with a high production rate of Rose to sustain the potential cooperative business operations.
- The continued exploitation of the smallholder Rose farmers is increasing their agitation to strengthen their collective actions in market access
- The cooperative can also be strong with the large number of women in the Rose sector, who can use the cooperative organisation to acquire jobs and increase their household income.

2. **High-value crop**

- Rose flower is a high-value crop with potential areas of substantial value addition initiatives at each value chain tier to maximize incomes for the farmers from farm to finished product through cooperative initiatives. These different initiatives can result in different streams of revenue for cooperative success and sustainability

3. **Government support**:

- Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives.
- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government also offers land incentives for the construction of cooperative facilities and premise rent incentives for cooperatives' markets. The specialized Rose farmers' cooperative is planning to establish its Rose oil extraction factory with the help of the government.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of Rose farmer cooperatives.

- The government is "privatizing" the extension services, to mitigate the low extension system to ensure accessibility of extension services among, the Rose farmers to improve production and productivity

4.2.4 Threats

1. **Exploitative lead-firm-driven value chain**

- The Rose value chain in Taif is largely intermediary-driven[46] (Lundy, et. al., (Lundy, et. al., 2012). These actors are ensuring the constant supply of raw/fresh by continuous manipulation of farmers through informal agreements for pre-season loans that continually tie the farmers to them.
- The big processing units do not seem to have any interest in the formation and strengthening of cooperatives for Rose farmers.

2. **Unfavourable conditions**

- The Rose farmers suffer unfavourable climatic conditions. There are cases of heavy rains that flood the flower farms, frost, and hailstones that destroy the flowers, thus affecting the production and productivity on regular basis.

3. Rose production cycle and productivity issues

- Rose cultivation is in plantations and has a very small season of flowering from March to May every year.
- The harvest produced in rose farming has no food function and the producers must rely on other crops or markets to meet their consumption needs.
- The volatility of the rose oil contained in the flowers makes the harvesting procedure only manual for a short time in the morning
- It is quality sensitive crop and has high losses due to inappropriate picking and during transportation when exposed to high temperatures.

4. **Information and knowledge gap**

- There is still an information and knowledge gap among the smallholder Rose farmers about cooperatives' role in livelihood improvement and their beneficial inclusivity in the value chain.
- The Rose farmers and their existing cooperatives are not regularly accessing training on cooperative management

5. Limited cooperation among cooperatives

- Taif governorate, which is the Rose producing governorate in the Kingdom, has two cooperatives to serve a total of 400 Rose farmers and 908 farms, who would ideally be served under one cooperative. This fragmentation of the groups threatens the viability of either of them.

6. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.

- The framework lacks flexibility in the internal governance structure of Rose farmers' cooperatives. There are no separate frameworks or unique provisions in the law for Rose farmers' cooperatives.
- The framework has limited provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains.

The strengths and opportunities in Cooperatives in Rose are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these compounding issues in the related cooperatives, the KSA's stakeholders need to re-think an overall turn-around and countervailing power strategies for the Rose farmers' collective actions. The subsequent section suggests key actionable areas for the foundation and strengthening of the Rose cooperatives.

[46] In an intermediary dominated supply chain, actors such as, processors, transporters, or wholesalers tend to have a great power over decision and implementation and governance and hold critical information about both upstream and downstream activities.

4.3 Recommendations for Developing and Strengthening Rose Cooperatives

The Rose farmers' cooperatives can be critical actors in the Rose sector in the Kingdom. They can engage in the:

1. Quicken horizontal and vertical expansion of Rose production for farmer incomes
2. Increase crop productivity through supporting members in their capacity building in crop husbandry
3. Improve marketing by accessing different markets and reducing marketing costs
4. Support implementation of quality standards of Taif Rose
5. Support the sector in organic farming of Rose and attaining Geographical Indications (GI)
6. Support product diversification from a few products to many products and include other aromatic plants in the chain (Jasmine and lavender are good candidates) to create job opportunities for women and youth.

Based on the above, the potential cooperative business model for smallholder Rose flower farmers should be structured with strategies and systems that appropriately position the farmers in the Rose flower value chain for viability and profitability.

Strong Rose Cooperatives are important for the responsive and beneficial involvement of the smallholder Rose farmers in Taif. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing Rose cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

4.2.1 Develop Rose farmer cooperatives' capacities

The capacities of cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[47] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

1. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing Rose farmer cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the Rose cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the Rose farmer cooperatives; financing and finance management in Rose farmer cooperatives; and performance monitoring of agricultural cooperatives (e.g., on auditing and inspection, regulation of cooperatives).
2. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
3. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
4. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

4.3.2 Develop Rose farmer cooperative business-models

Rose farmer cooperatives should be supported to develop and review their business models[48] to help them consolidate their operations, successfully and sustainably. The Government and the cooperative stakeholders

[47] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

[48] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

should be involved in and support efforts to establish the Rose cooperative business model. Therefore, there is a need to:

1. Develop Rose farmer cooperative business models that are cognisant of the cooperative scope of purpose and coverage[49], ownership and financing structures[50], governance structures[51], and marketing structure strategies. Based on the nature of the fish sector in the Kingdom, the Multi-stakeholder (Solidarity) Cooperative[52] (MSC) type of cooperative is proposed for Rose farmers.
2. Guide the Rose farmer cooperatives to adopt different business models that will help them to create, deliver and capture value for the Rose farmers. The business activities for member value proposition may include – fresh Rose flower marketing; development of consumer brands through values addition for dried flower, Rosehips, Rose concrete, Rose absolute, Gulkand, jams, cosmetics; extension services on-farm visits and management; input supply; and financial credit.
3. Support Rose farmer cooperatives to translate their various feasibility studies to the business, operational and financial plans.
4. Guide Rose farmer cooperatives on resource mobilization – human, material, and financial – through project proposal writing, and subsidy and loan application.
5. Guide Rose farmer cooperatives on the establishment of trading relationships, through vertical and horizontal integration; for example, as illustrated in Figure 8 below.

[49] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

[50] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook, M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[51] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[52] MSC - The term multi-stakeholder cooperative is used to describe a cooperative with multiple types of members (key stakeholders) engaged with the cooperative in different capacities. Any combination of types of stakeholders could be members and may include such constituents as workers, producers, consumers, suppliers, volunteers, among others. These cooperatives are also called solidarity cooperatives. (ICA, 2015)

Figure 8: Guiding trading relationships for smallholders and their cooperatives

4.3.3 Develop Rose farmer cooperative governance-system

Cooperatives[53] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors, management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide Rose farmer cooperatives to adopt best-fit governance structures[54] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[55]. The Rose farmer cooperatives can generally adopt the delegates system in which the North, West, Centre, and South zones can be allocated representatives based on the number of Rose farms.
2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the Rose farmer cooperatives' boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management, and conduct regular internal and external auditing.
4. Support the Rose cooperative to develop digitally integrated management systems, e-marking or e-auction systems, and (through CSC by its participation in ICA) develop a website using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

[53] A Rose farmer cooperative, based on the cooperative definition, is not only an association of Rose farmers but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[54] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[55] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

4.3.4 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The private sector players are also decamping farmer collective action. The awareness level of the public concerning the cooperative business model is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[56]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the farmers in Ta'if. Cooperative information should be available for everyone (ILO 2018).
2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[57] and World Rose Day[58]) to improve rose farmers' knowledge sharing and understanding of the cooperative's roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

4.3.5 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of Rose's cooperative development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology to support the Rose farmer cooperatives.
2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the Rose farmer cooperatives.
3. Consider merging the splinter Rose-oriented cooperatives in Ta'if to ensure economies of scope and scale, and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the Rose farmer cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly, integrated it as an Online Application and into the individual cooperatives' websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage Rose farmer cooperatives to develop websites using the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.
6. Re-organize the cooperatives register, with clear and consistent cooperative certificate names. There should be a consolidated specialized Rose farmers' cooperative.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at the Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products. This should deter the informal pre-season engagement of the Rose farmers in the hands of the manipulative processors and traders.
8. Review regulations for the Rose value chain for the benefit of the farmers and their cooperatives.

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[56] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

[57] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[58] The World Rose Day, which is celebrated on September 22 every year, is dedicated to cancer patients all across the globe. The day aims to bring happiness and hope into the lives of such patients and reminds them that they can emerge victorious in their battle against cancer through determination and positivity.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extent the MoHRSD, CSC, and Rose farmer cooperatives.

4.4 Success Story of Flower Cooperative Business Case

4.4.1 United Flower Growers Cooperative Association in the USA

The United Flower Growers Cooperative Association (UFGCA) is a grower-owned and operated cooperative established primarily to market the floral products grown by its members. Founded in 1963 by a small group of Canadian and European growers, the Cooperative has become the primary merchandiser of floral products in British Columbia. The one-hectare facility is in Burnaby and is the largest of its kind in North America.

The Cooperative is managed under the guidance of an elected Board of Directors and currently employs 30 full-time staff. There are approximately 100 member growers of the Cooperative and about 50 growers and wholesalers classified as guest shippers. United Flower Growers conducts Dutch-style auctions four or five times weekly depending on the time of the year. On a typical auction day, growers bring their crops to the auction on specially designed display carts. Within the climate-controlled warehouse, hundreds of carts are lined up in numbered rows. The first row to be auctioned is randomly chosen by an impartial lottery system.

Potted plants and cut flowers are sold simultaneously in the same auction gallery. Each floral cart is exhibited beneath the computer-controlled clocks for viewing by the customers assembled in the gallery. The grower's number, a product description, and the number of lots available are displayed on message boards beneath the clocks. As the sale of the product begins, the hand of the clock start at the highest estimated market and rises and falls until a purchase is made by one of the customers. A Dutch-style clock auction is an auction in reverse. The first customer to stop the clock using an electronic keypad on each assigned desk will purchase the product on display. Purchasers have the option of selecting the number of lots they wish to acquire. The customer may buy the minimum amount required during each transaction or purchase everything currently displayed on the clock. As the auction progresses, warehouse staff consolidate individual purchases into single shipments. Customers make their own transportation arrangements. Prices vary daily depending on the season, supply, and demand. Selling is speculative. There are no assured prices, although growers have the option of removing their product from the clock if prices fall below an acceptable level. To ensure a high standard of quality, the Cooperative's inspectors check flowers and foliage for damage, dehydration, or other imperfections. Substandard crops are downgraded or rejected. Customers are encouraged to personally inspect all products before the auction. During a typical day's auction, the computer records some 2,500 transactions involving about 10,000 floral units with an average value of US$17 per unit. Business is conducted on an established credit or a cash-and-carry basis.

By bringing diverse buyers and sellers together at the auction, growers can specialize in a select range of crops rather than attempting to fill the different needs of every customer. Growers also have collective access to those customers, saving time and money normally spent on merchandising their crops elsewhere. Growers also profit from group advertising and other promotions. For retailers and wholesalers, the auction offers the chance to buy at a one-stop floral centre. The auction also provides the opportunity to purchase the exact assortment required for small or medium size outlets as well as orders for very large single-item lots from mass merchandisers.

5. Cooperatives in Beekeeping and Honey Sector

Synopsis

In the Kingdom of Saudi Arabia, Beekeeping and Honey Sector is under MoEWA. Currently, the Honey sector is well-regulated. Beekeeping and honey cooperatives portray a mix of situations concerning their value chain outlook, strengths, weaknesses, opportunities, and threats.

There are approximately 5,656 beekeepers, managing approximately 1,809,920 beehives. Taif, Baha, and Assir (mountainous regions) in the Southwest are the most suitable areas for keeping bees in Saudi Arabia. These areas comprise 762,474 acres of forests with an altitude of 900–3700m. The beekeeping and honey value chain in KSA has a complex situation as both domestic production and imports get into the same market and overlap each other in certain instances. KSA is still a net importer of honey and honey products.

There are 10 registered beekeepers' cooperatives and 2 under-registration processes in the Kingdom. The penetration of cooperatives among the beekeeper is about 10 per cent. The beekeepers' cooperatives' internal shareholding stands at about SAR 2 million. Beekeepers are receiving support from government subsidies and special programs and initiatives by the agricultural development fund. Beekeepers' cooperatives can co-manage forestry resources, help improve the living conditions of small-scale beekeepers and slow down the rapid depletion of these resources.

Nonetheless, the beekeepers' cooperatives in the Kingdom still face several internal and external challenges including, incompatible business and governance models to accommodate youth and women, limited cooperatives among cooperatives, people's negative social attitudes and mindsets, unaligned policies, high competition from the private market players, erratic climatic conditions affecting the forestry resources, and information gaps on cooperative work.

The report, therefore, makes some suggestions for consideration by the government and cooperative stakeholders: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: develop beekeeper cooperatives' capacities; develop beekeepers' cooperative business models; strengthen beekeepers' cooperative governance structures; create awareness to change the perception of cooperatives; and strengthen the government agencies' capacity.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for beekeeping and honey chain and rural economies; while helping the smallholder beekeepers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and the development of compatible business models.

5.1 Beekeeping and Honey Value Chain Outlook

5.1.1 Beekeeping and Honey Production

The Rural areas of the Kingdom of Saudi Arabia have a centuries-old tradition of beekeeping and honey production. Religiously, the Holy Qur'an includes many statements about bees, beekeeping practices, and the various benefits of honey as an important remedy to treat several disorders in humans (Qur'an 16: 68-69) (Giovanni, 2001). Beekeeping is one of the important segments of the rural economy in the country and it serves as a source of income generation and diversification for a significant number of rural communities. Beekeeping contributes about 30 per cent of the beekeeper's annual income. Moreover, it contributes to circulating money from relatively high-income urban societies to relatively low-income rural societies through honey-selling.

KSA has an estimated 5,656 beekeepers managing approximately 1,809,920 beehives at an average of 320 beehives per beekeeper. Beekeeping is practised as a family business, medium or large-scale commercial venture, and accordingly, the number of bee colonies managed varies from less than a hundred in the case of a family-managed activity up to 3,000 bee colonies for a commercial scale activity.

Beekeeping is practised in the different regions of the kingdom using different types of hives and honeybee races. Taif, Baha, and Assir (mountainous regions) in the Southwest are the most suitable areas for keeping bees in Saudi Arabia. These areas comprise 762,474 acres of forests with an altitude of 900–3700m[59]. The most common species of trees are *Acacia* spp. (Fabaceae (a.k.a., Leguminosae)], *Olea europaea* subsp. *cuspidata* (Wall. & G.Don) Cif. (Oleaceae; often under the synonym *Olea chrysophylla* Lam.), *Juniperus procera* Hochst. ex Endl. (Cupressaceae), *Hyphaene thebaica* (L.) Mart. (Arecaceae), and *Ziziphus spina-christi* (L.) Willd. (Rhamnaceae). Temperatures in summer and winter in these regions range from 20°–28° C and 9°–14° C, respectively. During winter, beekeepers take their bees down to Tihama, a warm coastal region harbouring several rich pollen plants that help beekeepers to increase the number of their hives through uncontrolled swarming. Since beekeepers follow traditional beekeeping methods, swarming is allowed to occur freely, and more than one swarm normally leaves the hive. Unfilled traditional hives (hollow logs) marked with beeswax are distributed in the vicinity to attract swarms. Other swarms are captured from trees and placed in empty hives. Most beekeepers in the Southwest perform traditional beekeeping methods, whereas Langstroth hives are used in other parts of the country. Most beekeepers perform migratory beekeeping to avoid severe weather and food deficiency. In the central region, wild nectar and pollen plants such as *Astragalus spinosus* (Forssk.) Muschl. (Fabaceae (a.k.a., Leguminosae)), *Horwoodia dicksoniae* Turrill (Brassicaceae), *Anisosciadium isosciadium* Bornm. (Apiaceae), *Citrullus colocynthis* (L.) Schrad. (Cucurbitaceae), *Achillea fragrantissima* (Forssk.) Sch.Bip. (Asteraceae (a.k.a., Compositae)), *Capparis spinosa* L. (Capparaceae), *Acacia* spp. (Fabaceae (a.k.a., Leguminosae)), and *Ziziphus spina-christi* (Rhamnaceae) are available for bees after the rainy season, in addition to cultivated alfalfa, eucalyptus, sunflower, date palm, and some fruit trees[60]. Beekeepers follow the flowering of these plants within an area of 400–500km in diameter in the central region of the country. Some beekeepers move their bees across the country from South to West, to the Centre, or the North and vice versa. In general, the main honey plants in the country are *Acacia* spp. (Fabaceae (a.k.a., Leguminosae)) and *Ziziphus spina-christi* (Rhamnaceae), both being found wild in all regions of Saudi Arabia. Their flowering seasons start during June and August of each year, respectively, depending on rainfall. Approximately 70 per cent of the bees kept in Saudi Arabia are native populations of *Apis mellifera jemenitica*, with the remainder being Carniolan (*Apis mellifera carnica* Pollmann) or Egyptian-Carniolan hybrids. The honey production is illustrated in Table 22 below.

Table 22: Number of honey beehives and honey production by beehives type and region in the Kingdom

Region	**Traditional Hives**		**Modern Hives**		**Total**	
	No	**Kgs. Produced**	**No.**	**Kgs. Produce**	**No.**	**Kgs. Produced**
Al Riyadh	1,005	2,519	1,775	6,264	2,780	8,783
Makkah Al Mukarramah	4,721	5,127	585	474	5,306	5,601
Al Madinah Al Munawwarah	944	1,588	49	118	993	1,706
Al Qaseem	895	1,546	1,142	3,503	2,037	5,049
Eastern Region	573	4,079	945	3,658	1,518	7,737
Aseer	4,072	9,054	891	692	4,963	9,746
Tabuk	29	104	474	4,196	503	4,300
Hail	441	2,075	380	2,250	821	4,325
Northern Borders	1,000	10	0	0	1,000	10
Jazan	7,637	24,911	470	1,750	8,107	26,661

[59] Abu-Hassan AA, Alostta, ML, Mahmoud M (1994) Natural forests in Kingdom of Saudi Arabia and its economical exploitation. Administration of Scientific Research, National Saudi Center for Science and Technology (King Abdul-Aziz's City for Sciences and Technology), Riyadh, Saudi Arabia, 182 pp.

[60] Alghoson NI. (2004) *Bees and Honey Plants in Saudi Arabia.* Alobeikan Library, Riyadh, Saudi Arabia, 184 pp.(In Arabic) (Google Scholar)

Region	Traditional Hives		Modern Hives		Total	
	No	Kgs. Produced	No.	Kgs. Produce	No.	Kgs. Produced
Najran	161	115	0	0	161	115
Al Bahah	1,026	5,189	810	1,903	1,836	7,092
Al Jawf	3,708	5,566	5,145	22,789	8,853	28,355
Total	**26,212**	**61,883**	**12,666**	**47,597**	**38,878**	**109,480**

Source: Agriculture Census 2015, General Authority for Statistics, KSA (Accessed in 2021)

5.1.2 Honey production economics

Despite the extensive beekeeping practices in Saudi Arabia, relevant information related to the socioeconomic profiles of beekeeping and factors affecting the adoption of improved beekeeping technologies is lacking. According to the studies conducted for bee apiaries, the economics of honey production in different regions is illustrated in Table 20; the comparative analysis of traditional versus modern methods is illustrated in Table 21; while the potential for profitability among the smallholder beekeepers is illustrated in Table 23.

Table 23: Average cost (in SAR) of production and net annual income of beekeeping ventures per apiary

Region	Fixed cost (A)	Variable cost (B)	Total Production cost (A+B=C)	Gross annual income from the honey sale (D)	Annual net income from the honey sale (D-C)	Average % annual income share of income from beekeeping
Al Baha	37,341.96	13,351.19	50,693.15	322,386.15	271,693	46.09
Hail	20,026.3	14,140.69	34,166.99	220,999.99	186,833	20.43
Jazan	31,285.68	31,332.56	62,618.24	218,545.24	155,927	34.77
Madinah	30,416.97	17,684.81	48,101.78	207,108.78	159,007	13.11
Taif	44,127.29	16,646.77	60,774.06	395,071.06	334,297	22.21
Average	**32639.64**	**18,631.2**	**51,270.84**	**272,822.244**	**221,551.4**	**27.322**
Source: Ahmed *et al* (2017)						

Table 24: Beekeeping comparative analysis: traditional versus modern method

Factor	Traditional beekeeping	Modern beekeeping
Type of hive	Traditional hives	Box hives
Number of hives owned	333	219
Mean and range	(16-3,000)	(5-1,000)
Types of bee races used: First choice Second choice	 Local (90%) Both (6%)	 Imported (46%) Local (37%)
Survivability in KSA	High	Low
Percentage (%) of beekeepers engaged	63%	37%
The main source of beekeeping experience	Parent	Neighbours
Mean honey yield/colony/ annum (kg)	3.7	6.6
Range, minimum to maximum (kg)	1 to 37	0.5 to 20
Price per colony (USD)	100-200	30-40
Financial benefit (37 boxes per farmer) (in SAR)		
Average gross income/annum	16,492	33,773
Costs/annum #	30.6	73.3
Average gross net income/annum	**16,461**	**33,700**

Costs include transport, feed, medicine, labour, packaging, and water

Source: FAO-KSA Report (2019) on Author's analysis from Ahmad A. Al-Ghamdi, Nuru Adgaba, Ahmed H. Herab, Mohammad J. Ansari, Comparative analysis of the profitability of honey production using traditional and box hives, Saudi Journal of Biological Sciences, 2017.

Table 25: Economics of proposed beekeeping business in KSA

Size of business	Small Size Stationary family level	Middle size	Commercial size
Number of hives	50	100	200
Initial cost (in SAR)	41,500	86,000	250,000
Operating cost (in SAR)	3,500	39,000	100,000
Total cost (in SAR)	45,000	125,000	350,000
The income per annum (in SAR)	193,750	387,000	775,000
Net income	148,750	262,500	425,000
Return on investment (%)	331%	210%	121%

Source: FAO-KSA Honey Value Chain Report, 2019

Generally, the beekeeping practices in KSA are traditional with a migratory pattern of management, and more than 70 per cent of the bee colonies are kept in local hives with a recent trend of shifting to modern hives with higher yield potentials. The number of people involved across the value chain: in bee farming, processing, trading, input manufacturing, and supply is much more than the number of beekeepers.

5.1.3 Honey Value Chain Analysis and Map

The honey value chain analysis is highlighted in Table 26 below.

Table 26: Honey value chain analysis

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
End markets	Traders/direct	Honey festivals	Wholesalers-cum-retailers	Retail chains
Source of honey origin	Local	Local	Local and imported	Local and imported
Product packing	Loose, plastic cans, glass bottles	Loose, plastic cans, glass bottles	Loose, plastic cans, glass bottles	Glass bottle
Final products destination	Domestic	Domestic	Domestic and Export	Domestic
Channel used by honey producers	Consumers and traders	Consumers and retailers	Intermediaries	Not accessible
Products sold by farmer	Honey Honey with comb	Honey Honey with comb	Honey Honey with comb	Honey
The price paid by the consumer SAR/kg	350-450	350-450	350-450	250-350
Price to farmer -SAR/kg	200-450	250-450	200-250	200-250
Operational model	Known consumers purchase from the production site Traders procure directly from the production site Retailer price and consumer prices may differ by SAR 100 to 150 per kg	Honey producers participate in honey festivals in regions and heritage festivals in Riyadh and sell to consumers and intermediaries Intermediary price and consumer price may differ by SAR 100 to 150 per kg	Big suppliers import honey from several countries and supply through their network of wholesalers and retailers Agents of suppliers procure local production from producers Suppliers do re-export, after processing, to other countries	Retail chains procure imported honey directly through their procurement system They also procure locally processed honey from processors and big local suppliers

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Price fixing mechanism at the farmer's end	Price fixation by negotiation	Price fixation by negotiation	Price fixation by negotiation	Price fixation by negotiation
Farmer's say in price fixation	High	High/Medium	Medium	Medium
Key deciding factors for the price fixation	Local production, floral base, taste, colour, smell	Local production, floral base, taste, colour, smell	Local or imported brand, source	Local or imported brand, source
Farmer's awareness of prices in end markets	Yes	Yes/No	No	No
Volume of sale through channel - domestic produce (Rank)	Rank 2	Rank 1	Rank 3	Rank 4
Volume of sale through channel - import included (Rank)	Not applicable	Not applicable	Rank 1	Rank 2

Source: FAO-KSA Honey Value chain Report (2019)

The existing opportunity to exploit the strengthening of the beekeeping and honey cooperatives lies in the honey value chain map, illustrated in Figure 9.

Figure 9: Honey value chain map in KSA

5.1.4 Market vis a vis production

The total annual honey production of the country is around 2,600 tons. Honey is a highly regarded product in Saudi society's culture and religion for its medicinal and nutritional values, and the average price of locally produced honey is around SAR 250/kg which is 10 times more than the unit price of honey in The United State of America and Europe. The country is one of the largest honey buyers and consumers in the world. The

annual average consumption amount is more than 16,000 tons. The country imports about 20 000 tons of honey annually to fill gaps in honey demand. The trend increased in 2020 the country imported 24 000 tons of honey. There is a re-exportation of 2,000 to 4,000 tons of honey to mainly Gulf countries. Generally, there are huge gaps between honey production and demand which requires narrowing the gaps by increasing the production and productivity of beekeeping in the country (FAO KSA - 2021, internal report). Cooperative can play a huge role in balancing the supply of honey.

Box 13: Factors affecting honey pricing

- Locally produced honey is higher priced than imported honey.
- Honey sold with natural wax is higher priced than honey marketed without wax
- Honey with a natural taste was more expensive than high-sweet honey
- Light colour honey is higher priced than dark colour honey except for *Sumar* and *Talh* honey.
- Honey with a strong aroma is higher priced than honey with no aroma
- Strong viscous honey is higher priced than honey with low stickiness
- Pure honey is more expensive than non-pure honey
- Attractively packaged honey is higher priced

Source: Abdu Zulail, Sobhy Ismaiel, Safar Al Kahtani, Ahmad A Al-Ghmadi, Nuru Adgaba, Qualitative factors affecting the price and demand of honey in Saudi Arabia, Aust. J. Basic & App. Sci., 8(10): 199-206, 2014

5.1.5 Bee and Honey Products' Diversification

In most of the beekeeping cultures developing around the world, the focus of beekeeping activities has been oriented towards honey with wax as a major by-product while other possible products were rarely found. This neglect primarily emanated out of a lack of knowledge and market accessibility. Other products include pollen, propolis, royal jelly, venom, etc. The diversified uses include its utilization in food in various forms like sweetener, confectionary items, making candies, energy bars, etc. Similarly, honey, in many forms is utilized for medicinal purposes. Honeybee venom is known to treat arthritis. Honey cosmetics fetch higher prices in the market. Bees were used for treating fruits to reduce moisture loss and to make various polishes, paints, candles, etc. A brief about the products that can be made of the honeybees is listed below:

1. **Honey:** Beverages, Honey Vinegar, Honey butter, Honey syrup, Herbal infusions, Baked food, Candy, Ice cream, Nut spreads, Fruit-preserver
2. **Pollen:** A superfood - vitamins, minerals, protein, increases white blood cells, improves levels of haemoglobin, cholesterol, and triglycerides, mental abilities, Remedy for hay fever and allergies, Skin Benefits, increases in strength
3. **Propolis:** Embalming, tonic for battle, wound healing, treatment of upper respiratory, sinus, ear, infections; UTIs, acne, psoriasis, infertility.
4. **Bee's wax:** Surgical bone wax, Soap, Hand cream, Lotions, Encaustic paint, Surf wax, Jewellery wax, Hair removal, Candles
5. **Medicine:** Natural cough syrup, Mouth Infection, Insect bite, Balance Blood Sugar, Diaper rash cream, Face Moisturizer, Hair Conditioner, Dark circle remover, Cosmetics
6. **Honeybee Venom**: Allergy treatment, anti-Cancer, antibacterial, antifungal, antimicrobial, antiviral, Anti-inflammatory, Chronic pain, Neurological diseases, Parkinson's Disease, Rheumatoid arthritis, Scar reduction, Wrinkle reduction
7. **Hive Air:** Contains essential oils, flavonoids, pollen, and bee breath boosts the immune system, positively affects respiratory organs, reduces stress, and improves general wellbeing.

Product diversification and value addition lead not only to the utilization of otherwise waste products but also generate revenue. These diversifications can also enhance the integration of women and youth in the beekeeping and honey value chain.

Based on the above, the cooperative business model for smallholder beekeepers should be structured with strategies and systems that appropriately position the beekeepers in the honey value chain for viability and profitability.

5.2 The Analysis of the Beekeepers' Cooperatives in KSA

The beekeepers' cooperatives in KSA besides the general cooperative movement, exhibit several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measures as highlighted below.

52.1 Strengths

1. **Relatively functional beekeepers' cooperatives**:

- There are 10 registered and 2 under-registration beekeepers' cooperative associations in KSA (see Table 24, mainly along the *Sarawat* hills running along the Red Sea, which engage primarily in beekeeping for honey production.

Table 27: Registered Beekeepers Cooperatives in KSA

No.	Region	Name of the Cooperative	Membership	Capital (SAR)
1.	Al-Baha	Al-Baha Beekeepers Association	63	463,000
2.	Aseer	Abha Beekeepers Association	46	268,100
3.	Aseer	Rigal Alma Beekeepers Association	22	243,500
4.	Jazan	Jazan Beekeepers Association, Sabya	36	310,000
5.	Makkah	Taif Beekeepers Association	34	200,000
6.	Makkah	Makkah Beekeepers Association	-	-
7.	Riyadh	Nahal Beekeepers Association	22	220,000
8.	Medina	Medina Beekeepers Association	-	-
9.	Qassim	Al-Qassim Beekeepers Association	-	-
10.	Riyadh	Al-zulfi Beekeepers Association	-	-
11.	Najran (under registration)	Najran Beekeepers Association	-	-
12.	Hail (under registration)	Hail Beekeepers Association	-	-
Total			**223**	**1,704,600**

Source: CSC

- Beekeepers Cooperatives have operational offices and facilities to serve members and engage stakeholders near the respective geographical areas. Some of the cooperatives have a functional website, e.g., the Beekeepers Cooperative Association – Al Baha (http://bca.saudibi.com/).
- The Beekeepers Cooperatives are operating in a relatively well-specialized. This shows the relative acceptability of the cooperatives among the beekeepers.

2. **Existing apex organizations**

- The apex cooperative body, CSC, is established under the law and has a 12-year strategy (2018-2030) that highlights several specific objectives of the Cooperatives Sector.
- CSC is affiliated with Internal Cooperatives Alliance (ICA). CSC is rejuvenating the cooperatives, especially agricultural and fishery cooperatives.
- There is also one National Bee-breeders Association to promote bee breeding in the country. Earlier, most beekeepers interested in the modern method of beekeeping used to depend on all imported tools and equipment related to beekeeping and honey production.

3. **Ownership of processing and marketing facilities and equipment**

- In the last few years, some local beekeepers' associations (for instance the Beekeepers' Cooperative Association, Al Baha) have started manufacturing adapted wooden bee boxes locally at a much cheaper cost for sale to local beekeepers. BCA – Al Baha model initiatives of training services, input shops, model farms, agro-tourism, and producer festivals are being replicated by other types of cooperatives in the region. The cooperatives are also in the process of acquiring land from the government to develop market centres and model farms.

Figure 10: The new building under construction for the Beekeepers' Cooperative Association, Al Baha

4. **Proactive level of some Boards and Management staff**

- There are at least several cooperative know-how and conscious BoDs, officers, and managers in the Kingdom, who are active, open-minded, and responsible for the transference of the cooperative concept and principle in society.
- They are the current crop of cooperative champions to ignite more transformation of the development of the agricultural cooperative.
- The cooperative business and social activities are increasing including the registration of beekeepers in the government systems for licensing, and youth and women training.

5.2.2 Weaknesses

1. **Incompatible cooperative business models**

- The cooperatives' business models for the beekeeping and honey sector in the Kingdom are improperly structured to address the ownership rights and penetrate over 5,000 beekeepers in the country.
- The cooperative business models are not also developed well to decipher the aquaculture and capture beekeeping activities such as collective honey processing, honey testing, and bee product diversification (pollen, propolis, beeswax, hive air, and medicine). This downplays the cooperative vision and objectives.
- Most of the beekeepers' cooperatives have at least feasibility study reports on various initiatives. However, the cooperative business functions are not well developed and operated due to a lack of corresponding strategic and business plans.
- Most of the Beekeepers' Cooperatives have a weak self-financing approach; the internal shareholding is still relatively low compared to the expected objectives to be delivered.
- Some of the Beekeepers' cooperatives have not capitalized on and optimized the government programs, incentives, and subsidies.
- Most of the Beekeepers Cooperatives do not understand which model they are operating, some embrace some elements of new models (on ownership rights, capitalization, and revenue distribution) but not with the required understanding.
- The Beekeepers' Cooperatives have models that do not help realize the member-user, member-control, and member-benefit mantra they have.
- Numerous social, human, and financial capital issues require specific models for specific Beekeepers Cooperatives in the context of the different regions.

2. **Weak governance and management systems**

- Due to adequacy in the business and finance model, there are equally unclear organizational business structures and strategies.
- Some beekeepers' cooperatives' governance structures are not well developed for proper cooperative decision-making processes. Those who have some well-defined organizational structure lack qualified

and competent staff in key areas regarding cooperative identity (e.g., member/client relation management, marketing, accounting and financial matters, advocacy, and support).

- Most Beekeepers' cooperatives lack well-customized internal procedure manuals and business plans. There are significant operational inefficiencies, that make the available cooperative facilities ineffective.
- The limited operational management tools and lack of integrated management systems lead to the inability to create notable cooperative benefits/advantages for their members. As such member trust and social capital issues have been observed.
- The website domains Beekeepers' Cooperatives are using (the Beekeepers Cooperative Association – Al Baha - http://bca.saudibi.com/) are not giving them enough visibility to the public, the potential members, and external partners.
- There are also cases of the absence of an elected Board of Directors with specific responsibilities. The low leadership capacity of the boards sometimes results in leadership wrangles and breakouts.
- Most of the Beekeepers Cooperatives have relatively low youth and women on their boards. This has suppressed the image and identity of cooperatives among this important demographic group.
- In most cooperatives, the education and training programs are limited or not well structured and regular in most of these cooperatives to develop their social capital.

3. **Limited cooperation among cooperatives**

- Besides the establishment of the CSC and National Bee-Breeders Association, the local cooperation among Beekeepers Cooperatives is not visible. For instance, some beekeepers' cooperatives are not willing to use the established services of other beekeeper cooperatives.
- This organizational structure gap in the cooperative ecosystem deprives the beekeepers' cooperatives of advantages for economies of scale, economies of scope, bargaining power, joint innovations, and capital formation.
- The participation of the KSA beekeepers' cooperatives through CSC in the regional and global platforms (like the Asia Apiculture Association) is still low to improve the image and seek more external markets.

5.2.3 Opportunities

1. **Government support**:

- The beekeeping and honey value chain in Saudi is highly driven by the Ethical Agent[61] – the government – and the producers.
- Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives. Already, the government is highly investing in infrastructures such as training facilities, and market structures that beekeepers' cooperatives can take advantage of.
- ADF (in its 56 Annual Report) reported supporting the beekeeping and honey production development program in cooperation with the Beekeeping Association in Al-Baha.
- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of agricultural and fishery cooperatives.

[61] **Ethical agents** play a mediation role facilitating the process of chain collaboration to get a product or service to market. The agents possess the skills, knowledge and/or relationships necessary to play this role. They are usually industry experts who understand the specific market peculiarity of the sector they are operating in. Agents utilize their networks within the sector to garner information, establish trust and build new links between actors in the industry – strong relationships with key contacts are crucial. Ethical agents further have a strong motivation to ensure a positive development impact within these new market relationships. Although agents do not handle the product, they are likely to add value and assume some risk (and help in de-risking). Threats to the de-risking/ ethical agent are likely to be reputational or relationship-based, given the risks involved in getting a competitive product to market and keeping it there (Lundy, et. al., 2012).

- The government is "privatizing" and promoting mobile extension services, to mitigate the low extension system to ensure accessibility among, smallholder beekeepers to improve production and productivity.

2. **Demographic structure and character:**

- An estimated 5,656 beekeepers are managing approximately 1,809,920 beehives at an average of 320 beehives per beekeeper. This beekeepers' portfolio can enable the success of several specialized beekeepers' cooperatives.
- There is approximately 60 per cent of the youth in the Kingdom, with an estimated employment rate of 11 per cent, some of whom can be attracted to the beekeeping and honey sector and the extent of beekeepers' cooperatives.
- There is a high literacy level that can easily understand the cooperatives business concept. the growing population that puts demand for food supply and food safety; the youth population that needs employment opportunities through such ventures as cooperatives.
- Furthermore, according to International Telecommunication Union Report,[62] Saudis have highly embraced digital transformation. Over 80 per cent of the population owns a smartphone to seek and offer services. Social media and Apps can help integrate and develop the social economy of which cooperatives are part.

3. **The success of cooperative identity and experience:**

- With the perspectives around the globe and the Arab world, cooperatives are among the most important value chain growth engines for the smallholders participating in the value chains, with the potential to help them address the value chain core processes of production, aggregation, processing, and distribution. They are creating jobs and contributing to respective economic growth.
- Some of the development actors in advancing cooperatives, like FAO, which is a member of the Committee for the Promotion and Advancement of Cooperatives (COPAC) is currently offering technical support to the Kingdom that the beekeepers' cooperatives could leverage.

5.2.4 Threats

1. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.

- The framework lacks flexibility in the internal governance structure of beekeepers' cooperatives. There are no separate frameworks or unique provisions in the law for beekeepers' cooperatives
- The framework has limited provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains

2. **Population's negative social attitude and mindset**:

- The majority of the population still has a negative social attitude and mindset towards cooperative businesses, as they have considered them pure self-help and charity groups.
- Sometimes, individuals establish cooperatives just to acquire the cooperative development subsidies and after that, they abandon the cooperative venture.
- The population has inadequate awareness of the cooperative's structure and importance in the development of other socio-economic sectors.
- Furthermore, the would-be cooperative members lack a family beekeeping production system, where other family members could participate. This makes it difficult to internalize the greater need for a cooperative organization with fellow beekeepers.
- The overreliance but unoptimized Government incentives: continued overreliance but unoptimized government subsidies and incentives that are not well monitored concerning the cooperative performance.

[62] See: ITU report https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_ARS.01-2021-PDF-E.pdf

- The continued limited institutionalization of cooperatives' education and training programs (at MoEWA, MoHRSD and CSC) may continue to cause a scarcity of cooperative professionals and champions to create awareness and develop and manage successful cooperatives.

3. **High competition from private sector market players**:

- The private sector plays a tendency to distort the market structures for the smallholders are always out to curtail the growth of the cooperatives. They always facilitate middlemen to distort market prices.
- The cooperatives decry many business licenses required by the government with no tax incentives and reliefs – including for import and export activities, that could help them compete in the market. This makes the members shy away from the cooperative business model, as they perceive no difference from other business forms.

4. **Unfavourable climatic conditions**

- The unfavourable climatic condition and depletion of biodiversity support beekeeping and honey production. This weakness is the member involvement in some Beekeepers' Cooperatives with no alternative economic activities.

5. **Information gap on cooperatives:**

- There is a big information gap and a lack of understanding of the cooperative concept and model among the media fraternity. This leads to limited publicity of the cooperatives by the mainstream media, and limits awareness of the cooperatives and cooperative work among the people.

The strengths and opportunities in beekeepers' cooperatives are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these compounding issues in the beekeepers' cooperatives, the KSA's stakeholders need to re-think an overall inclusivity strategy, by building on strengths and capitalizing on the opportunities, while reducing the weaknesses and mitigating threats. The subsequent section suggests key actionable areas for the foundation and strengthening of agricultural cooperatives.

5.3 Recommendations for Developing and Strengthening Beekeepers' Cooperatives

The beekeepers' cooperatives can be critical actors in the beekeeping and honey sector in the Kingdom. They can engage in the:

1. Developing and conducting regular sensitization, education, and training programs for beekeepers on beekeeping initiatives, and the need for collective action.
2. Acquisition, management, operation, and maintenance of forest resources management, honey markets, and input shops for the benefit of the beekeepers' community.
3. Mitigation mechanisms for forestry resources; queen bee supply and genetic resources; bee feed; environmental integrity and disease problems; development and adoption of new and improved beekeeping technologies; market, trade, and food safety; climate change; investment capital impediments; and problems that can originate from unguided and unmonitored apiculture practices.
4. Mitigation of competition from imported honey, honey product and inputs; lobby for protection of the local product, and tax reliefs while calling for customs tax on the imported honey; negotiate on beekeeping protocols with MoEWA and find ways to align with government call for increases in Saudization rate and the localization agenda (especially around youth employment agenda).
5. Engaging women and youth in key beekeeping and honey value chain nodes, to help them acquire jobs and increase income; through diversification of honey production and products.

Strong Beekeepers' Cooperatives are important for the responsive and beneficial involvement of the beekeepers. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing beekeepers' cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

5.3.1 Develop beekeeper cooperatives' capacities

The capacities of cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[63] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

1. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing beekeepers' cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the beekeepers' cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the beekeepers' cooperatives; financing and finance management in beekeepers' cooperatives; and performance monitoring of beekeepers' cooperatives (e.g., on auditing and inspection, regulation of cooperatives).
2. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
3. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
4. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

5.3.2 Develop beekeeper cooperatives' business models

Beekeepers' Cooperatives should be supported to develop and review their business models[64] to help them operate successfully and sustainably. The Government and the cooperative stakeholders should be involved in and support efforts to establish several beekeeper cooperative business models that other cooperative societies will follow. Therefore, there is a need to:

1. Develop beekeepers' cooperative business models that are cognisant of the cooperative scope of purpose and coverage[65], ownership and financing structures[66], governance structures[67], and marketing structure strategies. Based on the nature of the beekeeping and honey sector in the Kingdom, the New Generation Cooperative[68] (NGC) type of cooperative is proposed for beekeepers.
2. Guide the beekeepers' cooperatives to adopt different business models that will help them to create, deliver and capture value. The business activities for member value proposition may include forest

[63] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

[64] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building, and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

[65] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

[66] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook, M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[67] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[68] New generation cooperatives are designed to enable producers to profit from the production and marketing of value-added products made from their raw commodities.

resources management, honey processing facilities, honey markets, input and equipment supply shops, beehive-making workshops, and honey testing laboratories.

3. Support Beekeepers' Cooperatives to translate their various feasibility studies to the business, operational and financial plans.
4. Guide beekeepers' cooperatives on resource mobilization – human, material and financial – through project proposal writing, and subsidy and loan application.
5. Guide beekeepers' cooperatives on the establishment of trading relationships, through vertical and horizontal integration; for example, as illustrated in Figure 11 below.

Figure 11: Guiding trading relationships for smallholders and their cooperatives

5.3.3 Strengthen beekeepers' cooperative governance system

Cooperatives[69] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors, management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide Beekeepers' Cooperatives to adopt best-fit governance structures[70] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[71]. The structure can take the delegates system that includes representatives various.

[69] A beekeepers' cooperative, based on the cooperative definition, is not only an association of beekeepers but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[70] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[71] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the cooperative boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management and conduct regular internal and external auditing.
4. Support the beekeepers' cooperatives to develop and adopt digitally integrated management systems, e-marketing or e-auction system, and (through CSC by its participation in ICA) develop or change their websites using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

5.3.4 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The awareness level of the public concerning the cooperative business model is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[72]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the public. Cooperative information should be available for everyone (ILO 2018), and cooperative awareness creation can equally ensure information dissemination to the public.
2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[73] and World Bee Day[74]) to improve beekeepers' knowledge sharing and understanding of cooperatives' roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

5.3.5 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of cooperative development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology.
2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the beekeepers' cooperatives.
3. Support collaboration of beekeepers' cooperatives, and cooperation among cooperatives s within the regions or by the beekeeping and honey sector to ensure economies of scope and scale, and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the beekeepers' cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly integrated it as an Online Application and into the individual cooperatives' websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage beekeepers' cooperatives to change their website domains to the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.

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[72] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

[73] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[74] World Bee Day is celebrated on May 20. On this day Anton Janša, the pioneer of beekeeping, was born in 1734. The purpose of the international day is to acknowledge the role of bees and other pollinators for the ecosystem.

6. Re-organize the cooperatives register, with clear and consistent beekeepers' cooperative certificate names.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at the Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extent the MoHRSD, CSC, and Beekeepers' Cooperatives.

6. Cooperatives in the Cereals Sector

Synopsis

In the Kingdom of Saudi Arabia, Cooperatives in the cereals (e.g., sorghum, millet, sesame) value chain portray a mix of situations concerning sector outlook, strengths, weaknesses, opportunities, and threats.

Of the registered agricultural cooperatives in the Kingdom, there are no specialized cereals-oriented cooperatives and associations. The cereals sector is endowed with various value-added opportunities to create jobs for women and increase incomes for farmers – to make cooperatives and associations more relevant, successful and sustainable.

However, the cereals-orientated farmer cooperatives in the Kingdom still face several internal and external challenges. These include limited cooperative business operations, undeveloped cereals-oriented cooperative business models, exploitative traders in the value chain, unfavourable climatic conditions affecting production cycles and productivity unconsolidated, cooperative information and knowledge gaps, and limited cooperation among and between cooperatives.

The report, therefore, makes some suggestions for considerations by the government and cooperative stakeholders to strengthen the cooperatives in the cereals value chain: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: develop cereals-oriented cooperatives' capacities; develop cereals-oriented cooperative business models; develop cereals-oriented cooperative governance structures; create awareness to change the perception of cooperatives; and strengthen the government agencies' capacity including set-up of digital system and development of cereals sector regulations.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for the cereals value chain; while helping the smallholder cereals farmers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and the development of compatible business models.

6.1 Cereals Value Chain Outlook

6.1.1 Cereals Production

In KSA, there are no pure smallholder farmers for cereal crops, as the smallholders are engaged in multiple crop production including cereals, fruits and vegetables, and coffee cultivation. The cereals production is primarily done in Makkah, Aseer, and Jazan, and some pockets of Madinah and Albaha regions. One of the greatest challenges is the extension-services to coffee farmers and farmer cooperatives to enhance collective action among farmers for coffee production and marketing activities.

According to recent statistics from Food and Agriculture Organization (FAOSTAT, 2018), sorghum is cultivated in about 54,866 Ha from which about 144, 038 tons are produced annually with a productivity of 2.6 T/Ha. Sesame is cultivated in about 1,663 ha with an annual production of around 3,085 tons and a productivity of 1.86 T/Ha. Millet is another cereal grown in an area of about 4,907 Ha which produces around 8,320 tons annually. The current yield of millet stands at 1.69 T/Ha.

Annual consumption of sorghum, sesame, and millet was estimated at 203,000, 36,000, and 15,000 tons, respectively, much higher than the amount produced (FAO, 2018). To meet this demand additional amount had to be imported. The KSA imported 3.423 Metric Tons (MT) of sesame seed valued at 5.337 million USD and 179 MT of sesame oil valued at 9.06 million USD. In the same year, the country exported 384 MT of

sesame seed valued at 72,000 USD and 7.0 MT of sesame oil valued at 39, 000 USD, showing net imports of 3,039 and 172 MT for sesame seed and oil, respectively. During the same time, the country was a net importer of sorghum and millet with the quantity of 8,523 and 14,930 MT valued at 3.6 and 4.848 million USD, respectively (FAO, 2018). There is high demand locally and in the foreign market for these crops which is motivating local production.

Table 28: Sorghum, Millet and Sesame Production in KSA

Cereals	**Area (Ha)**	**Production (MT)**	**Yield (T/Ha)**
Sorghum	54,866	144,038	2.6
Millet*	4,907	8,320	1.69
Sesame	1,663	3,085	1.86
Source: FAOSTAT, 2018			

The data for Saudi Arabia indicate that there exists a higher potential for improving the production and productivity of these crops. The cereal production across KSA is illustrated in Table 29 below.

Table 29: Cereals production by Region in the Kingdom

Region	**Total area (M^3)**	**Harvested area (M^3)**	**Total production (tons)**	**The production sold (tons)**
Riyadh	437,450.0	435,378.4	290,762.5	244,487.7
Makkah	189,513.2	180,550.1	63,964.0	49,363.1
Madinah	3,607.1	3,520.5	1,416.0	1,242.9
Qassim	453,099.0	427,050.1	236,505.1	219,285.3
Eastern Region	206,629.7	205,783.1	114,047.3	92,420.9
Aseer	125,559.3	121,646.3	63,858.0	49,237.3
Tabuk	102,631.8	101,683.6	73,561.7	67,439.5
Hail	370,841.3	366,955.9	284,928.6	234,851.7
North borders	436.2	436.2	325.8	250.4
Jazan	432,763.0	407,077.9	93,323.2	71,491.8
Najran	4,289.1	4,251.9	3,141.5	2,561.1
Al Baha	22,821.4	11,169.7	8,207.7	5,818.8
Jouf	333,670.8	332,382.6	206,023.6	199,108.2
Total	**2,683,311.7**	**2,597,886.4**	**1,440,065.0**	**1,237,558.7**

Source: Agriculture Census 2015, General Authority for Statistics, KSA (Accessed in 2021)

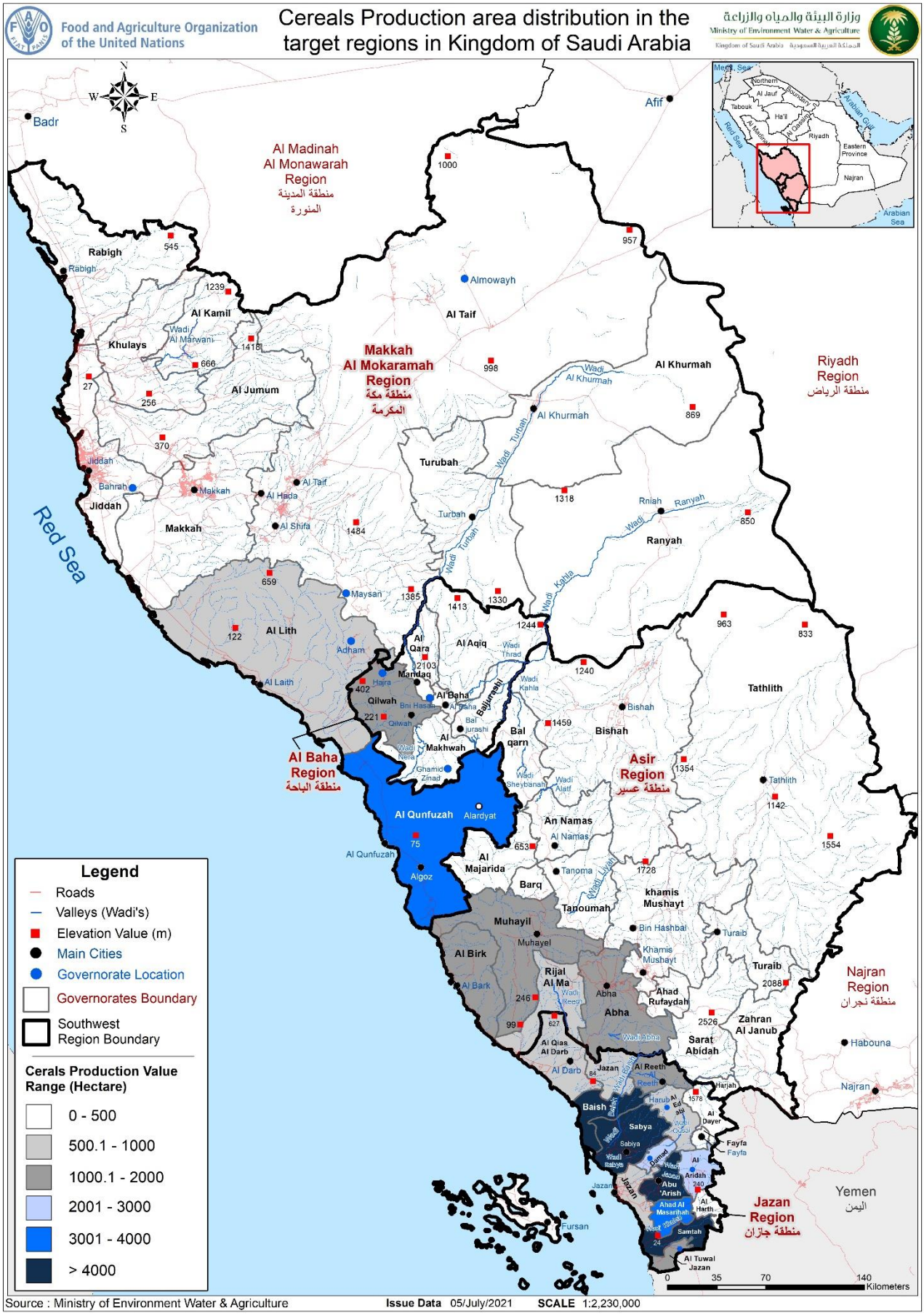

Figure 12: Cereals Producing Areas in KSA

6.1.2 Cereals Value Chain Analysis Map

Table 30 below highlights the value chain analysis for the cereals – mainly sorghum, millet, and sesame.

Table 30: Cereals (sorghum, millet, sesame) value chain analysis

Major channels	**Channel 1**	**Channel 2**	**Channel 3**	**Channel 4**
Source of origin	Local	Local and imported	Local and imported	Local and imported
End market products	Sesame seed and oil, millet, sorghum	Loose and packed products Sesame seed, oil and cake, millet, sorghum	Packed products Sesame seed and oil, millet, sorghum	Packed products Sesame seed and oil, millet, sorghum
End markets	Retailers-cum-flour mills, Government. markets	Retailers-cum-flour mills, retail shops	Big suppliers and SMEs	Big retail chains
Final product destination	Domestic	Domestic	Domestic/Export and import markets	Domestic/ Import markets
Channel used by farmer	Direct to retailers /consumers	Traders	Traders	Traders
Products sold by the farmer	Loose, uncleaned, and ungraded	Loose, uncleaned, and ungraded	Loose, uncleaned, and ungraded	Loose, uncleaned, and ungraded
Price paid by consumer Sesame -SR/kg Millet – SR/kg Sorghum - SR/kg	 20-25 15-17 6-7	 10-20 3-8 3-7	 Not accessed by consumers	 2.7- 3.4/100gm Not available Not available
Price to farmer Sesame-SR/kg Millet – SR/kg Sorghum – SR/kg	 10-15 5-8 3-4	 8-12 3-5 2-3	 8-12 3-5 2-3	 8-12 - -
Operational model	Farmers supply directly to local retailers-cum-flour mills, and directly to consumers in the government markets Some farmers own flour mills and procure from other farmers as well	Farmers supply to local traders who in turn supply to big suppliers, who distribute it to wholesalers and retailers across KSA Processors also procure sesame seed from big suppliers	Farmers supply to local traders who in turn supply to big suppliers, who export Sesame (seed and oil), and no/limited quantity of millet and sorghum to other countries Big suppliers import cereals and distribute across KSA	Big retail chains procure through their procurement units both within and outside the country Packed sesame seed and oil are sold but not the millet and sorghum
Weight and price-fixing mechanism at farmer's end	Traditional weight measurement Price fixation by negotiation	Traditional weight measurement Price fixation by negotiation	Traditional weight measurement Price fixation by negotiation	Weight by scale Price fixation by negotiation
Farmer's say in price fixation	High	Medium	Medium	Medium
Key deciding factors for the price fixation	Consumer preference to purchase from source	Demand and supply situation	Demand from the trader's side	Demand from trade houses

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Farmer's awareness of prices in end markets	Yes	No	No	No
Is cost-benefit analysis done by the producer	No	No	No	No
Volume of sale through channel domestic produce (Rank)	Rank 2	Rank 1	Rank 3	Rank 4
Volume of sale through channel import included (Rank)	Rank 3	Rank 1	Rank 2	Rank 4

Source: FAO-KSA Cereals Value chain Report (2019)

The cereals value chain map is illustrated in Figure 13 below, indicating limited coordination among the farmers.

Figure 13: Cereals value chain map in KSA

The cereals value chain exhibit opportunities in local and export markets, and the possibilities for diversification and value addition.

3.1.3 Cereals Export Market

The leading import markets for the target cereals, KSA can export to, are illustrated in Table 31 below.

Table 31: Leading Sesame, Millet, and Sorghum Importers (2020)

Cereal	Country	Value	% Global share
Sesame	China	USD 1.3 Billion	44.2%

Cereal	Country	Value	% Global share
	Japan	USD 331.9 Million	11.5%
	India	USD 184.5 Million	6.4%
Millet	The UK.	USD 5.6 Million	12.1%
	Indonesia	USD 4.8 Million	10.5%
	Nepal	USD 4.4 Million	9.6%
Sorghum	China	USD 1.2 Billion	72.4%
	Japan	USD 85.4 Million	5.3%
	Mexico	USD 54.3 Million	3.4%
Source: https://www.tridge.com/			

3.1.4 Cereal Products Diversification

It is a fact throughout the world that the value-added segment of the value chain can provide better margins in a comparatively shorter period. This segment fits well with the aspirations of youth and gender. In developed countries, farmers and processors make good profits through product diversification in these rainfed cereals. However, the situation in the Kingdom of Saudi Arabia is a little different as the majority of producers are unable to maximize their profits through product diversification primarily due to insufficient knowledge of relevant technologies or a dearth of personal entrepreneurial competencies. Some of these business opportunities for cooperatives and cooperative members are listed below:

Table 32: Diversification Opportunities for Sesame

Sesame		
Input	**Product**	**Description and use**
Seeds	Confectionery	Fried seeds may be bound together with sugar syrup to give sweetmeats.
Seeds	Biscuits	The whole seeds can be baked into biscuits
Seeds (Hulled)	Bakery	Incorporated into bread or as decorative toppings.
Seeds (roasted)	Oil	Particularly used in oriental cuisine. The flavour is quite strong.
Oil	Medicinal treatment	Treating ulcers and burns
Oil	Margarine	For use as a butter replacement
Oil	Aerosol	A synergist for pyrethrum sprays
Low-grade oil	Multiple	Soaps, paints, lubricants
Hulled seeds	Tahini	Paste of sesame seeds used as part of middle eastern food
Tahini	Dips and spreads	Various ingredients such as chickpeas or eggplants or added to tahini to make dips and spreads such as hummus
Tahini	Halva	A sweet made from tahini and sugar with other added flavourings
Cake	Animal feed	Protein-rich useful supplement
Cake from hulled seeds	Ingredient	Use in some Indian cooking.
Source: Chemonics 2002		

Table 33: Diversification Opportunities for Millet

Millet		
Input	**Product**	**Description and use**
Seeds	Flakes	Thick roasted flakes used in making muesli
Seeds	Pops	The whole seeds can be mechanically popped at 230^{o}C
Seeds (Hulled)	Bakery	Incorporated into traditional snacks and sweets.
Seeds (ground)	Flour	Common bakery products such as biscuits, cakes, cookies

Table 34: Diversification Opportunities for Sorghum

Sorghum		
Input	**Product**	**Description and use**
Seeds	Bran	Sorghum offal, sorghum milling waste, sorghum mill feed) is a mixture of grain pericarp (bran) and variable amounts of grain fragments (endosperm, germ).
Seed	Flour	Sorghum gluten feed is a by-product of the manufacture of sorghum starch or syrup by wet milling. It is the sorghum equivalent of the corn gluten feed and consists of a mixture of bran, steep liquor, and other residues.
Flour	Starch	Sorghum gluten meal is another by-product of sorghum starch extraction. Like corn gluten meal, sorghum gluten meal consists of the gluten (protein) fraction of the grain that remains after the separation of fibre and starch.
Starch	Cake	Sorghum germ meal (sorghum oil germ cake) is another by-product of sorghum starch extraction, consisting of the germ of sorghum grains from which part of the oil has been pressed.

There are several gaps in the trading relationship of the cereals value chain that the smallholder farmers can address by joining or forming cooperatives. These include especially aggregation, processing, and extension services such as ploughing, spraying, harvesting, storage, and transportation.

Based on the above, the potential cooperative business model for smallholder cereal farmers should be structured with strategies and systems that appropriately position the farmers in the cereal's value chain for viability and profitability.

6.2 The Analysis of the Cooperatives in Cereals Value Chain

The sub-tropical fruits-oriented Cooperatives in KSA, besides the general cooperative movement, exhibit several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measure as highlighted below.

6.2.1 Strengths

1. **Existing Cooperatives incorporate cereal farmers**

- There are specialized agricultural and marketing cooperatives and associations in the target regions that are patronized by cereal farmers.

2. **Existing apex organizations for cooperatives**

- Cooperatives in the sub-tropical fruits value chain are by default in the apex cooperative body, CSC. CSC is established under the law, is affiliated with Internal Cooperatives Alliance (ICA), and has a 12-year strategy (2018-2030) that highlights several specific objectives for the rejuvenation of the cooperatives, including those in sub-tropical fruits.

6.2.2 Weaknesses

1. **Undeveloped cooperatives business model**

- The existing agricultural cooperatives and associations are yet to develop a business model that can address the increasing market failure in the cereals value chain.

2. **Unconsolidated leadership cereals farmer community**

- The majority of cereals farmers work individually to source mechanization services and inputs (seeds, fertilizers, pesticides, equipment, tools) and sell cereals mainly to traders.
- There seems limited awareness among smallholder farmers about the potential benefits of being a part of the cooperative association.

6.2.3 Opportunities

1. **Producers drive the value chain**

- The cereals value chain is largely a "producer-driven"[75] value chain, and therefore the coffee farmers, through the cooperative, can co-invest in "upgrading" the value chain (from subsistence to market-orientation), adapt supply chain structure and relationships and adapt buying practices and product propositions (Lundy, et. al., 2012).

2. **Cereals' product diversification opportunities**

- There are numerous value-addition opportunities in the cereal's value chains – including sorghum, millet, and sesame., from seed to oil to flour, to starch and stalks.

3. **Government support**

- Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives.
- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government also offers land incentives for the construction of cooperative facilities and premise rent incentives for cooperatives' markets.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of subtropical fruit farmer cooperatives.
- The government is "privatizing" the extension services, to mitigate the low extension system to ensure accessibility among, the sub-tropical fruit farmers to improve production and productivity

6.2.4 Threats

1. **Unfavourable conditions**

- The cereal farmers suffer unfavourable climatic conditions since the production is largely rainfed. There are cases of heavy rains that flood the farms, and diseases that destroy the crops, thus affecting production and productivity on regular basis.

2. **Cereals' production cycle and productivity issues**

- Cereal cultivation is on small farms and has a very small season of flowering every year.

3. **Information and knowledge gap**

- There is still an information and knowledge gap among the smallholder cereals farmers about cooperatives' role in livelihood improvement and their beneficial inclusivity in the value chain.
- The cereals farmers and their existing cooperatives are not regularly accessing information and training on cooperative management

4. **No specialized cereals farmers cooperatives**

- There are no cooperatives specialized in the cereals value chain. This continually compromises farmers' ability of collective action to address the existing market failures.

5. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.

- The framework has limited provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains, including cereals.

The strengths and opportunities in cooperatives in subtropical fruits are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these compounding issues in the related cooperatives, the KSA's stakeholders need to re-think an overall turn-around and countervailing power strategies for the subtropical farmers' collective actions. The subsequent section suggests key actionable areas for the foundation and strengthening of the cooperatives in the cereals value chain.

[75] Producer driven value chain is where the producers themselves are mostly interested and controlling the value chain, with objective for new markets, high prices, stabilize their market position and focus on extra supply volumes (Lundy, et. al., 2012).

6.3 Conclusion

The cereals farmers' cooperatives can be critical actors in the cereals sector in the Kingdom. They can engage in the:

1. Farmer sensitization and mobilization, including women and youth, to understand the importance of collective action through cooperatives and patronizing the cooperatives.
2. Developing initiatives for improved farmer/member extension services and good agricultural practices in cereals production such as conservation farming.
3. Financing and development of the cooperative office facilities, mechanization, aggregation centres, and storage facilities.
4. Linkage of smallholder produce to retail chains and markets at local and national level

Based on the above, the potential cooperative business model for smallholder cereal farmers should be structured with strategies and systems that appropriately position the farmers in the cereal's value chain for viability and profitability.

Strong cereals-oriented cooperatives are important for the responsive and beneficial involvement of the cereals-farmers. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing cereals cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

6.3.1 Develop cereals-oriented cooperatives' capacities

The capacities of potential cereals-oriented cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[76] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

1. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing fruit farmer cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the fruit farmer cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the fruit farmer cooperatives; financing and finance management in fruit farmer cooperatives; and performance monitoring of fruit farmers cooperatives (e.g., on auditing and inspection, regulation of cooperatives).
2. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
3. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
4. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

6.3.2 Develop cereals farmer cooperative business-models

Cereal-oriented cooperatives should be supported to develop and review their business models[77] to help them consolidate their operations, successfully and sustainably. The Government and the cooperative stakeholders

[76] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

[77] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building, and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

should be involved in and support efforts to establish the fruit cooperative business model. Therefore, there is a need to:

1. Develop cereals-oriented cooperative business models that are cognisant of the cooperative scope of purpose and coverage[78], ownership and financing structures[79], governance structures[80], and marketing structure strategies. Based on the nature of the fish sector in the Kingdom, the Multi-stakeholder (Solidarity) Cooperative[81] (MSC) type of cooperative is proposed for cereals farmers.
2. Guide the cereals farmer cooperatives to adopt different business models that will help them to create, deliver and capture value for the cereals farmers. The business activities for member value proposition may include – mechanization, value addition; water management; and input supply.
3. Support cooperatives to translate their various feasibility studies to the business, operational and financial plans.
4. Guide cereals-oriented cooperatives on resource mobilization – human, material, and financial – through project proposal writing, and subsidy and loan application.
5. Guide cereals-oriented cooperatives on the establishment of trading relationships, through vertical and horizontal integration; for example, as illustrated in Figure 14 below.

Figure 14: Guiding trading relationships for smallholders and their cooperatives

[78] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

[79] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook, M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[80] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[81] MSC - The term multi-stakeholder cooperative is used to describe a cooperative with multiple types of members (key stakeholders) engaged with the cooperative in different capacities. Any combination of types of stakeholders could be members and may include such constituents as workers, producers, consumers, suppliers, volunteers, among others. These cooperatives are also called solidarity cooperatives. (ICA, 2015).

6.3.3 Develop cereals farmer cooperative governance-system

Cooperatives[82] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors, management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide cereals-oriented cooperatives to adopt best-fit governance structures[83] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[84]. The general agricultural and marketing or multipurpose can generally adopt the delegates system in which the cereals farmers are allocated representatives in the cooperative governance.
2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the cereals-oriented cooperatives' boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management and conduct regular internal and external auditing.
4. Support the cereals-oriented cooperatives to develop digitally integrated management systems, e-marking or e-auction systems, and (through CSC by its participation in ICA) develop websites using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

6.3.4 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The private sector players are also decamping farmer collective action. The awareness level of the public concerning the cooperative business model is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[85]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the cereal's farmers. Cooperative information should be available for everyone (ILO 2018).
2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[86] and International Whole Grain Day[87]) to improve cereal farmers' knowledge sharing and understanding of cooperatives' roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

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[82] A cereals-oriented cooperative, based on the cooperative definition, is not only an association of cereals farmers but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[83] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[84] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

[85] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

[86] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[87] The International Whole Grain Day is observed on November 16, ever year. It is celebrated to discuss how the daily consumption of whole grains is a vital part of not only healthy, but also sustainable diets.

6.3.5 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of cereals-oriented cooperatives development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology to support the cereals-oriented cooperatives.
2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the cereals-oriented cooperatives.
3. Consider merging and consolidating cereals-oriented cooperatives to ensure economies of scope and scale, and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the cereals-oriented cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly, integrated it as an Online Application and into the individual cooperatives' websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage cereals-oriented cooperatives to develop websites using the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.
6. Re-organize the cooperatives register, with clear and consistent cooperative certificate names. There should be consolidated specialized cereals-oriented cooperatives in fruit-growing regions or governorates.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at the Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products. This should deter the informal post-harvest manipulation by traders.
8. Review regulations for the fruit value chain for the benefit of cereal farmers and their cooperatives.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extent the MoHRSD, CSC, and cereals-oriented cooperatives.

6.4 Success Story of the Cereals Cooperative's Business Case

6.4.1 Cooperative Bulk Handling (CBH) in Australia

CBH Group (https://www.cbh.com.au/) is Australia's largest cooperative and a leader in the Australian grain industry with operations extending along the value chain from grain storage, handling, transport, marketing, and processing. Established in 1933, it is owned and controlled by around 4,200 Western Australian grain growers. The cooperative creates value for members through low storage and handling fees, competitive freight rates, grower loyalty rebates, and annual investment in the grain network. The cooperative communicate value through The Grower Value Statement, which details the real value returned to the member, the industry, and the community. The first part of the statement provides an overview of CBH's achievements at the group level and the benefits that flow to growers. The cooperative is operating within a specific geographical area and has been able to return value directly to each member.

7. Cooperatives in Sub-Tropical Fruits Sector

Synopsis

In the Kingdom of Saudi Arabia, Cooperatives in the sub-tropical fruits (e.g., grapes, pomegranate, figs) value chain portray a mix of situations concerning sector outlook, strengths, weaknesses, opportunities, and threats.

Of the registered agricultural cooperatives in the Kingdom, there is one specialized registered subtropical fruit (pomegranate) farmers' cooperative in Al Baha. But there are several multipurpose Agricultural Cooperative Associations that serve a few smallholders in Al Baha, Jazan, and Hail regions. The fruit sector is endowed with various value-added opportunities to create jobs for women and increase incomes for farmers – to make cooperatives more relevant, successful and sustainable.

However, the fruit-based and oriented farmer cooperatives in the Kingdom still face several internal and external challenges. These include limited cooperative business operations, undeveloped fruit cooperative business models, exploitative traders in the value chain, unfavourable climatic conditions affecting production cycles and productivity unconsolidated, cooperative information and knowledge gaps, and limited cooperation among and between cooperatives.

The report, therefore, makes some suggestions for considerations by the government and cooperative stakeholders to strengthen the cooperatives in the subtropical fruit value chain: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: develop fruit farmer cooperatives' capacities; develop fruit farmer cooperative business models; develop fruit farmer cooperative governance structures; create awareness to change the perception of cooperatives; and strengthen the government agencies' capacity including set-up of digital system and development of subtropical fruit sector regulations.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for the subtropical fruits value chain; while helping the smallholder fruit farmers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and the development of compatible business models.

7.1 Sub-Tropical Fruits Value Chain Outlook

7.1.1 Fruits Production

In KSA, there are no pure smallholder farmers for fresh fruits, as the smallholders are engaged in multiple crop production including cereals, fruits and/or vegetables, and coffee cultivation. Of about 0.34 million farmers, 92 per cent are smallholders (each owning less than 50 Donums) in crop and tree farming, who own only about 6 per cent of the total arable landholding. Fruits production is done in most regions across KSA.

Based on the production and management practices followed, farmers can be profiled broadly in the following three categories, as highlighted in Table 35 below.

Table 35: Profiling of fruit farmers in KSA

Description	**Category 1**	**Category 2**	**Category 3**
Type of farmers	Small farmers	Small and medium farmers	Big farmers

Description	Category 1	Category 2	Category 3
Landholding (Donum)	2 – 5 donum	5 – 50 donum	> 50 donum[88]
Fruits plot size	2,000-5,000 sqm	5,000-50,000 sqm	> 50,000 sqm
Cropping pattern	Mixed (all three fruits together)	Generally exclusive but partly mixed	Exclusive
Use of inputs	No use of pesticides and insecticides	A mix of chemical and organic inputs, few use only organic	A mix of chemical and organic inputs, few use only organic
Production to marketing functions	Production focus	Mainly Production focus	Production, Vertical integration
Selling focus	Traders and consumers	Mainly auction process	Own supply chain network
Market focus	Domestic	Domestic	Domestic and export
Example	Mixed farming villages	Fruit specific villages	Astra farms

Source: FAO-KSA Fruits Value Chain Report, 2019

7.1.2 Fruits Value Chain Analysis and Map

The fruit value chain analysis is illustrated in Table 33 to help the existing and potential cooperatives in the fruit sector to identify gaps and develop business structures and strategies that benefit the smallholder fruit farmers.

Table 36: Fruits value chain analysis

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Source of origin	Local	Local and imported	Local and imported	Local and imported
Packaging	Loose	Loose/pack	Loose/pack	Loose/pack
Major end markets	Retailers, Government markets	Retailers/retail shops	Trading house	Retail chain outlets
Final product destination	Domestic	Domestic	Domestic/Export	Domestic
Channel used by farmer	Direct to retailers /consumers	Auction market	Traders	Traders
Price paid by consumer Fig -SR/kg Pomegranate- SR/kg White grape-SR/kg	 15-20 6-20 4-10	 17-28 6-20 6-10	 Export market	 17-28 14-25 13-16
Price to farmer Fig -SR/kg Pomegranate- SR/kg White grape-SR/kg	 5-10 4-8 3-8	 4-7 3-7 2-5	 4-7 4-7 3-5	 4-7 4-7 3-5

[88] 10 Donums = 1Ha

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Operational model	Farmers sell directly to local consumers Farmers sell directly to consumers in the government markets complexes Farmers sell to local retailers who sell in the local market	Farmers take produce to the nearby auction markets and sell through commission agents from where it passes through a chain of wholesalers and retailers to consumers.	Farmers supply to local traders who in turn supply to trade house, who export outside countries. Local agents supply to trade houses who distribute it to wholesalers and retailers across KSA Trade houses import fruits and distribute them through a channel of retailers across KSA.	Big retail chains procure through their procurement units both within and outside the country Retail chains repack in small-size convenient packs and sell under their brand
Weight and price-fixing mechanism at farmer's end	Packed in open boxes on an estimation basis Price fixation by negotiation	Packed in open boxes on an estimation basis Price fixation by auction process	Packed in open boxes on an estimation basis Price fixation by negotiation	Packed in open boxes on an estimation basis Price fixation by negotiation
Farmer's say in price fixation	High	Low	Medium	Medium
Key deciding factors for the price fixation	Consumer preference, source of origin, variety	Demand and supply situation Source of origin and variety	Demand from the trader's side Source of origin and variety	Import price and margins Source of origin and variety
Farmer's awareness of prices in end markets	Yes	No	No	No
Is cost-benefit analysis done by the farmer	No	No	No	No
Volume of sale through channel domestic produce (Rank)	Rank 3	Rank 1	Rank 2	Rank 4
Volume of sale through channel import included (Rank)	Rank 4	Rank 2	Rank 1	Rank 3

Source: FAO-KSA Fruits Value Chain Report (2019)

The fruits value chain map is illustrated in Figure 15 below, indicating limited coordination of the smallholder fruit farmers.

Figure 15: Fruits value chain map in KSA

There are several gaps in the trading relationship of the fruits' value chain, that the smallholder farmers can address by joining or forming cooperatives. These include especially aggregation, processing, and extension services such as pruning, spraying, harvesting, storage and transportation.

Based on the above, the potential cooperative business model for smallholder fruit farmers should be structured with strategies and systems that appropriately position the farmers in the fruit value chain for viability and profitability.

7.2 The Analysis of the Cooperatives in Sub-Tropical Fruits Value Chain

The sub-tropical fruits-oriented Cooperatives in KSA, besides the general cooperative movement, exhibit several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measures as highlighted below.

7.2.1 Strengths

1. **Existing Sub-tropical fruits-oriented Cooperatives**

- There is one specialized sub-tropical cooperative, the Cooperative Association of Pomegranates in the Al Baha Region.
- The outlook of the three cooperatives working with and for fruit farmers in the Kingdom is as below:

Table 37: Registered Cooperatives in Subtropical Fruits in KSA

No.	Region	Name of the Cooperative	Estimated members	Established share capital (in SAR)
3.	Al Baha	Cooperative Association of Pomegranate in Al Baha	92	2,706,300
4.	Al Baha	Agricultural Cooperative Association in Al Baha	146	2,237,900
5.	Al Baha	Agricultural Cooperative Association in Baljurshi	90	620,000
6.	Hail	Cooperative Society for Vegetables and Fruits in Hail	12	600,000
7.	Hail	Agricultural Marketing Cooperative at Hail	53	948,100
8.	Jazan	Agricultural Cooperative Association in Jazan	278	1,307,100
Total			671	**8,419,400**

- There are cooperatives in Dates production and processing that are doing extremely well that those in the subtropical fruits can benchmark.

Figure 16: The Fruits and Vegetable Market managed by the Agricultural Marketing Cooperative Association – Bualjrashi

2. **Existing apex organizations for cooperatives**

- Cooperatives in the sub-tropical fruits value chain are by default in the apex cooperative body, CSC. CSC is established under the law, is affiliated with Internal Cooperatives Alliance (ICA), and has a 12-year strategy (2018-2030) that highlights several specific objectives for the rejuvenation of the cooperatives, including those in sub-tropical fruits.

7.2.2 Weaknesses

1. **Undeveloped cooperatives business model**

- There are few specialized subtropical fruit cooperatives in the Kingdom.
- The cooperatives serving sub-tropical fruit farmers are yet to develop a business model that can address the increasing market failure and exploitation in the fruit value chain.

2. **Unconsolidated leadership sub-tropical farmer community**

- The majority of smallholder fruit farmers work individually to source inputs (seeds, fertilizers, pesticides, equipment, tools) and sell fruits to traders and in the auction markets.
- There seems limited awareness among small farmers about the potential benefits of being a part of a cooperative society. They work individually but collaborate to hire a transport vehicle to take produce to the markets.

7.2.3 Opportunities

1. **Demographic structure and character**

- The continued exploitation of the smallholder sub-tropical fruit farmers is increasing their agitation to strengthen their collective actions in market access.

- The cooperative can also be strong with the high number of women and youth in the fruit sector, who can use the cooperative organisation to acquire jobs and increase their household income.
- There is increasing demand for local fruits in the Kingdom that cooperatives could capitalize on to enhance productivity among their members.

2. **Government support**

- Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives.
- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government also offers land incentives for the construction of cooperative facilities and premise rent incentives for cooperatives' markets.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of subtropical fruit farmer cooperatives.
- The government is "privatizing" the extension services, to mitigate the low extension system to ensure accessibility among, the sub-tropical fruit farmers to improve production and productivity

7.2.4 Threats

1. **Exploitative lead-firm-driven value chain**

- The sub-tropical fruits value chain is largely intermediary-driven[89] (Lundy, et. al., (Lundy, et. al., 2012). These actors are ensuring the constant supply of raw/fresh by continuous manipulation of farmers through informal agreements for pre-season loans that continually tie the farmers to them.
- The middlemen and traders do not seem to have any interest in the formation and strengthening of cooperatives for sub-tropical fruit farmers.

2. **Unfavourable conditions**

- Sub-tropical fruit farmers suffer unfavourable climatic conditions. There are cases of heavy rains that flood the fruit farms, frost, and hailstones that destroy the flowers, thus affecting production and productivity on regular basis.

3. Fruit production cycle and productivity issues

- Subtropical fruit cultivation is on small farms and has a very small season of flowering every year.
- Fruits are quality-sensitive crops and have high losses due to inappropriate picking and during transportation when exposed.

4. **Information and knowledge gap**

- There is still an information and knowledge gap among the smallholder fruit farmers about cooperatives' role in livelihood improvement and their beneficial inclusivity in the value chain.
- The fruit farmers and their existing cooperatives are not regularly accessing training on cooperative management

5. Few specialized subtropical fruit cooperatives

- There are few cooperatives specialising in the fruit value chain. This continually compromises farmers' ability of collective action to address the existing market failures.

6. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.

- The framework lacks flexibility in the internal governance structure of farmers' cooperatives in subtropical fruits. There are no separate frameworks or unique provisions in the law for farmers' cooperatives.
- The framework has limited provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative

[89] In an intermediary dominated supply chain, actors such as, processors, transporters, or wholesalers tend to have a great power over decision and implementation and governance and hold critical information about both upstream and downstream activities.

business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains.

The strengths and opportunities in cooperatives in subtropical fruits are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these compounding issues in the related cooperatives, the KSA's stakeholders need to re-think an overall turn-around and countervailing power strategies for the subtropical farmers' collective actions. The subsequent section suggests key actionable areas for the foundation and strengthening of the cooperatives in the fruit value chain.

7.3 Recommendations for Developing and Strengthening Fruit Cooperatives

The sub-tropical fruit farmers' cooperatives can be critical actors in the fruit sector in the Kingdom. They can engage in the:

1. Farmer sensitization and mobilization, including women and youth, to understand the importance of collective action through cooperatives and patronizing the cooperatives.
2. Developing initiatives for improved farmer/member extension services and good agricultural practices in fruit production such as organic farming.
3. Financing and development of the cooperative office facilities, aggregation centres, and cold storage facilities.
4. Linkage of smallholder produce to retail chains and markets at local, national, and international levels

Based on the above, the potential cooperative business model for smallholder fruit farmers should be structured with strategies and systems that appropriately position the farmers in the sub-tropical fruit value chain for viability and profitability.

Strong fruit cooperatives are important for the responsive and beneficial involvement of subtropical fruit farmers. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing fruit cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

7.3.1 Develop fruit farmer cooperatives' capacities

The capacities of cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[90] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

1. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing fruit farmer cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the fruit farmer cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the fruit farmer cooperatives; financing and finance management in fruit farmer cooperatives; and performance monitoring of fruit farmers cooperatives (e.g., on auditing and inspection, regulation of cooperatives).
2. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
3. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
4. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

7.3.2 Develop fruit farmer cooperative business-models

Fruit farmer cooperatives should be supported to develop and review their business models[91] to help them consolidate their operations, successfully and sustainably. The Government and the cooperative stakeholders

[90] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

should be involved in and support efforts to establish the fruit cooperative business model. Therefore, there is a need to:

1. Develop fruit farmer cooperative business models that are cognisant of the cooperative scope of purpose and coverage[92], ownership and financing structures[93], governance structures[94], and marketing structure strategies. Based on the nature of the fish sector in the Kingdom, the Multi-stakeholder (Solidarity) Cooperative[95] (MSC) type is proposed for fruit farmers.
2. Guide the fruit farmer cooperatives to adopt different business models that will help them to create, deliver and capture value for the fruit farmers. The business activities for member value proposition may include – value addition (pulp, crisps, dried fruits); extension services on-farm visits and management; input supply; and financial credit.
3. Support fruit farmer cooperatives to translate their various feasibility studies to the business, operational and financial plans.
4. Guide fruit farmer cooperatives on resource mobilization – human, material, and financial – through project proposal writing, and subsidy and loan application.
5. Guide fruit farmer cooperatives on the establishment of trading relationships, through vertical and horizontal integration; for example, as illustrated in Figure 17 below.

[91] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

[92] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

[93] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook, M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[94] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[95] MSC - The term multi-stakeholder cooperative is used to describe a cooperative with multiple types of members (key stakeholders) engaged with the cooperative in different capacities. Any combination of types of stakeholders could be members and may include such constituents as workers, producers, consumers, suppliers, volunteers, among others. These cooperatives are also called solidarity cooperatives. (ICA, 2015).

Figure 17: Guiding trading relationships for smallholders and their cooperatives

7.3.3 Develop a fruit farmer cooperative governance-system

Cooperatives[96] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors, management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide fruit farmer cooperatives to adopt best-fit governance structures[97] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[98]. The regional-based fruit cooperatives can generally adopt the delegates system in which the governorates or districts are allocated representatives based on the number of fruit farms and farmers.
2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the fruit farmer cooperatives' boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management and conduct regular internal and external auditing.
4. Support the fruit farmer cooperatives to develop digitally integrated management systems, e-marking or e-auction systems, and (through CSC by its participation in ICA) develop a website using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

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[96] A fruit farmer cooperative, based on the cooperative definition, is not only an association of fruit farmers but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[97] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[98] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

7.3.4 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The private sector players are also decamping farmer collective action. The awareness level of the public concerning the cooperative business model is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[99]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the farmers. Cooperative information should be available for everyone (ILO 2018).
2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[100] and International Fruit Day[101]) to improve fruit farmers' knowledge sharing and understanding of cooperatives' roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

7.3.5 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of fruit farmer cooperatives development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology to support the fruit farmer cooperatives.
2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the fruit farmer cooperatives.
3. Consider merging and consolidating fruit-oriented cooperatives to ensure economies of scope and scale, and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the fruit farmer cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated for by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly, integrated it as an Online Application to the individual cooperatives' websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage fruit farmer cooperatives to develop websites using the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.
6. Re-organize the cooperatives register, with clear and consistent cooperative certificate names. There should be consolidated specialized fruit farmer cooperatives in fruit-growing regions or governorates.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at the Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products. This should deter the informal post-harvest manipulation by traders.
8. Review regulations for the fruit value chain for the benefit of the farmers and their cooperatives.

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[99] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

[100] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[101] The International Fruit Day is observed on July 1, ever year. It was first commemorated 2007, at the Mauerpark in Berlin, Germany.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extent the MoHRSD, CSC, and fruit farmer cooperatives.

7.4 Success Story of the Fruits Cooperatives Business Case

7.4.1 Cuatro Pinos in Guatemala,

Cuatro Pinos, from Guatemala, is a successful cooperative organization with nearly 30 years of experience in the vegetable export business. Recently the cooperative has succeeded in opening large markets for several fresh vegetable products in the US through an alliance with a specialised wholesaler and several retailers. Existing demand significantly outstrips the capacity of cooperative members, requiring the integration of new producers, organisations, and geographies. To achieve this, *Cuatro Pinos* identifies existing farmer groups, including associations, cooperatives, and lead farmer networks, in favourable environmental niches. It works with them to test production schemes and then contracts those that show an ability to meet quantity and quality targets. The cooperative signs a legally binding contract with the producer group, which specifies quantity, quality and a production schedule as well as provides a fixed annual price for the product. Credit in the form of inputs and technical assistance is provided. This is later discounted from the first few product deliveries.

Cuatro Pinos provides business and organisational support to its partner organisations to increase their efficiency and access additional funding from diverse sources for development activities. In 2006, *Cuatro Pinos* partners successfully raised US$ 1.7 million for investments in irrigation, packing sheds, education, and housing. Through this model, *Cuatro Pinos* achieves an estimated annual growth rate of 50 per cent in vegetable exports and membership expansion from 560 member producers to a network of more than 2,000 families. Nearly all the new producers in the network are from regions with higher-than-national-average poverty levels and limited access to land.

7.4.2 Hortifruti in Central America

Hortifruti is the specialized wholesaler of fresh fruit and vegetable for Wal-Mart in Central America. Hortifruti works with a variety of suppliers for vegetables in Honduras and Nicaragua and often purchases a product from existing farmer cooperatives. However, they have experienced significant difficulties with these RPOs in terms of lengthy decision-making processes. As a result, Hortifruti Honduras has developed and promoted a ‘lead farmer’ model of the organization through which they identify and build the capacity of farmers who can consistently meet their quality needs. After demonstrating such capacity, lead farmers receive larger orders for a product or new products and are invited to work with neighbouring farmers to meet this demand. The lead farmer provides access to technology, technical assistance, and market access as embedded services. The cost of these services is then recouped via the sales margin. The expansion of this model is organic and depends on the identification of new lead farmers. It is low-cost, easily scalable, and sustainable (Source: Agropyme, 2006; Lundy, 2007)

7.4.3 Normincorp in Mindanao, Philippines

Farmers of the Northern Mindanao Vegetable Producers’ Association, NorminVeggies, can successfully participate in dynamic vegetable chains primarily because of the organisational structure they chose to respond to the market challenges. This involves a corporation, Normincorp, which gives them the agility needed for each development in the supply chain. Normincorp’s formation signified a new development in marketing for small farmers. While established as a stock corporation, Normincorp functions more like a cooperative and has a social enterprise character. It was set up and operated with a keen business sense but also with full empathy for the small farmers. As a market facilitator, Normincorp saw to it that production was programmed by farmer clusters with their respective cluster leaders, according to marketing plans; that quality farm and post-harvest management could be done by each farmer in the cluster; and that coordination could be provided for the sequence of activities that include order taking, out-shipment logistics, billing/charging, collection, and remittance to the farmers. For these services, Normincorp earns a market facilitation fee based on the value of the sale and uses the income to cover the marketing management overhead.

Normincorp is not a trading company. Rather, it is a market facilitator linking the farmer through his or her cluster directly to the buyer. The farmer is given the buyer's price, and he or she is therefore accountable for the product and retains ownership of the product up to the point of sale. This encourages the farmer to supply the best quality since the price is given to him/her and all sales are remitted directly after deducting the market facilitation fee, which is based on the quantity of accepted vegetables. Conversely, all rejects are individually charged to the farmer concerned. Labelling of products per farm or farmer provides this traceability.

8. Cooperatives in Fishery and Aquaculture Sector

Synopsis

In the Kingdom of Saudi Arabia, Fishery Sector is under MoEWA – Directorate of Fishery Resources[102]. Currently, the fishery sector is well-regulated[103]. Fishery and Aquaculture Cooperatives portray a mix of situations concerning their value chain outlook, strengths, weaknesses, opportunities, and threats.

Out of the Kingdom's total of 7,572 km of coastline, roughly 2,400 km is available for fisheries sector development along the Red Sea in the west and the Arabian Gulf in the east. The fish and shrimp production tonnage stood at 141,536 tons in 2019. The sector is complemented by the aquaculture practices that began in the 1980s. currently, there are about 128 fish farms and ponds with 65,436M^3 capacity. The fish value chain in KSA has a complex situation as both domestic production and imports get into the same market and overlap each other in certain instances. KSA is still a net importer of fish.

There are 8 registered Fishery and Aquaculture Cooperatives in the Kingdom, spread along the Red Sea in the west and the Arabian Gulf in the east of the Kingdom, with a total membership of 1,301. The Fishery and Aquaculture Cooperatives have a relatively high penetration of 34.9 per cent of the 3,729 Saudi-born fishermen. The Fishery and Aquaculture Cooperatives' internal shareholding stands at SAR 2,638,400. Fishermen are receiving immense financial support from government subsidies and special programs and initiatives. Fishery and Aquaculture Cooperatives can co-manage coastal fishery resources, help improve the living conditions of small-scale fishers and slow down the rapid depletion of these resources.

Nonetheless, the Fishery and Aquaculture Cooperatives in the Kingdom still face several internal and external challenges including, incompatible business and governance models to accommodate other actors, limited cooperatives among themselves, people's negative social attitudes and mindsets, high competition from the private market players, disruption of the fishing waters and coastlines, and media information gaps on cooperative work.

The report, therefore, makes some suggestions for consideration by the government and cooperative stakeholders: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: develop fishery cooperatives' capacities; develop fishery cooperative business models; strengthen fishery cooperative governance structures; create awareness to change the perception of cooperatives; and strengthen the government agencies' capacity.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for the fish value chain and rural coastal economies; while helping the small fisherfolks inclusively access fishery resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and the development of compatible business models.

8.1 Fish Value Chain Outlook

8.1.1 Fish Production

The Kingdom of Saudi Arabia occupies 80 per cent of the Arabian Peninsula's land surface with a unique geographical location, with the length of its coastal belt along the Red Sea and the Gulf exceeding 2,400 km. Of the Kingdom’s total of 7,572 km of coastline, roughly 2,400 km is available for fisheries sector

[102] See: https://www.mewa.gov.sa/en/Ministry/Agencies/AgencyFisheries/Pages/AboutUs.aspx

[103] See: Regulations on Fisheries in Saudi Arabia - http://extwprlegs1.fao.org/docs/pdf/sau4907E.pdf ; https://www.informea.org/sites/default/files/legislation/sau4907E.pdf

development along the Red Sea in the west and the Arabian Gulf in the east. This makes the country a rich source of a wide range of fish and other marine products suitable for commercial exploitation, particularly marine species, attributed to favourable climate conditions, availability of water, good land, and a suitable environment. However, this potential vast coastline is yet to be fully tapped; an opportunity for Fishery and Aquaculture Cooperatives to recruit, train, and support smallholder fishermen to exploit these resources.

Aquaculture in Saudi Arabia dates to the early 1980s when Nile tilapia was reared in inland water bodies. The sector started to move toward shrimp aquaculture - giant tiger prawn first and Indian white shrimp after. The disease hit with native species led to a Kingdom-wide crop holiday and meanwhile partial switch-over to Asian seabass in shrimp ponds. Ministry recognized the need for a new candidate species to lead the industry and after cumulative due diligent study, analytical discussions, and factual and objective evaluation with Scientific peers and industry experts took the lead and embraced Specific Pathogen Free (SPF) *Vannamei* for commercial-scale farming.

Whereas the bulk of freshwater aquaculture production is consumed locally, the shrimp production is exported to many countries like Japan, Europe, and North American markets, once the domestic demand has been satisfied. The development in aquaculture is focused on increased production of *whiteleg* shrimp (*Penaeus vannamei*) and diversification of the culture of marine fish species. (FAO, 2021). However, the potential in aquaponics fish production technology is yet to be fully explored; an opportunity for cooperatives to advance the fishing technology transfers among the smallholders.

The estimates of aquaculture production and fish capture in KSA are illustrated in Tables 38 and 39.

Table 38: Number of fish farms and number, and size of the ponds in KSA

Regions	No. of Farms	No. of Ponds	The capacity of Ponds M^3
Riyadh	45	51	2,931
Makkah Al Mukarramah	1	8	60,000
Hail	1	20	2,500
Northern Borders	1	1	5
Total	**48**	**80**	**65,436**

Source: Agriculture Census 2015, General Authority for Statistics, KSA (Accessed in 2021)

Table 39: Fish and shrimps' production (Ton) in KSA

Type	2019*	2018	2017	2016	2015
Fishing of Red Sea	24,164	24,016	23,269	23,356	23,062
Fishing in the Arabian gulf	42,042	43,987	43,132	43,182	41,820
Production in Fish Farms	75,330	72,312	55,000	40,280	38,770
Total	**141,536**	**140,315**	**121,401**	**106,818**	**103,652**

Source: Agriculture Census 2015, General Authority for Statistics, KSA (Accessed in 2021)

According to the statistics released by MoEWA (See Saudi Gazette), there are 30,332 fishermen in Saudi Arabia. Out of this, 3,729 are Saudis, constituting the total workforce in fisheries and fish farms in the Kingdom. About 17,801 workers are foreigners[104].

The KSA's catch-fish is characterized by both small and big fishermen. The small fishermen own 8-6 meters long boats, while the large fishermen own more than 10 meters and up to 20 meters boats. Majorities of fishermen own traditional boats. Unlike traditional boats, commercial fishing boats are equipped with modern eco-sounders, electronic navigation equipment, and fishing gear and are greater than 9 meters. Cooperatives would enable smallholder fishermen to produce more for the local market, ensure bargaining power and reduce costs through their economies of scale and scope.

[104] See: https://saudigazette.com.sa/article/595510 (Accessed on December 30, 2021)

Figure 18: A Section of Thuwal Seaport

8.1.2 Fish Value Chain Analysis and Map

The KSA fishing sector is comprised of both aquaculture and capture. The fish value chain can be described in Table 40.

Table 40: Fish value chain analysis

Major channels	**Channel 1**	**Channel 2**	**Channel 3**	**Channel 4**
End market products	Aquaculture and capture-fish	Aquaculture and capture fish	Aquaculture and capture fish	Aquaculture and capture fish
End markets	Retailers	Retailers	Trading house	Trading house
End markets Include	Retail chains, restaurants, retail shops	Retail chains, restaurants, retail shops	Big suppliers and SMEs	Big suppliers and SMEs
Final products destination	Domestic	Domestic	Domestic/Export markets	Domestic/ Export markets
Channel used	Direct to retailers/consumer	Auction process	Traders and auction process	Traders and trading house
Products sold	Aquaculture and capture fish	Capture fish	Aquaculture and capture fish	Aquaculture and capture fish
Price paid by consumer Tilapia – SR/kg Harida – SR/kg Shaour- SR/kg	 18-20 40-70 35-60	 18-20 15-17 (36-40) 14-16 (32-35)	 18-25 40-70 35-60	 18-25 40-70 35-60
Price to farmer Tilapia – SR/kg Hairda – SR/kg Shaour – SR/kg	 11-15 13-17 12-16	 10-14 13-15 12-14	 11-14 14-15 13-14	 11-14 14-15 13-14

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Operational model	Producers of aquaculture fish and collectors of capture-fish sell directly to institutional buyers and retailers through their sales team. It is the main channel for aquaculture fish Sale The limited sale happens directly to final consumers but fetches higher prices	Producers of aquaculture fish and collectors of capture-fish participate in the auction process through commission agents, who charge 5% -7% commission on the sale. Producers/ collectors bring fish in the vehicle to the fish auction market complex. Commission agent offers the initial price after bidding starts. Those quoting higher prices make the purchase	Producers sell to local traders who visit farmer's places to make the purchase. Producers sell at lower prices to traders for bulk sale. Local traders sell to big trading houses and retailers in the fish market complex. They also sell to local retailers.	Producers and collectors sell to local traders who remain in touch with them. Local traders sell to the big trading house that aggregates and exports to other countries. Trading houses import frozen fish and sell it through fish market complexes and retailer
Weight and price-fixing mechanism at farmer's end	By weight Price fixation by negotiation	Weight by estimation Price fixation by auction process	Weight by estimation Price fixation by negotiation	Weight by estimation Price fixation by negotiation
Farmer's say in price fixation	High	Low	Medium	Medium
Key deciding factors for the price fixation	Consumer preference to purchase from source Variety, fresh or marine water fish	Demand and supply situation Variety, fresh or marine water fish	Demand from the trader's side Variety, fresh or marine water fish	Demand from trade houses Variety, fresh or marine water fish
Farmer's awareness of prices in end markets	Yes	Yes	Yes/No	Yes/No
Is cost-benefit analysis done by the producer	Yes	Yes/No	Yes/No	Yes/No
Volume of sale through channel domestic produce (Rank)	Rank 2	Rank 1	Rank 3	Rank 4
Volume of sale through channel import included (Rank)	Rank 4	Rank 3	Rank 1	Rank 2

Source: Adapted from FAO-KSA, Fish Value Chain Report (2019)

Consequently, the fish value chain map is illustrated in Figure 19.

Figure 19: Fish value chain map in KSA

The fish value chain in KSA has a complex situation as both domestic production and imports get into the same market and overlap each other in certain instances. KSA is still a net importer of fish. According to MoEWA (See Saudi Gazette)[105] Saudi imports and exports of fish and fisheries products showed an increasing trend in recent years. In 2015, imports were valued at USD 633.1 million, while exports were valued at USD 100 million. Saudi Arabia is an approved exporting country to the European Union. Farmed shrimp products are exported to the EU, Japan, and the US. Moreover, through the most used market channels (see Figure 18), the smallholder fishermen's income margins are still meagre.

However, there is rising domestic as well as international demand for fisheries products. KSA is a close and convenient location to international fish export markets. There is a presence of big and reputed retail chains in the country such as Lulu Hypermarkets, Carrefour, and Savola group (Panda supermarkets) with fish selling points. The interest and willingness of big retail chains to procure directly from small producers through their associations are significant for strong Fishery and Aquaculture Cooperatives to exploit.

The major export destinations of frozen fish from Saudi Arabia in 2019 included Bahrain with a share of 47 per cent (USD 1.05 million), Indonesia with a share of 21 per cent (USD 475,000), Kuwait with a share of 15.6 per cent (USD 347,000), Malaysia with a share of 8.85 per cent (USD 196,000), South Africa with a share of 3.48 per cent (USD 77,000), Oman with a share of 2.77 per cent (USD 61,000) and Egypt (USD 4,040)[106]. Globally, during 2019, as reported by Statista, European Union remained the top importer of fish and fisheries products worth USD 56.5 billion USD followed by the USA (USD 22.4 billion) and China (USD 20.2 billion).

Table 40: Leading Importers of fish and fish products in 2019 for KSA to exploit

Country	Fish Value (in USD)
Brazil	1.3 billion
Australia	1.5 billion

[105] See: https://saudigazette.com.sa/article/595510 (Accessed December 30, 2021)
[106] Source: https://trendeconomy.com/data/h2/Saudiarabia/0303

Country	Fish Value (in USD)
Russia	2.0 billion
Canada	3.1 billion
Thailand	3.7 billion
South Korea	5.7 billion
Japan	15.5 billion
China	20.2 billion
USA	22.4 billion
EU	56.6 billion
Source: https://www.statista.com/statistics/268266/top-importers-of-fish-and-fisheries-products/	

This should motivate the smallholders through the Fishery and Aquaculture Cooperatives to produce more fish for even international markets.

Conversely, the changing global scenarios amidst changing eating habits, health awareness, purchasing power, changing market trends along with many other factors can influence the evolution and dynamics of even KSA's fish production, consumption, and markets and, therefore, a range of uncertainties exist when projecting into the future. These include external factors (climate, environmental conditions) and policy factors (fisheries management and governance, trade policies, and policies against illegal, unreported, and unregulated fishing.

These issues, positive or otherwise, poise the opportunity for the strengthening of Fishery and Aquaculture Cooperatives in the Kingdom, to alleviate the situations or sustain the sector through smallholders' inclusivity.

8.2 The Analysis of the Fishery and Aquaculture Cooperatives in KSA

The Fishery and Aquaculture Cooperatives in KSA besides the general cooperative movement, exhibit several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measures as highlighted below.

8.2.1 Strengths

1. **Relatively functional fishery cooperatives**:

- There are 8 already registered fishery cooperatives, spread along the Red Sea in the west and the Arabian Gulf in the east of the Kingdom, with a total membership of 1,301.
- The Fishery and Aquaculture Cooperatives have a relatively high penetration of 34.9 per cent of the 3,729 Saudi-born fishermen (See Saudi Gazette) and are among the most specialized cooperatives in the Kingdom – focusing on the fish value chain.
- Most fishery cooperative and their members are willing to assume responsibility for managing fishery resources.
- The Fishery and Aquaculture Cooperatives' internal shareholding stands at SAR 2,638,400, with an average of SAR 2,028 per member.

Table 41: Registered Fishery and Aquaculture Cooperatives in KSA

No.	Region	Name of the Cooperative	Estimated members	Established share capital (in SAR)
1.	Jazan	Cooperative Society of Fishermen in Jazan	299[107]	790,000
2.	Makkah	Fishery cooperative Society of Makkah Region	285[108]	199,500
3.	Makkah	Cooperative Society for Fishermen - Thuwal	160[109]	362,700
4.	Makkah	Cooperative Association of Fishermen in Rabigh	49[110]	323,000

[107] The numbers increased to 380 in 2021 based on the FGD conducted. The number is still relatively low compared to approximated over 4,000 fishermen at the Jazan Red Sea coast

[108] The current total membership is 323 members, spread across the region as follows: 104 members from Jeddah, 104 members from Al Qunfudhah, 55 members from Al Lith, 26 members from Thuwal, and 34 members from Rabigh. Over 500 potential members are awaiting admission.

[109] The membership increased to 190 members in 2021, include 5 women

No.	Region	Name of the Cooperative	Estimated members	Established share capital (in SAR)
5.	Madinah	Cooperative Society for Fishermen in Yanbu Governorate	79[111]	100,000
6.	Tabuk	Professional Cooperative Society of Fishermen in Umluj	163[112]	266,600
7.	Aseer	Fishery cooperative, at Asir coast	45	114,200
8.	Eastern Region	Fishery cooperative at Safawi	221	482,400
Total			**1,301**	**2,638,400**

- most Fishery and Aquaculture Cooperatives have operational offices and facilities to serve members and engage stakeholders near the respective geographical areas. Some of the cooperatives have functional websites such as www.fishermenmr.org (for Fishermen Cooperative Society of Makkah Region); https://fthuwal.org.sa/ (Cooperative Society for Fishermen – Thuwal, Makkah); and, http://caf.com.sa/ (Cooperative Society for Fishermen in Yanbu Governorate, Madinah).
- The Fishery and Aquaculture Cooperatives are operating in a relatively well-organized, regulated, and supported sector compared to other value chains. This shows the relative acceptability of the cooperatives among the fisherfolk.

2. **Existing apex organizations for Fishery and Aquaculture Cooperatives**

- The apex cooperative body, CSC, is established under the law and has a 12-year strategy (2018-2030) that highlights several specific objectives of the Cooperatives Sector.
- CSC is affiliated with Internal Cooperatives Alliance (ICA). CSC is rejuvenating the cooperatives, especially agricultural and fishery cooperatives.
- The Fishery and Aquaculture Cooperatives are also affiliated with the Saudi Aquaculture Society, as a second-tier association for information and quality assurance.

Box 14: Saudi Aquaculture Society (SAS)

The Saudi Aquaculture Society (SAS) is an independent organization, formed by Saudi Cabinet Decree 73 on February 6, 2013.

SAS represents the aquaculture industry in Saudi Arabia and operates under the supervision of the Aquaculture Department of MoEWA.

SAMAQ is the Saudi national aquaculture product certification and labelling program developed by the SAS.

SAS developed the current Code for Responsible Aquaculture Practices and its detailed principles, guidelines, and standards.

SAS's trained staff who act as external, second-party, auditors for the aquaculture units wishing to enrol in the SAMAQ program. SAS's auditors, visit and audit the interested aquaculture unit upon request (application) and check for compliance with the Codes' Guidelines and Standards.

The successful audit provides the facility with a Certificate of Compliance (CoC) and entitles it to market its products under the national SAMAQ logo

3. **Ownership of processing and marketing facilities and equipment**

- Some of the Fishery and Aquaculture Cooperatives have a significant amount of assets, especially for ice processing and fish marketing.
- The cooperatives have also been given the management of some of the government facilities and boat landing spaces that can help them participate actively in the value chains.
- There are relatively successful Fishery and Aquaculture Cooperatives with active member sand business and/or social activities.

4. **Proactive level of some Boards and Management staff**

[110] The numbers reduced to 48 members out of the possible 300 fishermen along with the target coastal strip.
[111] The numbers increased to 208 members in 2021 based on the FGD conducted
[112] The numbers decreased to 98 in 2021 based on the FGD conducted

- There are at least several cooperative know-how and conscious BoDs, officers, and managers in the Kingdom, who are active, open-minded, and responsible for the transference of the cooperative concept and principle in society.
- They are the current crop of cooperative champions to ignite more transformation of the agricultural cooperatives' development.
- The cooperative business and social activities are increasing including the registration of the fisherfolk in the government systems for licensing.

Figure 20: Offices for the Cooperative Society for Fishermen in Jazan

8.2.2 Weaknesses

1. **Incompatible cooperative business models**

- The cooperatives' business models for the fisheries sector in the Kingdom are improperly structured to address the ownership rights and accommodate various actors including the smallholder youth and women in the sector, and about 17,801 workers foreign fishermen and workers who are high numbers. The models are not able to safeguard against private-sector competition/interferences, and overdependence on government support.
- The cooperative business models are not also developed well to decipher the aquaculture and capture fish activities. This downplays the cooperative vision and objectives.
- Most fishermen cooperatives have at least feasibility study reports on various initiatives. However, the cooperative business functions are not well developed and operated due to a lack of corresponding strategic and business plans.
- Most Fishery and Aquaculture Cooperatives have a weak self-financing approach; the internal shareholding is still relatively low compared to the expected objectives to be delivered.

- Some of the Fishery and Aquaculture Cooperatives have not capitalized on and optimized the government programs, incentives, and subsidies.
- Most of the Fishery and Aquaculture Cooperatives do not understand which model they are operating, some embrace some elements of new models (on ownership rights, capitalization, and revenue distribution), but not with the required understanding.
- The Fishery and Aquaculture Cooperatives have models that do not help realize the member-user, member-control, and member-benefit mantra they have.
- Numerous social, human, and financial capital issues require specific models for specific Fishery and Aquaculture Cooperatives in the context of the different regions.

2. **Weak governance and management systems**

- Due to inadequacies in the business and finance model, there are equally unclear organizational business structures and strategies.
- Some cooperatives' governance structures are not well developed for proper cooperative decision-making processes. Those who have some well-defined organizational structure lack qualified and competent staff in key areas regarding cooperative identity (e.g., member/client relation management, marketing, accounting and financial matters, advocacy, and support).
- Most cooperatives lack well-customized internal procedure manuals and business plans. There are significant operational inefficiencies that make the available cooperative facilities ineffective.
- The limited operational management tools and lack of integrated management systems lead to the inability to create notable cooperative benefits/advantages for their members. As such member trust and social capital issues have been observed.
- The website domains Fishery and Aquaculture Cooperatives are using (such as www.fishermenmr.org; https://fthuwal.org.sa/; and http://caf.com.sa/ are not giving them enough visibility to the public, the potential members and external partners.
- There are also cases of the absence of an elected Board of Directors with specific responsibilities. The low leadership capacity of the boards sometimes results in leadership wrangles and breakouts.
- Most of the Fishery and Aquaculture Cooperatives have relatively low youth and women on their boards. This has suppressed the image and identity of cooperatives among this important demographic group.
- The education and training programs are limited or not well structured and regular in most of these cooperatives to develop their social capital.

3. **Limited cooperation among cooperatives**

- Besides the establishment of the CSC and SAS, the local cooperation among Fishery and Aquaculture Cooperatives is not visible. For instance, the Makkah region has three Fishery and Aquaculture Cooperatives that are not adequately working together, or even federated.
- This organizational structure gap in the cooperative ecosystem deprives the fishermen cooperatives of advantages for economies of scale, economies of scope, bargaining power, joint innovations, and capital formation. This limitation has on the contrary been diminishing the relevance and effectiveness of the Fishery and Aquaculture Cooperatives (for instance that of Umluj and Rabigh).
- The participation of the KSA fishery and aquaculture cooperatives through CSC in the regional and global platforms is still low to improve the image and seek more external markets.

8.2.3 Opportunities

1. **Government support**:

- The fish value chain in Saudi is highly driven by the Ethical Agent[113] – the government of the Kingdom of Saudi Arabia.

[113] **Ethical agents** play a mediation role facilitating the process of chain collaboration to get a product or service to market. The agents possess the skills, knowledge and/or relationships necessary to play this role. They are usually industry experts who understand the specific market peculiarity of the sector they are operating in. Agents utilize their networks within the sector to garner information, establish trust and build new links between actors in the industry – strong relationships with key contacts are crucial. Ethical agents further have a strong motivation to ensure a positive development impact within these new market relationships. Although agents do not handle the product, they are likely to add value and assume some risk (and help in de-risking). Threats to the de-risking/ ethical agent are likely to be

- Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives. Already, the government is highly investing in infrastructures such as production and processing facilities, and markets structures and systems that fishery cooperatives can take advantage of.
- The "TAWTEEN" program under the MoEWA's fisheries department, is one of those programs that support fishermen and Fishery and Aquaculture Cooperatives with such facilities as fishing boats. There is also the "Seventh Initiation" for fisheries development by MoEWA and ADF to promote fisheries development (i.e., 1 million MT fish production by 2029) and youth employment (400,000 jobs).
- ADF (in its 56 Annual Report) reported supporting the program of enhancing small-scale fishermen and fish farmers' capacities by about (15) million Riyals, which contributed to the employment of (67) Saudis.
- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government also offers land incentives for the construction of cooperative facilities and premise rent incentives for cooperatives' markets.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of agricultural and fishery cooperatives.
- The government is "privatizing" the extension services, to mitigate the low extension system to ensure accessibility among, fish farmers to improve production and productivity.

2. **Demographic structure and character:**

- Saudi society values a social and solidarity economy (SSE), which corresponds to cooperative identity and principles. This can augment the promotion and development efforts of the cooperatives in the Kingdom.
- There is approximately 60 per cent of the youth in the Kingdom, with an estimated employment rate of 11 per cent, some of whom can be attracted to the fish sector and the extent of fish cooperatives.
- There is a high literacy level that can easily understand the cooperatives business concept. the growing population that puts demand for food supply and food safety; the youth population that needs employment opportunities through such ventures as cooperatives.
- Furthermore, according to International Telecommunication Union Report,[114] Saudis have highly embraced digital transformation. Over 80 per cent of the population owns a smartphone to seek and offer services. Social media and Apps can help in the integration and development of the social economy of which cooperatives are part.

reputational or relationship-based, given the risks involved in getting a competitive product to market and keeping it there (Lundy, et. al., 2012).

[114] See: ITU report https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_ARS.01-2021-PDF-E.pdf


Figure 21: Fish processing workers at the Jeddah fish market

3. **The success of cooperative identity and experience:**

- With the perspectives around the globe and the Arab world, cooperatives are among the most important value chain growth engines for the smallholders participating in the value chains, with the potential to help them address the value chain core processes of production, aggregation, processing, and distribution. They are creating jobs and contributing to respective economic growth.
- Some of the development actors in advancing cooperatives, like FAO, which is a member of the Committee for the Promotion and Advancement of Cooperatives (COPAC) is currently offering technical support to the Kingdom that the Fishery and Aquaculture Cooperatives could leverage.

8.2.4 Threats

1. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.

- The framework lacks flexibility in the internal governance structure of fishery cooperatives. There are no separate frameworks or unique provisions in the law for fishery cooperatives
- The framework has limited provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains

2. **Population's negative social attitude and mindset**:

- The majority of the population still has a negative social attitude and mindset towards cooperative businesses, as they have considered them pure self-help and charity groups.
- Sometimes, individuals establish cooperatives just to acquire the cooperative development subsidies and after that, they abandon the cooperative venture.

- The population has inadequate awareness of the cooperatives' structure and importance in the development of other socio-economic sectors.
- Furthermore, the would-be cooperative members lack a family fish production system, where other family members could participate. This makes it difficult to internalize the greater need for a cooperative organization with fellow fisherfolk.
- The overreliance but unoptimized Government incentives: continued overreliance but unoptimized government subsidies and incentives that are not well monitored concerning the cooperative performance.
- The young generation is migrating to urban areas in search of other employment opportunities, a case that puts strain on production.
- The continued limited institutionalization of cooperatives' education and training programs (at MoEWA, MoHRSD, and CSC) may continue to cause a scarcity of cooperative professionals and champions to create awareness and develop and manage successful cooperatives.

3. **High competition from private sector market players**:

- The private sector plays a tendency to distort the market structures for the smallholders are always out to curtail the growth of the cooperatives. They always facilitate middlemen to distort market prices.
- The cooperatives decry many business licenses required by the government with no tax incentives and reliefs – including for import and export activities, that could help them compete in the market. This makes the members shy away from the cooperative business model, as they perceive no difference from other business forms.

4. **Disruption of the fishing waters and coastlines**

- The unfavourable climatic condition and water pollution are affecting fish production. This weakness is the member involvement in some Fishery and Aquaculture Cooperatives with no alternative economic activities.
- Due to the ongoing mega government infrastructure development, some smallholders' activities may be disrupted. For instance, the infrastructure development along the Red Sea coastal line is likely to interrupt the traditional coastal fishing activities by the cooperative members. This in turn diminishes the relevance, growth, and sustainability of the fishery cooperatives.

Figure 22: A Section of the Government construction along the Red Sea in Umluj, Tabuk

5. **Information gap on cooperatives:**

- There is a big information gap and a lack of understanding of the cooperative concept and model among the media fraternity, and hence the limited publicity of the cooperatives by the mainstream media, limits awareness of the cooperatives and cooperative work among the people.

The strengths and opportunities in Fishery and Aquaculture Cooperatives are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these compounding issues in the fishery cooperatives, the KSA's stakeholders need to re-think an overall transformation strategy, by building on strengths and capitalizing on the opportunities, while reducing the weaknesses and mitigating threats. The subsequent section suggests key actionable areas for the foundation and strengthening of agricultural cooperatives.

8.3 Recommendations for Developing and Strengthening Fishery and Aquaculture Cooperatives

The Fishery and Aquaculture Cooperatives can be critical actors in the fisheries sector in the Kingdom. They can engage in the:

1. Developing and conducting regular sensitization, education, and training programs for fisherfolk on the fisheries management initiatives, and the need for collective action.
2. Acquisition, management, operation, and maintenance of fish harbours management, cold storage facilities, fish markets, gas filling station, and input and boat/nets maintenance shops for the benefit of the fisherfolk community.
3. Internal and external funding mechanisms to support to create and establishment of fuel stations and their facilities, fuel transport trucks, marine maintenance workshops, ice factories, fish markets, fish processing and freezing plants, fish export and import, fishing projects, regional and high seas fishing boats and vessels, fishing support projects, academic training and qualification, maritime transport, fishing equipment agencies, and marine machinery.
4. Mitigation mechanisms for land and water and associated conflicts; feed, seed supply, and genetic resources; environmental integrity and disease problems; development and adoption of new and improved farming technologies; market, trade, and food safety; climate change; investment capital impediments; and problems that can originate from unguided and unmonitored aquaculture practice.
5. Mitigation of competition from imported fish; frequent conflicts in the neighbouring countries on the major two shared water bodies; lobby for protection of the local product, and tax reliefs while calling for customs tax on the imported fish; negotiate on fishermen's sailing protocols with MoEWA and border guards and find ways to align with government call for increases of Saudization rate and the localization agenda (especially around youth employment agenda).
6. Engaging women and youth in key fish value chain nodes, to help them acquire jobs and increase income; through diversification of fish production sources to aquaculture, aquaponics, value addition activities, or even aqua tourism.

Strong Fishery and Aquaculture Cooperatives are important for the responsive and beneficial involvement of the fisherfolk in the fisheries sector. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing fishery cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

8.3.1 Develop fishery cooperatives' capacities

The capacities of cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[115] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

5. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing fishery cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the fishery cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the fishery

[115] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

cooperatives; financing and finance management in fishery cooperatives; and performance monitoring of fishery cooperatives (e.g., on auditing and inspection, regulation of cooperatives).

6. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
7. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
8. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

8.3.2 Develop fishery cooperative business models

Fishery and Aquaculture Cooperatives should be supported to develop and review their business models[116] to help them operate successfully and sustainably. The Government and the cooperative stakeholders should be involved in and support efforts to establish several fishery cooperative business models that other cooperative societies will follow. Therefore, there is a need to:

1. Develop fishery cooperative business models that are cognisant of the cooperative scope of purpose and coverage[117], ownership and financing structures[118], governance structures[119], and marketing structure strategies. Based on the nature of the fish sector in the Kingdom, the Multi-stakeholder (Solidarity) Cooperative[120] (MSC) type is proposed for fisherfolk.
2. Guide the Fishery and Aquaculture Cooperatives to adopt different business models that will help them to create, deliver and capture value. The business activities for member value proposition may include fish harbour management, cold storage facilities, fish markets, gas filling station, provision of fishing equipment consisting of fishing boats, fishing rods, spare parts, repair workshops for fishing boats, and markets fishermen's catch.
3. Support Fishery and Aquaculture Cooperatives to translate their various feasibility studies to the business, operational and financial plans.
4. Guide Fishery and Aquaculture Cooperatives on resource mobilization – human, material and financial – through project proposal writing, and subsidy and loan application.

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[116] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building, and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

[117] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

[118] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook, M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[119] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[120] MSC - The term multi-stakeholder cooperative is used to describe a cooperative with multiple types of members (key stakeholders) engaged with the cooperative in different capacities. Any combination of types of stakeholders could be members and may include such constituents as workers, producers, consumers, suppliers, volunteers, among others. These cooperatives are also called solidarity cooperatives. (ICA, 2015)

5. Guide fishery and aquaculture cooperatives on the establishment of trading relationships, for instance, by the illustration in Figure 23 below.

Figure 23: Guiding trading relationships for smallholders and their cooperatives

8.3.3 Strengthen fishery cooperative governance system

Cooperatives[121] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors, management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide Fishery and Aquaculture Cooperatives to adopt best-fit governance structures[122] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[123]. The structure can take the delegates system that includes the representation of various Beach Management Units (BMUs) along with the coastal coverage of the cooperative.
2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the cooperative boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management and conduct regular internal and external auditing.

[121] A fishery cooperative, based on the cooperative definition, is not only an association of fisherfolk but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[122] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[123] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

4. Support the fishermen's cooperative development and adopt digitally integrated management systems, e-marketing or e-auction system, and (through CSC by its participation ICA) develop or change their websites using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

8.3.4 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The awareness level of the public concerning the cooperative business model is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[124]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the public. Cooperative information should be available for everyone (ILO 2018), and cooperative awareness creation can equally ensure information dissemination to the public.
2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[125] and World Fishery Day[126]) to improve fisherfolk knowledge sharing and understanding of the cooperative's roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

8.3.5 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of cooperative development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology.
2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the fishery and aquaculture cooperatives.
3. Support mergers of fishery and aquaculture cooperatives, and cooperation among cooperatives within the regions or by the fishery sector to ensure economies of scope and scale and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the fishery cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated for by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly integrated it as an Online Application and into the individual cooperatives' websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage fishery and aquaculture cooperatives to change their website domains to the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.
6. Re-organize the cooperatives register, with clear and consistent fishery cooperative certificate names.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products.

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[124] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

[125] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[126] World Fisheries Day, celebrated on November 21, is dedicated to highlighting the critical importance of healthy ocean ecosystems and to ensure sustainable stocks of fisheries in the world. Fishing communities celebrate this day through rallies, workshops, public meetings, cultural dramas, exhibitions, and music shows.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extend to the MoHRSD, CSC, Fishery, and Aquaculture Cooperatives.

8.4 Success Story of the Fishery Cooperative Business Case

8.4.1 Higashi-away Fishermen Cooperative Association in Japan

Higashi-awa Fishermen Cooperative Association (FCA) in Japan, was formed in 2011 because of the merger between the *Amatsu-kominato* FCA in Kamogawa City, the *Shirahama-Cho* FCA, *Wada-Cho* FCA and *Bouso-chikura* FCA in Minamiboso city. Before then, the four cooperatives had challenges of an ageing membership, low production, and limited marketing business. Since the merger, the FCA has been consolidating its operations in the branches to improve its business and financial performance.

The FCA is enhancing marketing integration via fish aggregation and bidding unification, intensive human resources, settlement integration of the brand name and packaging style among the markets (including members, purchasers, and employees), and business integration to realize profit improvement by reducing market administrative expenses.

To be more specific, the local wholesale market is operated by FCA with biddings or auctions by which the fish collected from members will be sold to purchasers every day. In this way, the fishermen can obtain a consistent profit and thus avoid price fluctuations. Also, FCA manages the credit with purchasers, once the fish is sold out. Fishermen receive direct payment from FCA's account and audit system, even if the purchaser collapses, the risk would not affect the fishermen. To ensure the operation of the market, a handling charge is levied from 5 per cent to 15 per cent according to fish species.

In addition to management of the fishery rights and local wholesale market, FCA runs several economic businesses such as a supply business, credit business, fisheries consultancy services and mutual aid fund, thus helping the fishermen to realize a stable income. The supply business is to supply manufacturing materials such as fuels, nets, and equipment. The credit business is to provide loans and deposits service. Fisheries consultancy services offer advice for improving technology and operant level. Mutual aid fund compensates for the loss and stabilises gains. Logistics services offer joint-use facilities such as fishing gear storage. Besides these, there are other businesses such as process businesses for enhancing the added value, and storage businesses for maintaining value by using storage. Beyond that, FCA is concurrently running other businesses which depend on the regional feature. All of these are in use to help fishermen at the starting point to meet the needs of local fishermen, followed by raising the benefits of fishermen by sharing profits from those business earnings. In this way, FCA accounts for a large part of the regional economy.

9. Cooperatives in Livestock Sector

Synopsis

In the Kingdom of Saudi Arabia, Livestock Sector is under MoEWA. Livestock cooperatives portray a mix of situations concerning their value chain outlook, strengths, weaknesses, opportunities, and threats.

There are approximately 153 livestock keepers, managing approximately 21 million sheep, 6.7 million goats, 0.3 million cattle, 5 million poultry, and 1.5 million camels across all 13 regions of the Kingdom. Hoover, there Kingdom is still a net importer of animal and animal products. There are 19 registered livestock cooperatives in the Kingdom. The penetration of cooperatives among livestock keepers is still low at 0.62 per cent. The livestock cooperatives' internal shareholding stands at about SAR 30.2 million, which is comparably high compared to other agricultural-oriented cooperatives. Livestock keepers are receiving support from government subsidies and special programs and initiatives by agricultural development funds such as breeding, fattening, slaughterhouse, and markets. Livestock cooperatives can co-manage natural and water resources, help improve the living conditions of small-scale livestock keepers and slow down the rapid depletion of these resources.

Nonetheless, the livestock cooperatives in the Kingdom still face several internal and external challenges including, incompatible business and governance models to accommodate youth and women, limited cooperatives among cooperatives, people's negative social attitudes and mindsets, unaligned policies, high competition from the private market players, erratic climatic conditions affecting the natural and water resources, and information gaps on cooperative work.

The report, therefore, makes some suggestions for consideration by the government and cooperative stakeholders: to think of an overall transformative strategy, by building on strengths and capitalizing on the opportunities, while addressing the weaknesses and mitigating threats. These suggestions include among others, the following: develop livestock cooperatives' capacities; develop livestock cooperative business models; strengthen livestock cooperative governance structures; create awareness to change the perception of cooperatives; and strengthen the government agencies' capacity.

This report is, to help the line Ministries in charge of cooperatives and agriculture to broadly rethink and redefine the development of the cooperative in the Kingdom. It will help the different stakeholders work toward the recognition of cooperatives as growth engines for beekeeping and honey chain and rural economies; while helping the smallholder livestock keepers inclusively access resources, services, and markets. The report is meant to specifically help the line Ministries in collaboration with FAO, develop and facilitate capacity-building initiatives and develop and/or review various cooperatives development tools for different cadres of stakeholders from the national to target provincial and governorate levels, and cooperatives, including officers, leaders, and members. The report is finally meant to be a precursor for the development of a cooperative strengthening plan, continuous capacity assessments of cooperatives, cooperative awareness creation, organization and business capacities, and the development of compatible business models.

9.1 Livestock Value Chain Outlook

9.1.1 Livestock Production

The Kingdom of Saudi Arabia has a vast landmass, mostly arid and semi-arid, with the majority of farmers comprising of small rural strata, livestock in general and small ruminants are an important source of livelihood. Livestock plays a vital role in a country with high economic, social, and cultural significance. In the otherwise constrained agriculture sector of KSA with high import dependence on food security, there are silver linings of the livestock sector having full self-sufficiency in milk and poultry production. The sector contributes to the diversification of the economic base through its subsectors (Dairy, Red meat, Eggs, and Broiler) and different types of animals (Sheep, Goats, Camels, Cattle, and Poultry).

The livestock sub-sector in KSA is pursued in a complex, diverse, and generally not in very congenial and favourable agro-climatic conditions. The majority of small ruminants are kept by nomadic pastoralists, and agro-pastoralists, and very little in the confined farms with stock feeding. Owing to a lack of information and

not following the best practices, the productivity of the sector is low as compared to other advanced countries. This is primarily due to imbalanced and insufficient feeding regimes, unavailability of green fodder in sufficient quantities throughout the year, and insufficient health cover.

According to the MoEWA statistics, there are 153,000 small ruminant producers across the country; the majorities of them are landless including desert nomads who rear both sheep and goats. However, according to the FAO-KSA livestock report (2019), sheep numbers could be three to four times of goats. They rear *Awassi* sheep (locally called *Naimi*) that fetches higher prices in the local markets compared to imported breeds. At the household level, they are primarily raised for milk and its products while the village women use their wool for making traditional crafts. *Ardi*, *Jabali* and *Shami* goats are popular breeds in the country that provide income to the villagers through the sale of milk, meat, wool, and leather. In addition, *Hajazi* goats are raised for their beauty and physical appearance. The herd size may vary widely; from as small as 100 to a few thousand animals and are kept in an open shed fenced by wooden sticks, metal grills, or stones. Small ruminants are generally kept away from the households and are managed by the household members or a hired manager/staff. The small livestock production in KSA is illustrated in Table 43 below.

Table 43: Number of livestock by type and region in the Kingdom

Regions	Camels	Poultry	Cattle	Goats	Sheep
Riyadh	443,774	597,397	63,890	641,407	3,578,835
Makkah Al Mukarramah	189,055	495,882	46,780	671,357	2,955,344
Al Madinah Al Munawwarah	112,146	580,169	3,610	443,011	910,121
Al Qaseem	92,666	574,729	4,710	245,557	1,042,793
Eastern Region	243,249	636,397	15,100	279,563	1,410,912
Aseer	63,781	450,394	36,400	1,222,537	2,209,046
Tabuk	62,561	242,224	280	298,407	732,800
Hail	85,199	236,180	920	336,097	950,974
Northern Borders	59,776	223,000	10	317,698	1,005,043
Jazan	23,590	281,146	79,160	654,802	2,757,727
Najran	39,631	115,349	21,350	993,208	2,271,284
Al Baha	17,852	212,350	28,560	322,899	391,841
Al Jawf	66,961	366,135	1,290	312,611	1,508,004
Total	**1,500,241**	**5,011,352**	**302,060**	**6,739,154**	**21,724,724**

Source: Agriculture Census 2020, MoEWA Statistics, KSA

Livestock farmers are relying on government slaughterhouses. Table 44 below highlights the volumes of locally produced livestock slaughter in the regions.

Table 44: Local Livestock slaughtered under the supervision of the municipalities by region and type

Region	Goat	Sheep	Cattle	Camel	Total
Riyadh	554,089	665,544	39,573	93,168	1,352,374
Makkah	304,378	743,583	29,797	27,275	1,105,033
Madinah	196,942	207,547	4,342	14,731	423,562
Al-Qassim	73,182	245,263	188	41,183	359,816
Eastern	165,179	879,718	6,344	48,538	1,099,779
Aseer	216,768	372,930	8,513	22,877	621,088
Tabouk	65,506	87,483	16	4,852	157,857
Hail	47,756	157,744	45	8,955	214,500
Northern Borders	30,864	164,463	39	4,280	199,646
Jazan	125,551	219,146	8,654	2,988	356,339
Najran	54,845	149,817	415	9,041	214,118
Al-Baha	40470	73,967	6,365	3,538	124,340
Al-Jowf	10,886	57,252	1,089	8,186	77,413
Grand Total	**1,886,416**	**4,024,457**	**105,380**	**289,612**	**6,305,865**

Source: Agriculture Census 2015, General Authority for Statistics, KSA (Accessed in 2021)

9.1.3 Livestock Chain Analysis and Map

The KSA livestock Value analysis is illustrated in Table 45 below.

Table 45: Small Ruminant value chain analysis

Major channels	**Channel 1**	**Channel 2**	**Channel 3**	**Channel 4**
End market products	Meat and internal organs	Meat and internal organs	Meat and internal organs	Meat and internal organs
Channel used (Meat products)	Consumers go directly to the slaughterhouse	Slaughterhouse to the meat market or retail shop	Slaughterhouse to meat market/retail shop	Meat markets to restaurants/hotels
End markets (Live animal)	Consumers	Animal markets	Animal markets/ retailers	Big suppliers
Final products destination	Domestic	Domestic	Domestic	Domestic/Export markets
Channel used (Live animal)	Direct to consumer	Auction in markets	Local traders to the animal market	Local traders to big suppliers
Products sold (Live animal)	Sheep and goat (Adults and kids)	Sheep and goat (Adults and kids)	Sheep and goat (Adults and kids)	Sheep and goats (Adults and kids)
Price paid by consumer Live sheep -SAR Live goat-SAR	 800-1000 500-600	 700-1400 500-750	 700-1400 500-750	Imported sheep-650-750 700-1400 500-750
Price to farmer Live sheep -SAR Live goat -SAR	 800-1000 500-600	 260-800 400-600	 500-650 400-500	 500-650 400-500
Operational model	Individual consumers visit the cattle farm of farmer and purchase 1-2 animals directly. Consumers prefer healthy animals. Consumers take the animals to the local slaughterhouse for getting the meat by paying the slaughtering fee	Producers take small ruminants to animal markets and participate in the auction process. Old and sick animals are sold for much lesser prices. Consumers and/or retailers purchase from animal markets and take them to local slaughterhouses. Agents of big suppliers procure from markets.	Producers sell to local traders who visit farmers' places to make the purchase. Producers sell at lower prices to traders for bulk sales. Local traders sell in the regional/local markets. Big suppliers, retailers, and consumers purchase from these animal markets.	Producers sell to local traders who visit farmers' places to make the purchase. Local traders sell to big suppliers who aggregate animals and export them to other countries. Big suppliers import small ruminants and sell in local animal markets.
Slaughterhouse	Slaughterhouses and meat market complexes are operated by private players under the supervision of the local Municipality. Meat retailers must procure meat only from Municipality-approved slaughterhouses.			
Weight and price-fixing mechanism at the farmer's end	Weight by Estimation Price fixation by negotiation	Weight by Estimation Price fixation by auction	Weight by Estimation Price fixation by negotiation	Weight by Estimation Price fixation by negotiation
Farmer's say in price fixation	High	Low	Medium	Medium
Key deciding factors for the price fixation	Consumer preference to purchase from source Animal age and health	Demand and supply Animal age and health Number of units sold	Demand from the trader's side Animal age and health Number of units sold	Demand from big suppliers Animal age and health Number of units sold

Major channels	Channel 1	Channel 2	Channel 3	Channel 4
Farmer's awareness of prices in end markets	Yes	Yes	Yes/No	Yes/No
Is cost-benefit analysis done by the producer	No	No	No	No
Volume of sale through channel (Rank)	Rank 3	Rank 1	Rank 2	Rank 4

Source: FAO-KSA Small Ruminant Value Chain Report (2019)

The small livestock value chain map is illustrated in Figure 24 below, indicating limited coordination of the herders.

Figure 24: Small livestock value chain map in KSA

9.2 The Analysis of the Livestock Cooperatives in KSA

The Livestock Cooperatives in KSA besides the general cooperative movement, exhibit several unique strengths, weaknesses, opportunities, and threats (SWOT) in proportional measures as highlighted below.

9.2.1 Strengths

1. **Relatively functional beekeepers and honey cooperatives**:

- There are 19 registered livestock cooperative associations in KSA, that engage primarily in livestock production.

Table 46: Registered Livestock Cooperatives in KSA

#	Region	Name of the Cooperative	Estimated members	Established share capital (in SAR)
1.	Riyadh	Kingdom Poultry Producers Cooperative	113	2,340,000

#	Region	Name of the Cooperative	Estimated members	Established share capital (in SAR)
2.	Riyadh	Cooperative Association for livestock in Riyadh	36	1,555,000
3.	Riyadh	Al-Kharj Cooperative Society for Livestock	0	0
4.	Riyadh	Riyadh Cooperative Society for Livestock (Thrwah)	0	0
5.	Makkah	Poultry Producers Cooperative at Holy Makkah	16	256,000
6.	Makkah	Cooperative Society for Poultry Producers in Jeddah	222	1,943,000
7.	Makkah	Cooperative Society for Livestock and Forage		
8.	Al Qassim	Cooperative Association for livestock Buraidah	145	943,500
9.	Eastern Region	Cooperative Marketing of Eggs and Poultry in Al-Ahsa	51	1,243,300
10.	Eastern Region	Hafr Al-Batin Cooperative Society for Livestock and Marketing	0	0
11.	Aseer	Cooperative Association of Assir Poultry Producers	64	13,637,500
12.	Aseer	Agricultural and Marketing Cooperative Association in Khamis Mushait	40	1,135,000
13.	Aseer	Khamis Mushait Cooperative Society for Livestock	0	0
14.	Hail	Cooperative Society for Livestock Development in Hail (Tharwah)	119	1,012,000
15.	Hail	Cooperative Society for Livestock Development in Al Shamli	15	120,200
16.	Hail	Cooperative Society for Livestock in Al Shihyah	64	900,000
17.	Jazan	Cooperative Association for Poultry Producers in Jazan	17	1,000,000
18.	North Borders	Cooperative Association of Livestock Breeders and Producers (Mwashi)	23	2,069,045
19.	North Borders	Cooperative Association for Poultry Breeders	17	2,056,476
Totals			**942**	**30,211,021**

Source: CSC

- The livestock and poultry cooperatives (which are 19) are relatively many specialized agricultural cooperatives in the Kingdom, followed by beekeepers' cooperatives (which are 10), and then fishermen's cooperatives (which are 8). This shows the relative acceptability of the cooperatives among the livestock keepers.
- Livestock Cooperatives have operational offices and facilities to serve members and engage stakeholders near the respective geographical areas. Some of the cooperatives have a functional website, e.g., the Cooperative Association of Assir Poultry Producers (https://osoul.sa/).

2. **Existing apex organizations for Beekeepers' Cooperatives**

- The apex cooperative body, CSC, is established under the law and has a 12-year strategy (2018-2030) that highlights several specific objectives of the Cooperatives Sector.
- CSC is affiliated with Internal Cooperatives Alliance (ICA). CSC is rejuvenating the cooperatives, especially agricultural and fishery cooperatives.

3. **Ownership of processing and marketing facilities and equipment**

- In the last few years, some livestock cooperatives (for instance the Cooperative Association of Assir Poultry Producers - CAAPP) are owning processing facilities.

Figure 25: The office building for the Cooperative Association of Asir Poultry Producers

4. **Proactive level of some Boards and Management staff**

- There are at least several cooperative know-how and conscious BoDs, officers, and managers in the Kingdom, who are active, open-minded, and responsible for the transference of the cooperative concept and principle in society. They are the current crop of cooperative champions to ignite more transformation of the agricultural cooperatives' development.
- Cooperative business and social activities are increasing including animal disease surveillance and the government systems for licensing.

9.2.2 Weaknesses

1. **Exclusive cooperative business models**

- Livestock business models are not designed to absorb the huge number of about 153,000 livestock and poultry keepers. The penetration rate of livestock cooperatives is still low, at 0.62 per cent (only 942 cooperative members of the 153,000 livestock and poultry keepers).
- Some livestock cooperatives' business models are improperly structured to adequately include the smallholders, women, and youth.
- The cooperative business models are not also developed well to decipher the livestock productive activities – e.g., slaughterhouses, and veterinary services. Breeding and fattening. This downplays the cooperative vision and objectives.
- Most livestock cooperatives have at least feasibility study reports on various initiatives. However, the cooperative business functions are not well developed and operated due to a lack of corresponding strategic and business plans.
- Most livestock cooperatives have a weak self-financing approach; the internal shareholding is still relatively low compared to the expected objectives to be delivered.
- Some of the livestock cooperatives have not capitalized on and optimized the government programs, incentives, and subsidies.

- Most livestock cooperatives do not understand which best business model they need to operate for feeds, vaccination, vet-clinics, and livestock marketing.
- Numerous social, human, and financial capital issues require specific business models for specific livestock cooperatives and activities in the context of their different regions.

2. **Weak governance and management systems**

- Due to adequacy in the business and finance model, there are equally unclear organizational business structures and strategies.
- Some livestock cooperatives' governance structures are not well developed for proper cooperative decision-making processes. Those who have some well-defined organizational structure lack qualified and competent staff in key areas regarding cooperative identity (e.g., member/client relation management, marketing, accounting and financial matters, advocacy, and support).
- Most livestock cooperatives lack well-customized internal procedure manuals and business plans. There are significant operational inefficiencies, that make the available cooperative facilities ineffective.
- The limited operational management tools and lack of integrated management systems lead to the inability to create notable cooperative benefits/advantages for their members. As such member trust and social capital issues have been observed.
- The website domains livestock cooperatives are using (e.g., - https://osoul.sa/ for the Cooperative Association of Assir Poultry Producers), are not giving them enough visibility to the public, the potential members, and external partners.
- There are also cases of the absence of an elected Board of Directors with specific responsibilities. The low leadership capacity of the boards sometimes results in leadership wrangles and breakouts.
- Most of the livestock cooperatives have relatively low youth and women on their boards. This has suppressed the image and identity of cooperatives among this important demographic group.
- In most cooperatives, the education and training programs are limited or not well structured and regular to develop their social capital.

3. **Limited cooperation among cooperatives**

- Besides the establishment of the CSC, local cooperation among livestock cooperatives is not visible. For instance, some livestock cooperatives are not willing to use the established services of other livestock cooperatives.
- This organizational structure gap in the cooperative ecosystem deprives livestock cooperatives of advantages for economies of scale and scope, bargaining power, joint innovations, and capital formation.
- The participation of the KSA livestock cooperatives through CSC in the regional and global platforms is still low to improve the image and seek more external markets.

9.2.3 Opportunities

1. **Sentimental value on livestock**:

- The livestock value chain in Saudi is highly driven by the producers[127] due to the high sentimental value placed on livestock by the people. The sector is also partly driven by the government as an Ethical Agent[128] in terms of regulations.

[127] Producer driven value chain is where the producers themselves are mostly interested and controlling the value chain, with objective for new markets, high prices, stabilize their market position and focus on extra supply volumes (Lundy, et. al., 2012).

[128] **Ethical agents** play a mediation role facilitating the process of chain collaboration to get a product or service to market. The agents possess the skills, knowledge and/or relationships necessary to play this role. They are usually industry experts who understand the specific market peculiarity of the sector they are operating in. Agents utilize their networks within the sector to garner information, establish trust and build new links between actors in the industry – strong relationships with key contacts are crucial. Ethical agents further have a strong motivation to ensure a positive development impact within these new market relationships. Although agents do not handle the product, they are likely to add value and assume some risk (and help in de-risking). Threats to the de-risking/ ethical agent are likely to be reputational or relationship-based, given the risks involved in getting a competitive product to market and keeping it there (Lundy, et. al., 2012).

- There are about 153,000 livestock keepers with a large number of livestock reared in the Kingdom including over 21 million sheep, 7 million goats, 5 million poultry, and 1.5 million camels that livestock cooperatives can serve. This livestock keepers' portfolio can enable the success of several specialized livestock cooperatives.

2. **Government support**:

- Through Saudi Vision 2030 and NTP's strategic pillars, the government is showing readiness to support cooperatives. Already, the government is highly investing in infrastructures such as training facilities, and market structures that beekeepers' cooperatives can take advantage of.
- ADF (in its 57 Annual Report of 2020) reported supporting the program of developing the small-scale livestock keepers' sector by about SAR 96 million, broiler chicken by SAR 276.3 million, layers chicken by SAR 50 million, calves fattening by SAR 3.8 million, sheep breeding and fattening by SAR 115 million, agricultural products marketing centres by SAR 28 million, and Automatic slaughterhouse by SAR 157 million.
- The government has developed a good infrastructure network – including transport (air, road, rail, shipping), communication, and public utilities (water, gas, electricity) systems – across the country for local businesses including cooperatives.
- The government has restructured MoEWA to accommodate the directorate of cooperatives and marketing, with the distinct mandate of promotion and capacity building of agricultural and livestock cooperatives.
- The government is "privatizing" and promoting mobile extension services, to mitigate the low extension system to ensure accessibility among, smallholder livestock keepers to improve production and productivity.

3. **Demographic structure and character:**

- There is approximately 60 per cent of the youth in the Kingdom, with an estimated employment rate of 11 per cent, some of whom can be attracted to the livestock sector and extent of livestock cooperatives' sections of feed processing, veterinary services, and slaughterhouses.
- There is a high literacy level that can easily understand the cooperatives business concept. The growing population puts demand for food supply and food safety, and cooperatives would play a critical role in the development of the agrifood system that is dominated by smallholders. The youth population that needs employment opportunities, would need such ventures as cooperative enterprises.
- Furthermore, according to International Telecommunication Union Report,[129] Saudis have highly embraced digital transformation. Over 80 per cent of the population owns a smartphone to seek and offer services. Social media and Apps can help in the integration and development of the social economy of which cooperatives are part.

4. **The success of cooperative identity and experience:**

- With the perspectives around the globe and the Arab world, cooperatives are among the most important value chain growth engines for the smallholders participating in the value chains, with the potential to help them address the value chain core processes of production, aggregation, processing, and distribution. They are creating jobs and contributing to respective economic growth.
- Some of the development actors in advancing cooperatives, like FAO, which is a member of the Committee for the Promotion and Advancement of Cooperatives (COPAC) is currently offering technical support to the Kingdom that the livestock cooperatives could leverage.

9.2.4 Threats

1. **Unaligned and limited cooperatives policy, legal and regulatory framework,** to enable the formation and development of cooperatives models that fit in the socio-cultural and economic contexts, without distorting the cooperative identity, values, and principles.

- The framework lacks flexibility in the internal governance structure of livestock cooperatives. There are no separate frameworks or unique provisions in the law for livestock cooperatives

[129] See: ITU report https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_ARS.01-2021-PDF-E.pdf

- The framework has limited provisions to allow for enhancing cooperative competitiveness by establishing backwards and forward-integrated business organizations and innovative cooperative business models. The provisions (for example, of the bylaws) are too generic to work for cooperatives in various sectors and value chains

2. **Population's negative social attitude and mindset**:

- The majority of the population still has a negative social attitude and mindset towards cooperative businesses, as they have considered them pure self-help and charity groups.
- Sometimes, individuals establish cooperatives just to acquire the cooperative development subsidies and after that, they abandon the cooperative venture.
- The population has inadequate awareness of the cooperatives' structure and its importance in the development of other socio-economic sectors.
- Furthermore, the would-be cooperative members lack a family livestock production system, where other family members could participate. This makes it difficult to internalize the greater need for a cooperative organization with fellow livestock keepers.
- The overreliance but unoptimized Government incentives: continued overreliance but unoptimized government subsidies and incentives that are not well monitored concerning the cooperative performance.
- The continued limited institutionalization of cooperatives' education and training programs (at MoEWA, MoHRSD, and CSC) may continue to cause a scarcity of cooperative professionals and champions to create awareness and develop and manage successful cooperatives.

3. **High competition from private sector market players**:

- The private sector plays a tendency to distort the market structures for the smallholders are always out to curtail the growth of the cooperatives. They always facilitate middlemen to distort market prices.
- The cooperatives decry many business licenses required by the government with no tax incentives and reliefs – including for import and export activities, that could help them compete in the market. This makes the members shy away from the cooperative business model, as they perceive no difference from other business forms.

4. **Unfavourable climatic conditions**

- The unfavourable climatic condition and depletion of biodiversity support livestock production. This weakness is the member involvement in some livestock cooperatives with no alternative economic activities.

5. **Information gap on cooperatives:**

- There is a big information gap and a lack of understanding of the cooperative concept and model among the media fraternity. This leads to limited publicity of the cooperatives by the mainstream media, and limits awareness of the cooperatives and cooperative work among the people.

The strengths and opportunities in livestock cooperatives are intertwined, and so are the weaknesses and the threats; as in the cooperative ecosystem in the Kingdom. To address these compounding issues in the livestock cooperatives, the KSA's stakeholders need to re-think an overall inclusivity strategy, by building on strengths and capitalizing on the opportunities, while reducing the weaknesses and mitigating threats. The subsequent section suggests key actionable areas for the foundation and strengthening of livestock cooperatives.

9.3 Recommendations for Developing and Strengthening Fishery and Aquaculture Cooperatives

The livestock cooperatives can be critical actors in the livestock sector in the Kingdom. They can engage in the:

1. Developing and conducting regular sensitization, education, and training programs for livestock keepers on the livestock initiatives, and the need for collective action.
2. Acquisition, management, operation, and maintenance of natural and water resources management, livestock and meat markets, and input shops for the benefit of the livestock keepers' community.
3. Mitigation mechanisms for natural and water resources; livestock breeds; environmental integrity and disease problems; development and adoption of new and improved livestock-keeping technologies;

market, trade, and food safety; climate change; investment capital impediments; and problems that can originate from unguided and unmonitored livestock rearing practices.
4. Mitigation of competition from imported honey, honey product and inputs; lobby for protection of the local products, and tax reliefs while calling for customs tax on the imported livestock and animal products; negotiate on livestock protocols with MoEWA and find ways to align with government call for increases of Saudization rate and the localization agenda (especially around youth employment agenda).
5. Engaging women and youth in key livestock value chain nodes, to help them acquire jobs and increase income; through diversification of livestock production and products.

Strong livestock cooperatives are important for the responsive and beneficial involvement of livestock keepers. Based on the analysis, some suggestions are being made. These include cooperative capacity development, strengthening cooperative governance structure, establishing livestock cooperative business models, creating awareness to change perception, and building the cooperative institutional framework.

9.3.1 Develop livestock cooperatives' capacities

The capacities of cooperatives are still low. ILO through the Promotion of Cooperatives Recommendation, 2002 (No. 193)[130] has issued a guideline for the governments to promote and build the capacities of cooperatives. Therefore, in the Kingdom of Saudi Arabia, there is a need to:

1. Develop a comprehensive cooperatives training program revolving around the principles and practices of promoting and organizing livestock cooperatives (e.g., on value chain analysis, feasibility studies, business plans, and legal documents); governing and managing the beekeepers' cooperatives; managing the key business functions (input supply, marketing, extension services, value addition) of the livestock cooperatives; financing and finance management in livestock cooperatives; and performance monitoring of livestock cooperatives (e.g., on auditing and inspection, regulation of cooperatives).
2. Develop cooperative training for the existing and potential government officers (from MoHRSD, MoEWA, CSC), cooperative elected board members and employees, and members.
3. Institutionalise cooperative training programs within government agencies. Later, the same could be initiated in the academic institutions and digitalized to widen the availability in nurturing potential cooperative professionals and experts within the Kingdom.
4. Organise and conduct regular experience-sharing activities through conferences, symposiums, and field visits to learn and adopt best practices for cooperative promotion and management at the local, regional, and international levels.

9.3.2 Develop livestock cooperatives' business models

Livestock cooperatives should be supported to develop and review their business models[131] to help them operate successfully and sustainably. The Government and the cooperative stakeholders should be involved in and support efforts to establish several livestock cooperative business models that other cooperative societies will follow. Therefore, there is a need to:

1. Develop livestock cooperative business models that are cognisant of the cooperative scope of purpose and coverage[132], ownership and financing structures[133], governance structures[134], and marketing

[130] See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R193

[131] A cooperative business model could be defined as a conceptual tool that contains a set of elements and their relationships and allows expressing a cooperative's logic of earning money. It is a framework for finding a systematic way to unlock the long-term value of a cooperative while creating and delivering value to members and customers while capturing value through monetization strategy. It describes how a cooperative creates, delivers, and captures value within a market network of producers, suppliers, and consumers, in economic, social, cultural, or other contexts, to generate profitable and sustainable revenue streams. A cooperative business model is a holistic framework to understand, design, and test cooperative business assumptions in the marketplace. The process of cooperative business model building and modification is also called business model innovation and forms a part of cooperative business strategy. The business model concept is linked to business strategy (the process of business model design) and business operations (the implementation of a cooperative's business model into organisational structures and systems).

[132] Birchall, J., (2011). People-Centred Businesses: Cooperatives, Mutuals and the Idea of Membership, London, Palgrave MacMillan.

structure strategies. Based on the nature of the beekeeping and honey sector in the Kingdom, the New Generation Cooperative[135] (NGC) type of cooperative is proposed for livestock keepers.

2. Guide the livestock cooperatives to adopt different business models that will help them to create, deliver and capture value. The business activities for member value proposition may include forest and water resources management, slaughterhouse facilities, animal markets, veterinary services, input, and equipment supply shops.
3. Support livestock cooperatives to translate their various feasibility studies to the business, operational and financial plans.
4. Guide livestock cooperatives on resource mobilization – human, material, and financial – through project proposal writing, and subsidy and loan application.
5. Guide livestock cooperatives on the establishment of trading relationships, through vertical and horizontal integration; for example, as illustrated in Figure 25 below.

Figure 26: Guiding trading relationships for smallholders and their cooperatives

9.3.3 Strengthen beekeepers' cooperative governance system

Cooperatives[136] have a unique governance structure that reflects the fact that they are owned and controlled by their members. Effective cooperative operations depend on four groups: members, the board of directors,

[133] Cook, M.L., and Iliopoulos, C., (2000). Ill-Defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives", in C. Menard, C. (ed.), Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics, London, Edward Elgar, pp. 335-348; By Nilsson, J. (1999). *Cooperative Organizational Models as Reflections of the Business Environments*. Finnish Journal of Business Economics 4: 449-470; Chaddad, F.R., and Cook, M.L. (2004). *Understanding new cooperative models: An ownership control rights typology*. Review of Agricultural Economics 26(3):348-360

[134] Bijman, J., Hendrikse, G. and A. van Oijen, (2013). *Accommodating Two Worlds in One Organization: Changing Board Models in Agricultural Cooperatives*. 34 Managerial and Decision Economics 3-5, 2013, pp. 204-217; Chaddad, F.R. and Iliopoulos, C. (2013). *Control Rights, Governance, and the Costs of Ownership in Agricultural Cooperatives.* 29 Agribusiness: An International Journal 1, 2013, pp. 3-22.

[135] New generation cooperatives are designed to enable producers to profit from the production and marketing of value-added products made from their raw commodities.

[136] A fishery cooperative, based on the cooperative definition, is not only an association of fisherfolk but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. In practice, there is often no clear-cut distinction between these two parts of the

management, and employees. Cooperative governance is the act of steering cooperatively owned enterprises toward economic, social, and cultural success. It consists of answering key questions, defining roles and responsibilities, and establishing processes for setting expectations and ensuring accountability. Therefore, there is a need to:

1. Guide livestock cooperatives to adopt best-fit governance structures[137] in compliance with the cooperative principles and best practices; depict a high level of transparency and accountability and build resilience in face of emerging complexities[138]. The structure can take the delegates system that includes representatives various.
2. Develop and share for adoption the model legal documents and guidelines on such tools as Articles of incorporation, by-laws, internal board and management policies, membership, and marketing agreements.
3. Develop a mentorship program for the cooperative boards regularly to enhance their decision-making levels and critical thinking abilities and ensure implementation of regulations regarding cooperative' management and conduct regular internal and external auditing.
4. Support the livestock cooperative to develop and adopt digitally integrated management systems, e-marketing or e-auction system, and (through CSC by its participation in ICA) develop or change their websites (e.g., from https://osoul.sa/ of the Cooperative Association of Assir Poultry Producers), using the ICA's recommended domain i.e., .coop, which can enhance and deepen their cooperative identity.

9.3.4 Create awareness to change the perception of cooperatives

The social attitude and mindset of the public toward the cooperatives are still largely negative. The awareness level of the public concerning the cooperative business model is low. Therefore, there is a need to:

1. Develop and coordinate cooperative awareness creation initiatives[139]. More knowledge products on cooperative values, principles, and practices should be developed and disseminated to the public. Cooperative information should be available for everyone (ILO 2018), and cooperative awareness creation can equally ensure information dissemination to the public.
2. Organize and conduct regular awareness campaigns (for instance during International Cooperative Day[140] and World Farm Animal Day[141]) to improve beekeepers' knowledge sharing and understanding of cooperatives' roles, characteristics, impacts, and operating models.
3. Develop a digital media platform for the dissemination of cooperative information, lessons, and success stories in the Kingdom.

9.3.5 Strengthen the government agencies' capacity

The effectiveness of the institutional framework of cooperative development is essential in the Kingdom. Therefore, there is a need to:

1. Equip the cooperative promotion and development units in the mandated agencies – MoHRSD, MoEWA, and CSC – with staff, skills, guidelines, and technology.

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cooperative organization, certainly not in the mind of the cooperative members, especially in the Kingdom of Saudi Arabia.

[137] Iliopoulos, C. (2015). *Ownership and Governance in Agricultural Cooperatives: An Update*. AGRERI Working Paper Series, 2015-1, Agricultural Economics Research Institute, Athens, Greece

[138] International Cooperative Alliance. (2015). *Cooperative Governance Fit to Build Resilience in the Face of Complexity*. Brussels, Belgium

[139] A cooperative awareness creation campaign is any time-bound, a strategic campaign aimed entirely at increasing public visibility and awareness for cooperative courses. For cooperatives agencies and organisations, this means planning a cooperative campaign to spread the word about cooperatives, explain why it matters, and show supporters how they can get involved. The main goal of a cooperative awareness campaign is to raise visibility for cooperatives in society. The various awareness creation campaigns channels include social media, fairs, and other public events to enhance the awareness of members and non-members.

[140] International Cooperative Day is an annual celebration of the cooperative movement observed on the first Saturday in July since 1923 by the International Cooperative Alliance

[141] World Farm Animals Day is commemorated on **October 2nd** of every year. Created in memory of Ghandi, who believed in treating all living beings with respect, World Farm Animals Day was founded to highlight the poor conditions suffered by some farm animals and promote awareness in the hope something may be done to improve their lives.

2. Promote the culture of performance and ensure that the government links the provision of support to measurable performance indicators for the livestock cooperatives.
3. Support collaboration of livestock cooperatives, and cooperation among cooperatives s within the regions or by the livestock sector to ensure economies of scope and scale, and for success and sustainability.
4. Developing digital platforms that are embedded with cooperative monitoring tools should be developed and regularly administered among the beekeepers' cooperatives, to determine the cooperative economic indexes (CEIs) and social progress indexes (SPIs) in the Kingdom, as advocated by the World Cooperative Monitor (WCM). The digital platforms by the agencies should also be used to advance online awareness creation campaigns, information sharing, and training.
5. Re-develop the cooperatives' registration system, and possibly integrated it as an Online Application and into the individual cooperatives' websites and systems – with multiple user interfaces (UIs). CSC by its participation in ICA should encourage livestock cooperatives to change their website domains to the ICA's recommended domain i.e., .coop, to enhance and deepen their cooperative identity.
6. Re-organize the cooperatives register, with clear and consistent livestock cooperative certificate names.
7. Streamline the funding initiatives to the cooperatives – for instance by establishing a cooperative development fund (from the project initiation to monitoring). The CSC should also advocate for the review of funds applications at the Agricultural Development Fund (ADF), and Social Development Bank (SDB), with specialized cooperative loan products.

Generally, this analysis report is valuable not only to inform appropriate MoEWA-SRAD activities but also to provide the implementing team, government officers, and cooperatives with a broad snapshot of the entire cooperative sector and the existing gaps in the cooperatives sector; and guide in the subsequent support activities. The resultant deliverables will continually strengthen the technical and management capacities of the key MoEWA and extent the MoHRSD, CSC, and livestock cooperatives.

9.4 Success Story of the Livestock Cooperative Business Case

9.4.1 South-Eastern Farmers (SEF) Cooperative in the USA

South-Eastern Farmers (SEF) Cooperative (https://www.sefcoop.com/) in the State of Tennessee in the USA that is offering specialized agronomy services, veterinary services, fuel and auto services, animal feed manufacturing and farm input to farmer members and the community in four branches of the region including Lafayette, Pikeville, and Cleveland.

9.4.2 Farm Stock Cooperative in Scotland

Farm Stock in Scotland (https://farmstock.org.uk/), is a farmer-owned, livestock marketing cooperative dedicated to maximising returns to livestock producers. It is based within the Scottish borders and operates throughout central and southern Scotland. Comprised of over 1,000 farmer members, Farm Stock is the largest single cooperative of its type operating within the Scottish livestock industry handling large numbers of both sheep and cattle with an annual turnover in excess of £13 million. The cooperative creates value by minimising marketing costs and maximising prices. Value for members is being measured in terms of higher lamb prices, reduced hassle for farmers, trust, provision of technical information, lower costs, payment within seven days, high service levels and management of risk.

Annexes

Annexe 1: Assessment Questionnaire

A. General Cooperative Information

1. What are the most common sectors in which cooperatives in KSA are active (e.g., agriculture, financial etc.)?
2. In approximation, how many cooperatives are there in the KSA? How many "cooperative organizations"? (Please provide the source(s) of information.)
3. From the above, what is the proportionality (Give percentages, if possible.) of agriculture-based cooperatives compared with other sector cooperatives?
4. In approximation, how many cooperatives are there in the agriculture sector where SRAD program activities are targeted?
5. Where is the target agricultural cooperatives typically located (region)? If they exist in certain areas of the KSA, list those areas.
6. Explain why agricultural cooperatives exist in the areas where SRAD program activities are targeted.
7. How many members do the majority of agricultural cooperatives have? (Mark the box with an "X.")

☐ 2–20 ☐ 21–75 ☐ 76–100 ☐ 101- 999 ☐ >1,000

If the target agricultural cooperatives differ widely in the number of members, describe the differences.

8. Approximately, what size of business do these target agricultural cooperatives typically represent?

#	**Business Sizes of Agricultural cooperatives**	**Responses**	
a.	The number of members/employees:	…….Female	…..Male
b.	Roughly what percentage of members/employees are family members?		
c.	Average annual revenues (in SR):		
d.	Average annual profits or losses (revenues minus costs in SR). Please define how profits/losses are calculated (i.e., net or gross profits before/after financial costs):		
e.	Value of fixed assets (in SR):		
f.	Value of capital assets (in SR):		
g.	Cooperative net worth (in SR), if possible:		
h.	Equity per member (in SR):		
i.	Other information:		

9. Please complete the following table regarding agricultural cooperatives in the target area. If the sectors listed do not reflect your area, adjust the (sub) sectors accordingly. Leave rows blank if there are no active agricultural cooperatives.

Agriculture Value Chain	**Number of cooperatives**	**Number of members (segregated into women, men, and youth)**	**Region (s)**	**Total Asset Base (in SR)**
Coffee				
Rose Flowers/Horticulture				
Sub-Tropical Fruits				
Beekeeping/Honey Production				
Fishery/Aquaculture				
Livestock/Poultry				
Cereals – Grains/Legumes				
Other (s) ……				

B. History of Cooperatives Development

Provide a summary (no more than three or four paragraphs) of the history of cooperatives' development and activity in the KSA, including answers to the following questions.

1. Are there past examples of cooperative development and activities in the KSA? What was or has been the context?
2. What socio-economic sector of cooperatives has a long or successful history in the KSA and its different regions?
3. What was the legal and regulatory environment when successful cooperatives were formed? Is the environment basically the same now or different? Briefly describe.
4. What other sociological, economic, or political influences have changed since then?
5. Are there experiences from other similar/surrounding countries that could shed light on the potential for cooperative development in your country? Please describe.

C. Recent Trends in Agricultural Cooperatives Development

1. In general, has the number of agricultural cooperatives declined, increased, or stagnated in recent years? Why? What factors (e.g., historical, sociological, economic, political) influenced this change?
2. In which agriculture (sub)sectors has the number of cooperatives increased recently?
3. In which agriculture (sub)sectors has the number of cooperatives decreased?
4. What are the theories about the reasons for these changes? Please cite academic/political/empirical sources for these theories.

D. Description of Cooperatives Enabling Environment

1. Law on cooperatives
    a. Please summarize the law on cooperatives in the KSA. (If you can obtain the law document or a
    b. Are you aware of an effort to change the cooperative law or its provisions?
    c. Based on your observations, is the law on cooperatives known and understood at the regional and local levels?
    d. To your knowledge, what are the basic legal/regulatory issues that need to be addressed to facilitate further cooperative development? Please provide a summary.
2. Practical application of cooperative legal/regulatory framework
    a. In general, are these laws applied at the local level? Please explain.
    b. In general, do local officials know about these laws? Do they abide by them?
    c. In general, do cooperatives know about these laws? Do they abide by them? Please explain.
    d. Are any state government agencies designed specifically to promote cooperatives in the country? If so, briefly describe their activities.
    e. If the answer to the previous question is “No,” which legal/regulatory agency or body oversees the activities of cooperatives (e.g., Ministry of Resources and Social Development, Ministry of Environment, Water, and Agriculture)? Briefly describe the relevant activities of these agencies or bodies.
3. Cooperatives registration
    a. In general, are cooperatives informally or formally organized/registered? Please explain.
    b. If cooperatives are usually not formally registered in the country, why not?
    c. How are cooperatives registered (e.g., as a business entity, or non-profit organization)?
    d. What is the registration process like for cooperatives? Overall, is it easy or difficult to register?
    e. What are the requirements for a group to register as a cooperative? How many days/months does it take to register a cooperative? What are the registration fees? How many different offices must be visited and how many signatures were obtained to complete the registration process?
    f. If possible, provide a resource reference or attach a document that describes the current laws on the registration of cooperatives. Please cite the source(s) for this information (including name, title, date, etc.)
4. Taxation

Provide a summary of the tax situation for cooperatives and businesses. For example:

    a. How are taxes divided (e.g., state, local government, pension, employee benefits)?
    b. What other taxes do cooperative businesses face (e.g., transportation, customs)?

c. Are any tax breaks or subsidies offered to new/emerging cooperative businesses? If so, please describe.
d. Are cooperatives and businesses taxed on revenues or net income? How does this policy affect local businesses?
e. If taxes are collected, how often are taxes collected (e.g., annually, quarterly)?
f. Do businesses and/or cooperatives face considerable pressure from tax authorities? Please explain
g. For a cooperative business to operate, are other kinds of "fees" required by tax or other government authorities?
h. Are other kinds of “fees” required by other groups not affiliated with the government? Please explain.
i. Are there any other issues concerning taxes that negatively affect cooperative businesses?

5. The financial sector and cooperatives' development
    a. Describe access to capital and loan types (e.g., for assets or working capital), sizes of loans available, loan terms, payment period, and the number of different financial institutions providing capital.
    b. What are the requirements for collateral?
    c. Describe the loan application process and approval requirements.
    d. How many, or what percentage of cooperatives typically apply for loans? What are the terms of these loans?
    e. Do banks recognize cooperatives as businesses eligible for a loan?
    f. Is leasing equipment an option?
6. Infrastructure
    a. How reliable are public utilities (water, gas, electric) for local businesses, including the cooperatives? Please explain.
    b. Describe the reliability of telecommunications – mobile phones, electronic communications, etc. — for local businesses.
    c. Domestic transport. Describe the physical state of domestic roads and other transportation networks (rail, shipping, air.) How reliable, costly, and safe is it for businesses to move products and services around the country?
    d. International transport. What opportunities exist for transporting goods and services outside the country?
    e. International transport. What limitations exist on transporting goods and services outside the country?
    f. Other local government services. Describe any other service delivery challenges (e.g., trash collection) that may affect local businesses including cooperatives
7. Other enabling environment issues

Please discuss any other major issues concerning the enabling environment (e.g., corruption.)

E. Description of Cooperative Networks and Advocacy

1. Are cooperatives organized into higher-level apex organizations that provide services or advocacy?
2. Please list any support organizations that might serve cooperative businesses, such as chambers of commerce, business associations and industry associations. Are they independent agencies or affiliated with the government? Are they operational? What is the quality of services?
3. What is the structure of these support organizations?
4. Please list organizations that might provide support for cooperatives.
5. Summarize any notable advocacy efforts that cooperative/support organizations have initiated in the past one or two years.

F. Other General Cooperatives Information

1. In general, how do people perceive cooperatives? When asked about cooperatives, what statements do people make about them? Are attitudes toward cooperatives negative, positive, or neutral?
2. What are the perceived weaknesses of cooperatives?
3. Which international or domestic organizations currently provide support or assistance to cooperatives? What kinds of support are they providing and to whom?

4. Which international or domestic organizations currently provide support or assistance to other kinds of businesses? What kinds of support are they providing and to whom?
5. What kinds of opportunities do you see for cooperative development in the country's agriculture sector development?
6. What threats to cooperatives do you see in the country?
7. Any other comments regarding cooperatives, cooperative development, or this program?

G. General Business and Economic Environment

1. Besides cooperatives, what other mechanisms exist for economic opportunity among low/rural income earners? How do rural people (including youth and women) typically earn money besides farming?
2. Besides cooperatives, what other long-term opportunities might there be for generating income among rural people?
3. What are the short-term opportunities for income among smallholder farmers, youth, and women?
4. What are the perceived benefits and constraints of these other businesses?
5. How would cooperatives serve as an alternative solution for youth and women?
6. What do cooperatives offer that other businesses do not?
7. What do other business opportunities offer that cooperatives do not?

Annexe 2: List of Key Informants

S/No.	Name	Tel.	Email	Position	Organization
1.	Mr. Suliman Saleh Al-Gtily	+966553131559	e20825@mewa.gov.sa	Director of Cooperatives & Marketing	MoEWA
2.	Adel Mohammed Al Mutlaq		adalmutlaq@mewa.gov.sa	Director of Sectors in Sustainable Rural Development Program	MoEWA
3.	Abdullatif AlJabr	+966533300300	Amaljabr@mewa.gov.sa	Director Strategy and Operations	MoEWA – REEF and Agriculture Subsidies
4.	Maan Alangari	+966555109998		Director General Cooperatives	MoHRSD
5.	Jueezaed	+966568863645		Cooperative Officer	MoHRSD
6.	Eng. Adel Aljumah			Strategy Deputy General Manager	Agricultural Development Fund
7.	Dr. Abdullah Kidman	+966500020404		President	Cooperative Societies Council
8.	Mr. Fawaz Z. Alanizi	+9665500062222	fawazi@cscs.org.sa	Secretary-General	Cooperative Societies Council
9.	Ziyad Alharbi	+966541100020	ziyad@cscs.org.sa	Director of Empowerment	Cooperative Societies Council
10.	Eng. Khalid Albatea			Financial Secretary	Cooperative Societies Council
11.	Mr. Waleed Alahmadi	+966543338644		Projects Director	Cooperative Societies Council
12.	Eng. Naif Almasoudi	+966505372189		Projects Manager	Cooperative Societies Council
13.	Mr. Salah Alshammari	+966500294611		Projects Specialist	Cooperative Societies Council
14.	Mr. Khalid Alshemimry			Member	Central Consumer Cooperative Association
15.	Ms Munera Alwateed			Member	Central Consumer Cooperative Association
16.	Sevag Papazian	+966556225322	spapazian@sparc.sa	Cooperative Expert	Sparc Consulting
17.	Abdulaziz AlOwais	+966554110260	aalowais@sparc.sa	Cooperative Expert	Sparc Consulting
18.	Dr. Ahmad Al Khazmi	+966505782019		Chairman	Beekeepers Cooperative Association, Al-Baha
19.	Basim Ali	+966505540965		Manager – Wood Works Unit	Beekeepers Cooperative Association, Al-Baha
20.	Rolly Gayorgor	+966507304945		Manager – Metal Works Unit	Beekeepers Cooperative Association, Al-Baha
21.	Zafar Khan	+966550347610		Manager – Honey Processing Unit	Beekeepers Cooperative Association, Al-Baha
22.	Reyfuddin Ahmad	+966557645367		Manager – Honey Quality Laboratory	Beekeepers Cooperative Association, Al-Baha

S/No.	Name	Tel.	Email	Position	Organization
23.	Gamal Khalid	+966533531246		Manager – Input Shop	Beekeepers Cooperative Association, Al-Baha
24.	Yilma Tadesse	+966502172635		Research – Beekeeping Technologies	Beekeepers Cooperative Association, Al-Baha
25.	Abdullah Assaf Al Ghamdi	+966555718172	alassafcompany@hotmail.com	Chairman (Also Board member of Al Baha Chamber of Commerce)	Agriculture and marketing cooperative association – Bualjrashi, Al Baha
26.	Mohamed Saidi Al Ghamdi	+966563799997	Ziraeih.baujurashi@hotmail.com	Board Member	Agriculture and marketing cooperative association – Bualjrashi, Al Baha
27.	Yusuf Ali Mohamed	+966504585637	Ziraeih.baujurashi@hotmail.com	Board Member	Agriculture and marketing cooperative association – Bualjrashi, Al Baha
28.	Eng. Mohamed Jamal Husein	+966559960307	Zaki.m.gamal@gmail.com	Board Member	Agriculture and marketing cooperative association – Bualjrashi, Al Baha
29.	Kheled Abdulrahmani Abdullah Al Ghamdi	+966534930740	Khaled-4278@hotmail.com	Officer	Agriculture and marketing cooperative association – Bualjrashi, Al Baha
30.	Major Abdullah Alqahtani	+966500334355	Tareeb999@gmail.com	Chairman	Cooperative Association of Assir Poultry Producers
31.	Ibrahim Dhafeer Abdullah Al-Shahrani	+966557733000		Chairman	Cooperative Agriculture Marketing Association in Khamis Mushayt
32.	Masfer Saleh	+966534691999	ggqqpp.7777@gmail.com	Office Administrator	Cooperative Agriculture Marketing Association in Khamis Mushayt
33.	Ahmed Muhammed Mobarak Barkoot Al-Shahrani	+9665462292626/ +966596166260	barkootahmad@gmail.com	Project Manager	Cooperative Agriculture Marketing Association in Khamis Mushayt
34.	Fare Boushi	+966580366507	fareboushi@gmail.com	Finance Manager	Cooperative Agriculture Marketing Association in Khamis Mushayt
35.	Talal Abushusha	+966503629611	talal.lotfi2013@hotmail.com	Chairperson	Fishermen Cooperative Society of Makka Region
36.	Khalid Saeed Alshowaiki	+966503011142	Kh_sh44@yahoo.com	General manager	Fishermen Cooperative Society of Makka Region
37.	Abdullah Awad Alhmranei	+966544450559	alhmranei@cscs.org.sa	CSC Board Member - Makkah Region Representative	Cooperative Societies Council (CSC)
38.	Dr. Al Saaidi Ghaleb	+966543477722	ghaleb@mewa.gov.sa	Deputy Director-General	Ministry of Environment, Water and Agriculture – Makkah Region
39.	Eng. Waseem Abdulla Al-mohaibadi	+966567274111	E20885@mewa.gov.sa	Provincial Supervisor – Organic Agriculture	Ministry of Environment, Water and Agriculture – Makkah Region
40.	Ibrahim bin Awad bin Ahmed al-Maliki	+966506770563	-	Director of Jeddah Fisheries Unit	Ministry of Environment, Water and Agriculture – Makkah Region
41.	Sulman Ahmed Al-Ghamdi	+966598183815		Fisheries Officer	Ministry of Environment, Water and Agriculture – Makkah Region

S/No.	Name	Tel.	Email	Position	Organization
42.	Issam Kabbani	+41788011708	issam.kabbani@novaton.com	CEO	Novaton – Clean technologies, positive aquaculture
43.	Abdul Rahim Awad Al-Jahdali	+966505645987		Chairman	Cooperative Society of Fishermen - Thuwal
44.	Hamid bin Yahya Shaleh Al-Nazzawi	+966557150000		Chairman	Cooperative Society for Fishermen in Yanbu Governorate
45.	Ahmad Balghith	+966557513330		General Manager	Cooperative Society for Fishermen in Jazan
46.	Mohamed Al Zraa	+966 505379937		Chairman	Professional Cooperative Society Umluj
47.	Aid Al Johani	+9665440792240		Treasurer	Professional Cooperative Society Umluj
48.	Mr. Abdul Rahman Ashribe	+966504720453		Chairperson	Agricultural Marketing Cooperative, at Taif
49.	Mohamed Abzeid	+966505709020		Chairperson	Taif Rose Cooperative Association
50.	Rashid Hussain Al Qurashi Corporation			Firm	Rose processing factory, Al-Hada, Taif, Saudia.
51.	Faleh Shafi Al-Khrasani	+966505213156	asoolmatb@gmail.com	Chairperson	Al-Kharj Cooperative Society for Livestock, Riyadh
52.	Sultan Ali Al-Hammadi	+966554455122	E3laan22@gmail.com	Chairperson	Riyadh Cooperative Society for Livestock (Thrwah)
53.	Ibrahim Egair Al-Thaqafi	+966553232103	Abokalel_1434@hotmail.com	Chairperson	Cooperative Society for Livestock and Forage, Makkah
54.	Abdullah Meqbel Al-Meqbel	+966506147123	info@cslbur.com	Chairperson	Buraydah Cooperative Society for Livestock, Quassim
55.	Abdullah Mohammad Al-Ghamdi	+966502629715	Abdullah.alajeebah@gmail.com	Chairperson	Hafr Al-Batin Cooperative Society for Livestock and Marketing, Eastern Region
56.	Saeed Oudhah Al-Shahrani	+966505742196	Irack2020@gmail.com	Chairperson	Khamis Mushait Cooperative Society for Livestock, Assir
57.	Fahad Rashed Al-Tamimi	+966505156162	a.d.ah@hotmail.com	Chairperson	Hail Cooperative Society for Livestock development and welfare
58.	Abdullah Mohammad Al-Enezi	+966505159913	Algameeh6@gmail.com	Chairperson	Al-Shamli Cooperative Society for Livestock development, Hail
59.	Aaysh Fniteel Al-Shammari	+966555162937	Tharaa293@gmail.com	Chairperson	Al-Shehyah Cooperative Society for Livestock
60.	Saleh Abdullah Al-Sweilm	+966555449000	cslsfp@gmail.com	Chairperson	Northern Border Cooperative Society for Livestock holders and producers
61.	Salman Ahmed Almalki	+966533316543/+966 504983000	kcoffeesa@outlook.sa	Chairperson	Cooperative Association of Khawlani Coffee in Jazan

S/No.	Name	Tel.	Email	Position	Organization
62.	Moshabbab Al Qahtani	+966504735933		Chairperson	Abha Beekeepers Association, Aseer
63.	Ali Al Hayani	+966504714923		Chairperson	Rigal Alma Beekeepers Association, Aseer
64.	Jobran Al Aamri	+966553470466		Chairperson	Jazan Beekeepers Association
65.	Mohammad Al Thmaly	+966556006868		Chairperson	Taif Beekeepers Association
66.	Khalid Al Matrafi	+966555502124		Chairperson	Makkah Beekeepers Association
67.	Saud Al Guwair	+966505461972		Chairperson	Nahal Beekeepers Association, Riyadh
68.	Waleed Al Hazmi	+966563276868		Chairperson	Medina Beekeepers Association
69.	Saleh AL Jarboo	+966503979227		Chairperson	Al-Qassim Beekeepers Association
70.	Abdul Karem Al Farraj	+966505122870		Chairperson	Al-zulfi Beekeepers Association, Riyadh

Annexe 3: List of Potential Partners and Expected Roles

Partner	Roles
Ministry of Environment, Water and Agriculture	• Provide policy guidance for project implementation, management, and monitoring. • Provide leadership and coordination for review and incorporation of new policy agenda, • Ensure that all in-kind contributions to the project including human resources, premises, and sites for specific infrastructure and facilities are allocated timely.
Ministry of Human Resources and Social Development	• Support the establishment and capacity development of small producers' cooperatives. • Facilitate the establishment of small and medium enterprises (SMEs). • Provide support including any required regulatory frameworks for the establishment of business model cooperatives.
Cooperatives Society Council (CSC) and Agricultural Cooperatives	• Facilitates establishment of cooperative societies in the regions, • Provide marketing services to smallholders • Support the provision of agricultural services to small agricultural producers • Facilitate communication with small producers. • Provide for and ensure the leadership of collective interventions. • Work with the project to help mobilize other farmers and /or producers to join cooperatives.
Regional Governorates in the target regions (Emarahs)	• Provide political and implementation support to projects in the regions • Ensure alignment of the project to the regional priorities • Facilitate coordination among the stakeholders in the region
Ministry of Municipality and Rural Affairs (MoMRA)	• Promotion of cooperative work in communities
Ministry of Education (MoE)	• Support the institutionalization of cooperative education and training in schools and universities
General Directorate for Awareness and Community Partnership	• Contribute to the implementation, management and monitoring of communication and awareness-raising interventions. • Contribute to community group identification and mobilization and motivation. • Contribute to the identification of data gaps and the identification and aggregation of relevant existing datasets.
Agricultural Development Fund (ADF)	• Contribute to the establishment of incubators for youth and women small entrepreneurs • Assist with introducing ADF processes and procedures among rural farmers, youth, and women. • Provide small-scale credits and support to smallholder producers, women, and young entrepreneurs. • Engage in dialogue with small farmers, youth, and women agribusiness entrepreneurs to facilitate their access to financial resources. • Support training and capacity development for male and female youth in entrepreneurship.
Social Development Bank (SDB)	• Contribute to the establishment of incubators for youth and women small entrepreneurs • Provide interest-free agribusiness loans to smallholders, youth, and women. • Provide credit to small farmers' cooperatives to start their agribusiness interventions. • Play a coordinating role for the SME sector. • Encourage rural smallholder producers, youth, and women to enter agribusiness activities. • Support training and capacity development for male and female youth in entrepreneurship.
Monsha'at (Small and Medium Enterprises General Authority)	• Support, develop and nurture the individual entrepreneurs in the agricultural cooperative in line with the best global practices by implementing and supporting programs and projects to promote the culture and spirit of entrepreneurship, and innovation, with diversifying sources of financial support for entrepreneurs
Council of Chambers of Commerce and Industry (CCI)	• Market linkages and coordination for the cooperative products.

Partner	Roles
King Salman Youth Centre (KSYC)	• Establish and entrench the concept of excellence and consolidation of entrepreneurship among the youth, • Contribute to building a creative generation of future leaders who will continue achieving progression and prosperity for the country.
National Centre for Youth Studies	• Contribute to youth-related issues through research and studies – by providing consultations, specialized data, and suggesting the appropriate scientific solutions and qualitative programs with the highest professional standards.
King Saud University – Cooperative Training Unit	• Institutionalizing cooperative management courses
Private Agri-Business Companies	• Assist in small producers' sustainable access to high-quality production inputs • Assist in delivering extension messages on the proper use of agricultural production inputs to small agricultural producers
International Cooperative Alliance (ICA)	• Support in the promotion of the cooperative identity in the Kingdom • Support through the Cooperative Law Committee in the provision of independent advice Saudi on cooperative law includes all legal rules that shape the cooperative institution and regulate its operations. • Provide cooperative news updates, an online library and a global-level comprehensive database of cooperative statistics produced by some key reports and tools such as the World Cooperative Monitor, the Global Census on Cooperatives, Cooperatives and Employment, the Data Explorer for its members
International Labour Organization (ILO)	• Support cooperative labour laws, standards, policies, information and statistics, and resources for the benefit of all cooperative members. • Improving the Saudi country profile on Cooperative development
World Farmers' Organisation (WFO)	• Support in the formation of the Saudi national agricultural cooperative organization.
U.S. Overseas Cooperative Development Council (OCDC)	• Support in the research on the Saudi Cooperatives especially on the Cooperative Difference and Social Capital. • Include Saudi for honours and recognition of cooperatives leaders with the International Cooperative Champion Award and Innovation Award

Annexe 4: List of Saudi Arabia's Policies, Royal Orders, and Decrees Consulted

1. The Kingdom of Saudi Arabia was established by the enactment of Royal Decree No. 2716 dated 17/5/1351 H. (18 September 1932).

2. The Council of Ministers was established pursuant to Royal Order No. A/13 dated 3/3/1414 H. (20 August 1993).

3. The Basic Law was promulgated under Royal Order No. A/90 dated 27/8/1412 H. (1 March 1992).

4. The Law of Judiciary promulgated by Royal Decree No. M/78 dated 19/9/1428 H. (1 October 2007).

5. The Foreign Investment Regulations promulgated by Royal Decree No. M/1 dated 5/1/1421 H. (10 April 2000) and its Rules of Implementation published on 7/6/1423 H. (16 August 2002).

6. Council of Ministers Resolution No. 131 dated 24/4/1430 H (corresponding to 20/4/2009).

7. The Supreme Economic Council established pursuant to the Supreme Economic Council Regulation promulgated by Royal Order no. A/111 dated 17/5/1420 H. (28 August 1999).

8. The Regulations for Companies promulgated by Royal Decree No. M/6 dated 22/3/1385H. (20 July 1965).

9. Pursuant to Article 9 (b) of the Listing Rules, issued pursuant to the resolution of the Board of the Capital Market Authority No. 3-11-2004 dated 20/8/1425 H. (4 October 2004) as amended, a joint stock company may not offer less than 30 per cent of its shares for public subscription through an IPO and, pursuant to Articles 9 (f) of the Listing Rules, the expected value of such offered shares must not be less than SR 100,000,000.

10. Article 100 of the Regulations for Companies provides that cash shares subscribed for by the founders, as well as shares for contributions in kind, in a joint stock company may not be transferred to third parties before the lapse of two complete financial years each consisting of at least 12 months as from the date of incorporation of a such joint stock company.

11. The Commercial Agencies Regulations promulgated by Royal Decree No. M/11 dated 20/2/1382 H. (22 July 1962).

12. The Government Tender and Procurement Regulation promulgated by Royal Decree No. M/58 dated 4/9/1427 H. (27 September 2006) and its Rules of Implementation issued by resolution of the Minister of Finance No. 362 dated 20/2/1428 H. (10 March 2007).

13. The Unified Rules of Granting Priority in Government Procurements to National Products and Products of National Origin in the GCC promulgated by Council of Ministers Resolution No. 139 dated 25/6/1407 H. (24 February 1987).

14. The capital Markets Law promulgated under Royal Decree No. M/30 dated 2/6/1424 H. (31 July 2003).

15. The Unified GCC Customs Law approved by Royal Decree No. M/41 dated 3/11/1423 H. (6 January 2003).

16. The Anti-Cover Up Regulation promulgated by Royal Decree No. M/22 dated 4/5/1425H. (22 June 2004) and its Rules of Implementation issued by Ministerial Resolution No. 7/M.W dated 13/5/1426 H. (20 June 2005).

17. Competition Regulation promulgated by Royal Decree No. M/25 dated 4/5/1425 H. (22 June 2004).

18. The Anti-Money Laundering Regulation promulgated by Royal Decree No. M/39 dated 25/6/1424 H. (25 August 2003) and its Rules of Implementation published in Umm Al Qura 17/4/1428 H. (4 May 2007).

19. Income Tax Law promulgated by Royal Decree No. M/1 15/1/1425 H. (7 Mar 2004)

20. The Labour Regulation promulgated by Royal Decree No. M/51 dated 23/8/1423 H.(27 September 2005) and its Rules of Implementation issued pursuant to Ministerial Resolution No. 693 dated 29/2/1428 H. (19 March 2007).

21. Real Estate Financing Companies Control Regulation, Execution Regulation, Financing Lease Regulation, Mortgage Regulation, Real Estate Financing Law approved by Council of Ministers on 15/8/1433 H. (corresponding to 6 July 2012).

22. Real Estate Registry Regulation promulgated by Royal Decree No. M/6 11/2/1423 H. (24 April 2002) and its Implementing Rules published in Um Al-Qura on 1/9/1425 H. (15 October 2004).

23. The Ownership of and Investment in Property by Non-Saudis Regulations promulgated by Royal Decree No. M/15 dated 17/4/1421 H. (19 July 2000).

24. The Rules for Real-Estate Appropriation by Nationals of the GCC States promulgated by Royal Decree No. M/55 dated 27/10/1405 H. (16 July 1985).

25. The Trade Name Regulation promulgated by Royal Decree No. M/15 dated 12/8/1420 H. (21 November 1999) and its Rules of Implementation issued by Ministerial Resolution No. 2015 date 20/12/1420 H. (27 March 2000).

26. The Trademarks Regulations promulgated by Royal Decree No. M/21 dated 28/5/1423 H. (8 August 2002) and its Rules for Implementation issued by Ministerial Resolution No. 1723 dated 28/7/1423 H. (6 October 2002).

27. The Paris Convention for Protection of Industrial Property dated 20 March 1883 as revised in Stockholm on 14 July 1967.

28. The Copyright Regulation promulgated by Royal Decree No. M/41 dated 2/7/1424 H. (30 August 2003) which came into effect on 22/1/1425 H. (14 March 2004) and its Rules of Implementation published on 16/4/1425 H. (4 June 2004).

29. The Universal Copyright Convention dated 6 September 1952 as revised in Paris on 24 July 1971.

30. The Berne Convention for Protection of Literary and Artistic Works of 1886 as revised in Paris on 24 July 1971.

31. The Regulations for Patents, Layout Designs of Integrated Circuits, Plant Varieties, and Industrial Models promulgated by Royal Decree No. M/27 dated 29/5/1425 H. (17 July 2004) and its Rules of Implementation issued by the General Directorate of Patents at King Abdulaziz City for Science and Technology No. 118828/M/10 dated 14/11/1425 H. (26 December 2004).

32. The GCC Patent Law approved by Royal Decree No. M/28 10/6/1422 H. (26 June 2007).

33. GCC Animal Welfare Law which was approved by Royal Decree No. (M / 44) dated 26/7/1434 H (5 June 2013).

34. The Paris Convention for Protection of Industrial Property approved by Royal Decree No. M/48 dated 12/7/1424 H. (9 September 2003).

35. The Protection of Confidential Trade Secrets Regulations issued by Ministerial Resolution of the Ministry of Commerce & Industry No. 3318 dated 25/3/1426 H. (4 May 2005) and authorised by Council of Ministers Resolution No. 50 dated 25/2/1426 H. (5 April 2005).

36. The Meteorology and Environmental Protection Administration (MEPA) established pursuant to High Order No. 7/M/8903 dated 21/4/1401 H. (24 February 1981).

37. The General Environmental Regulation promulgated under Royal Decree No. M/34 dated 28/7/1422 H. (16 October 2001) and its Rules of Implementation published on 27/81424 H (24 October 2003).

38. The Commercial Court Law promulgated by Royal Decree No. 32, dated 15/1/1350 H. (1 June 1931).

39. The Bankruptcy Avoidance Regulations promulgated under Royal Decree No. M/16, dated 4/9/1416 H. (24 January 1996).

40. The Saudi Arbitration Regulations promulgated by Royal Decree No. M/34 dated 24/0/1433 H. (16 April 2012).

41. The New York Convention promulgated by Royal Decree No. M/11 dated 16/7/1414H (29 December 1993).

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