

Developing Livestock Production and Fishery to Foster Food Security for A Sustainable Agricultural Development in OIC Member Countries

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Introduction

Background: Agriculture is central to food security and economic development in OIC Member Countries. Livestock and fisheries provide essential nutrition, employment, and income for rural populations.

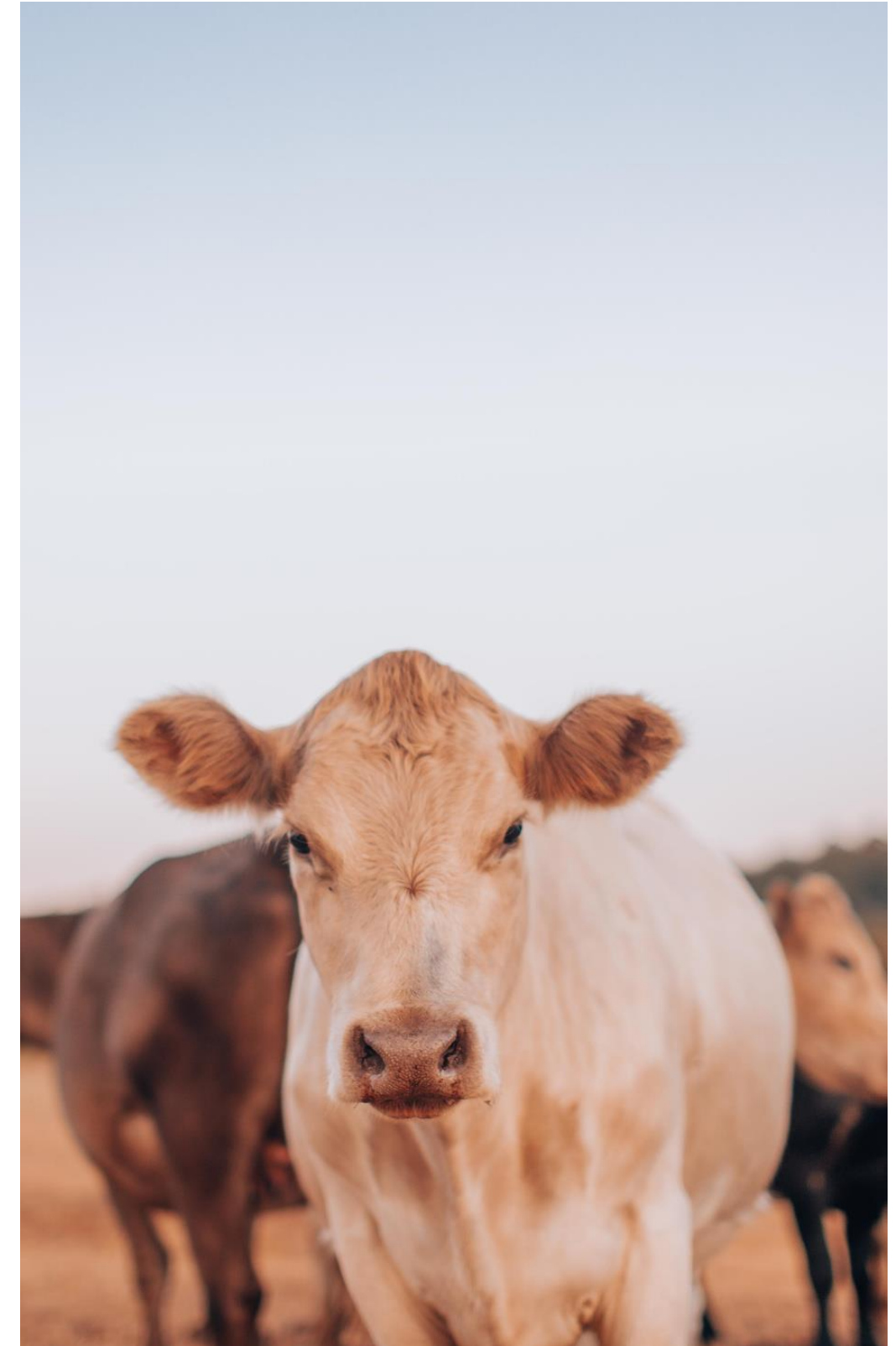
Importance: With growing populations and increasing demand for protein, developing these sectors is vital for achieving food security, reducing poverty, and promoting sustainable development.

Objectives: This report aims to analyze the current state of livestock production and fisheries in OIC Member Countries and propose policy recommendation and practical implementations to foster their development as part of a sustainable agricultural framework.



Scope of the Report

- Overview on livestock and fisheries in OIC Member Countries
- Club convergence analysis
- Survey
- Case Studies: **Malaysia, Senegal**, Nigeria, Sudan, USA
- Challenges and Lessons Learnt
- Policy recommendations and practical implementations





Current Status of Livestock Production in OIC Member Countries

Total Meat Production (1000 tones)

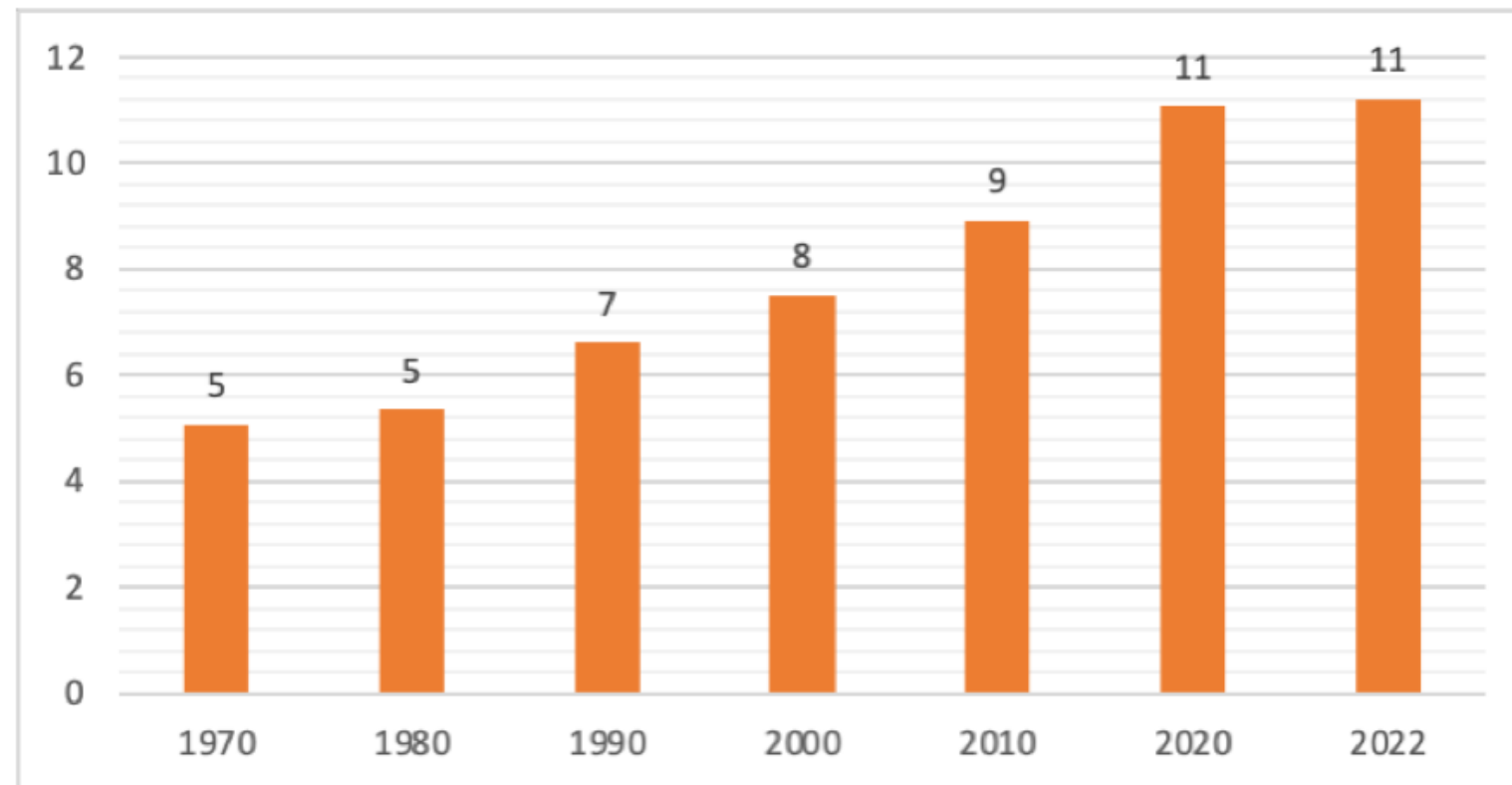
	1970	1980	1990	2000	2010	2020	2022
Africa	5.069	6.720	8.814	11.987	16.943	21.439	22.742
Asia	16.986	28.631	50.918	89.602	122.918	137.467	155.162
EU (27)	23.426	32.830	36.720	39.242	41.243	44.300	42.600
OIC	5.098	7.310	11.878	17.427	26.251	37.561	40.389
LDC	3.317	3.883	4.856	6.418	10.250	11.968	12.342
LLDC	1.542	2.011	2.638	6.152	8.820	12.736	13.108
LIFDC	3.278	4.168	5.187	7.698	10.664	13.678	14.330
NFIC	6.210	7.963	10.656	14.689	22.577	27.916	29.641
World	100.660	136.761	179.524	231.912	294.416	338.912	360.618

- 569 percent in OIC Member Countries
- 340 percent in Africa
- 721 percent in Asia,
- 124 percent in EU (27)
- 504 percent in LDC countries
- 879 percent in LLDC countries
- 491 percent in LIFDC countries
- 516 percent in NFIC.



Current Status of Livestock Production in OIC Member Countries

Share of OIC Member Countries in World Meat Production (%)



•Increased steadily especially after 1990 and reached 11 per cent in 2022.



Current Status of Livestock Production in OIC Member Countries

Mutton and Goat Meat Production (1000 tones)

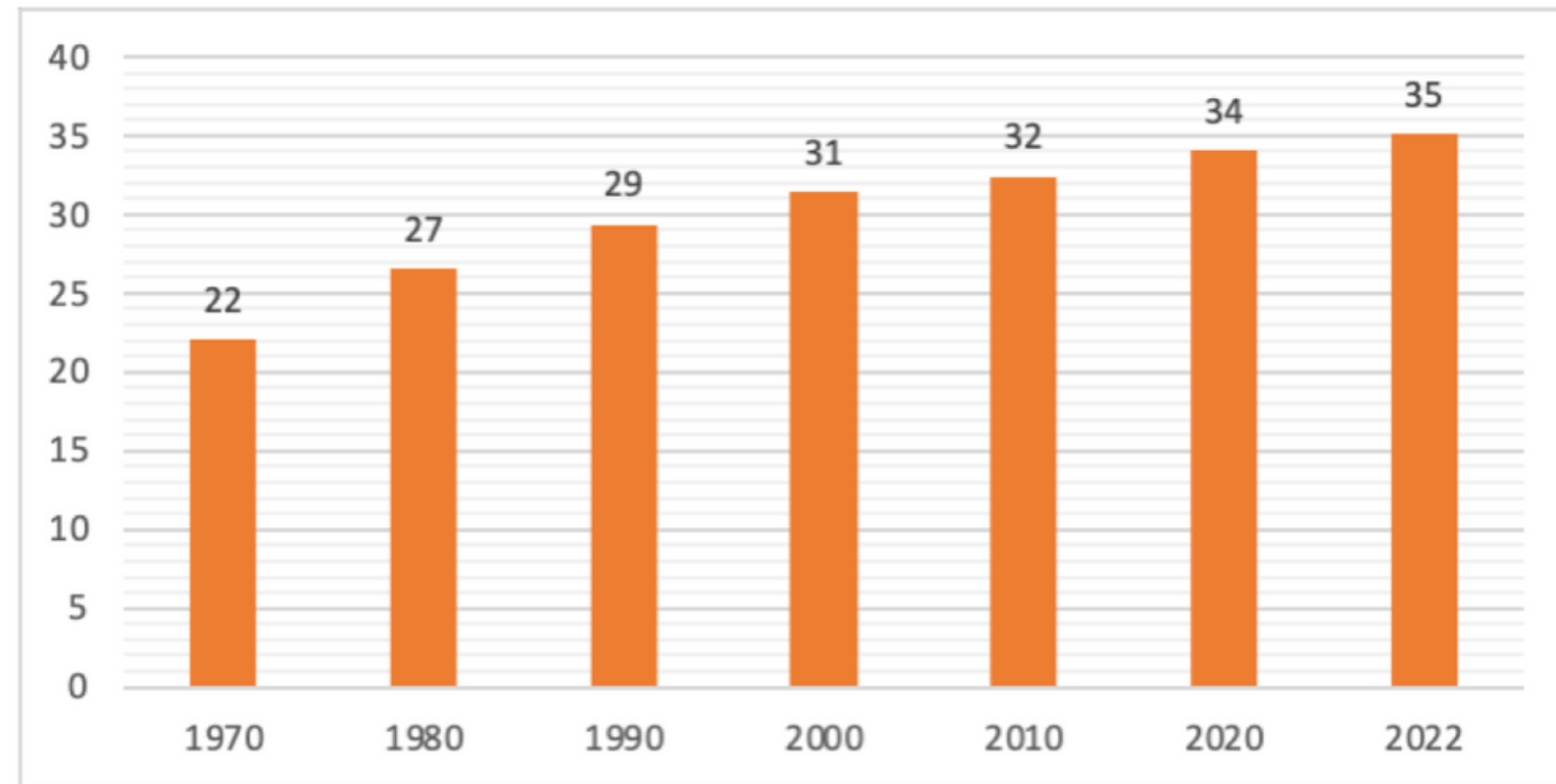
	1970	1980	1990	2000	2010	2020	2022
Africa	998	1.233	1.590	2.073	2.834	3.415	3.438
Asia	1.754	2.365	3.770	5.859	7.976	9.755	10.274
EU (27)	700	878	1.069	954	718	568	586
OIC	1.508	1.949	2.850	3.545	4.444	5.469	5.844
LDC	676	845	987	1.324	1.897	2.374	2.452
LLDC	382	503	554	1.011	1.483	2.310	2.330
LIFDC	726	953	1.115	1.604	2.140	2.807	2.901
NFIC	1.160	1.501	2.006	2.422	3.189	4.115	4.140
World	6.829	7.341	9.713	11.284	13.713	16.078	16.640

- **288 per cent in OIC**
- 244 per cent in African countries
- 486 per cent in Asia
- 263 per cent in LDC
- 510 per cent in LLDC
- 300 per cent in LIFDC
- 257 per cent in NFIC
- 16 per cent decrease in EU(27).



Current Status of Livestock Production in OIC Member Countries

Share of OIC Member Countries in World Mutton and Goat Meat Production (%)

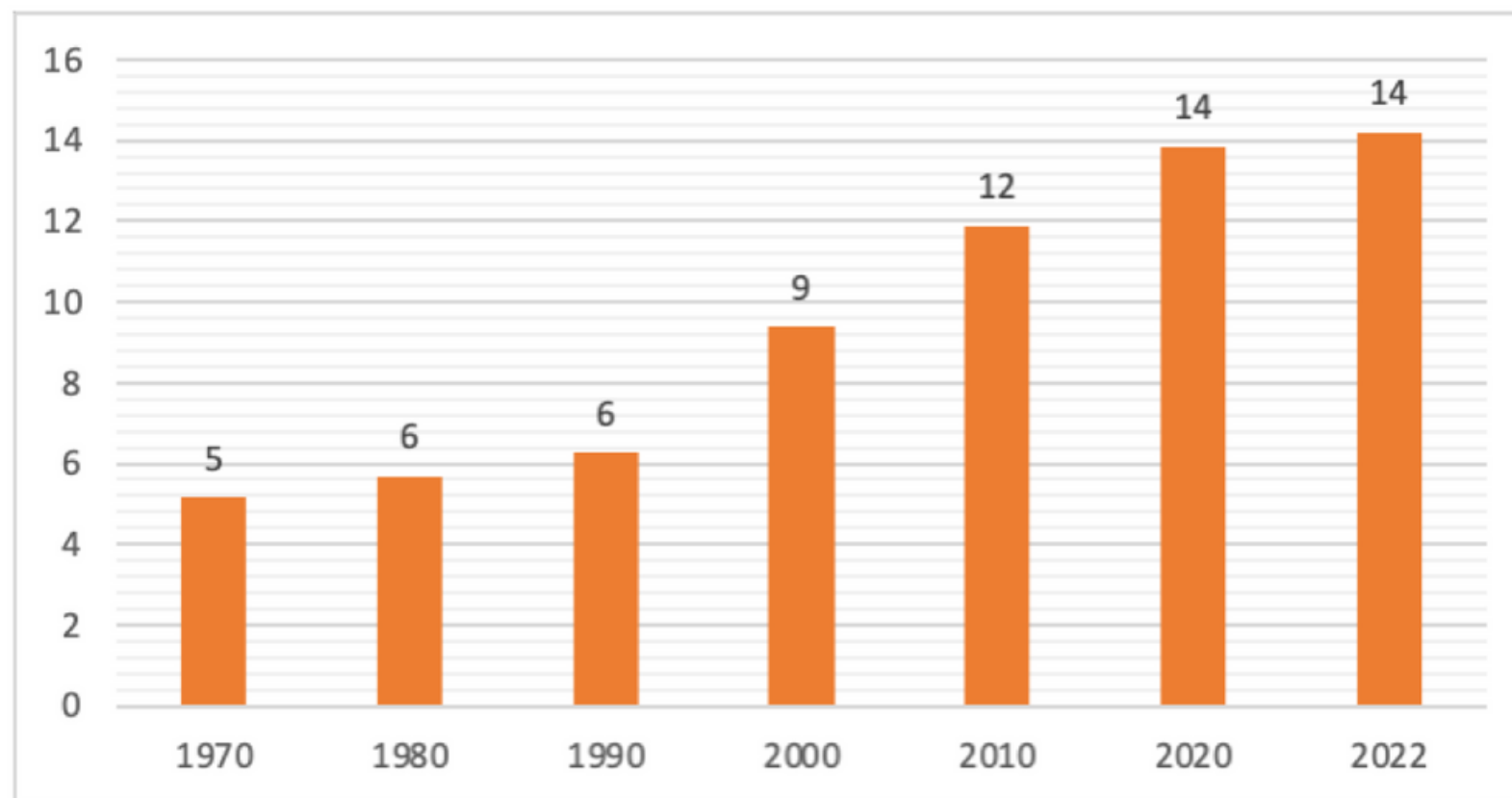


- Increased continuously and reached 35 per cent in 2022.



Current Status of Livestock Production in OIC Member Countries

Share of OIC Member Countries in World Beef and Buffalo Meat Production (%)

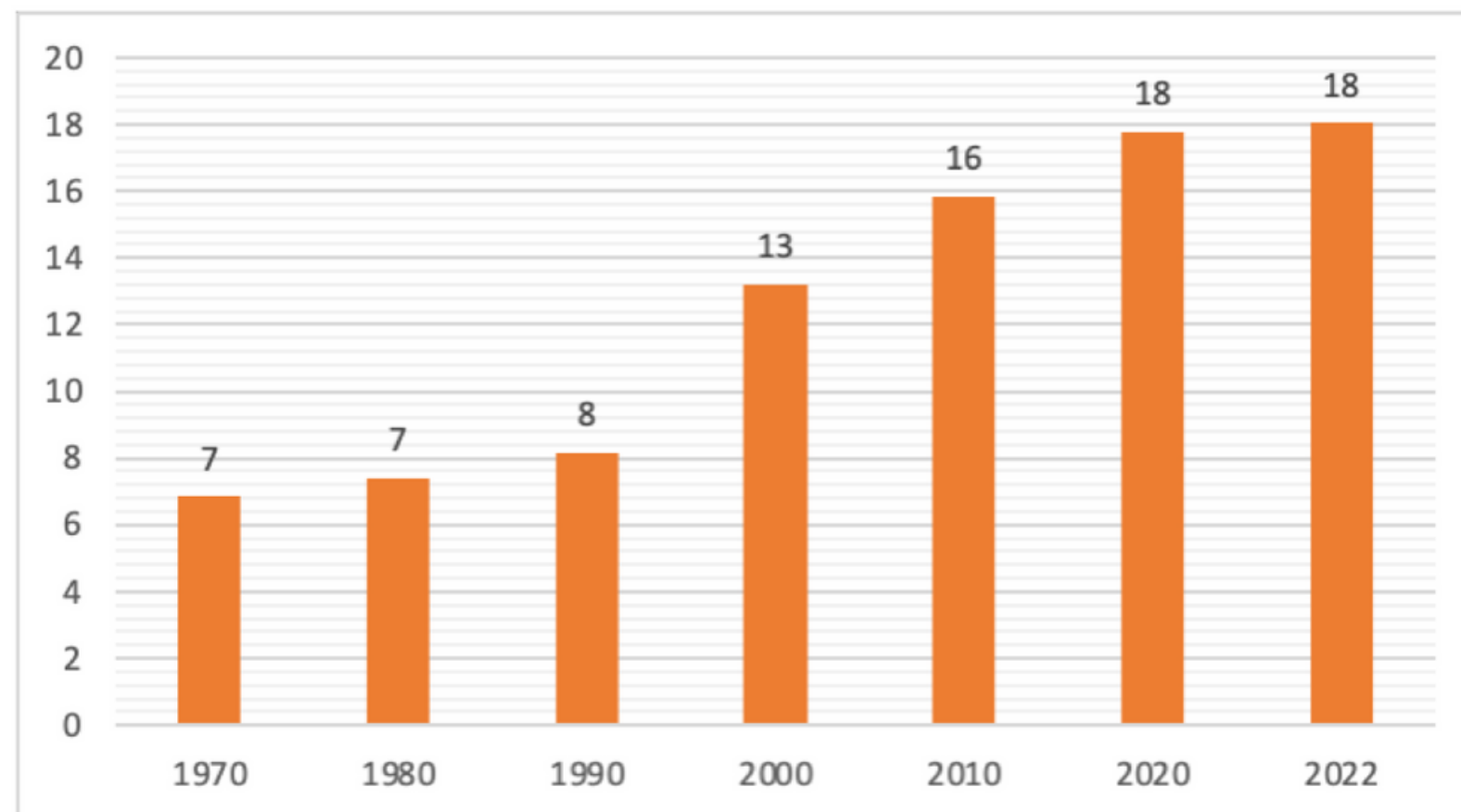


- Beef and buffalo meat production of OIC member countries in world production was 5 per cent, while this share was 14 per cent in 2022.



Current Status of Livestock Production in OIC Member Countries

Share of OIC Member Countries in World Milk Production (%)

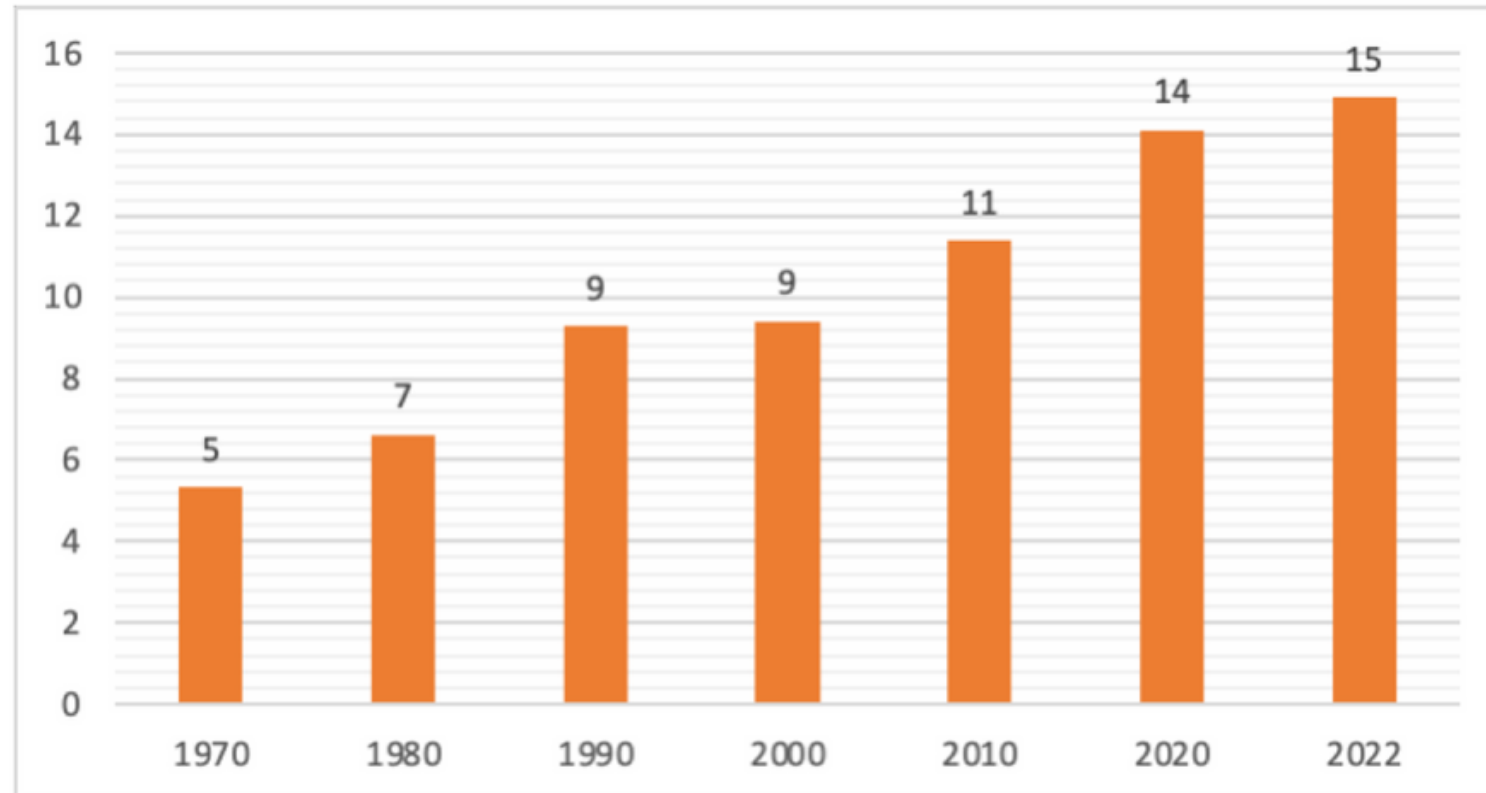


- Reached 22 per cent in 2022.



Current Status of Livestock Production in OIC Member Countries

Share of OIC Member Countries in World Poultry Meat Production (%)

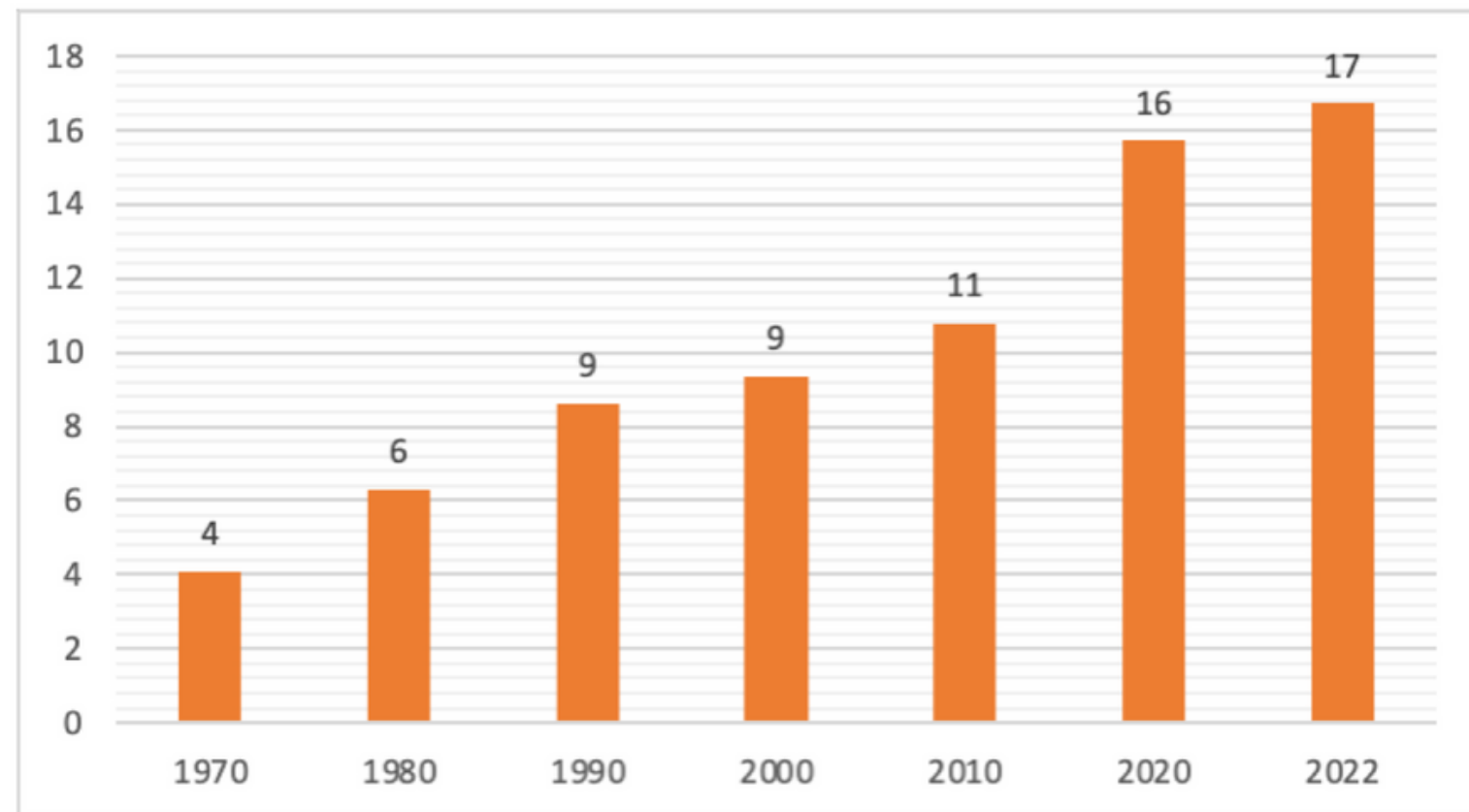


- Increased to 15 per cent in 2022.



Current Status of Livestock Production in OIC Member Countries

Share of OIC Member Countries in World Egg Production (%)



- Reached 17 per cent in 2022.



Current Status of Fisheries

	Capture (Tones, Million)		Aquaculture (Tones, Million)	
	2021	2022	2021	2022
Asia	46.8	47.1	80.5	83.4
China	12.9	13	51.2	52.9
Indonesia	7.1	7.3	5.5	5.4
Africa	10.4	10.6	2.3	2.3
Egypt	0.4	0.4	1.6	1.6
Morocco	1.4	1.6	-	-
South America	11.6	10.4	3.4	3.8
Ecuador	0.9	0.7	0.9	1.1
Peru	6.5	5.3	0.2	0.1
Northern America	5.3	5.3	0.7	0.6
USA	4.3	4.3	0.5	0.5
Europe	13.6	13.7	3.6	3.5
EU(27)	3.6	3.6	1.1	1.1
Russia	5.2	5	0.3	0.3
Norway	2.4	2.4	1.7	1.6
Oceania	15	16	0.2	0.2
LDC	10.1	10.3	4.7	4.8
LIFDC	5.8	5.8	0.6	0.6
World	91.2	91	90.8	94.4



Current Status of Fisheries

World Fisheries Production (Million Tones)

	Capture		Cultivation	
	Sea	Inland Water	Sea	Inland Water
2010	76,3	10,9	21,8	36,01
2021	79,8	11,4	34,6	56,2

Inland aquaculture constitutes an important potential as an alternative to sea fishing worldwide.



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 10 different clusters in beef production and data of 53 countries can be accessed in these clusters.

There are 11 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of beef production and showing significant growth in beef production compared to other countries in the period 2010-2022.

Beef Domestic Supply Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (11 Members)	Chad Egypt Indonesia Iran Kazakhstan Malaysia Morocco Nigeria Tajikistan United Arab Emirates Uzbekistan
Club 2 (8 Members)	Algeria Azerbaijan Bangladesh Iraq Jordan Saudi Arabia Turkmenistan Uganda
Club 3 (7 Members)	Afghanistan Burkina Faso Cameroon Guinea Kyrgyzstan Mali Senegal
Club 4 (5 Members)	Kuwait Lebanon Niger Somalia Yemen
Club 5 (5 Members)	Benin Mauritania Oman Syrian Arab Republic Tunisia
Club 6 (5 Members)	Albania Ivory Coast Libya Maldives Mozambique
Club 7 (3 Members)	Gabon Gambia Sierra Leone
Club 8 (2 Members)	Guinea-Bissau Togo
Club 9 (3 Members)	Comoros Guyana Suriname
Not convergent Group	Djibouti Pakistan Sudan Türkiye



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 6 different clusters in mutton and goat meat production and data of 45 countries can be accessed in these clusters.

There are 5 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of mutton and goat meat production and showing significant growth in production compared to other countries in the period 2010-2022.

Domestic Supply of Mutton and Goat Meat Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (5 Members)	Algeria Chad Nigeria Sudan Türkiye
Club 2 (14 Members)	Afghanistan Bangladesh Benin Indonesia Iran Kazakhstan Morocco Saudi Arabia Syrian Arab Republic Tajikistan Turkmenistan United Arab Emirates Uzbekistan Yemen
Club 3 (19 Members)	Azerbaijan Burkina Faso Cameroon Egypt Guinea Iraq Jordan Kuwait Kyrgyzstan Libya Malaysia Mali Mauritania Niger Oman Senegal Somalia Tunisia Uganda
Club 4 (2 Members)	Albania Ivory Coast
Club 5 (5 Members)	Djibouti Lebanon Sierra Leone
Not convergent Group	Pakistan Togo



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 5 different clusters in poultry meat production and data of 48 countries can be accessed in these clusters.

There are 5 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of poultry meat production and showing significant growth in production compared to other countries in the period 2010-2022.

Domestic Supply of Poultry Meat Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (5 Members)	Egypt Iran Malaysia Pakistan Türkiye
Club 2 (19 Members)	Algeria Azerbaijan Bangladesh Burkina Faso Gambia Guinea Iraq Jordan Kuwait Lebanon Libya Morocco Mozambique Nigeria Senegal Turkmenistan United Arab Emirates Uzbekistan Yemen
Club 3 (14 Members)	Afghanistan Albania Benin Cameroon Ivory Coast Gabon Guyana Mali Oman Sierra Leone Sudan Syrian Arab Republic Togo Uganda
Club 4 (10 Members)	Chad Comoros Djibouti Guinea-Bissau Kyrgyzstan Maldives Niger Somalia Suriname Tajikistan
Not convergent Group	Indonesia Kazakhstan Saudi Arabia Tunisia



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 5 different clusters in eggs production and data of 45 countries can be accessed in these clusters.

There are 9 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of eggs' production and showing significant growth in production compared to other countries in the period 2010-2022.

Domestic Supply of Eggs Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (9 Members)	Bangladesh Cameroon Egypt Iran Malaysia Nigeria Pakistan Saudi Arabia Türkiye
Club 2 (3 Members)	Algeria United Arab Emirates Uzbekistan
Club 3 (21 Members)	Afghanistan Albania Azerbaijan Burkina Faso Ivory Coast Iraq Kazakhstan Kuwait Kyrgyzstan Lebanon Libya Oman Senegal Sudan Syrian Arab Republic Tajikistan Togo Tunisia Turkmenistan Uganda Yemen
Club 4 (9 Members)	Benin Guinea Jordan Maldives Mali Mauritania Mozambique Niger Sierra Leone
Not convergent Group	Chad Indonesia Morocco



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 7 different clusters in milk production and data of 53 countries can be accessed in these clusters.

There are 4 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of milk production and showing significant growth in production compared to other countries in the period 2010-2022.

Domestic Supply of Milk Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (4 Members)	Bangladesh Malaysia Türkiye Uzbekistan
Club 2 (5 Members)	Algeria Egypt Indonesia Iran Kazakhstan
Club 3 (6 Members)	Afghanistan Azerbaijan Iraq Morocco Saudi Arabia Turkmenistan
Club 4 (13 Members)	Albania Kuwait Kyrgyzstan Niger Nigeria Oman Somalia Syrian Arab Republic Tajikistan Tunisia Uganda United Arab Emirates Yemen
Club 5 (7 Members)	Burkina Faso Chad Jordan Lebanon Libya Mali Mauritania
Club 6 (10 Members)	Benin Djibouti Gabon Gambia Guinea Guyana Maldives Mozambique Senegal Sierra Leone
Not convergent Group	Cameroon Comoros Ivory Coast Guinea-Bissau Pakistan Sudan Suriname Togo



Club Convergence Analysis for OIC Member Countries

Based on the amount of honey domestic production in the 2011-2012 period, it is seen that 34 countries among OIC Member Countries can produce more than 1000 tons of honey annually. When we evaluate these countries in terms of the amount of production and the change in production increases in the 2011-2012 period, it is determined that the member countries are divided into three different clubs.

Among 34 countries, Iran, Saudi Arabia and Türkiye are ranked as the countries producing the highest amount of honey. Since Türkiye has a significantly higher production compared to OIC Member Countries, it is seen to be differentiated from all three clubs.

Honey Domestic Supply Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (6 Members)	Azerbaijan Iran Morocco Saudi Arabia United Arab Emirates Uzbekistan
Club 2 (8 Members)	Albania Algeria Cameroon Indonesia Malaysia Senegal Tajikistan Tunisia
Club 3 (19 Members)	Afghanistan Chad Ivory Coast Egypt Guinea Jordan Kazakhstan Kuwait Kyrgyzstan Lebanon Libya Mozambique Oman Pakistan Sierra Leone Sudan Syria Turkmenistan Yemen
Not convergent Group	Türkiye



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 5 different clusters in butter production and data of 35 countries can be accessed in these clusters.

There are 5 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of butter production and showing significant growth in production compared to other countries in the period 2010-2022.

Domestic Supply of Butter Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (5 Members)	Egypt Iran Türkiye United Arab Emirates Uzbekistan
Club 2 (8 Members)	Afghanistan Azerbaijan Bangladesh Indonesia Morocco Niger Oman Saudi Arabia
Club 3 (12 Members)	Algeria Burkina Faso Iraq Jordan Kuwait Libya Malaysia Nigeria Somalia Syrian Arab Republic Tunisia Yemen
Club 4 (6 Members)	Albania Kyrgyzstan Lebanon Mauritania Senegal Turkmenistan
Not convergent Group	Guinea Kazakhstan Maldives Pakistan



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 3 different clusters in freshwater aquaculture production and data of 36 countries can be accessed in these clusters.

There are 19 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of freshwater aquaculture production and showing significant growth in production compared to other countries in the period 2010-2022.

Aquaculture Freshwater Production Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (19 Members)	Albania Algeria Brunei Darussalam Cameroon Benin Ivory Coast Guyana Iraq Jordan Kazakhstan Kyrgyzstan Malaysia Mali Nigeria Pakistan Saudi Arabia Türkiye Uganda Uzbekistan
Club 2 (12 Members)	Azerbaijan Chad Gabon Guinea Kuwait Lebanon Morocco Niger Senegal Syrian Arab Republic Tajikistan Tunisia
Not convergent Group	Bangladesh Egypt Gambia Indonesia Iran



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 7 different clusters in marine aquaculture production and data of 20 countries can be accessed in these clusters.

There are 6 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of marine aquaculture production and showing significant growth in production compared to other countries in the period 2010-2022.

Aquaculture Marine Production Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (6 Members)	Bangladesh Brunei Darussalam Iran Malaysia Saudi Arabia Türkiye
Club 2 (2 Members)	Algeria Tunisia
Club 3 (3 Members)	Albania Guyana Senegal
Club 4 (2 Members)	Ivory Coast Morocco
Club 5 (2 Members)	Benin Pakistan
Club 6 (2 Members)	Kuwait Lebanon
Not convergent Group	Egypt Gambia Indonesia



Club Convergence Analysis for OIC Member Countries

OIC Member Countries are divided into 6 different clusters in capture production and data of 54 countries can be accessed in these clusters.

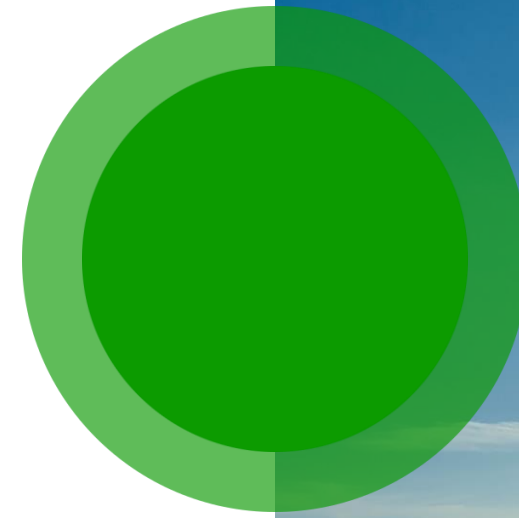
There are 30 countries in Cluster 1 and these countries converge to each other both in terms of having high amounts of capture production and showing significant growth in production compared to other countries in the period 2010-2022.

Capture Production Comparison Based on Club Convergence Approach

Clubs	Countries
Club 1 (30 Members)	Algeria Bahrain Bangladesh Brunei Darussalam Cameroon Comoros Ivory Coast Djibouti Egypt Guinea Guinea-Bissau Indonesia Iran Kazakhstan Malaysia Maldives Mauritania Morocco Mozambique Nigeria Oman Pakistan Qatar Saudi Arabia Senegal Sierra Leone Tunisia Türkiye Uganda Uzbekistan
Club 2 (11 Members)	Benin Burkina Faso Chad Gambia Guyana Iraq Libya Mali Palestine United Arab Emirates Yemen
Club 3 (5 Members)	Gabon Jordan Niger Suriname Togo
Club 4 (3 Members)	Albania Lebanon Tajikistan
Club 5 (4 Members)	Afghanistan Azerbaijan Kuwait Syrian Arab Republic
Not convergent Group	Kyrgyzstan



Key Policy Area 1: Climate and Environmental Factors



Three Main Challenges

Water Scarcity

Climate Change

Land Degradation





Key Policy Area 2: Feed Availability and Quality



Two Main Challenges

Limited Feed Resources
High Feed Costs





Key Policy Area 3: Disease Management and Veterinary Services



The Main Challenges

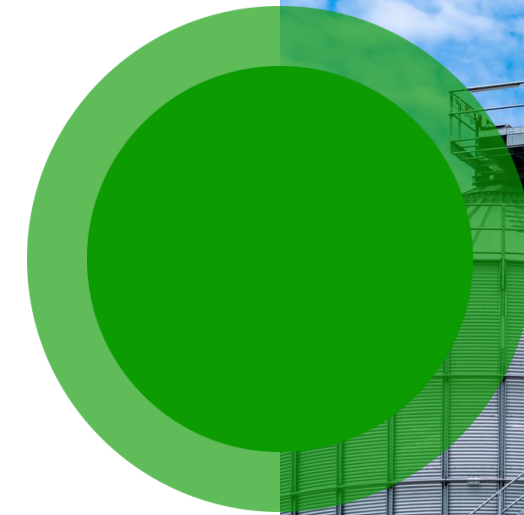
Animal Health

Access to Vaccines and Medicines





Key Policy Area 4: Infrastructure and Market Access



Three Main Challenges

Poor Infrastructure

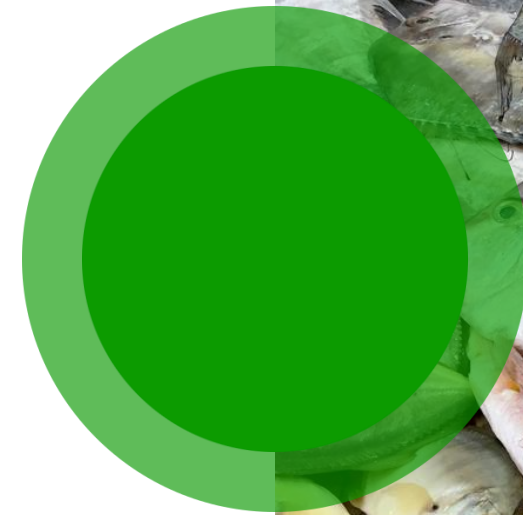
Market Volatility

Low Adoption of Modern Practices





Key Policy Area 5: Overfishing and Depleting Fish Stocks



The Main Challenges

- Overfishing**
- Depleting Marine Resources**
- Pollution and Habitat Destruction**





Key Policy Area 6: Infrastructure and Technology Constraints



The Main Challenges

Lack of Modern Fishing Infrastructure
Inadequate Cold Chain and Storage Facilities





Key Policy Area 7: Socio-Economic Issues



The Main Challenges

Poverty Among Fishers
Small-Scale and Artisanal Fisheries





Key Policy Area 8: Aquaculture Development



The Main Challenges

Limited Development of Aquaculture
Environmental Concerns in Aquaculture