

23/12/2012

COUNTRY PROGRAMMING FRAMEWORK FOR THE KINGDOM OF BAHRAIN

Jointly Prepared by

the Ministry of Municipalities Affairs and
Urban Planning of the Kingdom of Bahrain
And The Food and Agriculture Organization of
the United Nations

LIGHT CPF (2013-2016)



Table of Contents

Acronyms	3
1. Introduction	5
2. Situation Analysis	5
2.1 Macro-economic Context	5
2.2 Overview of the Agricultural sector	6
3. Analysis of Global, Regional and National Development Frameworks	9
4. FAO Comparative Advantage and Priorities	10
5. Programming for Results	12
5.1 CPF Strategic Outcome, Objectives and Priority areas	12
5.1.1 CPF Strategic Outcome	12
5.1.2 Strategic Objectives	12
5.1.3 Strategic Priority Areas:	12
5.1.4 Proposed Interventions	13
First Strategic Priority Area: Strategy Planning, Policy	
Development and Strengthening Agricultural Information Systems.....	13
Second Strategic Priority Area: Enhancement of Agricultural and fisheries	
Production and Productivity, Food safety and Food and	
Nutrition Security	14
Third Strategic Priority Area: Development, Conservation,	
Sustainable Management and Efficient Utilization of	
Natural Resources	17
5.2 Implementation Arrangements	18
Programming Matrix: CPF Strategic Outcome, Objectives and Priority areas	19

Acronyms

ARD	Agriculture and Rural Development
BD	Bahrain Dinar
CPF	Country Programming Framework
CCA	Common Country Assessment
CFs	FAO Core Functions
CPD	Country Programme Document of UNDP
CSOs	Civil Society Organizations
EDB	Economic Development Board
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmers Field School
HHD	High Human Development countries
HDI	Human Development Index
M&E	Monitoring & Evaluation
FO	FAO Functional Objectives
FMD	Foot and Mouth Disease
FYDP	Five-year Development Plan
GDP	Gross Domestic Product
GCC	Gulf Cooperation Council
IDB	Islamic Development Bank
JFFLS	Junior Farmer Field and Life Schools
MDGs	Millennium Development Goals
MM ³	Million Cubic Meters
MMAUP	Ministry of Municipalities Affairs and Urban Planning
RNE	FAO Regional Office for the Near East
SO	FAO Strategic Objectives
SPA	Strategic Priority Area
SNG	FAO Sub-regional Office for the GCC countries and Yemen
UNDAF	United Nations Development Assistance Framework
UN	United Nations
UNIDO	United Nations Industrial Development Organization



1. Introduction

The Country Programming Framework (CPF) is a framework for agreed priorities in the co-operation between the Kingdom of Bahrain and FAO. It is a planning and management tool for FAO to prioritize, guide and manage its assistance at the country level in a coherent and structured manner for a period of five years (2013-2016). It is a living document that can be updated whenever warranted as a result of implementation and/or emergence of pressing issues. This document contains a set of priority areas and activities for FAO's assistance in support of the attainment of Bahrain's agriculture, fisheries, natural resources, food safety and food and nutrition security policy related objectives including gender and capacity building. It also describes the types of interventions/outputs needed to achieve these objectives. The CPF is jointly owned and led by the Kingdom of Bahrain through the Ministry of Municipalities Affairs and Urban Planning (MMAUP) and FAO. It is therefore framed within and governed by the national medium-term development priorities articulated in the Kingdom's Strategies and Plans that set out the priority policies and investments of Government for achieving growth, employment and prosperity; and also draws on the current strong drive reflected in Bahrain First Lady's "National Initiative for Agriculture Development". In addition, prioritization also benefited from review of the Progress Report 2010 of the Millennium Development Goals (MDGs) in the Kingdom of Bahrain, UNDP Country Programme Document for Bahrain - CPD (2012-2016), UNIDO agro-preneur and growth promotion programmes, FAO Strategic Framework 2010-2019, World Food Summit Plan of Action 1996, and the FAO Priorities for both the Near East Region and the GCC and Yemen Sub-region. The priorities identified for FAO's intervention and displayed in this document have been jointly formulated by MMAUP and FAO through a wide and inclusive consultation process involving almost all Directorates of the Agriculture and Fishery Affairs within MMAUP, and farmers and farmers associations. Cross-sector participation has also been secured with the involvement of Ministries for Health, Commerce and Industry, the Public Commission for the Protection of Marine Resources, Environment and Wildlife, the Supreme Council for the Environment, Environmental Friends Society, Nature Environmental Studies Consultation and Planning Services, the Food Security Committee within the Chamber of Commerce and Industry, Economic Development Board (EDB) and Bahrain Agricultural Engineers Society.

2. Situation Analysis

2.1. Macro-economic Context

Bahrain is an archipelago comprising 40 islands situated halfway down the Arabian Gulf. It has a total area of 757.5 km² in 2008. The total population is estimated in 2010 at 1,234,571 (of whom almost 50% are Bahrainis) growing at an average annual rate of 2% for the Bahraini population.

Bahrain follows an open free economic and commercial system with minimum controls and operates with a fixed exchange rate regime that has long been pegged to the US Dollar¹; custom

¹ The exchange rate is fixed at 0.377 BD to a dollar

duties are negligible and no tax is levied on personal incomes. Its economic growth has been consistently strong, with a real average growth rate of over 6% during the last decade and GDP per Caput of UD\$ 17,716. Bahrain progressive and outward plans and policies of the last 10 years have transferred it from an oil dependent economy² to a successful and diversified economy, which managed to translate its economic growth into improvement of the quality of life for its citizens. The country's 2010 Report on Progress towards the Millennium Development Goals (MDGs) records impressive performance, with most 2015 targets met a long time ago. The UNDP Human Development Index (HDI) value for Bahrain has risen from 0.820 in 2000 to 0.895 in 2009, making it among the group of High Human Developed (HHD) countries in the world and globally ranking 39th. The indicator of people living under US\$1 a day confirms that Bahrain does not suffer from extreme poverty.

2.2 Overview of the Agricultural Sector

The contribution of Bahrain agriculture and fisheries to GDP is very low and averaged less than 0.6%. Its contribution to food security is also modest, about 2%, and to employment is equally tiny. Nevertheless, agriculture and fisheries assume special importance to Bahraini people and are considered part of a tradition that has to be preserved. The constitution of the Kingdom of Bahrain explicitly states that “the State takes all necessary measures for the productive use of lands suitable for agriculture and for farms improvement, and the law determines the means for small farmers support and for owning agricultural land”. In another Article, the Constitution also affirmed that “all natural resources are owned by the State, which protects and better utilizes them in accordance with necessities for national security and national economy”. Despite its modest contribution to GDP, agricultural production registered impressive growth over the last few years especially with respect to vegetables, which currently cover nearly 30% of the local needs, and dairy production. Vegetables production has, more than, doubled from 7,558 tons in 2005 to 17,229 tons in 2008, while fresh milk production has significantly increased from 6,400 thousand litres to 11,600 thousand litres over the same period. Broilers production remained more or less stagnant between 2005 and 2007, as seen in the table below. Bahrain finfish capture fishery is at its maturity and total fish landed remained, more or less, stable over the last five years, with evident overexploitation of a number of species.

Year	2005	2006	2007	2008
Eggs: Local production (000)	40503	55370	59885	-
Poultry Local production (000Tons)	5050	4336	5196	-
Fish total landed (MT)	11853.7	15594.4	15011.1	14175.4

Commercial fish farming activities do not exist in Bahrain at present, and no interest in aquaculture has been shown by local investors until 2008, mainly due to doubts about its profitability. However, with the remarkable surge in fish prices and the high demand for certain species like grouper and breams, about 25 applications for fish farming were submitted for

² Contribution of Oil to GDP dropped from about 33% in 1980 down to 19% in 1990, to 13% in 2000 and to about 11% in 2009.

approval and government support in the last three years, and avenues for aquaculture development are currently discussed in many circles, especially by the private sector.

The efforts to promote agriculture and fisheries development in Bahrain were frustrated by many challenges and constraints that have to be addressed properly for the sector to grow and achieve its prescribed economic, social and environmental objectives. Most important among those are the *natural challenges* reflected in the hostile climatic conditions and limited agricultural land and water resources. Bahrain has a very arid desert climate characterized by high temperature, high humidity and scanty and often erratic showers. The cropping season is also short and restricted to the winter season.

The area of Bahrain continued to expand at a rate of more than 5 km² every year, from 706.5 km² in 2000 to 757.5 km² in 2008 to provide land for buildings, all at the expense of its shallow sea shores and marine habitat. On the other hand, out of the cultivable land estimated at about 6,400 ha, the area actually cultivated continued to decline at an average rate of 120 ha per annum, from 4,686 ha to 3,731 ha in 2010⁴, all of which was irrigated. The rest is unused land that kept increasing from 1,714 ha in 2005 to reach 2,669 ha in 2010. The reduction in area has mainly been due to expansion in buildings. Agriculture is concentrated in the north and north west coast and land use is divided between permanent crops (mainly date palms counting about 400,000 trees) which constitute about 60% of the area and seasonal crops occupying 15% and dominated by vegetables. The law prevents use of agricultural land, especially in the Green Belt, for non-agricultural purposes and prohibits uprooting and cutting date palms. However, some owners were reported to have deliberately neglected their holdings of date palms and later requested transfer of the land to residential status on the grounds that it was no longer suitable for agricultural production. The pressure to convert agricultural land into residential land is amplified by the *demographic challenges* as a result of expanding population and increased demand for housing. Agriculture also became a less attractive profession and movement of people from villages to town for employment further accentuated the housing problem and land use for non-agricultural purposes.

Water in Bahrain continued registering a significant annual deficit. However, the situation for irrigation water improved a lot in recent years, thanks to the use of the treated sewage effluents (TSE) for agricultural production. The total water used for agriculture increased from 319 million m³ in 2001 to 418 million m³ in 2009, as seen in the table 1 below. The underground water available for agricultural use fell by 42%, from 219 million m³ in 2001 to 126.6 million m³

³ Bahrain total area was 706.5 km² in 2000 and increased to 735.8 km² in 2005, 741.4 km² in 2006, 749.73 km² in 2007 and reached 757.5 km²

⁴ The cultivated area declined from 4,686 Ha in 2005 to 4,453 ha in 2006, 4,344 ha in 2007, 4,218 ha in 2008, 4101 ha in 2009 and 3731 ha in 2010

in 2009 (with 80% being used for agriculture); desalinated water available for agriculture doubled from 82 million m³ in 2001 to 199 million m³ in 2009 all used; while available TSE quadrupled from 15 million m³ in 2001 to 60.36 million m³ in 2009 and only 61% of it was used. The surplus quantity of about 23.5 million m³ of TSE could, if properly used, replace a corresponding amount from groundwater reserves, which are suffering from degradation in quality and quantity due to over-abstraction. The signs so far are encouraging with some of the aquifers, notably Alat, Khoba and Rus showing improvements in both water reserves and water quality due to less pumping as well as surge-in of surplus STE.

Table 1- Water Use for Agriculture in million cubic meters (mm³)

Situation in 2009				Situation in 2001
Water Source	Available	Used by agriculture	Use	Available
Underground Water	126.6	101.5	80%	219
Desalinated Water	199.00	199.00	100%	82
Treated Sewage Effluent (TSE)	60.36	36.87	61%	15
Agriculture Drainage water	23.00	0.16	0.70%	3
Total	408.96	337.53	82.5%	319

Development of Bahraini agriculture is also impacted by economic challenges reflected in the severe competition from cheap imports, limited government support and low level of private investment in agricultural production. The latter is also influenced by land tenure arrangements whereby most of the farmers do not own the land they farm and henceforth refrain from undertaking long-term investments. Furthermore, most of the farmers are elderly with the youth renouncing agricultural work, creating an additional social challenge and reduced employment opportunities. The situation is further exacerbated by resort to an expatriate workforce who are generally short of the knowledge and skills required for farming. A similar situation can also be observed with respect to fisheries with almost 90% of fishers on fishing boats and 40-60% on small boats being expatriates. There has been overfishing; and the weak enforcement of laws has also encouraged expatriate fishers to fish even at breeding times and to further affect natural reserves. The environmental issues affecting marine habitats add further pressure on natural stocks. On the other hand, investment in aquaculture is constrained by the lack of offshore or coastal land areas allocated for these activities.

The slow introduction and adoption of new technology, expanding threat of plant and animal epidemic diseases, poor farm management and limited trained national workforce add to the technical challenges influencing agricultural production. Limited capacities are particularly reflected in the area of agricultural planning and policy analysis.

3. Analysis of Global, Regional and National Development Frameworks

Development of the agricultural sector in the Kingdom of Bahrain is guided by the Economic Vision 2030 and the Strategy of MMAUP for Sustainable Agricultural Development for the Two Decades to 2030 and has gained momentum following the National Initiative for Agricultural Development recently launched by Bahrain's First Lady.

Globally, the Millennium Declaration is the principal international norm that encapsulates social and economic development goals (MDGs) adopted globally, including by FAO and the Government of Bahrain. They are intended to fast-track government policies towards socio-economic development and poverty reduction. FAO contributes directly to MDGs 1, 7 and 8 and indirectly to 3 and 6. Bahrain status of achievement with regard to the MDGs is impressive as seen from below:

Millennium Development Goals (MDGs)		Status
MDG 1	Eradicate extreme poverty and hunger with a target to halve the proportion of people living in extreme poverty and halve the proportion of people suffering from hunger between 1990 and 2015	Fully achieved
MDG 2	Achieve universal primary education with the target of ensuring that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary school	Fully achieved
MDG 3	Promote gender equality and empower women with the target of eliminating gender disparity in primary and secondary education by 2005 and at all levels not later than 2015	Partially achieved (in progress)
MDG 4	Reduce child mortality with the target of reducing by two-thirds the under-5 mortality rate between 1990 and 2015	Fully achieved
MDG 5	Improve maternal health with the target of reducing by three-quarters the maternal mortality rate between 1990 and 2005	Fully achieved
MDG 6	Combat HIV/AIDS, malaria and other diseases with targets of halting and reversing the spread of HIV and AIDS by 2015 and halting and reversing the incidence of malaria and other major diseases by 2015	Fully achieved
MDG 7	Ensure environmental sustainability with the targets of integrating the principles of sustainable development into country policies and programmes and reverse the loss of environment resources; halving the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015; and achieving significant improvement in the lives of at least 100 million slum dwellers by 2020	Partially achieved (difficulty in progress due to size of Bahrain and its precarious environment)
MDG 8	Develop a global partnership for development	Achieved

Source: Progress Report 2010 for the MDGs, Kingdom of Bahrain

Neither a Common Country Assessment (CCA) nor a United Nations Development Assistance Framework (UNDAF) were prepared for Bahrain, and UNDP activities in the Kingdom are guided by a Country Programme Document- CPD (2012-2016). UNDP CPD encompasses three outcomes including (1) Improved governance: Strengthened capacity to formulate plans and policies more efficiently, fairly and transparently; (2) Inclusive sustainable development: More women empowered, youth unemployment reduced and national environmental protection actively pursued; and (3) Economic development: Knowledge-based and private-sector growth for sustainable pro-poor and pro-women development.

Other than FAO, UNIDO is the only UN agency embarking on initiatives for agricultural development in Bahrain as part of its efforts to promote entrepreneurship in the private sector. UNIDO “agro-preneur” and “growth promotion” programmes were designed to train young entrepreneurs in high tech agricultural production systems through arrangements with Bahrain Polytechnic for the theoretical aspects and an incubator arrangement for practical training, and is financially supported by the Islamic Development Bank (IDB).

The present CPF for Bahrain provides the main explicit United Nations reference for the agricultural sector, supported by the FAO Strategic Framework 2010-2019, and its Regional (Near East) and Sub-regional (GCC and Yemen) priorities.

4. FAO Comparative Advantage and Priorities

In principle the comparative advantages of FAO are derived from its mandate as the lead UN Agency in agriculture, food and nutrition security. To accomplish its mandate effectively and efficiently, FAO has continuously been revising and adjusting its strategies, objectives, philosophy of management and approach to development. The latest in this series of revisions is the Strategic Framework 2010-2019 adopted in November 2009, which has clearly articulated FAO’s strategic objectives (SO), functional objectives (FO) and core functions (CF). Furthermore, FAO’s rich knowledge base is supported by pools of expertise available at HQs and the decentralized structures, which can quickly be tapped when required at country level. FAO has the comparative advantage to provide for the technical assistance required to address almost all challenges faced by Bahrain agriculture sector and listed in above section. The recent establishment of the Sub-Regional Office for the GCC States and Yemen in Abu Dhabi (United Arab Emirates) adds to FAO comparative advantage and testifies for the confidence and respect FAO has earned among development partners and among government institutions and producers in GCC member countries. The decision of the Government of Bahrain to establish a “Focal point” to strengthen and coordinate contacts with FAO bears a further witness to the respect bestowed upon FAO.

The CPF for Bahrain defines, as illustrated in the following section on programming for results, three Strategic Priority Areas (SPAs) that are aligned to the SO of FAO, making use of FAO comparative advantages. These SPAs are also consistent and aligned with FAO regional priorities for the Near East as well as with the FAO sub-regional strategic priority framework for the GCC states and Yemen, as have been recognized by the FAO Regional Conference for the

Near East in its 31st session (Rome, 14-18 May 2012). These SPAs are illustrated in the Table below.

FAO Strategic Objectives	Strategic Priorities for the Near East Region	Strategic Priorities for the GCC and Yemen Sub-region	Strategic Priorities for Bahrain
1. Eradicate hunger, food insecurity and malnutrition	1. Enhancing food security and nutrition	1. Food and nutrition	1. Strategic planning, policy development and strengthening agricultural and fisheries information systems
2. Increase production in agriculture, fisheries and forestry in an economic, social and environmentally sustainable manner	2. Fostering agricultural production and rural development for improved livelihoods	2. Rural development and the role of agriculture in food and nutrition security and poverty reduction	2. Enhancement of agricultural and fishery production and productivity, food safety and food and nutrition security
3. Improve livelihood of rural populations, in particular women and youth, through enhanced employment opportunities and increased access to production resources	3. Sustainable management of natural resources	3. Natural resource management	3. Development, conservation and sustainable management and efficient utilization of natural resources
4. Enable more inclusive and efficient agricultural and food systems at local, national, regional and international levels	4. Responding to climate change impacts and developing adaptation strategies	4. Climate Change	
5. Increase the resilience of rural livelihoods to threats and crises	5. Preparedness for, and response to, food and agriculture emergencies	5. Preparedness for, and response to emergencies	

5. Programming for Results

5.1 CPF Strategic Outcome, Objectives and Priority areas

5.1.1 CPF Strategic Outcome

FAO technical support in the implementation of the CPF for Bahrain shall contribute to ***“improved management and conservation of the natural resource base and the orientation of technological change in its sustainable use to increase consumer-safe agricultural and fisheries production and productivity, generate employment and enhance “relative” food security and livelihood of the Bahraini people”***.

5.1.2 Strategic Objectives

In the pursuit of the above long-term outcome, the CPF is premised on the following strategic objectives:

- Support strategic planning and design of enabling development policy and regulatory framework to enhance productivity of consumer-safe agricultural, livestock, poultry and fishery products and to promote increased participation of the private sector in agricultural and fisheries investment.
- Increase agricultural and fishery production and productivity through vertical expansion by supporting infrastructure needed for developing and facilitating utilization of modern techniques that will contribute to raising productivity and increased self-reliance in some food commodities.
- Support development, conservation, sustainable management and optimal use of the available natural resources specially agricultural land, water and marine resources as well as climate change mitigation and adaptation.

5.1.3. Strategic Priority Areas:

The achievement of these strategic objectives in the medium term (2013-2016) will involve FAO collaboration with the Ministry of Municipalities Affairs and Urban Planning (MMAUP) and with other public institutions mandated with support to agriculture, fisheries, natural resources management and food and nutrition security, food safety and consumer protection, as well as farmers, fishermen, Civil Society Organizations (CSOs) and the private sector, in line with the following priority areas which were identified through inclusive analysis and extensive consultations with stakeholders:

1. Strategic planning, policy development and strengthening agricultural information systems.
2. Enhancement of agricultural and fishery production and productivity, food safety and food and nutrition security.
3. Development, conservation and sustainable management and efficient utilization of natural agricultural and marine resources.

5.1.4 Proposed Interventions

The CPF interventions listed below have been identified by the stakeholders in line with government priorities as included in Strategic Frameworks (particularly Bahrain Economic Vision 2030; Strategy of MMAUP for Sustainable Agricultural Development for the Two Decades to 2030 and the Development Initiative to 2015, the National Initiative for Agricultural Development 2010) and with due regard to FAO Strategic Framework for the period 2010-2019, and the regional (Near East - RNE) and sub-regional (GCC countries and Yemen - SNG) medium-term priority frameworks. The cross cutting issues of productive capacity building, gender mainstreaming and management of agricultural knowledge and information are addressed as integral parts of the identified priority areas.

First Strategic Priority Area: Strategic Planning, Policy Development and Strengthening Agricultural Information Systems

Outcome 1: National capacities enhanced in the design, analysis and monitoring implementation of strategies, plans and policies that would foster agriculture and fishery development and improve food safety and food and nutrition security

Output 1.1: Enhanced capacities of MMAUP and other concerned government institutions, CSOs and private sector to design agriculture and fisheries development policies, sector and project planning and to develop practical measures for their effective management and implementation.

Interventions

- Benefit from international experience and strengthen the technical and institutional capacities of MMAUP and other concerned organs in strategic planning and in the analysis, design and evaluation of food and nutrition security and agricultural and fishery development policies and plans as well as agricultural and fishery investment projects.
- Assist in conducting agriculture sector review and assessing effectiveness and relevance of implemented strategies, programs and initiatives for food security, agricultural and fishery development and provide recommendations on future implementation and strategy options for effective and efficient agriculture sector planning.
- Assess the policy and planning training requirements of MMAUP and other public institutions and agencies involved in agriculture and fishery development, food safety and food and nutrition security and provide assistance in the design and implementation of suitable training activities to develop and upgrade human resource capacities in these domains.

- Support mobilization and sensitization of farming and fishers communities, private sector, traders, food processors and all value-chain actors on policies impacting agricultural and fishery development, food safety and consumer protection, agro-processing, value-addition and marketing of agricultural (including livestock) and fishery products and provide technical assistance in harmonization of policies, regulations and standards regarding quality and safety assurance of crops, animals and fisheries products.
- Avail forum for networking and dialogue among development actors, including public institutions, farmers, private sector and CSOs on agriculture, fishery, food safety and food and nutrition security plans and policies.

Output 1.2: The technical and functional capacity to collect agricultural statistics and to conduct agricultural, livestock, and natural resources census, developed

Interventions

- Provide technical assistance in planning and conduct of a comprehensive agricultural census and in the analysis, interpretation, documentation and dissemination of agricultural statistics and information to enhance the agricultural development process in Bahrain and to improve sector planning and policy design capabilities.
- Support developing the technical and functional capacities of MMAUP to establish an electronic farm data base for all crop and livestock enterprises differentiated by production systems/technology to continually assess their production efficiency and comparative advantages and to provide foundation for continued result-based M&E system to enhance management.
- Support systems for management of agricultural and marketing information, data and knowledge including public-private sector partnerships and dissemination for use by interested public institutions, CSOs and individuals.

Second Strategic Priority Area: Enhancement of Agricultural Production and Productivity, Food Safety and Food and Nutrition Security

Outcome 2: Capacity of public institutions, farming communities, fisher folks and private sector to achieve higher and sustainable agricultural and fisheries production, productivity, competitiveness, food safety and food and nutrition security, strengthened.

Output 2.1: Capacity of farming communities and fisher folks for increased and sustainable production and productivity enhanced.

Interventions

- Increase agricultural and fisheries production through vertical expansion via development and application of adapted high technology production systems and support capacity development of farmers, fishers and private sector to access the necessary technologies, facilities and services for increased modernization and commercialization of farming and aquaculture.
- Support Junior Farmers through establishing agricultural sites irrigated with recycled water and through provision of needed plant and livestock production facilities and services and enhance private sector role in the agricultural development process and grant new fields for businessmen willing to invest in high technology production system.
- Mobilize resources and technical assistance for development and expansion of aquaculture and artisanal fisheries development, provide necessary facilities and infrastructure and encourage private sector to invest in these ventures.
- Empower farming communities and private sector with skills for improved postharvest handling, reduce avoidable food losses and food wastes and promotion of more efficient agro-processing and develop their capacities to establish, strengthen and upgrade product of high quality safe food and assurance standards along the market chain for increased national and regional trade.
- Survey all agricultural sites to identify areas infected with plant and animal pests and diseases and introduce an integrated control programme including an early warning system for plant pests and animal disease surveillance.
- Develop capacities to eradicate epidemic diseases (such as FMD and TB) and support the control campaigns against other trans-boundary pests and diseases of major crops, livestock, poultry, and fisheries and strengthen plant and animal quarantine services and laboratories at entry points and enhance exchange of information especially with neighboring countries and concerned international agencies with respect to spread of these menaces.

Output 2.2: The physical, institutional, technical and human resources capabilities of agricultural and fishery research to develop and deliver technologies for increased and sustainable agricultural production and productivity and for fisheries development revived and enhanced.

Interventions

- Rehabilitate, upgrade and modernize the technological basis of agriculture, livestock, fisheries and safe food (production) research facilities and laboratories and strengthen

capacity to conduct site specific adaptive research with farmers and extension services linkages to generate knowledge and to develop and supply relevant technological inputs to enhance productivity and competitiveness of crop, livestock and fisheries production.

- Support capacity development of agricultural and livestock research for the conservation, management and sustainable use of plant and animal genetic and marine resources for improved productivity and health.
- Provide technical support to enhance capacities of agriculture, livestock and fisheries researchers through participation in advanced training and study tours abroad, and enable research link-up with renowned research institutions to monitor developments in the different fields of agriculture, livestock, fisheries and safe food production to continuously upgrade researchers knowledge and experience through exchange programmes.
- Activate the tissue culture laboratory to enhance and improve date palm production and increase its resilience to diseases and pests, specially the red weevil, and take required measures to develop a national improved vegetable seeds industry and expand artificial insemination and other assisted reproduction technologies for improved and adaptable animal breeds.
- Establish a botanical garden to include all plants of Bahrain comprising date palm varieties and establish a gene bank for the conservation and sustainable utilization of biodiversity and national plants and animal genetic resources.
- Coordinate with GCC countries with respect to research policies and transfer of technology and collaborate with international organizations in research improvement and conduct of research on genetic engineering, improve product quality, increase water use efficiency and resistance to diseases.

Outcome 2.3: Reformed demand-driven, gender-sensitive, participatory and client-oriented public extension system to enhance productivity and facilitate farmers and fishers empowerment and their access to markets, established.

Interventions

- Develop and rehabilitate the physical, technical and functional human capacity of a qualified extension system that creates strong linkages with research and farmers and enhances the dissemination of knowledge, skills and attitudinal changes essential to improve productivity and marketing of agriculture, livestock and fishery products and to contribute to improving livelihood of the producers.
- Develop a national extension policy that ensures a legal framework of extension services responsibilities and provides broad-based demand driven, participatory and gender-sensitive approaches throughout the agriculture, livestock and fishery innovation system.

- Provide support to farming community including youth farmers by launching and expanding pilot interventions aimed at introducing innovative and high technology production systems, productivity gains, market expansion, and new business/market oriented management capacities.
- Benefit from FAO international experience of Farmers' and Junior Farmer' Field and Life Schools (FFS & JFFLS) to support UNIDO's "youth farmers agro-preneur" programme and similar initiatives to develop capacities of farming community in modern farm management skills, and on the various marketing function and post harvest losses minimization methods, etc.
- Establish specialized agricultural training centre to enhance capacities in the use of modern agricultural practices for efficient use of resources, increase in productivity with proper and safe post harvest handling.

Third Strategic Priority Area: Development, Conservation, Sustainable Management and Efficient Utilization of Natural Resources

Outcome 3: Capacity of public institutions, farming and fishers communities, CSOs and private sector for the sustainable management of the available natural resources enhanced.

Output 3.1: National capacity to promote an improved sustainable management and development of natural agricultural and marine resources upgraded

Interventions

- Assist and complement urban planning by developing a map for agricultural land within and outside the green belt and sites suitable for aquaculture and in developing legislation, administrative regulations and executive programs for the development and conservation of these agricultural and fishery land resources and the enforcement of legislations to prevent their use for non-agricultural purposes, and grant agricultural affairs staff the judicial power to put legislations into effect.
- Assist in developing/supporting a water metrological centre and promote capacities for modeling, measuring and monitoring underground water levels, quantity, depth, salinity and rates of extraction and for predicting effects of water policies on the national reserves.
- Enhance awareness raising on better use of water and encourage use of modern irrigation techniques, rationalize water use and expand TSE use for agriculture and encourage use of TSE sludge as soil amendment.
- Support establishment of fully fledged TSE, Water and Soil Laboratory and assist concerned authorities in undertaking field studies to assess the health hazards of storing TSE and developing necessary actions and policies based on the results of the study.

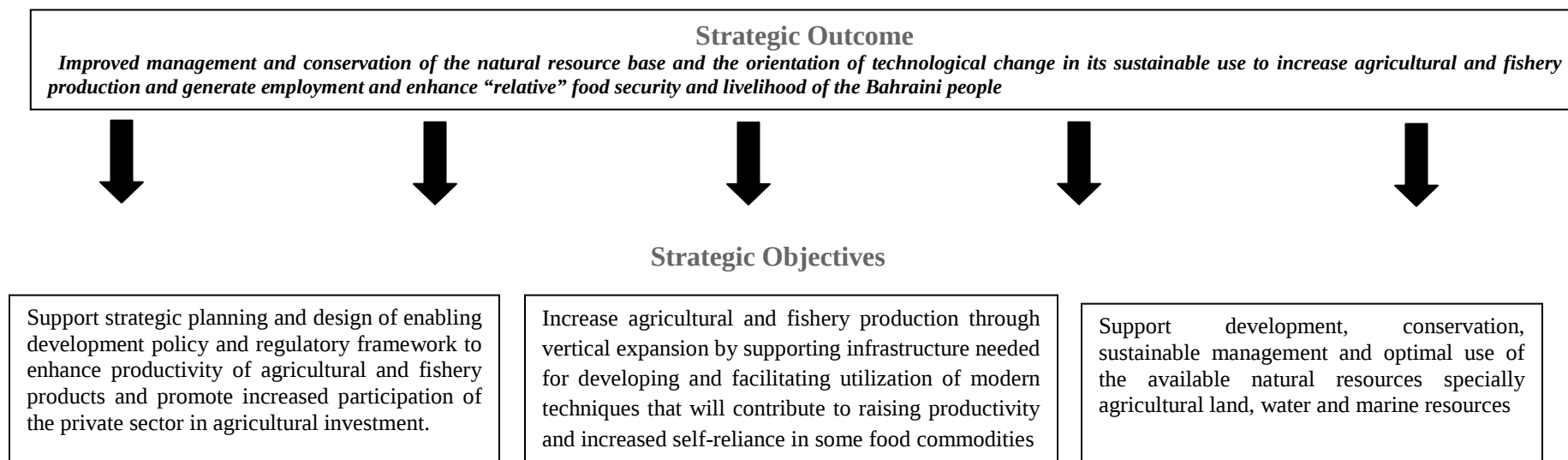
- Enhance capacity to improve sound management of pollutants and hazardous wastes in agriculture and coastal areas and harnessing residual effects of pesticides as well as the safe disposal of obsolete pesticides and prevention of their future pile-up.
- Provide technical assistance to develop tools and mechanisms for mainstreaming natural resources, environment and climate change issues into sector plans; and empower public, private sector and civil society to engage, actively participate and take ownership of development plans.

5.2 Implementation Arrangements

The CPF is jointly owned by the Kingdom of Bahrain and FAO and hence the facilitation for its implementation must be undertaken in close consultation between MMAUP and FAO/SNG in Abu Dhabi and in partnership with other concerned agencies and stakeholders. An effective Result-based Monitoring and Evaluation (M&E) system is an indispensable tool of management and should be installed to ensure proper programme implementation through the continued provision of performance information.

Immediately after endorsement of the CPF, FAO-SNG and the MMAUP agree to formulate a proposal for the quantification of the indicative levels of resource commitments required to achieve the results expected from the activities proposed in this CPF. In this way, the CPF will be the framework within which both parties confirm their mutual commitment to undertake all possible endeavours to pursue shared goals on the basis of jointly agreed priorities.

CPF Strategic Outcome, Objectives and Priority Areas



Priorities, Outcomes and Interventions

First Strategic Priority Area: Strategic Planning, Policy Development and Strengthening Agricultural Information Systems	Second Strategic Priority Area: Enhancement of Agricultural and Fisheries Production and Productivity, Food Safety and Food and Nutrition Security	Third Strategic Priority Area: Development, Conservation and Sustainable Management, and Efficient Utilization of Natural Resources
Outcome 1: National capacities enhanced in design, analysis and monitoring implementation of strategies, plans and policies that would foster agriculture and fishery development and improve food safety and food and nutrition security Output 1.1: Capacities of MMAUP and other concerned government institutions, CSOs and private sector to design agriculture and fishery development policies, sector and project planning and to develop practical measures for their effective management and implementation, enhanced. Interventions • Benefit from international experience and strengthen the technical and institutional capacities of MMAUP and other concerned organs in strategic planning and in the analysis, design and evaluation of food and nutrition security and agricultural and fishery development policies and plans as well as agricultural and fishery investment projects. • Assist in conducting agriculture sector review and assessing effectiveness and	Outcome 2: Capacity of public institutions, farming communities, fisher folks and private sector to achieve higher and sustainable agricultural and fisheries production, productivity, competitiveness, food safety and food and nutrition security, strengthened. Output 2.1: Capacity of farming communities and fisher folks for increased and sustainable production and productivity enhanced. Interventions • Increase agricultural and fishery production through vertical expansion via development and application of high technology production systems and support capacity development of farmers, fishers and private sector to access facilities and services for increased modernization and commercialization of farming and aquaculture. • Support Junior Farmers through establishing agricultural sites irrigated with recycled water and through provision of needed plant and livestock production facilities and services and enhance private sector role in the agricultural development process and grant new fields for businessmen and businesswomen willing to invest in high technology production system. • Mobilize resources and technical assistance for development and expansion of aquaculture and artisanal fisheries development, provide necessary facilities and infrastructure and encourage private sector to invest in these ventures. • Empower farming/fisheries communities and private sector with skills	Outcome 3: Capacity of public institutions, farming and fishers communities, CSOs and private sector for the sustainable management of the available natural resources enhanced. Output 3.1: National capacity to promote an improved sustainable management and development of natural agricultural and marine resources upgraded Interventions • Assist and complement urban planning by developing a map for agricultural land within and outside the green belt and sites suitable for aquaculture and in developing legislation, administrative regulations and executive programs for the development and conservation of these agricultural and fishery land resources and the enforcement of legislations to prevent their use for non-agricultural purposes, and grant agricultural affairs staff the

relevance of implemented strategies, programs and initiatives for food security, agricultural and fishery development and provide recommendations on future implementation and strategy options for effective and efficient agriculture sector planning • Assess the policy and planning training requirements of MMAUP and other public institutions and agencies involved in agriculture and fishery development, food safety and food and nutrition security and provide assistance in design and implementation of suitable training activities to develop and upgrade human resource capacities in these domains • Support mobilization and sensitization of farming and fishers communities, private sector, traders, food processors and all value-chain actors on policies impacting agricultural and fishery development, food safety and consumer protection, agro-processing, value-addition and marketing of agricultural and fishery products and provide technical assistance in harmonization of policies regarding quality assurance and safety of crops, animals and fisheries products. • Avail forum for networking and dialogue among	for improved postharvest handling and agro-processing and develop their capacities to establish, strengthen and upgrade product of high quality and safety standards and assurance along the market chain for increased national and regional trade. • Survey all agricultural sites to identify areas infected with plant and animal pests and diseases and introduce an integrated program including an early warning system for pests and disease surveillance • Develop capacities to eradicate epidemic diseases like FMD and TB and support the control campaigns against other trans-boundary pests and diseases of major crops, livestock, poultry, and fisheries and strengthen plant and animal quarantine services and laboratories at entry points and enhance exchange of information with countries and concerned international agencies with respect to spread of these menaces. Output 2.2: The physical, institutional, technical and human resources capabilities of agricultural and fishery research to develop and deliver technologies for increased and sustainable agricultural production and productivity and for fishery development revived and enhanced. Interventions • Rehabilitate, upgrade and modernize the technological basis of agriculture, livestock and fishery research facilities and laboratories and strengthen capacity to conduct site specific adaptive research with farmers and extension services linkages to generate knowledge and to develop and supply relevant technological inputs to enhance productivity and competitiveness of crop, livestock and fishery production. • Support capacity development of agricultural and livestock research for the conservation, management and sustainable use of plant and animal genetic and marine resources for improved productivity. • Provide technical support to enhance capacities of agriculture, livestock and fishery researchers through participation in advanced training, and	judicial power to put legislations into effect. • Assist in developing/supporting a water metrological centre and promote capacities for modeling, measuring and monitoring underground water levels, quantity, depth, salinity and rates of extraction and for predicting effects of water policies on the national reserves. • Enhance awareness raising on better use of water and encourage use of modern irrigation techniques, rationalize water use and expand recycled water use for agriculture and connecting farms to recycled water. • Enhance capacity to improve sound management of pollutants and hazardous wastes in agriculture and coastal areas and harnessing residual effects of pesticides as well as the safe disposal of obsolete pesticides and prevention of their future pile-up. • Provide technical assistance to develop tools and mechanisms for mainstreaming natural resources, environment and climate change issues into sector plans; and empower public, private sector
--	--	---

development actors, including public institutions, farmers, private sector and CSOs on agriculture, fishery, food safety and food and nutrition security plans and policies Output 1.2: The technical and functional capacity to collect agricultural statistics and to conduct agricultural, livestock, and natural resources census, developed Interventions • Provide TA in planning and conduct of a comprehensive agricultural census and in the analysis, interpretation, documentation and dissemination of agricultural statistics and information to enhance the agricultural development process in Bahrain and to improve sector planning and policy design capabilities. • Support developing the technical and functional capacities of MMAUP to establish an electronic farm data base for all crop and livestock enterprises differentiated by production systems/technology to continually assess their production efficiency and comparative advantages and to provide foundation for continued result-based M&E system to enhance management. • Support systems for management of agricultural and marketing information, data and knowledge including public-private partnerships and dissemination for use by interested public institutions, CSOs and individuals.	enable research link-up with renowned research institutions to monitor developments in the different fields of agriculture, livestock and fishery and to continuously upgrade researchers knowledge and experience through exchange programmes. • Activate the tissue culture laboratory to enhance and improve date palm production and increase its resilience to diseases and pests, specially the red weevil, and take required measures to develop a national improved vegetable seeds industry and expand artificial insemination for improved and adaptable animal breeds. • Establish a botanical garden to include all plants of Bahrain comprising date palm varieties and establish a gene bank for the conservation and sustainable utilization of biodiversity and national plants and animal genetic resources. • Coordinate with GCC countries with respect to research policies and transfer of technology and collaborate with international organizations in research improvement and conduct of research on genetic engineering, improve product quality, increase water efficiency and resistance to diseases. Outcome 2.3: Reformed demand-driven, gender-sensitive, participatory and client-oriented public extension system to enhance productivity and facilitate farmers' and fishers empowerment and their access to markets, established. Interventions • Develop and rehabilitate the physical, technical and functional human capacity of a qualified extension system that creates strong linkages with research and farmers and enhances the dissemination of knowledge, skills and attitudinal changes essential to improve productivity and marketing of agriculture, livestock and fishery products and to contribute to improving livelihood of the producers. • Develop a national extension policy that ensures a legal framework of extension services responsibilities and provides broad-based demand	and civil society to engage, actively participate and take ownership of development plans.
--	--	---

	driven, participatory and gender-sensitive approaches through out the agriculture, livestock and fishery commodity chain • Provide support to farming community including youth farmers by launching and expanding pilot interventions aimed at introducing innovative and high technology production systems, productivity gains, market expansion, and new business management capacities • Benefit from FAO international experience of Farmers' and Junior Farmer' Field and Life Schools (FFS & JFFLS) to support UNIDO's "youth farmers agro-preneur" programme and similar initiatives to develop capacities of farming community in modern farm management skills, and on the various marketing function and post harvest loss minimization methods, etc. • Establish specialized agricultural training centre to enhance capacities in the use of modern agricultural practices for efficient use of resources, increase in productivity and proper and safe post harvest handling.	
--	---	--