



Investing in rural people

**Republic of Kenya**

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**Aquaculture Business Development Programme**

**Final Design ReportFinal Design ReportFinal Design  
Report**

Main report and appendices

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## **Working papers**

(Bound separately)

WP1: Poverty, gender and targeting
WP2: Fisheries subsector and aquaculture
WP3: Aquaculture value chains and PPPPs
WP4: Access to finance for aquaculture
WP5: Financial management arrangements
WP6: Procurement capacity assessment
WP7: Institutions and implementation arrangements
WP8: Programme Costs and Financing
WP9: ABDP economic and financial analysis
WP10: Water requirements for aquaculture in Kenya
WP11: Aquaculture extension and advisory services
WP12: Draft Programme Implementation Manual
WP13: Mainstreaming nutrition
WP14: Aquaculture research and development

## Currency equivalents

Currency Unit	=	Kenya Shilling (KES)
USD 1.00	=	KES 104

## Weights and measures

1 kilogram	=	1,000 g
1.000 kg	=	2.204 lb
1 kilometre (km)	=	0.62 mile
1 metre	=	109 yards
1 square metre	=	1,076 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

## Abbreviations and acronyms

AAK	Aquaculture Association of Kenya
ABDP	Aquaculture Business Development Programme
AfDB	African Development Bank
AFFA	Agriculture, Fisheries, and Food Authority
AFIPEK	Association of Fish Processors and Exporters of Kenya
AIE	Authority to Incur Expenditure
ARW	Annual Review Workshop
ASAL	Arid and Semi-Arid Lands
ASDS	Agriculture Sector Development Strategy 2010-20
ASE	Aquaculture Support Enterprise
AWPB	Annual Work Programme and Budget
BP	Business Plan
CDF	County Development Fund
CF	Conversion Factor
CG	County Government
CIDP	County Integrated Development Plan
CIT	County Implementation Team
CoG	Council of Governors
COSOP	Country Strategic Opportunities Programme
CPC	County Programme Coordinator
CPCC	County Programme Coordination Committee
CPE	Country Programme Evaluation
CPFT	County Programme Facilitation Team
CPI	Corruption Perception Index
CPSC	County Programme Steering Committee
CRF	County Revenue Fund
CSA	Climate Smart Aquaculture

DA	Designated Account
DHS	(Kenya National) Domestic Household Survey
DSA	Daily Subsistence Allowance
DVS	Directorate of Veterinary Services
EAC	East African Community
EAFFRO	East Africa Freshwater Fisheries Research Organization
EAP	Environment Action Plan
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EMCA	Environmental Management and Coordination Act, 1999
EMP	Environmental Management Plan
ENRM	IFAD Environmental and Natural Resource Management Policy
ERR	Economic Rate of Return
ERS	Economic Recovery Strategy
ESMP	Environment and Social Management Plan
ESP	Economic Stimulus Programme
EU	European Union
FAM	Financial and Accounting Manual
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FHH	Female-Headed Household
Fi	Fingerling
FI	Financing Institution
FIQA	Fish Quality Assurance
FM	Financial Management
GALS	Gender Action Learning System
GDP	Gross Domestic Product
GE/WE	Gender Equality and Women's Empowerment
GIS	Geographic Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
GoK	Government of Kenya
HACCP	Hazards Analysis Critical Control Point
HDI	Human Development Index
HH	Household
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunity Deficiency Syndrome
HR	Human Resources
IAA	Independent Aquaculture Aggregator
ICB	International Competitive Bidding
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IFMIS	Integrated Financial Management Information System
IFPRI	International Food Policy Research Institute
IGA	Income Generating Activity
ILO	International Labour Organisation
IPSAS	International Public Sector Accounting Standard
KALRO	Kenya Agricultural and Livestock Research Organization
KARI	Kenya Agriculture Research Institute
KBS	Kenyan Bureau of Standards
KCEP	Kenya Cereal Enhancement Programme
KCEP-CRAL	Kenya Cereal Enhancement Programme - Climate Resilient Agricultural Livelihoods Window
KEBS	Kenya Bureau of Standards
KENAF	Kenya National Farmers Federation
KENAO	Kenya National Audit Office

KES	Kenya Shillings
KFS	Kenya Fisheries Service
KfW	Kreditanstalt für Wiederaufbau
KIHBS	Kenya Integrated Household Budget Survey
KIPPRA	Kenya Institute of Public Policy Research and Analysis
KM	Knowledge Management
KMAP	Kenya Market-led Aquaculture Programme
KMFRI	Kenya Marine Fisheries Research Institute
KNBS	Kenya National Bureau of Statistics
KWFT	Kenya Women Finance Trust
LBDA	Lake Basin Development Authority
LIB	Limited International Bidding
LVFO	Lake Victoria Fisheries Organization
M&E	Monitoring and Evaluation
MBA	Masters in Business Administration
MERL	Monitoring, Evaluation, Reporting and Learning
MFB	Microfinance Bank
MFI	Microfinance Institution
MoALF	Ministry of Agriculture, Livestock and Fisheries
MoU	Memorandum of Understanding
MSME	Micro-, Small- and Medium-sized Enterprise
Mt	Metric Ton
NASEP	National Agriculture Extension Strategy
NCB	National Competitive Bidding
NEMA	National Environment Management Authority
NFSCC	National Food Safety and Coordination Committee
NGO	Non Governmental Organization
NIMES	National Integrated Monitoring and Evaluation System
NPV	Net Present Value
NRM	Natural Resource Management
ODK	Open Data Kit
OIE	Oficina Internacional de Epizootias (World Organization for Animal Health)
PC	Programme Coordinator
PCR	Programme Completion Report
PCU	Programme Coordination Unit
PDR	Programme Design Report
PEFA	Public Expenditure and Financial Accountability
PFA	Programme Financing Agreement
PFM	Public Financial Management
PIM	Programme Implementation Manual
PP	Procurement Plan
PPOA	Public Procurement Oversight Authority
PPPP	Public-Private-Producer Partnership
PPRA	Public Procurement and Regulatory Authority
PROFIT	Programme for Rural Outreach of Financial Innovations and Technologies
PRSP	Poverty Reduction Strategy Paper
PS	Principal Secretary
PSC	Programme Steering Committee
QE	Quality Enhancement
R&D	Research and Development
RAS	Recirculating Aquaculture System
RB-COSOP	Results Based Country Strategic Opportunities Programme
RFP	Request for Proposal

RIAT	Ramogi Institute of Advanced Technology
RIMS	Results and Impact Management System
ROSCA	Rotating Savings and Credit Association
RSF	Risk Sharing Facility
SACCO	Savings and Credit Cooperative Organisation
SAG	Smallholder Aquaculture Group
SASRA	SACCO Societies Regulatory Authority
SBD	Standard Bidding Document
SCCO	Sub-county Cooperatives Officer
SCFO	Sub-county Fisheries Officer
SCPIT	Sub-county Programme Implementation Team
SCSDO	Sub-county Social Development Officer
SCVO	Sub-county Veterinary Officer
SDA	State Department of Agriculture
SDCP	Smallholder Dairy Commercialization Programme
SDF&BE	State Department of Fisheries and Blue Economy
SDL	State Department of Livestock
SECAP	Social, Environmental and Climate Assessment Procedures
SEIA	Strategic Environmental Impact Assessment
SIYB	Start and Improve Your Own Business
SME	Small- and Medium-sized Enterprise
SMEP	Small Micro Enterprise Programme
SoE	Statement of Expenditure
SP	Service Provider
SPC	Special Procurement Committee
SUN	Scaling Up Nutrition
TA	Technical Assistance
ToRs	Terms of Reference
ToT	Training of Trainers
TSP	Technical Service Provider
TTC	The Trilateral Cooperation
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USD	United States of America Dollars
UTaNRMP	Upper-Tana Natural Resource Management Programme
VC	Value Chain
VCF	Value Chain Finance
VSLA	Village Savings and Loan Association
WA	Withdrawal Application
WFP	World Food Programme
WHO	World Health Organization
WRMA	Water Resources Management Authority
WRUA	Water Resources User Association
WUA	Water User Association

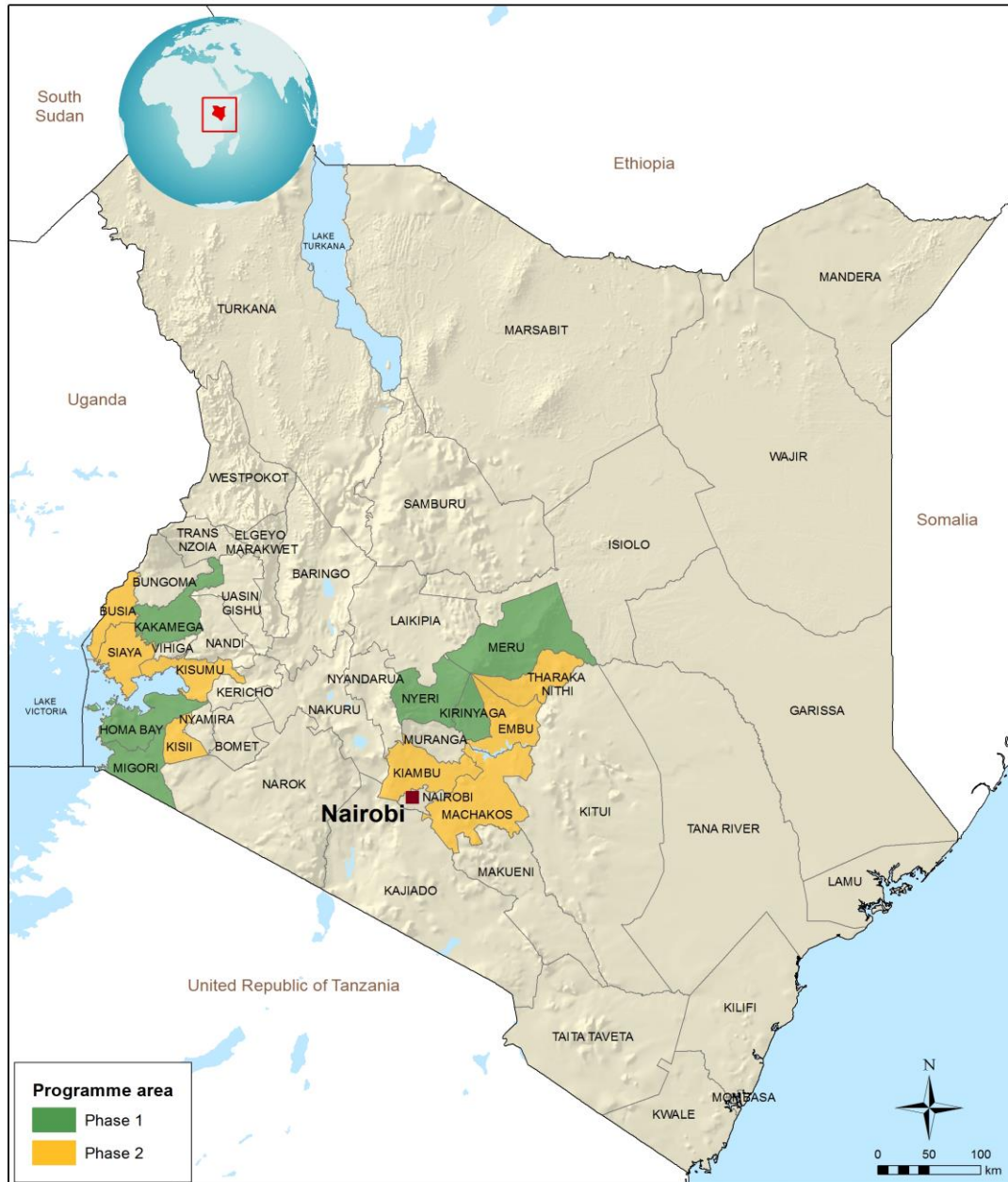


## Map of the Programme area

### Kenya

#### Aquaculture Business Development Programme

Design report



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD | 29-08-2017

## Executive Summary <sup>1</sup>

**Strategic Context.** Smallholder agriculture and livestock production are under mounting pressure in Kenya from shortages of productive land and the negative effects of climate change, particularly on rainfed crops, pastures and livestock. In response, the mass of subsistence farmers on the margins of markets are seeking ways to adjust their mixed farming systems to minimize risks, make optimum use of their scarce resources and earn a living. Despite advances in the national economy, a significant proportion of rural people remain in poverty.

In this deteriorating rural economic context, diversification of agricultural production and rural incomes is extremely important. Aquaculture has been identified as one such diversification strategy. The inland aquaculture Subsector in Kenya has been growing rapidly in response to declining capture fisheries and increasing national demand for fish. The gap between demand and production is projected to increase to 360,000 mt/year by 2025, resulting in rising prices and a continuing decline in fish consumption – currently 3.5 kg/person/year compared to a global average of 16.3 kg/person/year.

The Government of the Republic of Kenya (GoK) launched a large-scale aquaculture support programme under the Economic Stimulus Programme (ESP) during the period 2009 – 2013 to promote smallholder aquaculture fish production through targeted support for input supply, fish production, post-harvest management and related activities. The ESP achieved a rapid expansion in the productive infrastructure in the Subsector, including regions of the country with little history of fish production or consumption. However, the aquaculture fisheries value chains are still not well articulated, with clear weaknesses in the availability of good quality fish feed and seeds, technical services, processing and value addition enterprises, and market access. Typical smallholder fish producers, for example those with one or two small ponds, are operating low-input/low-output on-farm enterprises that contribute little to their livelihoods.

In 2016, the GoK asked IFAD for support in designing and funding a project that supports smallholder aquaculture fish production. In response, IFAD fielded two design missions (in March-April and June 2017) to review the issues with GoK, the rural communities and other public and private sector stakeholders, and to generate an appropriate package of capacity-building and investment measures to accelerate and consolidate the expansion of aquaculture production and trade within the country by realizing the productive potential of smallholders. The result is the *Aquaculture Business Development Programme* (ABDP).

**Justification and rationale.** The observed rapid and continuing expansion of the aquaculture Subsector in Kenya offers a major developmental opportunity for alleviating rural poverty and malnutrition, and building climate resilience for poor households. The central idea is to assist large numbers of smallholders to become profitable fish producers or village-level providers of related services within a secure value chain framework and, in so doing, to promote a step-change in nutritional well-being in the wider communities. As with other agricultural and livestock activities, the

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<sup>1</sup> Final mission composition: Hani Elsadani (Overall Mission Leader, IFAD), Geoffrey Rockliffe-King (Deputy Mission Leader), Richard Abila (Lead Advisor and Fisheries Specialist, IFAD), Julius Manyala (Fisheries Expert), Alice Jesse (Aquaculture Specialist, FAO), Andrew Dibo (Extension Specialist), Marian Odenigbo (Nutrition Specialist, IFAD), Edith Kirumba (Climate/Natural Resource Management Specialist, IFAD), Sixto Requena (Private sector and Specialist), Paul Picot (Rural Finance Specialist), Chiara Romano (Targeting, Gender and Youth Specialist), James Mbwika (Value Chain Specialist and overall mission coordination), Juan Morelli (Economic and Financial Analyst), Fredrick Kagaba (Financial Management Specialist), Wojciech Dubelaar (Knowledge Management/M&E Specialist, IFAD) and Joseph Nganga (Institutions and Implementation Arrangements Specialist, IFAD). Mr Harrison Kaisa (Aquaculture Specialist, WorldFish) and Mr Gunjan Dallakoti (Youth Employment Expert, ILO) joined part of the mission activities.

way forward for poor households is to progress from subsistence/survival to a sustainable semi-commercial mode with a reliable substantial return to effort.

The ABDP aims at using both public and private sector vehicles to strengthen the aquaculture value chains with whole-community initiatives to promote good nutrition and food security, environmental sustainability and adaptation to climate change. The Programme will support the small-scale fish production base for existing and new producers, with priority for women and youth, by promoting viable enterprises for production and value-addition.

As the landscape in Kenya is supportive for private sector initiatives and investments, the Programme will promote public private producers partnerships (PPPPs) as the way forward for the Subsector, with a proper allocation of risks between the parties. The one necessary condition, given the overarching Programme goal of rural poverty reduction, is that the PPPPs can demonstrate that significant numbers of smallholder fish producers and support enterprises benefit from their business activities. This may be directly, through supply contracts established by outgrowers ,processors, or small producers' groups or indirectly through making available affordable goods and services at community level. This will involve as well support to business plans for small producers groups and non-producers support enterprises. PPPPs may also be built around arrangements for the better use of existing GoK-owned infrastructure, such as the fish processing plants established by the ESP and currently not fully utilized.

ABDP would seek to broaden and deepen the aquaculture value chains to increase the volume and value of fish and fish products produced and sold. Given that all the actors in the value chains have to operate in a financially, socially and environmentally sustainable fashion, the Programme would provide capacity building of the public services, the essential SMEs and substantial businesses in the industry as well as the organisations of primary producers and related enterprises in rural communities. ABDP would be a Programme of GoK embedded in the mainstream work of MoALF and the Counties, promoting mutually beneficial partnerships between and within the public and private sectors.

**Programme area.** The ABDP is envisaged as national in scope but targeting Counties with high concentrations of aquaculture activity, high production, existing sectoral infrastructure (processing, marketing and research), adequate water resources and marketing potential. The Programme will start with six Counties in the first year and expand from the second year to reach a maximum of fifteen by third year of implementation. The first Counties to be targeted comprise Homa Bay, Migori and Kakamega (in Western Kenya Region) and Kirinyaga, Nyeri and Meru (in Central/ Eastern Region), to be followed by Tharaka Nithi, Kisii, Kisumu, Siaya, Busia, Embu, Kiambu, Machakos and Kajiado.

**Targeting.** The ABDP takes into account poverty targeting criteria in selecting the operational Counties. The Programme direct beneficiaries would be inclusive of women, youth, landless and other disadvantaged groups. Whole communities in which aquaculture is promoted would be included in nutrition and healthy eating campaigns centred on fish consumption.

The number of directly benefiting households is estimated at 35,500, including individual and grouped smallholder households engaged in aquaculture, participants in off-farm income generating groups related to the Subsector, and producers and labourers working within and for integrated aquaculture businesses, thus bringing the total number of direct beneficiaries to 213,000 assuming an average of six persons per household. Indirect beneficiaries include the public and private sector entities that are capacitated by the Programme as a means to reaching the rural target group as well as members of communities that are not directly receiving training or support from the Programme but will benefit from the opportunities that the new economic environment will create. Communities at large, including schools, will benefit from the nutrition and other initiatives in the Programme Counties.

**Development objective.** The Overall Goal of ABDP is **Reduced poverty and increased food security and nutrition in rural communities**, as shown by improved dietary diversity. In pursuit of this goal, the Programme Development Objective is **To increase the incomes, food security and**

**nutritional status of the wider communities of poor rural households involved in aquaculture in the targeted Counties**, with progress indicated by *the percentage of beneficiaries reporting increased annual net income and the percentage increase in national annual fish consumption*).

**Programme Components and outcomes.** The Aquaculture Business Development Programme comprises two mutually supportive Components concentrated on strengthening the aquaculture value chains to benefit smallholder fish producers, small-scale supporting service providers and their rural communities. The substantive ABDP Component activities and investments are facilitated by an implementation support structure (under the project's Component 3) embedded in the host GoK agency providing physical and financial management, and proactive knowledge management, monitoring and evaluation functions.

*Component 1: Smallholder aquaculture development* aims to raise the efficiency, profitability and sustainability of ongoing and new aquaculture activities in mixed smallholder farming systems, with associated nutrition activities to improve diet quality and food security of the wider rural communities. In doing so, the Programme will promote viable business activities based on aquaculture through group and enterprise mobilisation, training and support, investment in productive infrastructure, and the transfer of technical and business skills. Promoting climate smart technologies and practices, and environmentally sustainable forms of production will be crosscutting themes. Particular attention will be given to water needs and quality, as well as the suitability of different agro-ecological zones for different aquaculture technologies.

The complementary *Component 2: Aquaculture value chain development* seeks to improve the efficiency of the whole aquaculture value chain, with a concentration of Programme effort and resources on operations that either include smallholders directly or demonstrably benefit the mass of small-scale producers. The second Component is driven by the creation of a range of PPPs within the aquaculture value chain. It would also feature a number of modest but important actions to strengthen the public and private services crucial to success in the Subsector, including the policy and regulatory framework, public infrastructure, extension capacity, priority research, quality assurance services, fish health and surveillance services and access to financial services.

**Programme cost and financing.** An eight-year Programme implementation period is anticipated, from early 2018. Total Programme costs are USD 143.3 million (KES 14.9 billion).

#### ABDP estimated costs by Component

Programme costs	KES Million	USD Thousand	% base costs
1. Smallholder aquaculture development	7,076	68,035	56
2. Aquaculture value chain development	4,901	47,124	39
Implementation support	681	6,545	5
<b>Total base costs</b>	<b>12,657</b>	<b>121,704</b>	<b>100</b>
Physical contingencies	1,013	9,736	8
Price contingencies	1,231	11,833	10
<b>Total Programme costs</b>	<b>14,900</b>	<b>143,273</b>	<b>118</b>

The Programme would be financed with an IFAD Loan drawn from the 2016-18 Performance Based Allocation System cycle (USD 40.0 million or 27.9%), the Government of Kenya (USD 31.4 million, 21.9%) and beneficiary contributions in cash or kind (USD 43.6 million, 30.4%). There is a financing gap of USD 27.9 million representing 19.5% of total cost, while FAO would contribute USD 400,000 (0.3%). The financing gap of US 27.9 million may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to availability of funds and internal procedures) or by co-financing identified during implementation.

**ABDP financing plan by Component (USD million)**

Component	IFAD loan		Other donors		FAO		Bene- ficiaries		GoK		Total	
	sum	%	Sum	%	sum	%	sum	%	sum	%	Sum	%
1. Smallholder aquaculture development	19.3	24.2	15.9	20.0	0.4	0.5	16.3	20.4	27.8	34.9	79.7	55.6
2. Aquaculture value chain development	14.2	25.4	11.6	20.8	-	-	27.3	48.9	2.7	4.9	55.8	39.0
Implementation support	6.5	83.3	0.4	5.1	-	-	-	-	0.9	11.6	7.8	5.4
<b>Total Programme costs</b>	<b>40.0</b>	<b>27.9</b>	<b>27.9</b>	<b>19.5</b>	<b>0.4</b>	<b>0.3</b>	<b>43.6</b>	<b>30.4</b>	<b>31.4</b>	<b>21.9</b>	<b>143.3</b>	<b>100.0</b>

**Programme benefits and economic justification.** ABDP is expected to generate benefits for all the actors involved in the production, processing, value addition and trade in fish and fish products from the burgeoning aquaculture sector, predominantly as incremental income for smallholders from financially and environmentally sustainable fish production. Benefits will also accrue to rural communities in terms of improved nutritional status, to domestic consumers with greater access to affordable fish, to the country as a whole with foreign exchange savings from import substitution, and to the GoK with revenue inflows from additional income tax.

**Economic analysis.** The viability of the Programme from the Kenyan economy point of view has been estimated through an economic cost-benefit analysis using illustrative models and economic prices assuming 2017 values in constant terms over 20 years, an investment conversion factor (CF) of 0.88, a wage CF of 0.70, an imported fish feed CF of 0.85 and a discount rate of 10%. Taking into consideration the value of benefits to be generated by the ABDP proposed interventions but excluding the less easily quantifiable benefits from the improvement on the nutrition of the poor as fish protein will be made available at an affordable price with positive effect on the development of more healthy children and adults, the ERR was estimated at 21.1% and the Net Present Value KES 7.48 billion. A sensitivity analysis was performed to measure the robustness of the expected Programme impact given potential adverse situations during implementation. The analysis showed the Programme to be relatively sensitive to a reduction in productivity and/or fish prices but robust against the risk of cost increases and/or a reduced incorporation of beneficiaries adopting the proposed production improvements. These results allow for the justification of the Programme's investments.

**Sustainability.** The Programme has inbuilt economic sustainability. The strengthening and use of existing public services and community structures is expected to establish a strong institutional framework that would support sustainability. Beneficiaries and stakeholders would be prepared from the outset for the post-Programme engagement period through effective training and advice and an orderly gradual transfer of ownership and management responsibilities. The positioning of ABDP as a fixed-term initiative contributing to an open-ended GoK PPPP programme is appealing in terms of sustainability of the investment, but does draw attention to the continuing commitment of GoK to ensure the necessary recurrent budget for field support services.

A post-Programme decline from the improved levels of household and enterprise fish production and related trade achieved during implementation is considered unlikely as the upgrade would be accomplished through the use of appropriate, affordable and widely available technologies and business skills in real market conditions. It is expected that increased smallholder productivity combined with the use of environmentally-friendly best aquaculture practices would have a positive impact on the physical agricultural landscape, in particular the efficient use of scarce water resources. The Programme will also ensure sustainability of the financing of the aquaculture businesses along the value chain through linkage with the Kenyan financial sector.

**Social, Environmental and Climate Procedures.** The ABDP SECAP analysis considers the likely impact of additional aquaculture development in the country, both spontaneous and Programme-driven, given that smallholder fish production poses medium risks to the environment. Nationally and at County level, there are strategies, legislation, institutions and action plans to reduce the potential

negative impacts. The SECAP identifies several potential risks and proposes mitigation measures. Given the proposed mitigation activities and the fact that most interventions are at smallholder level, the SECAP concludes that the environment and climate related risks of ABDP are manageable and/or reversible and classified as **moderate**. The Programme is thus categorized as a **Category B** project.

## Logical Framework

Results Hierarchy	Indicators				Means of verification			Assumptions (A) and Risks (R)
	Name	Base-line <sup>2</sup>	Mid-Term	End Target	Source	Frequency	Responsible	
Outreach:	▪ # of persons receiving technical and/or financial services promoted or supported by the Programme. <sup>3</sup>	0	150,000 (25,000 HH)	213,000 (35,000 HH)	Fisheries enterprise records, Economic Surveys, Programme reports, baseline and impact studies.	Annual.	PCU and Counties.	A: Supportive policy and legal framework.
Goal: Reduced poverty and increased food security and nutrition in rural communities.	▪ # households have improved asset ownership index compared to baseline <sup>3</sup>	0	17,750	35,500	RIMS baseline and impact surveys, household survey.	Year 1, mid-term & Year 8.	PCU.	A: Favourable conditions for domestic fish trade.
	▪ % good dietary diversity (data for households and women). <sup>4</sup>	0	30% increase	60% increase	RIMS baseline and impact surveys, household survey.	Year 1, mid-term & Year 8.	PCU.	A: Favourable conditions for domestic fish trade.
Development Objective: To increase the incomes, food security and nutritional status of the wider communities of poor rural households involved in aquaculture in the targeted Counties.	▪ % of target households reporting increased annual net income from baseline, disaggregated by fish farmers, processors and traders. <sup>3</sup>	0	30%	50%	Fisheries enterprise records, Economic Surveys, Programme reports, baseline and impact studies	Annual.	PCU.	A: Favourable conditions for aquaculture farming.
	▪ % increase in national annual fish consumption, (current national average 3.6 kg/capita).	0	10%	25%	Household Food Survey.	Year 1, mid-term & Year 8.	PCU, MoALF.	A: Supportive GoK foreign trade policy for fish.

<sup>2</sup> All without-Programme data to be determined in baseline survey and verified/updated at Programme start.

<sup>3</sup> All target groups are disaggregated by gender and age. Each farmer or non-producing value chain actor represents an average household of six persons.

<sup>4</sup> Good dietary diversity for households defined as intake of ≥5 food groups out of 12 food groups, and for women intake of ≥5 food groups out of 10 food groups.

Results Hierarchy	Indicators				Means of verification			Assumptions (A) and Risks (R)
	Name	Base-line <sup>2</sup>	Mid-Term	End Target	Source	Frequency	Responsible	
Outcomes/Components: Outcome 1: To improve production, productivity as well as food security and nutrition of smallholder farmers.	# households reporting an increase in production and graduated from level 1 (subsistence) to level 2 (semi-commercial). <sup>3</sup>	0	11,700	16,400	Economic Surveys, Programme reports (baseline and impact studies), specific survey to monitor performance of farmers targeted under Component 1 (in particular level 1 farmers).	Six-monthly.	PCU, service provider	
	Composite index of market prices of fish and fish products in Programme areas.	100	95	80	Price monitoring sample surveys in target and control areas.	Six-monthly	Service provider.	(A) Prices and costs fall with greater value chain efficiency.
	# households reporting adoption of environmentally sustainable and climate resilient technologies and practices. <sup>3</sup>	0	15,000	24,800	Programme reports (baseline and impact studies).	Annual.	PCU.	
	# persons reporting an increase in consumption of fish. <sup>3</sup>	0	120,000	300,000	Programme reports (baseline and impact studies).	Annual	PCU	
Outputs: 1.1 Enhanced smallholder aquaculture production.	# households accessing aquaculture production input and/or technological packages. <sup>3</sup>	0	20,000	29,900	PCU M&E surveys and reports.	Six-monthly.	PCU.	R: Poor maintenance of investments and/or inadequate business skills result in early collapse of individual/group fish production or support enterprises.
1.2 Development of enterprises in support of smallholder aquaculture production.	# fishponds constructed, upgraded or rehabilitated and stocked with fish in an environmentally sustainable and climate smart manner.	0	20,000	29,900	PCU M&E surveys and reports.	Six-monthly.	PCU.	R: Availability of land and water for construction of new facilities.  R: High cost of rehabilitation.



Results Hierarchy	Indicators				Means of verification			Assumptions (A) and Risks (R)
	Name	Base-line <sup>2</sup>	Mid-Term	End Target	Source	Frequency	Responsible	
		▪ # persons trained in business management. <sup>5,3</sup>	0	25,000	30,400	PCU M&E surveys and reports.	Six-monthly.	PCU.
1.3 Community nutrition initiatives.	▪ # households provided with targeted support to improve their nutrition. <sup>3</sup>	0	25,000	35,400	PCU M&E surveys and reports.	Six-monthly.	PCU	
Outcome 2: To improve the efficiency of the value chain in fish and fish products by promoting a business approach at all scales.	▪ value of fish products marketed by Programme beneficiaries. <sup>6</sup>	0	USD 70 million	USD 110 million	Economic Surveys, Programme reports, baseline and impact studies.	Annual.	PCU, MoALF and Counties.	A: Favourable climate conditions and no disease outbreak.  R: Limited local fish marketing opportunities for lack of local purchasing power.
	▪ # supported rural aquaculture related enterprises reporting an increase in profit.*	0	105	240	PCU M&E surveys and reports.	Annual.	PCU, MoALF and Counties.	A: Favourable climate conditions and no disease outbreak. R: Limited local fish marketing opportunities for lack of local purchasing power.
Outputs: 2.1 Smallholder-based aquaculture value chain development.	▪ # persons trained in business management. <sup>3</sup>	0	5,000	15,760	PCU M&E surveys and reports.	Six-Monthly.	PCU.	R: High transaction costs deter enterprises from entering outgrower arrangements with Programme smallholders.

<sup>5</sup> Including: (i) fish production practices and technologies; (ii) fish farming as a business; (iii) good environmental and climate smart farm management; and (iv) off-farm activities, such as post-harvest handling; food safety, hygiene.

<sup>6</sup> The baseline value for different fish products will be estimated during baseline survey.

Results Hierarchy	Indicators				Means of verification			Assumptions (A) and Risks (R)
	Name	Base-line <sup>2</sup>	Mid-Term	End Target	Source	Frequency	Responsible	
	▪ # smallholder households included in outgrower schemes and linked to the market. <sup>3</sup>	0	3,500	9,360	PCU M&E surveys and reports.	Six-monthly.	PCU.	R: High transaction costs deter enterprises from entering outgrower arrangements with Programme smallholders.
	▪ # aquaculture-related enterprises accessing business development services.*	0	5,000	14,000	PCU M&E surveys and reports.	Six-monthly.	PCU.	R: High transaction costs deter enterprises from entering outgrower arrangements with Programme smallholders.
2.2 Aquaculture sector enabling environment and support services.	▪ # extension officers trained by the Programme. <sup>3</sup>	0	170	170 <sup>7</sup>	PCU M&E surveys and reports.	Six monthly.	PCU.	
	▪ # knowledge management products developed to support aquaculture.	0	15	25	PCU M&E surveys and reports.	Biannual.	PCU.	A: Supportive policy and legal framework.
	▪ # regulations and policies proposed for decision makers for ratification / approval	0	1	2	PCU M&E surveys and reports.	Six-monthly.	PCU.	A: Supportive policy and legal framework.

<sup>7</sup> Exact number to be defined during needs assessment.

## I. Strategic context and rationale

### A. Country and rural development context

1. **Rural Development Context.** Kenya has a total land area of 582,646 km<sup>2</sup> and an estimated population of 46 million people. High fertility combined with declining mortality has contributed to a population growth rate estimated at 2.6%. Kenya's Arid and Semi-Arid Lands (ASALs) make up more than 80% of the country's land mass and are home to approximately 36% of its population. The remaining 64% of the population lives in medium- and high-potential areas in the central and western parts of the country, where the population density is up to ten times the National average of 80 people/km<sup>2</sup>. In October 2014, Kenya became a low-middle-income country. Despite uncertainties in the period leading up to elections, rising insecurity and erratic weather, growth is expected to continue in the next five years at an annual average of around 6%, facilitated by ongoing infrastructure development. However, the challenges of poverty and income inequality remain.

2. While the incidence of poverty dropped from 52% in 1997 to 45% in 2009, more than 75% of the population lives in rural areas, where poverty still affects 50.5% of the people. Kenya remains a food-insecure country with about 10 million Kenyans suffering from chronic food insecurity and poor nutrition. According to the 2014 Kenya National Domestic Household Survey (DHS), 26% of children under five are stunted (chronic malnutrition), 11% are underweight (chronic and acute malnutrition) and 4% are wasted (acute malnutrition). It is reported as well that 9% of women between 15 – 49 years are thin or undernourished with a BMI < 18.5 kg/m<sup>2</sup>, while 33% are overweight or obese. It is worth noting that Kenya has been a member of the Scaling Up Nutrition (SUN) movement since 2012.

3. Around 75% of Kenya's population is employed in the agricultural sector, relying on agricultural-pastoral activities and natural resources for their livelihoods. Crop production, comprising industrial crops, food crops and horticulture, accounts for 82% of agricultural Gross Domestic Product (GDP) and 94% of export earnings from agriculture. The remaining three agricultural subsectors - livestock, fisheries and forestry - account for 18% of agricultural GDP and 8% of export earnings from agriculture. However, these have significant potential, which is not fully exploited.

4. Kenya's youth accounts for 35.4% of the total population (18 and 35 years old) and constitutes 60% of the total labour force, of which 10% only are directly participating in the agricultural sector (World Bank 2014). Unemployment among youth is high with 64% of the 23 million registered unemployed Kenyans are youth with the majority moving out of the rural agricultural sector, into urban areas. This reduces the labour force in rural areas and highlights the need to support rural youth to improve their livelihoods. Radicalization and indulgence in illegal activities are judged by many as a direct result of lack of employment opportunities among the youth.

5. The current female population in Kenya is 50.1%, yet women are underrepresented in decision-making positions. In the 2017 election, only three women Governors and three women senators were elected out of 47 Governors and Senators. At the constituency level, women form only 7.59% of those elected. Furthermore women have less access to education, land and employment. Recent studies show that women are engaged in most nodes of the fish value chains, but their participation in and benefits from the sector are less than men. The main obstacle to women's full participation in agricultural value chains, including those related to fisheries/aquaculture, remains the cultural norms of access and control over the primary resource, inadequate access to affordable credit, knowledge, information and inputs.

6. Kenya's policy direction is articulated in various Government of Kenya (GoK) documents, such as the Poverty Reduction Strategy Paper (PRSP), the Kenyan Constitution 2010 and Kenya Vision 2030, with all of them focusing on elimination of rural poverty. The GoK recognises adequate food and nutrition as human rights and the Food and Nutrition Security Policy (2011) states that nutrition is central to human development in the country.

7. **Private sector and business environment.** Key supporting factors for growth in private sector investments in agribusiness, including the aquaculture value chains, are well developed. For example, there is a well-developed network of paved roads in the Central and Western zones, where aquaculture has greatest potential, telecom services are well established and can be used in all sorts of applications, falling energy prices are a catalyst for lower costs of agricultural production, and the energy sector is expected to realize gains from the huge Government and private sector investments in power generation projects. In addition, Kenya has a well-established banking sector, with adequate liquidity to finance all sizes of enterprises, including those in agribusiness. The business environment has improved markedly in terms of reduced cost of doing business. According to the World Bank, Kenya has moved up 37 places in the worldwide ranking in the beginning of 2016 and is considered the fifth best in sub-Saharan Africa, although the regulations related to starting a business could still be improved. The overall macro-economic situation in Kenya is stable, which boosts private sector investments in the country.

8. **Financial services.** Kenya's financial sector is one of the largest and most innovative in Africa, with a wide range of formal institutions as well as semi-formal and informal organizations with deep geographical penetration. According to the 2013 FinAccess report, 74.6% of the population above 18 years old is considered financially included, although people whose livelihood comes mainly from agriculture are less financially included than those depending on other businesses. Despite this high level of financial inclusion, Kenya is characterized by a relatively low level of financial literacy, especially for the small-scale farmers. The agriculture sector accounted for only 5.7% of the total loan accounts of the banking system at the end of 2015, well below its share of GDP (24.2%). This reflects a lack of focus on financing small-scale farming and to a lesser extent agribusiness SMEs because of the notion of a high perceived risk. There is, however, growing interest by financial service providers to venture into the sector, in particular in line with new opportunities to finance profitable private agribusinesses under the agricultural Value Chain Financing (VCF) approach. However, adequate institutional knowledge of the agricultural sector and capacity to develop adapted products and delivery channels for the different segments of the value chains remain a constraint for many financial institutions to venture into agribusiness financing. Another characteristic of the Kenya financial sector is the intervention of numerous impact investment funds, with many of them targeting agribusiness SMEs for debt or equity investments.

9. **Fisheries and aquaculture.** The inland aquaculture Subsector in Kenya is growing rapidly in response to declining capture fisheries and increasing National demand for fish. The fish demand deficit is currently met partially with fish imports. In the meantime, there are major concerns about whether international markets are able to meet the gap with fish that meets standards, both now and in the future. The main farmed and traded species in Kenya are tilapia and catfish. There is already a significant gap between the projected demand and national fish production – 250,000 mt in 2014, currently expected to increase to 360,000 mt/year by 2025 – resulting in a continuous decline in per capita average consumption and rising prices. Consumption of fish in Kenya has dropped in recent years to 3.5 kg/person/year compared to a global average of 16.3 kg/person/year.

10. There are different aquaculture technologies already in practice in Kenya, with various input-output models. The choice of technology is important as the options have differing economic, social and environmental impacts. Based on their productive capacities, the aquaculture technologies can be categorised as extensive, semi-intensive and intensive systems. These range from earthen ponds at different levels of management, tanks, recirculating aquaculture systems and cage culture systems. Small pond aquaculture targeting smallholders was promoted heavily in the Economic Stimulus Programme 2008-13 (ESP) and became an additional enterprise for a significant number of smallholders with mixed farming systems. The ESP promoted various alternative production systems for smallholders, albeit to a lesser degree compared to the small pond system. The ESP also supported the establishment of hatcheries and community-level fish feed mills and provided subsidised inputs to programme beneficiaries, which some Counties continue to do.

11. The typical smallholder aquaculture producer with one or two small ponds is operating low-input/low-output systems because of inadequate technical expertise, input challenges (quality of fingerlings and feed or unaffordability of good quality ones) and inefficient marketing and sales systems. The lack of a dependable/affordable water supply is a major constraint at some sites, including some of the ESP installations. The majority of the small-scale aquaculture producers are not organised in viable enterprises that can enjoy economies of scale and enter into economic linkages with input suppliers, product markets, technical services and financial service providers.

12. Small-scale aquaculture is also carried out by smallholders in multipurpose small man-made reservoirs and dams and was promoted by the ESP in some locations with good potential. The initiative was constrained by availability of land and the high capital cost of establishing such reservoirs. ESP reports do not record the establishment of aquaculture in existing reservoirs.

13. The aquaculture Subsector also comprises medium- and large-scale businesses using advanced technologies for fish farming in pond systems, cage growing on open water bodies and reservoirs, and trout production on rivers. These enterprises are usually centred on the production of fingerlings and the provision of good quality fish feeds in addition to grow-out fish. Some of these enterprises are active in post-harvesting, value addition and/or marketing. Different models of fish farming schemes can be found in different parts of the country.

14. Despite several years of ESP implementation, the matter of fact is that the corresponding aquaculture value chains are not well articulated with major weaknesses in the availability of good quality fish feed and seeds, in technical services provision, and in processing and value addition capacity. The linkages between producers and other actors across the value chain are poor. The challenges facing ESP implementation and Subsector development were increased with the 2013 introduction of the two-tier Government system (National and County Governments). Aquaculture subsequently became a function of the County Governments, necessitating a transfer of roles and resources and the reconfiguration of institutions. Currently, a number of Counties have streamlined aquaculture into their County Integrated Development Plans (CIDP), making the Subsector a priority for investment. Currently at the County level, extension services are barely functional due to inadequate skilled extension service providers and the lack of mobility and other resources needed for effective service provision.

15. Cage fish culture is a special case with potential for high returns on investment in a relatively short period, and is expanding in Lake Victoria at an accelerating pace. However, cage culture is less suitable technology for smallholders due to high investment costs and the potentially severe environmental impacts. GoK is aware of the environmental risks and the urgent need to create an adequate regulatory framework. Cage culture was not one of the key support areas of the ESP.

16. **Institutional and policy framework.** The new constitution promulgated in 2010 brought about fundamental changes to the way Kenya is governed, with the devolution of some executive functions (including those related to agriculture, livestock and fisheries development) and administrative responsibilities to the Counties, the consolidation of institutional architecture into a much smaller number of ministries and institutions, accordingly:

- Kenya administrative organization is now made up of 47 County Governments dividing the country into 47 land areas that are semi-autonomous units of governance with responsibility for County legislation, executive functions and the provision of public services. The Sub-counties are the decentralized units through which County Government of Kenya provide functions and services. Counties are now responsible for aquaculture.
- The ministries operating in the sector have been merged to address the fragmentation of responsibilities between agriculture and rural development-related ministries, development partners and the private sector. Agriculture, Livestock and Fisheries are now in one ministry which is subdivided into the State Departments of Agriculture, Livestock and Fisheries.

17. GoK has developed an adequate policy and legal framework to support expansion of aquaculture including the National Aquaculture Policy (2010), the National Oceans and Fisheries Policy (2008), and the Fisheries Act (2016), which last has created the Kenya Fisheries Service (KFS). The current framework in place supports direct investment in the sector at all scales. Even though aquaculture is a devolved activity, the current framework provides for coordination between the two Government structures.

18. **Climate change.** The aquaculture Subsector is under increasing threat from climate change, as evidenced by the drying up of many ponds during the recent drought. Environmental sustainability and climate change adaptation awareness levels are very low among farmers and some value chain actors. Whilst the rapid expansion of aquaculture offers considerable potential for meeting the growing domestic demand for fish, boosting the rural economy and improving the nutritional status of disadvantaged people, the associated environment and climate risks are medium. The SECAP identifies the potential risks and proposes relevant mitigation measures. A primary action for this Programme will be to ensure sufficient and good quality water, as well as the identification of appropriate agro-ecological zones for aquaculture development.

## **B. Rationale and theory of change**

19. **The rise of aquaculture.** The burgeoning aquaculture Subsector in Kenya presents a major opportunity to reduce persistent rural poverty in the country by increasing incomes and tackling diet-related issues. Historically, fish production and consumption has been low nationally, with relatively little produced or consumed except in the Western region. Hitherto, domestic supplies have come mainly from inland capture fisheries supplemented by marine catch. The quantity landed from the main source, Lake Victoria, has been in steep decline since the 1980s. Currently, National demand is increasing from a low level, prices are rising and imports filling the widening gap in supply.

20. A profitable aquaculture subsector is emerging in response to growing demand, accelerated by a very substantial strategic GoK investment under the Economic Stimulus Programme (ESP). The ESP initiative sought to introduce aquaculture as an additional enterprise in / diversification of the predominant mixed farming systems rather than to create “fish farmers”. Important potential advantages for smallholders were the fact that aquaculture is less vulnerable to the effects of climate change than rainfed field crops, and the addition of a different technology spreads the risks in small-scale farming. Though ESP progress was slowed by a lack of connection to the larger “private sector” value chain operators and the unrelated decision two years on to devolve implementation responsibilities to newly formed County Governments, the Programme was instrumental in introducing aquaculture to a wide constituency, especially in Central and Eastern Region, and kick-starting an important subsector.

21. **The roles of smallholders in the aquaculture subsector.** The aquaculture value chain comprises a small number of large-scale producers with production concentrated on one site and large number of small-scale and subsistence farmers practicing aquaculture as an additional enterprise in a mixed farming system. The essential services for the activity – feed and seed (fingerling) supply and functional marketing arrangements for a perishable commodity – are developing but have not yet caught up with the rapid expansion in production. Most of the large-scale producers create integrated businesses that combine the key operations in-house to achieve optimal efficiency in high-input/high-output systems. The key success factors are quality of inputs, adherence to technical protocols and a robust marketing and sales plan, all in a proactive management structure. The activity is risky in the prevailing business environment even for the best-resourced operators, with low margins and limited aggregate real demand in the country.

22. There are good prospects for rural people to move into aquaculture, (predominantly small artificial ponds but also utilising dams and reservoirs), as primary fish producers or support service providers in the value chain. However, recent Kenyan experience has shown that the input, technology and marketing challenges facing independent smallholder producers render the sustainability of profitable on-farm pond enterprise improbable, particularly in locations remote from

larger population centres. As with other agricultural and livestock activities, the way forward is to progress from subsistence/survival to a sustainable semi-commercial mode with a reliable substantial return to effort.

23. **Value chain development.** For smallholders to flourish as producers in the aquaculture value chain, they need to enter into increasingly formal relations with other actors. The first step is the formation of groups of neighbouring smallholders producing fish, to collaborate on inputs and marketing, and benefit from public sector training and extension provision. The expansion of the production base has already created income-generating opportunities along the value chain for rural people without access to the land or resources.

24. Many of the groups formed by and since the ESP have moved on to associations of such groups and expanded into small-scale feed production and value addition activities. Rather than attempting to take on more of the value chain links themselves, with all the attendant barriers on technology, resources and advanced business skills, some producers have moved into various forms of contract relations with medium- and large-scale outgrower businesses. These pioneers have shown the way for the majority seeking to move into “farming as a business”.

25. **Rural poverty reduction through aquaculture.** The observed rapid and continuing expansion of the aquaculture Subsector in Kenya offers a major developmental opportunity for alleviating rural poverty and malnutrition, and building climate resilience for poor households. The basic idea is to assist large numbers of smallholders to become profitable fish producers or village-level providers of related services within a secure value chain framework and, in so doing, promote a step-change in nutritional well-being in the wider communities.

26. In this context, the following design of the proposed Aquaculture Business Development Programme seeks to enable existing and potential aquaculture producers to earn from fish production in an economically and environmentally sustainable fashion and to promote local income-generating businesses – from single operators to substantial groups – to provide supporting services. In this major undertaking, ABDP build on the impressive physical and institutional achievements of the ESP and assist GoK services in implementing aquaculture group and enterprise building, technical support and business training.

27. Recognising the fractured and poorly-developed state of the aquaculture value chain, ABDP would promote an array of Public-Private-Producer-Partnerships (PPPPs) at scale to put in place a robust industry. The one necessary condition, given the overarching Programme goal of rural poverty reduction, is that the PPPPs can demonstrate that significant numbers of smallholder fish producers and support enterprises benefit from their business activities. This may be directly, through supply contracts established by outgrowers, processors or smallholders’ groups or indirectly through making available affordable goods and services at community level. PPPPs may also be built around arrangements for the better use of existing GoK-owned infrastructure, such as the processing plants established by the ESP and currently not fully utilized.

28. In support of this two-pronged approach, the Programme would also assist GoK services to adjust to the rapidly-changing subsectoral environment with the strengthening of Subsector-wide services remaining in the public domain, including policy and regulations, training curricula and facilities, quality assurance and disease surveillance, diagnostic services at County level and the consolidation of County cadres to provide quality advice and encouragement beyond the Programme.

29. The proposed approach blends public and private sector investments in the aquaculture value chain with whole-community initiatives to promote good nutrition and food security. Along with the ongoing rapid expansion of large-scale commercial cage culture, smallholder fish farming will increase the availability of quality fish in the National market and thereby enhance the diet of the Kenyan population.

30. **Climate change and the environment.** Given that ABDP will focus mainly on small scale aquaculture, environmental sustainability and adaptation to climate change are cross cutting themes

for the Programme. The SECAP note identifies potential environment and climate risks and proposes mitigation measures, some of which include promotion of Climate-Smart Aquaculture (CSA)<sup>8</sup> technologies and practices to minimise the impacts of climate change, while striking a balance between income and food security objectives in climate change adaptation. The overall climate risk category is classified as **moderate**. A key focus of the Programme will be to ensure that water quality and quantity as well as appropriate agro-ecological zones for aquaculture development are given sufficient attention.

31. **Theory of change.** The ambition of the Programme is to improve the livelihoods and life prospects of poor smallholder fish producers, the local providers of supporting services and the wider communities in which they live. The proposal combines two approaches to the same end: direct investments in the physical, financial and human capital of poor rural individuals and groups engaging in aquaculture and supporting enterprises; and the promotion and brokering of investments in substantial smallholder-based businesses in the aquaculture value chain in a Public-Private-Producer-Partnership framework.

32. To work, this initiative has to adhere to basic business principles at all scales, including proper planning processes, scrutiny of business plans, capital assistance confined to productive infrastructure, equipment and other needs that cannot be fully financed by the financial sector due to their high risk profile, material contributions from beneficiaries, and a realistic management of inherent risks. All players are in the private sector, “farming as a business”, with even the poorest protected by the self-regulating feature of value chains: either all links in the chain make money, or none do.

33. **IFAD’s comparative advantage.** The proposed Programme is in line with IFAD strategic objectives and Kenya COSOP (2013-18). Aquaculture is growing rapidly in Kenya and promises to become an important driver of rural development in the country. IFAD, as a key player in rural development and smallholder agriculture, has strong comparative advantage to assist GoK in its effort to revitalize smallholder-based aquaculture and reach out to other marginalised groups, such as women, youth and landless. IFAD can help GoK bring in global experiences and catalyse links with other development partners, international finance institutions and global research centres. There are lessons learned that have informed the ABDP design, including weaknesses identified in previous interventions and the existing aquaculture networks that make it relatively straightforward to reach almost all the smallholder fish producers in the target Programme area.

## II. Programme description

### A. Programme area and target group

#### Geographical targeting and beneficiaries

34. **Geographical targeting.** The ABDP is envisaged as National in scope but targeting Counties with high concentrations of aquaculture activity, high production, existing infrastructure (processing, marketing and research), adequate water resources and marketing potential. Area selection also takes into account poverty targeting criteria. The Programme will target fifteen Counties (Migori, Kakamega, Homa Bay, Nyeri, Meru, Kirinyaga, Tharaka Nithi, Kisii, Kisumu, Siaya, Busia, Embu, Kiambu, Machakos and Kajiado), starting with six Counties (Homa Bay, Migori and Kakamega (in Western Kenya Region) and Kirinyaga, Nyeri and Meru (in Central/ Eastern Region) in the first two years and then expanding on a need basis from the third year. The first six hold clear comparative

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<sup>8</sup> ABDP defines Climate Smart Aquaculture as the integration of appropriate site selection, development of a dependable year round water supplies, selection of appropriate species (especially fast maturing species) and stocking rates, and for example promotion of solar/wind powered pumps to pump water to hatcheries or processing plants, simple interventions at farm level (for examples ultra-violet pond liners to reduce loss of water, soil erosion control, ensuring ideal pond design and depth to conserve water, aqua phonic systems to limit water and land utilization), with a focus on optimal water use efficiency



advantages: significant infrastructure funded under the ESP, namely fish processing facilities in Nyeri, Meru, Kakamega, and Migori; research facilities; an aquaculture hub (Kirinyaga); a high concentration of aquaculture activities; and vast water resources (Homa bay). Kajiado County will be included subject to a review of availability of financial resources and compliance with Social, Environmental and Climate Assessment Procedures (SECAP).

35. **Beneficiaries.** The total number of Programme direct beneficiary households is about 35,500.<sup>9</sup> Those beneficiaries consist of male and female smallholder fish farmers (29,900) involved in fish farming at different productive levels (subsistence and medium-farming, corresponding to levels 1 and 2 respectively<sup>10</sup>). The fish farmers would include 30% women and 20% youth. The beneficiaries' households include 5,500 youth (50% men and 50% women) benefiting from employment and self-employment opportunities along the non-production segments (processing, trading, etc) of the aquaculture value chain. The total outreach to indirect beneficiaries will include about 300,000 people benefiting from nutrition initiatives.

### **Inclusive targeting of direct beneficiaries**

36. **Smallholder farmers producing at subsistence level.** This group are considered among the core target of the project. They comprise among others *level 1 beneficiaries* of the Programme. Farmers in this category are involved in aquaculture with low level of production (less than 100 kg per year) and combine fish farming with other livelihood activities (crop production, milk production and livestock). Usually they lack access to improvement measures and cannot afford quality inputs to make their production market-oriented. Sometimes they produce some of their own fish feed. They own an average of one to two ponds or equivalent and have no access to proper extension services, improved-quality inputs for market-oriented fish production. Aquaculture activities represent a minor contribution (less than 40%) to household incomes. Poor bargaining power, weak organisational capacities and collective action, and poor market linkages reduce the income derived from the sale of limited surplus. Smallholder farmers generally do not have access to formal financial services. They may be members of informal financial organizations at village level, but they are usually reluctant to borrow for this risky aquaculture activity. Level 1 Farmers represent about 70% of the total number of beneficiaries (24,300 of which 30% women and 20% youth) who will be targeted directly in Component 1. The interventions under Component 1 will graduate 60% of level 1 farmers' beneficiaries to level 2.

37. **Smallholder farmers producing a surplus for marketing.** This group comprises a better – off target group and will be referred to (among others) as *level 2 beneficiaries*. Farmers in this group engage actively in fish production at a larger scale (semi-commercial farmers) than their subsistence counterparts with a market purpose, although their sales are limited to primary/local markets. Average pond ownership is three ponds and above (up to eight ponds) or equivalent, farming with a market-oriented approach but lacking entrepreneurial/management skills to farm as a business. They use good husbandry practices, produce an average of fish between 100 kg to 500 kg per year but have limited bargaining power in the market and limited access to more commercial markets. Formal financial institutions like Microfinance Banks (MFBs), Microfinance Institutions (MFIs) and SACCOs are reluctant to finance these farmers, due to inherent risks of the aquaculture value chain, and this confines their ability to expand production and raise productivity. Level -2 farmers numbers to 6,500 households. Women and youth represent 30% and 20% respectively of fish farmers among level 2 beneficiaries.

38. **Specialized fish farmers.** This group will be referred to as level 3 beneficiaries. In this category, farmers have some assets and are organized into formally established and legally registered operational and viable producers and/or processors organizations. Farmers under this

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<sup>9</sup> An average household (HH) has six persons, bringing the total number of direct beneficiaries to 213,000.

<sup>10</sup> See paragraphs 36-38 and 50 for beneficiary category levels.

group have evident productive and entrepreneurial skills. They have good access to inputs and services and relatively good but still limited access to finance. Level 3 farmers will not be targeted directly by Component 1, but some of the level 2 farmers may graduate to level 3 by the end of the Programme. In Component 2, the producing aggregators in the PPPP model will fall in level 3. They are targeted to act as aggregators and lead farmers uplifting the smallholders in their network and providing them with services and inputs on a mutually beneficial basis.

39. **Women.** Women are engaged actively in all key nodes of the aquaculture value chain, from hatching fingerlings to processing and marketing. However, women's participation is not at the same level as that of men. While aquaculture facilities such as ponds are "household assets", women in general and especially at subsistence level have fewer and smaller aquaculture facilities than their male counterparts. Differences in roles and responsibilities are found in facility management, where men are involved more than women in construction, feeding and harvesting. Men make most of the critical aquaculture management decisions including where to site facilities, the size of facilities, where to source fingerlings, the quantity to source, what and when to feed the fish and when to harvest.

40. Women farmers face multiple constraints and challenges in aquaculture production including: inadequate access to quality fingerlings and fish feeds, inadequate capital to invest in commercial aquaculture, low levels of skills and knowledge in the enterprise and poor access to technical and market information. In the context of the Programme, Female Headed Households (FHHs) are a highly vulnerable group because of deeply embedded socio-cultural attitudes and practices. Opportunities for income generation are found for women along the aquaculture value chain, particularly in post-harvest, processing, adding value and marketing of fish and fish products.

41. **Youth.** Youth in Kenya refers to those who are between 18 and 35 years of age. They account for 30% of the population and 60% of the total labour force. The ABDP youth-specific intervention will be in line with national policy and target rural youth who are without jobs and have experienced extended spells of unemployment or who are currently working in vulnerable jobs, defined as those working on their own (or self-employed) or a contributing family worker. A special focus will be dedicated to youth between 18-29 as they will be more at risk of being unpaid family workers. Furthermore, through nutrition related intervention targeting primary and secondary schools the programme will reach children age 6-14 and also youth age 14-18.

42. Despite their numerical weight, the youth are not well represented in the National and local political and socio-economic development processes. Most of them are unemployed, underemployed and underpaid, and lack resources to start their own businesses. Lack of access to land and dissatisfaction with agricultural production as a livelihood strategy, especially among rural males, limits their livelihood options, and yet it is the youth who are most energetic, better educated and more technology savvy. Their exclusion represents untapped potential for increased adoption of productivity-enhancing fish farming technologies.

43. Opportunities are found for youth all along the aquaculture value chain, especially for self-employment and labour (pond construction, fish collection and transport, retailing/agri-agents), as new aspiring entrepreneurs and producers (individual pond owners) and as processors.

### **Social inclusion strategy**

44. A strategy for gender mainstreaming and the social and economic inclusion of youth and other vulnerable and marginalised groups has been designed to achieve the following objectives.

- Ensure that men, women and vulnerable/marginalised groups participate and benefit equitably under the Programme.
- Reduce the gender gap and discrepancies across different social groups by improving human development status.
- Build collaboration and synergies with the Ministry of Gender, Sports, Culture and Social Services to ensure inclusivity of all the vulnerable members of the beneficiary communities.

The selection of youth and women will follow the guidelines provided by the Directorate of Youth Affairs through: (i) identification of opportunities for youth empowerment and development; (ii) youth social development initiatives and cluster/group dynamics; (iii) youth empowerment and participation programmes; (iv) youth mainstreaming and field services; and (v) women involvement and gender mainstreaming. Furthermore, the strategy for youth will align with the *Kenya Youth Agribusiness Strategy: 2017 -2021* of MoALF.

- Build awareness about gender mainstreaming, and social and economic inclusion among all Programme stakeholders: men, women, community members, Service Providers (SPs) and County Governments.

45. The strategy will be operationalized along three pillars of activity to: (i) provide direct-targeted programmes and investments to women and youth to boost their human development status and social capital; (ii) ensure full representation of men, women, youth and all social groups in community-level institutions and decision-making processes; and (iii) provide targeted information, education, capacity building to all stakeholders regarding gender awareness as well as on HIV, nutrition and related social aspects.

### Targeting strategy

46. The targeting mechanism will seek to ensure equitable participation in, and benefits from, Programme activities and opportunities for men and women, youth and other disadvantaged social categories. The Kenya National Youth Policy defines a Kenyan Youth as a person aged between 15-30 years. This Policy takes into account the physical, psychological, cultural, social, biological and political aspects, which explain the Kenyan youth situation.<sup>11</sup>

47. The targeting strategy will be guided by the following targeting mechanism. Self-targeting measures will ensure that Programme interventions respond to the priorities and livelihood strategies of the target groups. The selected entrepreneurial activities along the aquaculture value chain will be suitable for all target groups, in particular women and youth considering their potential for food security, local sales, small volume, proximity to home, local processing and value-adding opportunities. Direct targeting mechanisms will ensure that specific vulnerable and disadvantaged groups, such as female-headed households, single women, HIV/AIDS affected people, disabled people and the poorest people, be assisted to access employment and economic opportunities. The Programme will introduce quotas and specific targets to ensure their inclusion (*at least 30% women and 20% youth among fish producers and 100% youth including 50% women youth among non-fish producers*).

48. Target groups participation in Programme activities builds around three categories of value chain stakeholders, namely: (i) male and female fish farmer households; (ii) specialized value chain actors; and (iii) providers of support services. Women will be particularly involved in but not limited to processing and trading as the Programme will support at least 30% women fish farmers in addition to 50% of non-fish producers youth beneficiaries.

49. The Programme estimates targeting 29,900 fish farmers' households, as well as youth involved in processing and marketing of fish and fish products, and other young entrepreneurs and individuals from disadvantaged categories involved as providers of support services, such as transporters, carpenters, mechanics, shop/restaurant owners and retailers.

50. On the development of entrepreneurial skills and other business related activities, ABDP will target 5,500 youth, (50% women youth) among the non – fish producers to develop micro-enterprises and small businesses along the aquaculture value chains. They will be mobilized to join the Aquaculture Support Enterprises (ASEs). *The vast majority of the above mentioned target (5,000 youth) will be selected among the more disadvantaged groups and would be classified as level – 1*

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<sup>11</sup> GoK (2012). Draft Kenya National Youth Policy, 2012.

beneficiaries. The remaining will be selected among the most entrepreneurial youth individuals and are expected to be mostly among level -2 beneficiaries.

## B. Development objective and impact indicators

51. The *Programme goal* of the proposed ABDP is set as **Reduced poverty and increased food security and nutrition in rural communities**.

52. The corresponding *Development objective* is **To increase the incomes, food security and nutritional status of the wider communities of poor rural households involved in aquaculture in the targeted Counties**. This objective is in conformity with the current IFAD COSOP for Kenya: (SO-II) Improved access to productivity enhancing assets, technologies and services for vulnerable rural women, men and young people in target areas.

53. The selected indicators of intended Programme impact, drawn from the Logical Framework, are shown in the following table.

**ABDP impact indicators**

1	# of persons receiving technical and/or financial services promoted or supported by the Programme. <sup>12</sup> (outreach)
2	# of households have improved asset ownership index compared to baseline. (Goal)
3	% good dietary diversity (data for households and women) <sup>13</sup> .
4	# of target households reporting increased annual net income from baseline, disaggregated by fish farmers, processors and traders.
5	% increase in National annual fish consumption (current national average 3.6 kg).
6	# of households reporting an increase in production and graduated from level 1 (subsistence) to level 2 (semi-commercial).
7	composite index of market prices of fish and fish products in Programme areas.
8	# of households reporting adoption of environmentally sustainable and climate resilient technologies and practices.
9	# of persons reporting an increase in consumption of fish.
10	# of households accessing aquaculture production input and/or technological packages.
11	# of fishponds constructed, upgraded or rehabilitated and stocked with fish in an environmentally sustainable and climate smart manner..
12	# of persons trained in business management. <sup>14</sup>
13	# of households provided with targeted support to improve their nutrition.
14	value of fish products marketed by Programme beneficiaries.
15	# of supported rural aquaculture related enterprises reporting an increase in profit.
16	# of persons trained in business management.
17	# of smallholder households included in outgrower schemes and linked to the market.
18	# of aquaculture-related enterprises accessing business development services.

<sup>12</sup> All target groups are disaggregated by gender and age. Each farmer or non-producing value chain actor represents an average household of six persons.

<sup>13</sup> Good dietary diversity for households defined as intake of ≥5 food groups out of 12 food groups, and for women intake of ≥5 food groups out of 10 food groups.

<sup>14</sup> Including: (i) fish production practices and technologies; (ii) fish farming as a business; (iii) good environmental and climate smart farm management; and (iv) off-farm activities, such as post-harvest handling; food safety, hygiene.

19	# of extension officers trained by the Programme.
20	# of knowledge management products developed to support aquaculture.
21	# regulations and policies proposed for decision makers for ratification / approval

### C. Outcomes/components

54. The Aquaculture Business Development Programme comprises two mutually supportive Components concentrated on strengthening the aquaculture value chains to benefit smallholder fish producers, small-scale supporting service providers and their rural communities. The substantive ABDP Component activities and investments are facilitated by an implementation support structure embedded in the host GoK agency and providing physical and financial management, and proactive knowledge management, monitoring and evaluation functions.

#### Outcomes

55. The Component **Smallholder aquaculture development** aims to raise the efficiency, profitability and sustainability of ongoing and new aquaculture activities in mixed smallholder farming systems, with associated nutrition activities to improve diet quality and food security of the wider rural communities. In doing so, the Programme will promote viable business activities based on aquaculture through group and enterprise mobilisation, training and support, investment in productive infrastructure, and the transfer of technical and business skills. Promoting climate resilience through climate smart aquaculture and environmentally sustainable forms of production will be a crosscutting theme. Particular attention will be given to water needs and quality, as well as the suitability of different agro-ecological zones for different aquaculture technologies.

56. The complementary Component **Aquaculture value chain development** seeks to improve the efficiency of the whole aquaculture value chain, with a concentration of Programme efforts and resources on operations that either include smallholders directly or demonstrably benefit the mass of small-scale producers. The second Component is driven by the creation of a range of Public-Private-Producer-Partnerships within the aquaculture value chain and features a number of modest but important actions to strengthen the public and private services crucial to success in the Subsector, including the policy and regulatory framework, public infrastructure, extension capacity, priority research, quality assurance services, fish health and surveillance services and access to financial services.

#### Component 1: Smallholder aquaculture development

57. **Expected Outcome** of the first Component is to improve the production and productivity as well as the food security and diet quality of smallholder farmers. The objective is to strengthen the capacity of smallholder farmers, mostly aquaculture pond farmers, to increase production and improve productivity as well as to create opportunities for non-fish farming actors interested to develop micro-enterprises along the aquaculture value chain. The Component will also contribute to improved diet quality of the Kenyan population through the increased awareness on consumption of fish, fish products and dietary diversity.

58. Although efforts have been made, in the past through interventions intended to uplift the aquaculture sector targeting smallholder farmers, challenges remain in ensuring that there is sustainable business viability in the activity. These challenges include: inadequate technical capacity to manage fish farms; limited access to affordable high quality inputs; weak management skills to ensure consistent quality and quantity of supply to market; low bargaining power; and limited access to market information. These challenges have resulted in only a small contribution from aquaculture to household incomes and very few job opportunities, thereby limiting the potential of the sector to contribute to good nutrition outcomes.

59. In response, this Component aims to:

- upgrade aquaculture production base through rehabilitation of existing aquaculture production facilities (ponds and others), including those established by the ESP;
- introduce new fish farming facilities (ponds and others) focusing on new entrants to the sector (mainly youth and women);
- develop sound practices, training and capacity building for smallholders practicing cage culture and aquaculture in small man-made reservoirs, pending the completion of guidelines and SEIAs, (see Subcomponent 2.2; no related hardware investments are expected under Component 1);
- promote the technical and business skills of smallholder fish producers to increase their production and productivity as well as their income and move them from subsistence to commercially oriented production;
- build the capacity for feed cottage industries and fingerling production, introduced under the ESP program.
- identify entrepreneurial off-farm opportunities and create skills for off-farm entrepreneurial opportunities, focusing youth including landless, near landless youth, and women and other disadvantaged groups; and
- promote fish consumption and the production of value-added fish products to advance the nutritional status and food security of the wider communities, with particular attention to the most vulnerable categories including children and women of reproductive age.

60. The Programme will work mostly with pond aquaculture farmers but will also focus on small reservoir farmers. As discussed above, no support to cage culture in Lake Victoria will be provided under Component 1 other than developing of guidelines and studies.

61. The Component will work with rural communities within which aquaculture is being practiced by smallholders, engaging with existing village leadership structures and farmer organisations, and with existing and specially-formed groups with a shared interest in aquaculture production or closely-related support activities.

62. The Component will target 35,500 direct beneficiaries (each representing a household of smallholder fish farmers who are mostly pond owners), of which at least 10,000 (30%) women fish farmers and 2,750 non-fish farmers youth women and 11,500 (33%) youth (fish farmers and non-fish farmers). Self-targeting mechanisms as well as direct targeting measures will be applied to ensure equal participation and benefits for all social categories, including the most disadvantaged and nutritionally at-risk groups. Other indirect beneficiaries will include rural communities as a whole, which will benefit from improved nutrition education and other community nutrition initiatives.

63. Training of beneficiaries on production will be carried out throughout the programme using the Farmers Field School (FFS) approach. The Food and Agricultural Organization (FAO) is expected to provide a grant (TCP) in the amount of USD 400,000 to support such activities over the first year. The programme will explore possibilities to develop partnership with FAO to continue supporting this role throughout implementation. The ABDP includes financing for supporting the FFS activities for the entire programme.

64. Technical assistance will play an important role in supporting the target Counties in implementing the programme activities envisaged under component 1 and supporting overall implementation for other components.

65. The programme will develop linkages with other programmes and potential partners that support aquaculture in Kenya; such as the Netherlands funded Kenya Market-led Aquaculture Programme (KMAP), implemented by FarmAfrica. There is an excellent opportunity for ABDP to build on the lessons learnt and possibly achievements of the ongoing KMAP. The programme will explore synergies with KMAP and FarmAfrica. It would be possible that ABDP partner with FarmAfrica and

KMAP to provide some of the above mentioned technical assistance role. This would be subject to the applicable rules of GoK and IFAD review and concurrence.

### **Subcomponent 1.1: Smallholder aquaculture production**

66. The first Subcomponent would concentrate on raising the productivity and incomes of smallholders with the land and resources to farm fish for profit.

67. **Community mobilisation and group building.** The Programme will work with community-based organisations and local/traditional institutions to mobilise and sensitize communities to aquaculture-related opportunities, to get buy-in to ABDP initiatives and to build their potential to improve their quality of life and social and economic well-being. The Programme will undertake a participatory mapping exercise at community level to identify levels of poverty and eligible participants. Self-targeting as well as direct targeting strategies will be used to select participants, based on gap analysis. The selection criteria will ensure inclusion of women and youth, among other vulnerable groups. The Programme will then assist the selected participants to form groups and prepare them socially to participate in substantive activities.

68. The Programme will facilitate the formation and strengthening of 780 fish farming groups and organisations based on clusters of nearby fish producers, which will be termed Small-scale Aquaculture Groups (SAGs). The groups will be used mainly as an institutional focus for extension and training activities as well as facilitating the sourcing of inputs and primary marketing activities. The 29,900 targeted fish producers would comprise 23,400 level 1 beneficiaries who are small-scale farmers (men and women and youth) for whom aquaculture is one among other enterprises contributing to their livelihoods. The targeted fish farmers will include 6,500 farmers from the level 2 beneficiaries group. For new entrants, the participation of women and youth will be encouraged to reach 50% membership, with minimum youth participation of 30%. Overall, the Programme will ensure at least 30% women and 20% youth are reached out among targeted fish farmers.

69. **Aquaculture infrastructure development.** Many aquaculture production facilities (ponds and others) constructed before and during the Economic Stimulus Programme (ESP, 2009-15) are currently under-performing or dormant for a variety of reasons. These would form the initial target for support after assessment of their suitability for aquaculture. There are also opportunities for new aquaculture production or supplementary investments in existing facilities, such as improved water supplies, pond liners and protection against predators.

70. The selection of target sites and beneficiaries for new or rehabilitation of production facilities will be based on a set of criteria to include soil suitability, the availability of good quality and sufficient quantity of water supply throughout the year, availability of adequate land for future expansion and slopes suitable elevation. The soil texture should be suitable for the construction of ponds, good water holding capacity and the growth of natural fish food. The selected participants must be willing to join producer clusters and qualify to be classified as smallholders and qualify with the targeting criteria of the Programme. Site suitability assessment will be done before final selection fish farming units' rehabilitation or new construction. Strategic Social and Environmental Impact Assessments (SEIAs) will be carried out to ensure suitability and sustainability. Existing Water Resource Users' Associations will be engaged in negotiation on the use of water sources before new fish farming units are introduced.

71. The programme will provide targeted subsidies for rehabilitation, improvement and development of new aquaculture facilities for farmers targeted among level 1 beneficiaries. The above does not include direct subsidies for inputs such as feed and fingerlings. For farmers among level 2 beneficiaries, the programme will provide training and technical backstopping only except for youth. Financing institutions would be willing to provide loans for support of items; such as working capital for aquaculture farmers who are practicing / wish to practice aquaculture within mixed farming systems.

72. Facilities requiring high investment costs for rehabilitation will be excluded and support will not exceed the set investment limits of USD 500 per beneficiary household. Beneficiaries will be

expected to contribute labour for earth works and help as needed. For new facilities, the Programme will provide limited support through the provision of goods up to USD 500 per farmer on average. Construction will be considered only if the site has been selected properly and is intended for a priority Programme target group, with a focus on youth. Support for new facilities will be provided in a manner similar to that for rehabilitation, with beneficiaries contributing with labour, earth works and other resources in kind or cash.

73. For all such rehabilitation and new investments, the Programme will seek a technical solution that is both feasible and affordable, preferably employing gravity, wind-powered or solar-powered low-lift pumping, with emphasis on optimal water use efficiency and making the facilities climate proof through saving water, using renewable energy and introducing climate-smart technologies.

74. **Small-scale aquaculture input industry development.** Whilst the larger-scale operators are expanding their outreach and input marketing arrangements for the rapidly growing aquaculture Subsector, the target group under component 1 may not always be in position to access such affordable good quality feed and fingerlings. Given the need to address such gap and the desirability of having multiple suppliers in the marketplace, the Programme would support small-scale producers to establish robust links to existing accessible value chain operators or to produce their own supplies. An inventory of existing fingerlings and feed producers from the Kenya Fisheries Service (KFS) will be used to evaluate access to fingerlings and feeds for individual and SAG members to facilitate the application of economies of scale.

75. There are a number of small-scale fish feed producers in the Programme Counties, some dating from the ESP, some being a side-line for fish producers and many not functioning to design capacity. There are issues in the cottage feed industry with the balance between quality and price, suggesting that few of the units are financially viable. On a case-by-case basis, ABDP would contribute part of the cost of appropriate machinery upgrade and/or equipment needed to establish or restore production for ten producers, with each proposal being presented as a bankable business plan. Training would be provided on request from any small-scale feed producers across the Programme Counties, explicitly for the benefit of SAGs outside aggregator arrangements.

76. Similarly, the Programme would contribute to the capacity building of the small-scale/back-yard fingerling industry. Production is regarded as a potentially lucrative enterprise, but it has to be very carefully operated and managed to be sustainable. The Programme would offer modest grant support to build up local fingerling supplies where there is a convincing case.

77. **Aquaculture productivity.** A large proportion of the prospective beneficiary producers are involved in fish farming on a subsistence level, lacking capacity as well as the advanced technologies and practices needed to engage efficiently in the markets. The Programme intends to address these shortcomings with concentrated technical training, skills transfer and follow-up. The SAGs will receive training in all technical and managerial aspects of pond fish production and working as a group, including governance, representation, group dynamics, record keeping, leadership, transparency and accountability, financial management at group level and financial literacy. The training will be conducted in the first year of ABDP engagement with each individual SAG, with refresher training carried out periodically as required.

78. The training and capacity building for producers will be tailored to the specific needs of beneficiaries and will include: management of aquaculture production; post-harvest handling, food safety and hygiene; environmental management; fish farming as a business and marketing; and nutrition education and gender awareness.

79. The Programme objective of this intervention combined with support for aquaculture infrastructure development is to graduate at least 60% of the farmers from *Level 1 Subsistence smallholder farmers* to *Level 2 Semi-commercial smallholder producers*. Producer groups that meet required threshold production levels individually and collectively will qualify and will be candidate for linkages to the closest aggregator in their region through contractual agreements.



80. The principal means of training and skills transfer will be through the FFS approach. County and Sub-county staff (County and Sub-county Programme Implementation Teams) will be playing important role in this process with backstopping from FAO and technical assistance avenues. They will be trained, capacity built and provided with logistical support in Subcomponent 2.2. FAO will take a leading role in devising the optimum arrangements and technical specifications of an appropriate public sector extension support service for smallholders engaged in aquaculture, with an appropriate mix of demonstrations, Farmers' Field Schools (FFSs) and farmer-to-farmer exchange visits and methodologies that maximize the participation of women. Sustainability is served by the introduction of fisheries trainers in each community to continue with extension services post-ABDP for those producers not involved in aggregator arrangements.

### **Subcomponent 1.2: Development of enterprises in support of smallholder aquaculture production**

81. The second Subcomponent would promote income-generating activities for youth not doing primary fish production. The objective would be to promote Aquaculture Support Enterprises (ASEs) as a means of income generation and empowerment for youth who are non-producers of fish, especially for those from disadvantaged groups, by improving their access to resources and productive assets. This initiative complements the Programme assistance to SAGs by targeting marginalised people from the same rural communities.

82. **Establishing/strengthening youth ASEs.** To support youth employment and self-employment in rural areas, the Programme will promote the involvement of young men and women in aquaculture-related enterprises, introducing through them a business-oriented approach to the Subsector. To this end, the Programme will implement a "champion"-led ASE development initiative applying a methodology promoted successfully by ILO: Start and Improve Your Business (SIYB). This is a global business management coaching programme, featuring four training packages that respond to various stages of business development. Youth champions are identified and goes through training program, Each youth champion will be responsible for a youth group of 10 individuals, providing selection, formation, training and mentoring for one year. The objective is to assist the youth to establish viable businesses for sustained economic growth.

83. An initial 500 young potential rural entrepreneurs (at least 30% women) will be selected as "champions" that the Programme will support to initiate and consolidate their business ideas and plans. These champions will receive intensive SIYB training on how to develop a concrete business idea and how to devise a bankable business plan, and then become responsible to support another ten youth each to take up income-generating opportunities along the aquaculture value chain. At full development, the final number of youth involved in the scheme will be 5,500 (50% women).

84. The Programme will support the establishment and strengthening of ASEs to be engaged in any business activities related to the aquaculture value chain, through the identification of profitable markets with growth potential for fishery products and services. The Programme will provide as well additional technical assistance, seed capital and linkages with the financial sector. Under this Subcomponent, only small activities would be supported, such as pond construction or transportation of inputs small enterprises.

85. Possibilities for direct collaboration between ABDP and ILO will be explored at early stage of Programme implementation.

### **Subcomponent 1.3: Community nutrition initiatives**

86. The objective of this subcomponent is to contribute to good nutrition using fish as the food vehicle to improve diet quality of women, children and households in the targeted Counties. GoK is promoting aquaculture and the use of fish products to enhance national food security. Kenya's 2014-2017 National Nutrition Action Plan recognizes fisheries as one of the major sectors that contribute to the goals of the national nutrition agenda. In support of this aim, the Programme would contribute to

an increase in annual fish consumption as well a good nutrition outcome by overcoming two key constraints: low availability and affordability of fish, especially for poor households; and culturally grounded practices that limit fish consumption.

87. The Programme will incorporate nutrition awareness/information sharing activities and the promotion of fish value-added product development in all community interactions with the SAGs and ASEs, and possibly through the FFS. These supplementary interventions will be of importance to both improving diet quality and increasing the demand and consumption of fish in areas and communities where fish is not yet accepted fully as a good alternative for more traditional dishes. At village level, ABDP nutrition initiatives will be driven by the community members themselves and focus on the most disadvantaged and malnourished women, children and households within the vicinity.

88. The implicit theory of change for these community nutrition initiatives is the engagement in the fish supply chain as a vehicle for income and nutritious foods for healthy eating, contributing to good nutritional outcomes. Groups of small-scale fish farmers will be engaged on intensified nutrition promotion for increase fish consumption and healthy eating through income impact pathway. All community facilitators and extension staff will be trained to adopt and apply nutrition-sensitive approaches. The expected outreach of the nutrition initiatives is 300,000 people.

89. **Nutrition knowledge, curriculum and training materials development.** The Programme will fund nutrition surveys and studies on topics agreed upon with SDF&BE to test fish-related issues in rural diet and nutrition. Aside from the scientific aspects of nutrition, there is much to learn about the behavioural, cultural, habitual and economic factors influencing rural diet in Kenya, including fish consumption. In collaboration with other associated GoK technical agencies, the Programme will contribute to an updating and overhaul of the nutrition elements of the primary and secondary school curricula to the benefit of the whole national school population. A form of junior farmer field schools is envisaged in this activity in collaboration with FAO.

90. A range of fish- and nutrition-related communication materials, including posters, hard copy information leaflets and recipes in appropriate languages, short video presentations and radio features, will be commissioned to support the rural community nutrition campaigns. The materials would be utilised primarily by the Programme field staff but also be made available to the concerned technical units of non-ABDP Counties. This activity will build on the lessons of nutrition awareness IEC materials used in the FAO-supported intervention “Smart Fish Programme”.

91. Community **nutrition actions.** *Fish fairs* staged in each interested community or cluster of communities will aim at promoting fish consumption, with a specific focus on catfish processing and value addition. The fish fair events will involve awareness-raising messages using television and radio programmes, interactive drama during a fish fair event in a school or community and/or an “Eat more fish campaign” targeting local hotels with IEC materials such as table mats with fish information; community fish cooking trainings and competitions; and community road show caravans to promote fish consumption. The primary target locations will be non-traditional fish eating communities. Farmers will be engaged in the identification of national icons as “fish champions” within the community to facilitate the promotion of fish consumption.

92. ABDP will support a *school fish feeding programme*, building on positive experiences with school fish ponds in the country, including ponds developed under the ESP. The identification of beneficiary schools will focus on public schools within the Programme area with a high proportion of malnourished and poor children as well as poor school attendance records and on schools with ongoing school feeding programmes established by GoK, WFP, FAO or other partners. This activity will target at least two public primary schools per County within the vicinity of a viable fish farming association and/or grower for access to good quality inputs and regular support on productivity, reaching at least 28 schools over the duration of ABDP implementation. Each participating school will be linked to the extension services to promote fish production, inclusion of fish in school meals and skills building in fish preparation.

93. The purpose of this intervention is to contribute to school meals and raise awareness on the nutritional benefits of fish, with a spill-over effect on the promotion of fish consumption from school children to family members at home. ABDP will explore synergies with other relevant stakeholders and sectors. The aim is to demonstrate to schools the benefits of fish farming and fish utilization for sustainability.

## **Component 2: Aquaculture value chain development**

94. This Component comprises interventions to broaden and deepen the aquaculture value chain with a series of strategic Public-Private-Producer-Partnerships (PPPPs) within a robust modern public sector framework as well as support for smallholder farmer groups' business plans. The purpose of the support is to make the aquaculture producers' core activities financially viable and bankable. The Component would also seek to build up the capacity of public and private supporting services to the aquaculture Subsector with the express intention of increasing the real demand for smallholder production.

### **Subcomponent 2.1: Smallholder-based aquaculture value chain development**

95. The objective of the Subcomponent is to contribute to the establishment of a commercially viable aquaculture value chain in Kenya, with a focus on small- and medium-sized aquaculture pond producers. To achieve this objective, it is proposed to use tripartite agreements among the Programme, the aggregator/private party and smallholder producers; this three part agreement is referred to as the public private producer partnerships (PPPPs). In addition to PPPPs, this Subcomponent will also finance investments for ASEs and SAGs through a business plan competition window. Implementation of this Sub-component will be supported by Transaction Support Consultancy Firm / consortium, referred to hereon as the Transaction Advisor.

96. The PPPPs are conceived as vehicles to bring in the benefits of economies of scale, (that is, lower average cost per kg of fish), and to overcome identified weaknesses in all relevant segments of the aquaculture value chain. The PPPPs will be based on mutually beneficial contractual obligations among the ABDP, at least one commercially-driven aquaculture agent and the aquaculture producers. The PPPPs will include two generic models: one, referred to as the Independent Aquaculture Aggregator (IAA) PPPP model, that will aim at improving and increasing the production capacities of small aquaculture pond farmers; and a second that will aim at improving and increasing production capacity and productivity in the management of existing processing plants, built by ESP and possibly others, which will be referred as the Lease Contract PPPP model. These PPPP models are similar to the schemes common in Kenya.

97. One of the main focuses of the first model will be creating outgrower schemes that involve production and incorporating key nodes along the value chain. This would typically involve a nucleus farm and essentially large number of smallholders. The model could cater as well for few additional innovative transactions focusing more on areas such as value addition, marketing or input provision. The overarching condition is that large numbers of smallholders are directly involved in all transactions. The first model will provide as well for a business plan competition window, which is conceived as a vehicle to support ASEs and SAGs to identify business opportunities on specific segments of the value chain, mostly uncovered by the outgrower transactions.

98. With regard to the second model, each of the PPPPs that involve a lease contract would also provide linkages with smallholders that are supported through business plan competition or outgrower scheme.

99. The Subcomponent will raise the awareness of targeted ASEs, SAGs and potential IAAs as well as other key actors regarding opportunities in the value chain. This will also involve final fish products buyers, TA providers and financial institutions.

100. ABDP financing in all cases will be awarded by an ABDP financing committee, comprised of government relevant entities, financial institutions, and other value chain actors, upon evaluation of

proposals with the support of the above mentioned Transaction Advisor. Evaluation criteria will include technical aspects and financial proposals. In the financial proposals, the bidding variables will be: lowest matching grant requested in the case of IAA contracts; maximum lease fee paid to the County Government in the case of Lease contracts; and maximum economic rate of return in the case of the business plan competition. In all cases, the Transaction Advisor will undertake a due diligence assessment on behalf of the ABDP.

101. Selection criteria will include technical viability of the business plan, level of support for smallholders (including number of small holders), equity or debt financing raised by the private party or the group and technical capacity of the group or private party, innovation, number of targeted smallholders, elements of environmental conservation and inclusion of climate smart agriculture. The grant will not finance 100% of the cost of any of the transactions or business plans. The IAA, private party or group is expected to provide its contribution in advance.

#### ***Activity 2.1.1 Independent aquaculture aggregators PPPP model***

102. This Activity will finance about 22 Independent Aquaculture Aggregators PPPP contracts. Contracts for the Independent Aquaculture Aggregators will be tendered according to competitive bidding procedures. For a typical IAA transaction that involve an outgrower scheme, two main contracts are to be signed, one that is expected to rule the use of a grant based on a well-defined business plan signed between the ABDP and the IAA, and another signed between the IAA and the aquaculture farmers. The latter will be a fish purchase agreement that will ensure a market for the sales of the small aquaculture producers at market prices and the provision of technical support and quality inputs. It is expected that these two contracts will enhance the ability of the IAA to get long-term commercial co-financing for the development of his/her productive infrastructure. It will also enhance the ability of small aquaculture producers to get working capital from commercial sources.

103. Selection criteria of the IAAs that can participate in the bidding for contracts would include: experience in agribusiness in Kenya, experience of the proposed team in the area of aquaculture, equity contribution by the private sector and financial capacity.

104. Key obligations of the IAA under the PPPP contract will be to coach farmers in all technology aspects of establishing and operating aquaculture ponds, do procurement of fish feed and fingerling inputs of appropriate quality, verification that such inputs comply with best technical standards, and do the marketing and sales activities for all participant aquaculture farmers. The IAA will commit to buy fish from the small pond aquaculture producer fish outputs at market prices. The obligation of the aquaculture pond producer will be to supply a given volumes of fish of an agreed quality, within a given timeframe. He/she will also commit to adopting the promoted technological know-how using quality inputs (feed and fingerlings) procured by the aggregator.

105. It is expected that at the end of the contractual period (normally around 5 years) the typical IAA will be working with about 250 aquaculture farmers each owning three ponds on average, achieving a combined production volume of about 262 mt of fish per year, while at the same time achieving lower costs of production.

106. Funding under this Component includes investment financing for the Aggregators and the small aquaculture pond owners, both of which will be documented in the business plans presented by the aggregator in response to calls for proposals issued by the ABDP. It is expected that investments in an aggregator's typical business plan include a warehouse with cold storage and an area for fish feed storage, a refrigerated truck, outlet furniture and five motorbikes. It will also include the investment cost of pond rehabilitation and/or construction of new ponds for at least 250 farmers and a description of how he/she will conduct business, where the farmers are located and where the target market is located, the area they will cover, how the farmers are going to produce fish, pond siting and digging, and pond management.

107. Financing from the ABDP will include a maximum 45% grant of the aggregator investment, maximum 60% cost of pond upgrade (if needed) and maximum 55% of new ponds. In addition to the

investment funding, the ABDP will finance the two-year cost of five technical extensionists (for example, graduates from RIAT, an aquaculture vocational institute in the project area) who will work hand-in-hand with the pond owners, coaching them in the rehabilitation/construction and operations and management of the aquaculture production processes. After the second year, the cost of the technical extensionists will pass to form part of the fixed cost staff of the aggregator, to help him/her on the management of all aspects of the value chain management.

108. To receive funding from the ABDP, IAAs can be organized either as a limited liability company or as a cooperative, both managed professionally. Private sector contributions by farmers can include labour for siting and digging ponds, the cost of land for ponds and cash to cofinance liners.

109. For this IAA PPPP model to work, the banks and other private sector financiers will provide working capital to small aquaculture producers and long-term funding for the IAAs. It is expected that the IAA will commit equity funding in addition to grants from the ABDP and loans from banks. The participation of private financiers will be the actual test of commercial viability of the IAA PPPP model.

#### **Activity 2.1.2 Lease PPPP contract**

110. This Activity will finance PPPP lease contracts to operate and maintain the four fish processing plants built during ESP as well others to be identified during implementation. Each of these PPPP transactions would be possibly supported by a large IAA outgrower contract or multiple IAA schemes for the supply of fish to the fish processing plants. The lease contracts will be tendered according to competitive bidding procedures, based on a feasibility study for upgrading and expanding the productive capacity of the fish processing plants. Two main category of contracts are to be signed, one that is expected to rule the use of the fish processing plant signed between the County Government and the Fish Processing Plant contractor, and the other category would be signed between the Fish Processing Plant contractor and the smallholder aquaculture producers (supported by an IAA). The latter will be a fish purchase agreement that will ensure a market for the sales of the small aquaculture producers at market prices. As in the previous case, these two contracts are expected to enhance the ability of the lease contractors and small aquaculture producers to access commercial finance.

111. For the four processing plants that was constructed under the ESP, key obligations of the lease contractor (in addition to purchasing fish from the small aquaculture producers) will be to undertake structural adjustments of the fish processing plants, including an overhaul of the production line, installation of blast freezer, plate freezer, environment friendly oven, and purchase of a refrigerated truck if one is not in place. The lease contractor will develop a source of potable water (small water treatment plant when necessary) and install a back-up generator, to be included in the feasibility study.

112. It is expected that the lease contractor will increase fish processing plant production capacity from the current 12 mt/week to 20 mt/week, equivalent to 1,040 mt/year. It is also expected that each lease contractor will be supplied by four IAAs who will be coordinating the production of small aquaculture producers as described in the previous section.

113. Funding under this Activity includes investment financing for the IAA and for the small aquaculture (e.g. pond) producers, both of which will be documented in the business plans of the lease contractors. The lease contractor in charge of the facility can play the role of the IAA for the smallholders to be linked to the facility or it can be linked to smallholders who are supported by IAAs who are not involved in the operation of the processing plant. In either case, IAAs are expected to put in place fish productive infrastructure and logistical services for small farmers producing fish for the fish processing plant. The ABDP will include financing for four warehouses with cold storage, an area for fish feed storage and a refrigerated truck. It will also include funding for the investment cost of pond rehabilitation and/or construction of new ponds for at least 800 farmers.

114. It is expected that the lease contractor will receive zero subsidy for implementation of the business plan for the facility itself and will pay a lease fee to the County, with the lease fee to be

determined by competitive bidding during tendering of the contract. However, ABDP has provisions for supporting IAA schemes to be linked to the facility. Financing from the ABDP will include a maximum 45% grant of the aggregator investment, maximum 60% cost of pond rehabilitation and maximum 55% of new ponds. In addition to the investment funding for each IAA, the ABDP will also finance the two-year cost of five technical extensionists that will work hand in hand with the pond owners, coaching them in the rehabilitation/construction and operations and management of the aquaculture production processes. After the second year, the cost of the technical extensionist will pass to form part of the fixed cost staff of the aggregator. To receive funding from the ABDP, the IAA can be organized either as a limited liability company or as a cooperative.

115. For the Lease PPPP model to work, the banks and other private sector financiers will provide investment and working capital funding to the lease contractors, IAA and small aquaculture producers. In doing so, such financiers will do their own due diligence assessment.

116. It is expected that this activity will support as well other number of transactions that involve infrastructure elements that are similar in size to the above-mentioned processing plants, albeit with different ownership arrangements. While this may require variation of the transaction and contractual arrangements, the elements of a large infrastructure facility supported by one or more IAAs would remain the same.

### ***Activity 2.1.3 Business plan competition window***

117. This Activity will finance business opportunities in the aquaculture value chain discovered by SAGs and ASEs. For example, cases when/where developing linkages between the private sector/aggregators and SAGs/ASEs prove not possible, the ABDP will work closely with the SAGs and ASEs to develop alternatives for individual business plans outside the private sector aggregator model. This will be targeting as well individual SAGs and ASEs showing the potential to graduate to a semi-commercial level of operations, as follow.

- **Business plans of SAGs:** SAGs that are targeted and trained under Component 1 and have progressed sufficiently will be invited to submit stand-alone business plans when it is not feasible to link them to any of the PPPPs models above. A maximum of 90 groups would be supported under this model. The plan should include mechanisms for the inclusiveness of all members, (including women and youth), and for the provision of inputs.
- **Business plans for ASEs:** ASEs that are targeted and trained under Component 1 and have progressed sufficiently will be invited and guided to develop stand-alone business plans for non-producing commercial activities along the value chain, only when it is not feasible to link them to any of the PPPPs models above. ASEs may need to merge to be able to develop and implement BPs, envisaged under this activity. A maximum of 200 of BPs for ASEs are envisaged to be supported by this activity. The plan should include mechanisms for inclusiveness of all members, (including women and youth).

118. Well-defined criteria for inclusion of such groups will be developed and used so that elite capture is avoided. The ABDP will guide selected SAGs and ASEs throughout the process and monitor their performance closely. Examples of possible proposals for business plans for SAGs and ASEs would include the following.

- Improving marketing through marketing stands, fish eating places and related enterprises.
- Improving post-harvesting through small-scale facilities for filleting, freezers.
- Small-scale processing facilities for making fish-balls, fish sausage and other value addition products.
- Improving aquaculture systems management through provision of goods to improve/upgrade the production base or address challenges along with technical assistance for improved pond management (SAGs only).

119. The first three stand alone proposals would fit an ASE PB. When coupled with the fourth proposals it would be fit for a SAG.

120. While the Programme would provide a grant/support package, participating SAGs and ASEs are expected to raise part of the financing through their own resources. Matching grants (maximum 70% in the case of ASEs and 44% in the case of SAGs) will finance part of the costs required for the business plan, with the balance to be contributed by the groups through loans or own contribution.

121. The MoUs between ABDP and individual ASEs and SAGs, based on their business plans, will include clear binding targets and responsibilities. Both target groups will be closely and regularly monitored by the Programme and ASEs will receive additional mentoring support. Special consideration will be provided for women and youth and sufficient numbers of smallholders and marginalised groups would be served by each business plan.

122. Business plans that aim at building resilience and climate smart approaches will receive priority or additional support. Examples are: making the facilities climate proof through saving water; using renewable energy for pumping and post-harvest; and introducing climate smart technologies. Where relevant, the prerequisite of a dependable year-round water supply for established and new facilities will be assessed, preferably employing gravity, wind-powered or solar-powered low-lift pumping (in case of ponds and other relevant facilities), with emphasis on optimal water use efficiency, using renewable energy and introducing climate-smart technologies for post-processing.

123. Instructions to participate in the business plan competition will be detailed early during preparation of the Programme Implementation Manual. The business plan competitions would include the definition of solid stand-alone business models whereby the proponents of each business plan define credible value propositions based on market assessments.

## **Subcomponent 2.2: Aquaculture sector enabling environment and support services**

124. This Subcomponent will strengthen the overall enabling environment needed for the sustained development of the sector. The Programme would promote any proposed business plans with potential competitive advantages that either have an integral role for smallholder producers or can be shown to benefit small- and micro-scale operators through input cost reductions, marketing opportunities or other services.

125. **Policy engagement.** ABDP will facilitate policy review and advocacy to improve policy practices at the National and County levels. The initial list of topics includes: preparation of a National Aquaculture Strategic Plan; a review of the legal, policy and institutional environment for aquaculture development to ensure its relevance to the Subsector's development and evolving aspirations, including small aquaculture farmers and adequate PPPs; the development of aquaculture regulations linked to the newly enacted Fisheries Management and Development Act N° 35 of 2016; and domestication of the new National legislation into the devolved Counties' fisheries administration, policy and guidelines.

126. Programme emphasis will be on support and technical advice to the responsible Government authorities to develop the frameworks and enabling environment (policy, codes, regulations, environmental and social safeguards, site identification, EIA) for climate smart aquaculture, for example, towards sustainable cage culture development.<sup>15</sup> Specifically, the Programme will support the State Department of Fisheries to develop coherent regulations for cage culture, including site suitability mapping and robust criteria for the award of concessions for cage culture investments, and Strategic Environmental Impact Assessments for cage culture and for aquaculture in dams and reservoirs. Interventions may include analysis of the ease of doing fish farming business in Kenya as compared to other countries of the East African Community, in particular Uganda and Tanzania.

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<sup>15</sup> Environmental Management and Coordination Act 1999.

127. **Public infrastructure.** The Programme would address the upgrading of inland fish marketing infrastructure under the responsibility of local authorities and likely to remain in the public sector. The scope may include the refurbishment of physical plant (markets, cold storage at key marketing points for perishable fish products) and value-adding services in more remote locations still not served by private sector operators (internal distribution of produce, post-harvest handling, processing, branding).

128. As with the private sector-led business plans, any public sector investments in inadequate or missing climate resilient and low emission infrastructure and services deemed necessary for commercial aquaculture in the targeted area would be addressed in a PPPP framework. Possible PPPP mechanisms may comprise the leasing of existing Government-owned aquaculture demonstration facilities to entrepreneurs to run on a commercial basis or the encouragement of private entities to finance and manage processing or breeding facilities in target areas to support smallholders, (with or without capital sharing with the public party). Private sector partners will be expected to bring in equity finance. Robust risk sharing arrangements between the parties will be needed to attract such private sector investments, along with links brokered between the private sector and commercial financial institutions to raise debt for financing such private sector-led activities.

129. **Extension services.** The extension officers at both County and Sub-county level are pivotal to delivering aquaculture production and management information under Component 1 and maintaining flow of advice and encouragement post-Programme. The demand for aquaculture services has been rising rapidly but the gradual increase in supply disrupted by conduct of the ESP and the devolution of Subsectoral responsibilities to the new County administrations. Provision and delivery of effective and efficient extension and advisory services are necessary conditions for ABDP success and sustainability. It is therefore important that the extension cadres receive appropriate in-service training and retraining to improve their technical capacity and confidence to transfer the knowledge, skills and technology to the farmers for increased productivity.

130. To this end, sufficient capacity is installed in national institutions to deliver strong vocational training for future field staff. The Programme will develop and scale-up existing aquaculture training programmes at RIAT (in the Western region), Sagana (in the Central region) and possibly other units as appropriate, mainly by building up curricula to respond to the specific training needs of the Programme. Nutrition, business, environmental education, gender and climate change mitigation will be embedded in the extension training modules. In addition to the classroom approach to knowledge, technology and skills transfer, more emphasis is will be placed on practical “hands on” training around ponds and facilities similar to those operated by the majority of smallholders. The training institutions may be assisted with minor upgrading of teaching facilities.

131. ABDP will train the aquaculture field staff of the target Counties, as well as a number of Master Trainers and Trainers of Trainers (ToT), in short courses at RIAT, Sagana or other institutions as appropriate.

132. From Programme inception, the delivery of public extension services will be supported with transportation for extension staff at County and Sub-county levels, (vehicles and motorcycles respectively) and with the recurrent cost of extension field operations.

133. Looking to the future and focusing on sustainability, the Programme will pilot alternative extension service delivery models, including pay-per-visit, as possible successors to public service provision. However, any such extension services will be provided at a subsidized cost initially to ensure poor farmers are not crowded out.

134. **Aquaculture research.** The Programme will commission qualified state and private institutions to conduct scientific and technical research activities linked to ABDP objectives. It is assumed that the large-scale businesses will pursue their own research into the most advanced production technologies for commercial reasons, including technologies concentrated on seed, feed, aquaculture facility management and best practices, and production systems that maximise productivity, taking



into consideration building resilience to the impacts of climate change and strengthening early warning systems.

135. The Programme will partner with WorldFish and National research and training institutions, including the Kenya Marine and Fisheries Research Institute (KMFRI) and Universities to introduce improved and better performing fish breeds, and with the private sector for feeds and seeds research. A preliminary listing of priority research topics has been drawn up (See Working Paper No. 14). The Programme will also commission a suitability assessment of potential aquaculture sites, including for cage culture.

136. **Quality assurance services.** The Programme would facilitate the development of a credible National quality and safety monitoring system to consolidate advances in the conduct of domestic trade and open up opportunities for exporting aquaculture fisheries products. The system would comprise a product branding and traceability mechanism, seed and feed standards, domestic and external certification processes, and Residue Monitoring Plans. As a foundation for such modern quality assurance services, the Programme will support the development of culture-specific risk management systems for the inputs, production and products of smallholder aquaculture operators. This subcomponent will support as well creation of arrangements for quality assurance under components 1 & 2, to ensure quality of inputs and produce.

137. **Fish health and surveillance services.** ABDP will assist GoK in addressing an important weakness in the public sector supporting small-scale aquaculture and fisheries in general, namely the lack of effective fish health and surveillance services. Nationally, the plan is to build up the technical capacity of Veterinary Services to deal with aquaculture and to install essential equipment related to surveillance in the existing KMFRI laboratories located in Sagana and Kisumu. For each target County, the Programme would train pathologists on fish health surveillance techniques and provide appropriate field equipment to enable regular and reliable surveillance services.

138. **Financial services.** Financial needs identified for small-scale aquaculture farmers are related to access to quality inputs like fingerlings and feeds for each production cycle and investment for establishing new ponds once business has proven profitable. For other value chain actors upstream and downstream the value chain, financial needs depend on the nature and size of the enterprise. Finance is needed for working capital and for investments in means of production (equipment, machinery, vehicles and so on). Financing needs may range from a few hundred to several million USD.

139. There are diversified opportunities for the aquaculture value chain actors to access finance depending on their nature and needs, from Banks, MFIs, Savings and Credit Cooperative Societies (SACCOs) or impact investment funds. The Programme will work to ensure that the Subsector increases its attractiveness and creditworthiness to financial institutions and investment funds, to de-risk to a sufficient level lending to small-scale producers and value-adders, and to build the capacities of the lenders to develop appropriate financial products and extend access to their services to the rural communities (for institutions not benefiting from PROFIT support). Specific products may be designed for women and (especially) youths, deemed more risky by financial institutions due to their lack of business experience and higher mobility.

140. The various businesses under the PPPP approach are likely to secure access to finance on their own merit (including for subcontracted small-scale farmers) at least for the businesses with a sound track record. Matching grants are justified for new aggregators in the aquaculture value chain. Justification is not only the difficulty to access finance from the financial sector in the absence of track record but also the need to incentivize new entrants to develop an outgrower scheme, considering the high level of risk involved.

141. The Programme will also build synergies with the GoK/IFAD-funded PROFIT Programme. The Credit Facility and Risk Sharing Facility could be leveraged to finance the more risky SAGs model, since their concessional conditions may attract further financial institutions to venture into this financing. The Business Support Service Facility will be leveraged to ensure that PROFIT supported

financial institutions develop adapted financial products for the aquaculture value chain. The PROFIT completion date is June 2019, but leverage may continue after termination of the initiative as GoK is intending to sustain the Programme inputs. Although technical support under PROFIT will end in 2018 and aquaculture might not be addressed systematically, it is assumed that financial institutions will acquire a generic capacity to design adapted products for any agricultural value chain.

#### **D. Lessons learned and adherence to IFAD policies and the SECAP**

142. **Lessons learned.** The principal lessons to emerge from IFAD's recent programme in Kenya, informing the present design, relate to: the need to integrate fully NRM and climate change adaptation measures for effective poverty reduction; the importance of policy dialogue in a subsector undergoing very rapid change; the avoidance of overcomplicated designs including activities unrelated to the central purpose; and the need to concentrate the geographical and sectoral scope of investments to improve rural incomes and livelihoods.

143. The pertinent warning signals from recent reviews include: the continuing low GoK budgetary allocation to agriculture; weak project implementation capacity at the County level, particularly with under-strength extension cadres; and the fragmentation of institutional architecture. The major changes associated with the 2013 devolution of responsibilities to the Counties (formerly Districts) are still playing out, including the mechanisms to reconcile National and County policies and priorities in both plans and budgets.

144. The directly relevant experience of aquaculture interventions in Central Kenya by UTaNRMP, in which 37 groups ran fish ponds, underlined the importance of a business approach to fish farming, as with any other enterprise in a smallholder mixed farm. The proposed fish production model features a group of individual producers managing their own pond/s who are associated to benefit from phased batch production, economies of scale on inputs and planned marketing, as well as joint extension and training opportunities.

145. The main lessons learned from the aquaculture initiatives under the GoK's Economic Stimulus Programme 2009—13 concern business aspects rather than technical issues: the development of farmers' entrepreneurial and marketing skills were missing in the initial phase; and the private sector were slow to lead efforts in value chain development through expanded service provision, input supply and marketing arrangements. Smallholder production in isolation cannot succeed.

146. Relevant lessons in closing the gender gap by adopting the Household Methodologies have been drawn from the Smallholder Dairy Commercialization Programme (SDCP) and the Kenya Upper Tana Catchment Natural Resources Management Project (UTaNRMP). Their successful results in supporting gender equality and women's empowerment form the basis for its replication under ABDP.

147. **Adherence to IFAD policies.** The ABDP design is aligned to all relevant IFAD strategies and policies, as observed in Appendix 12. The IFAD *Environment and Natural Resource Management Policy: Resilient livelihoods through the sustainable use of natural assets* has particular significance for ABDP. Also important in this context is the Programme alignment to the *Climate Change Strategy* goal of maximising IFAD's impact on rural poverty in a changing climate and precisely relevant to two statements of purpose: "to support innovative approaches to helping smallholder farmers build their resilience to climate"; and "to inform a more coherent dialogue on climate change, rural development agriculture and food security".

148. In line with *IFAD Rural Finance Policy*, the Programme design promotes smallholder linkages with financial service providers under market-based conditions and focuses on capacity building interventions on both the demand and supply sides to contribute to sustainable access to finance. Matching grants are designed to complement identified financing gaps, in particular related to the financing of innovative approaches, without distorting markets. Performance-based modalities should contribute to the efficient use and significant impact of the grants in terms of outreach and the development of sustainable businesses.

ABDP is guided by the three succinct precepts set out in the *IFAD Policy on gender equality and women's empowerment* (2012): promote economic empowerment to enable rural women and men to participate in and benefit from profitable economic activities; enable women and men to have equal voice and influence in rural institutions and organizations; and achieve a more equitable balance in workloads and in the sharing of economic and social benefits between women and men. Fish farming is a new activity for most smallholders and unencumbered with traditional gender roles – though the mission was told that women are quite happy to let the men wade about in the water.

149. **Social, Environmental and Climate Review Note.** The SECAP (Appendix 12.1) considers the likely impact of significant additional aquaculture development in the country, both spontaneous and Programme driven, given that smallholder aquaculture poses medium risks to the environment. Nationally and at County level, there are strategies, legislation, institutions and action plans in place to mitigate potential negative impacts, and the Programme is committed to reinforcing the operating context of the Subsector. The overall climate risk category is classified as moderate. The SECAP concludes that the potential impacts of ABDP are manageable and/or reversible and therefore the Programme is categorized as a **Category B** project.

150. The SECAP addresses the intractable issue of land tenure and access to productive land for women and youth for aquaculture initiatives, and suggests that land leasing or other medium-term tenure arrangements or the adoption of aquaculture technologies requiring minimal land may offer ways forward. The availability and management of scarce water resources are already major challenges for rural communities; aquaculture has to become part of the solution rather than adding to the problem. The related issue of changes to rainfall patterns points to a need for climate smart aquaculture technologies and practices at the smallholder level, within the context of small-scale mixed farming systems.

151. The SECAP concludes with a list of potential social, environmental and climate risks with corresponding mitigation measures recommended as operational features of ABDP design and implementation.

152. ToR for preparation of the ESMP is included in Appendix 4.5.

### III. Programme implementation

#### A. Approach

153. ABDP will be implemented over eight years (2018 to 2025). Implementation arrangements for ABDP will be set out in a Programme Implementation Manual (PIM). Guiding principles for implementation will be: (i) a flexible approach in response to the needs of rural producers and value-adders; (ii) competitive private sector led activities, driven by effective local and National market demand; (iii) strategic investments in aquaculture and related economic activities founded on effective participatory planning by communities; (iv) individual producers and group enterprises as manager-owners of supported activities; (v) contributing to improved policy and regulatory frameworks in order to create an enabling environment; and (vi) inclusiveness of rural poor, women and youth.

#### B. Organizational framework

154. **Lead Agency.** The Programme will be coordinated and implemented by GoK through existing institutions in line with their respective functions. The Lead Agency will be the State Department of Fisheries and the Blue Economy (SDF&BE) in the Ministry of Agriculture, Livestock and Fisheries. The Department will collaborate with and delegate some technical implementation functions to other entities as may be identified in this design document.

155. **Programme Steering Committee.** A Programme Steering Committee (PSC) under the chairmanship of the Principal Secretary SDF&BE will be set up to provide overall policy guidance to ABDP. The main responsibility of the PSC will be to ensure successful implementation of the

Programme. The PSC tasks include reviewing Programme progress against targets, assessing management effectiveness, deciding on corrective measures where appropriate, identifying lessons learned and good practices, approving AWPBs and reviewing progress and achievements, etc. The PSC will meet quarterly and will have a diverse composition to cater for all relevant stakeholders. The other members will be drawn from National Treasury, the State Departments of Devolution, Cooperatives, Water, Labour and Social Services, Health, two County Executive Committee Members (CECs) and any other co-opted member depending on need; such as youth representative.

156. **Programme Coordination Unit.** For the day-to-day coordination and management of the Programme, and according to the financing agreement between the GoK, IFAD and other financiers, the SDF&BE will set up and delegate oversight and supervision responsibilities to the Programme Coordinating Unit (PCU) located within the programme areas. The location of the PCU could be in Kisumu (Western Kenya) or any other central location within the Programme areas. If the PCU is established in the Western region, a subsidiary office (Regional Project Coordination Unit) would be established in Central / Eastern region or vice versa. The PCU will ensure that the Programme is implemented strictly in accordance with the Financing Agreements between the GoK, IFAD and other financiers, and will facilitate a conducive environment for Programme activities, including the multiple partnerships required for effective implementation. The PCU will drive implementation of the Programme activities in line with the Annual Work Plans and Budgets (AWPBs) approved by the PSC and IFAD.

157. The PCU will interact directly with the SDF&BE on administrative matters, with the implementation teams to be established in each targeted County. The PCU will report directly to the PSC and its responsibilities will include but not limited to: (i) financial and administrative management of Programme resources; (ii) planning of Programme activities and preparation of the AWPB; (iii) contracting and procurement of Programme-related services and supplies; (iv) mobilization and coordination of the activities of the various Programme partners; (v) supervision and documentation of all activities; (vi) setting up and maintaining a flexible M&E database to reflect Programme activities, outcomes and impact; (vii) Knowledge management and (viii) preparation of progress reports. The PCU staff will be competitively recruited by the State Department of Fisheries using a private sector recruitment human resource firm. Recruitment of both the Programme Coordinator and the Financial Controller are conditions of disbursement.

158. The PCU will comprise a team of officers with appropriate project management skills that will be recruited through a competitive process. ToRs for senior PCU staff and key service providers are set out in Appendix 5 and the Programme Implementation Manual. The recruitment of the Programme Coordinator and the Financial Controller will form necessary conditions for effectiveness and disbursement.

159. **County Level Structure.** ABDP activities at County level will be implemented using existing County structures. The Programme will have a County Programme Implementation Team (CPIT) that will be established within each County Fisheries Directorate. The CPIT will be headed by a County programme coordinator from the Fisheries department and will be responsible for implementation of programme activities at the county level as per the established MoUs with the national PCU. The team will comprise mainly staff from the County Departments of Fisheries with participation of county staff from other relevant departments; such as, Veterinary Services, NEMA, WRMA, Gender Youth and Social Services, an Accountant, and any other entity as required. The team will be responsible for mobilization and awareness creation about the programme, monitoring and technical backstopping, and extension and advisory services. It will work directly with programme beneficiaries and will report to the County CEC in charge of fisheries.

160. Implementation will be supported by **technical assistance (TA) teams**, through project partners/service providers. The TA will support overall project implementation and in particular the first component. Under *Component one*, the TA will provide technical assistance in selected areas of expertise on full time basis to be linked to the PCU at their head office. These expertise will include among others; chief technical advisor; community development expert, gender, youth, and nutrition

expert, and entrepreneurial opportunities development expert. It will also provide technical support to the PCU on assignment or part-time basis in selected topics to support Component 1, Sub-component 2-2 and Component 3. This would include for example county level assessment and improvement planning of aquaculture production facilities (such as ponds), support to improvement and construction of smallholder aquaculture production facilities (ponds and others), curriculum preparation for training of extension staff, implementation of training plans, implement activities that support policy dialogue, knowledge management and ESMP development and implementation monitoring at the project level, etc. At the county level, the TA, will form county specific support teams to backstop County implementation, for all components. In doing so, the County level TA will support CPITs in preparation and implementation of plans and reporting. The recruitment of the service provider / agreement with project partner to carry out the TA under component 1 needs to be performed as early as possible during Programme implementation, with the recruitment process to be funded from the retroactive financing or start-up advance.

161. **Food and Agriculture Organization (FAO)** will provide support to farmers training under Subcomponent 1.1 using Farmers' Field School (FFS) approach. A specific MoU will be signed between the PCU and FAO for training of aquaculture farmers in areas of production, management, business planning, nutrition etc. FAO would provide technical support initially through a stand-alone TCP that would be implemented during the early stages of the Programme duration. Specific arrangements will be developed afterwards by the ABDP for continuation of FAO support in this area. The ABDP will provide complimentary financing for implementation of the FFS, to complement the TCP from FAO during the initial period.

162. Under subcomponent 1.2, the PCU will partner with **Start and Improve Your Business – Kenya (SIYB)** to train lead youth on entrepreneurship and enterprise creation along non-production aspects of the aquaculture value chains. This will be complemented by other support from other technical assistance under Component one and support by the CPITs.

163. **Activities under Subcomponent 2.1 Smallholder-based aquaculture value chain development**, aimed at orchestrating the establishment of a competitive commercially viable aquaculture value chain driven by the private sector, will be implemented through Public-Private-Producer-Partnerships. The private parties and beneficiary groups would be selected competitively to participate in the above partnerships. Formulation of the PPPPs models and contractual engagements as well as support for the competitive selection process will be supported by an experienced Transaction Advisory Firm / Consortium, (referred to as the Transactions Advisor). The transaction advisor will be selected through a competitive process. Due to the complexity of this selection process, an individual PPPP expert will support the process. This expert will be recruited as a short term consultant during the start-up phase through the retroactive financing or start-up advance to ensure readiness for implementation.

164. There are four levels of implementation for this subcomponent:

- (i) Building awareness and dissemination stage, which involves holding workshops, meetings, identifying key players. This would include smallholders, SAGs, ASEs, aquaculture farmers' organizations, public sector at national and county level, IAAs, private sector, financial institutions, technical assistance players, etc. Mobilization and identification of potential parties will be carried out by implementation teams at the county level, the PCU, and the Transaction Advisor. This is expected to yield identification of a base of potential partners who are ready to participate in the BP / PPPPs arrangements as well as PPPPs geographical areas and potential areas and models;
- (ii) Process of selection of PPPP/BP winning proposals on competitive basis. This would involve: (a) advertisement, (b) provision of TA by the Transaction Advisor to those eligible to participate and have expressed interest, and (c) evaluation of the proposals by a committee that would involve, as a minimum, the lead implementing agency, county government, relevant government entities, key value chain players (financial institutions, large industries, academia, experts, etc. The

transaction advisor will provide technical backstopping to the process but will not be part of the evaluation process;

- (iii) BP / PPPP implementation will involve signing MoUs / contracts between the programme and the winning group/ IAA / private party and between the winning party and the smallholders. In most cases two concurrent contracts will guide such partnerships including (a) contracts between the Programme and the private party, whether an IAA or for a lease contract that would outline the obligations of the private party in return for receiving the Programme support in the form of a matching grant, for the right to lease a government owned facility, or for both; and (b) contracts between the private party and the individual smallholder producers that would guide the obligations of both parties and would be in line with the above mentioned agreement between the private party and the Programme. The private party can be organized in the form of a limited liability company or a cooperative. Alternatively; the Programme will sign MoUs with SAGs and ASEs to outline the implementation of the business plan that would receive the Programme support;
- (iv) Start of implementation of the BP / PPPP arrangement. The wining party should be satisfying their equity contractual obligation prior to receiving Programme support. During this stage the programme with support by the transaction advisor and other TA and partnership arrangements in place will follow closely the implementation and satisfaction of the contractual arrangements by all parties.

165. In addition to the above mentioned contacts and MoUs, the Programme implementation will require developing **MoUs** between the PCU and: (i) Counties where the programme will be implemented; (ii) Kenya Marine and Fisheries Research Institute (KMFRI) and WorldFish for implementing the Research Institutions Strengthening activities; (iii) Existing aquaculture training programmes at RIAT (in the Western region) and Sagana (in the Central region) or possibly other alternative units as appropriate for training of the county extension staff; (iv) Fish quality laboratories in Kisumu, Nairobi and Mombasa to support building capacity for fish quality assurance in general and to support project activities under components 1 & 2 in particular; (v) Veterinary Department of the MoALF for building their capacity with regard to fish disease based on relevance; (VI) Any other party identified to support programme implementation.

166. Among other things, each MoU will clearly specify, the scope of the work to be undertaken, staffing and institutional arrangements to be put in place to ensure successful programme implementation, estimated budget for specific activities, reporting and audit requirements, activity tag transfer as opposed to general cash releases, implementation records, monitoring arrangements as well as clearly defined accountability and performance evaluation criteria. The MoUs will need to be monitored closely by the lead Programme agency and will: (i) specify that the above listed parties will maintain a register of assets acquired with the proceeds of the Financing; and (ii) be submitted to IFAD for its prior approval. No MoUs will be modified without the prior consent of the Fund.

167. Appendix 5 spells out the details of the Programme implementation arrangements. The operating modalities will be expanded further in the detailed Programme Implementation Manual that should receive IFAD's No objection before disbursements from IFAD loan proceeds could be made possible. (See PIM outline in Appendix 11 and preliminary draft, to be refined at Programme inception, in Working Paper 12.)

### **C. Planning, M&E, learning and knowledge management**

168. The Programme Knowledge Management/Monitoring and Evaluation (KM/M&E) system will be developed and managed by the PCU. The M&E team will be responsible for the consolidated M&E and knowledge management of the Programme and in particular, for: (i) Annual Work Plans and Budgets (AWPBs); (ii) Progress Reports on outputs and outcomes; (iii) Status Reports for Supervision Missions; (iv) *Ad hoc* reports as required; and (v) the Programme Completion Report. The Programme KM/M&E team will be composed of an M&E officer and a Knowledge Management and

Communications Officer, working under the supervision of the Programme Coordinator. At the County level, the Coordinators, with support from the CPITs and relevant implementing partners, will be responsible for the collection of information, follow up and updating of data for their respective Counties.

**169. Annual Planning and Budgeting.** The Programme will be implemented on the basis of an AWPB developed and approved by the beginning of each fiscal year. The PCU will be responsible for the timely development, implementation and monitoring of AWPBs. County level AWPBs will be developed by the CPITs with supervision and support from the Programme KM/M&E team. County AWPBs will be reviewed and consolidated by the KM/M&E team based on operational and financial targets. The PCU, in consultation and collaboration with all implementing partners and other stakeholders, will prepare a consolidated AWPB including activities at the National level in conformity with the GoK planning cycle. Timely preparation and submission of AWPBs will require adherence to a schedule linked to the Government budgetary approval process, and those of the National and County implementing agencies. The AWPB will be submitted for approval to the Steering Committee and to IFAD for No objection.

**170. Knowledge Management, Monitoring and Evaluation.** The PCU will bear overall responsibility for the continuous Monitoring and Evaluation (M&E) and regular reporting on progress and the achievement of Programme objectives, milestones and results. A Programme level M&E system will be developed compliant with IFAD requirements and aligned to the Government's National Integrated Monitoring and Evaluation System (NIMES). The Programme M&E and Knowledge Management system will: (i) guide Programme implementation; (ii) capitalize on and disseminate lessons learned; and (iii) measure ABDP impact. The Programme M&E system will report on the achievement of activity outputs and milestones. Particular attention will be given to the monitoring and reporting of the graduation of smallholder fish farmers to semi-commercial aquaculture enterprises and the anticipated improvements in incomes, nutrition levels and livelihoods of direct and indirect beneficiaries, in particular youth and women. Moreover, a detailed M&E manual will be developed during the first year of implementation setting out the roles and responsibilities of different Programme players in tracking and managing results and the modalities for data collection and management.

171. The ABDP KM/M&E system should be set up and operational within six months of Programme implementation, possibly with the support of specialized M&E Technical Assistance. The system will be deployed at the two levels of Programme management: PCU and County implementation and support teams. In this context, an M&E capacity assessment of the targeted Counties will be carried out to identify their respective capacities and possible gaps. The Programme KM/M&E system should be based on the quantitative and qualitative indicators provided in the Logical Framework and aligned to IFAD's recommended analytical structure, the Results and Impact Management System (RIMS). These indicators will be reviewed and finalised during Programme start-up with gender-sensitive indicators included as required.

172. Since some of the activities will be contracted out to service providers and partners, explicit monitoring requirements will be included in all agreements as part of their contractual obligations. M&E reports from partners and service providers will feed into the consolidated PCU-level M&E system. In this context, the M&E system will provide an effective tool for the PCU to monitor the performance of service providers.

173. Knowledge services will meet the needs of beneficiaries through "learning-by-doing" and rigorous analysis of operational experiences. The programme will share lessons learned through knowledge networking, learning events and publications. South-South learning and sharing opportunities will provide beneficiaries with up-to-date knowledge and experience.

174. The programme will: (i) carefully and frequently (twice a year starting the second year of implementation) monitor the performance of a statistically relevant sample of C1 farmers that receive(d) project support, compared to baseline and to a sample of those not receiving project

support; and (ii) support collection of annual fish price inflation data in rural and urban areas and actually sample consumers to survey actual fish consumption.

## **D. Financial management, procurement and governance**

175. **Overview.** The Programme financial management will be implemented under the 2015 GoK Financial Regulation, the Public Finance Management Act 2012 and IFAD Guidelines under the Financing Agreement as documented in the Programme Implementation Manual. The Programme will adopt appropriate systems including Financial Planning through AWPBs, financial accounting and reporting, funds flow management, procurement and audit. Oversight will be provided by MoALF management, SDF&BE, Programme Steering Committee and National Treasury.

176. **Anticorruption.** The systems governing the expenditure from the Programme funds will be subject to National and IFAD anti-corruption practices. IFAD's anti-corruption policy will be communicated as appropriate, including its concept of zero tolerance and the mechanisms for reporting suspected irregular practices.

177. **Financial management risk assessment.** The initial inherent risk assessment was considered "high" based on Transparency International and the latest PEFA reports. However, given that MoALF has experience in managing IFAD-funded projects, the rating can be expected to improve as mitigating controls are put in place.

178. **Financial management arrangements.** The PCU will be responsible for the management and coordination of Programme implementation, with the following key arrangements: an appropriate financial management team within the PCU and accounting focal points in the Programme Counties; and suitable accounting software comprising the National IFMIS accounting and management system in conjunction with dedicated accounting and reporting software to satisfy financial statement requirements segregated by Programme Component, expense category and financier. IPSAS will be used as the accounting standard for financial reporting. An initial assessment of four Counties concluded that adequate capacity exists, including qualified accountants, but this will be assessed further when the specific Programme management arrangements are finalised.<sup>16</sup>

179. **Flow of Funds and Disbursements.** ABDP funds will flow through two Designated Accounts (DAs) in USD currency operating on an imprest system, and each will receive an appropriate initial deposit directly from IFAD. The first DA will be opened by National Treasury denominated in USD for the National Programme activities under SDF&BE and its institutions. The second DA will be opened by National Treasury denominated in USD to receive funds from IFAD for the activities to be carried out in the Programme Counties. For each DA, a local operational bank account denominated in KES will be opened and maintained by the MoALF. Subsequent funds flow into these accounts will be dependent upon the eligible expenditures incurred, which will be the basis for replenishment requests through Withdrawal Applications claimed under the IFAD guidelines and procedures.

180. Each of the Programme Counties will be required to open and maintain a dedicated bank account for the IFAD Funds into which the funds from the PCU's County local currency bank account held by the MoALF will be transferred through the County Revenue Fund (CRF). The funds from this account will finance the approved AWPB activities. The accounting of National Government activities expenditures and those of the Counties will be kept distinct to ensure results-oriented monitoring. Statements of Expenditure (SoEs) and other returns will be submitted to the PCU regularly within set deadlines. A counterpart funding account denominated in KES will also be opened at the PCU to cover GoK contributions, primarily for taxes and duties. (See Appendix 7.1 for the Funds Flow chart.)

181. **Annual Work Plan and Budget Process.** All National eligible Programme expenditure will be included under the MoALF vote and appropriated by Parliament, whilst Counties will budget and be accountable for their own activities as per the Government's devolved budgetary process for

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<sup>16</sup> Kisumu, Kakamega, Homa Bay and Kisii.



presentation to Cabinet. Following the Annual Treasury Circular of the Government's budget cycle, the Programme will hold annual review workshops, including implementing partners, the PSC and beneficiaries to discuss progress during the prior financial year and to develop proposals for the forthcoming year. The individual AWPBs of the Programme Counties will have to be approved by their individual County Assemblies before funds are transferred as "Conditional Grants" from the Counties' Accounts held by the MoALF. Having a County Programme Account in the PCU will enable the Programme staff to: manage the advances to Counties and the retirement thereof; handle the first in/first out USD:KES exchange rate control; and prepare consolidated withdrawal applications for submission to IFAD through National Treasury.

182. **Internal Audit.** MoALF will designate one of the internal auditors on secondment from National Treasury to ABDP to provide internal audit for the PCU and the Counties will do similarly. The MoALF Audit Committee should receive and review regular reports on budget execution and on the implementation status of internal and external audit recommendations. Internal audit reports may be requested by IFAD in a mutually acceptable form.

183. **External Audit.** The Kenya National Audit Office (KENAO) has been auditing the Financial Statements of IFAD-financed projects in accordance with the required international standards and this arrangement will apply to ABDP.

184. **FM Supervision plan.** The supervision process will be complemented by a desk review of progress and financial reports, the Programme's annual financial statements, internal audit reports and annual audits.

185. **Project Advance and Retroactive Financing.** Project start-up advance in the amount of USD 550,000 will be disbursable from IFAD loan upon receiving a request by the national treasury after project approval by the IFAD Executive Board (EB) and before satisfaction of the disbursement conditions in order to allow for satisfaction of the disbursement conditions and advance implementation. GoK will support some of the activities from its own budget, through retroactive financing (USD 360,000) so that it would be reimbursed once the ABDP is approved by IFAD EB and satisfaction of the disbursement conditions. The project advance and retroactive financing will support activities that are necessary to advance implementation. The GoK request will outline the arrangements for the disbursement of start-up advance including what account will be used to receive the funds. Arrangements are detailed in the Financial Management appendix.

186. GoK will advance implementation of key initial activities to ensure early disbursement and reducing time lag between entry into force and first disbursement. This would include activities; such as, recruitment of PPPP advisor for component 2; recruitment process for the PCU staff; financial Management Software; consultancy services for finalization of the Project Implementation Manual and preparation of the first year Annual Work Plan and Budget; workshop for support of preparation of first year AWPB; renovation and upgrade of office accommodation; baseline surveys; salaries for the PCU staff and operating costs; preparation of the ESMP and computers and printers

187. These activities will be covered partially from GoK budget up to the tone of USD 360,000 (retroactive financing) while the remaining amount will be covered from start-up advance (USD 550,000). The retroactive financing will be drawn against the following categories: Civil Works (USD 50,000); Workshops (USD 15,000); TA, Studies, and Consultancies (USD 135,000); Goods & Equipment & Materials (USD 60,000); and Operating Cost (USD 100,000).

188. The start-up date for the eligible retroactive financing will be 1st of October 2017. Upon entry into force and fulfilment of disbursement conditions, eligible expenditures are reimbursed into the nominated Borrower's bank account in accordance with the provisions of the Financing Agreement. Retroactive expenditures are pre-financed by the prospective Borrower at its own risk in case the project is not approved by the EB.

189. The activities to be eligible for retroactive financing or funded from start-up advance will have to be listed clearly in the provisional AWPB and PP, which will be developed by the SDF&BE and

communicated to IFAD for review and no objection. This will need to be done prior to incurring any expenditure from government account, if it is to be considered for retroactive financing. The above items will have to be identified clearly as subject to retroactive financing as well as percentages that will be financed using this mechanism. The remaining percentages will be financed against the start-up advance. More details are provided in the FM annex.

190. **Procurement.** IFAD's Procurement Guidelines specify that National procurement systems will be used under the condition that the prescribed systems are assessed as satisfactory or better. The Programme will adopt the Kenya Public Procurement and Disposal Act 2015 and the Public Procurement Regulations (to be issued soon) to the extent such are consistent with the IFAD Procurement Guidelines 2010. National systems will be applied to all procurements except the category above the threshold for International Competitive Bidding (ICB) that will be undertaken according to the World Bank Guidelines.

191. ABDP will be implemented under a two-tiered institutional arrangement, namely at the National and County levels. At the National level, MoALF will be the main implementing agency. County Governments will be the executing agencies at sub-National level. At the National level, the PCU, anchored administratively in the SDF&BE of MoALF, will be responsible for carrying out all procurement transactions that use Open Tender and ICB methods in addition to other procurements at the National Level. At the County level, the CPITs to be established within the respective Counties' aquaculture departments will spearhead execution of small procurement activities that apply the Request for Quotations method.

192. With regard to procurement management, a qualified and experienced Procurement Officer will be recruited at the National level with ToRs agreed with IFAD to monitor contracts effectively and undertake post-procurement evaluations to strengthen systems, to enhance performance, and to measure improvement, among other regular functions. With additional TA to strengthen procurement capacity, the institutions can undertake implementation, facilitation and coordination of the Programme with reduced risk. ABDP will provide short-term training on IFAD procurement procedures (works, goods and consultants) before Programme implementation commences to enhance procurement capacity at the County level.

## **E. Supervision**

193. IFAD will be responsible for: (i) reviewing Withdrawal Applications for IFAD proceeds; (ii) reviewing and approving on a No objection basis all procurement under the Programme financed by IFAD funds and subject to prior review arrangements; (iii) monitoring compliance with the Financing Agreement and recommending remedies for any substantial non-compliance; and (iv) carrying out all other functions needed to administer the Financing Agreement and supervise the Programme. Supervision and implementation support will be a continuous process, involving ongoing communication and engagement with GoK, the PCU and other relevant stakeholders. The presence of the IFAD Country Office in Nairobi will expedite these processes.

194. The supervision plan for the Programme's first 12-18 months will be devised and validated at start-up. The first Implementation Support Mission will take place soon after effectiveness and first disbursement, and will include an M&E specialist. The frequency and composition of subsequent Supervision and Implementation Support Missions will be determined in the light of requirements and in accordance with GoK wishes, but will consist of at least one fully-fledged annual Supervision Mission complemented by short and focused Implementation Support Missions as appropriate.

195. Aspects of ABDP that would require special attention during supervision missions are: (i) the rigorous and proper conduct of community awareness raising and consultation activities; (ii) maintaining flexibility in Programme approach and modalities, particularly with regard to the cost effectiveness of business-oriented institution-building interventions in the value chain; (iii) the establishment and continued financing of post-investment asset maintenance and protection

arrangements; and (iv) concentration on the achievement of substantial medium- and longer-term outcomes rather than provision of inputs and budgetary resources as subsidies.

## F. Risk identification and mitigation

196. At the Programme level, the main potential risks threatening ABDP are:

- a GoK retreat from its progressive pro-poor policies focused on reducing income disparities;
- a policy environment that would hinder private sector willingness to invest in aquaculture value adding processes based on smallholder production;
- budgetary constraints on County Governments' capacity to realize the ambitious fisheries sectoral development and advanced NRM policies;
- continuing administrative and practical challenges related to the devolution of service delivery and project implementation responsibilities to County Governments; and
- fiduciary risks.

197. The overall Programme structure and logical framework entails a robust approach to support rural poor people using sound business principles, to seek an equitable balance in the sharing of risks between parties in PPPP arrangements. Risks stemming from social norms and existing behaviours, for examples, in the gender division of labour and in traditional diet, will be addressed by thorough awareness raising, working closely with target communities to build their capacity and ensuring that economic incentives are well developed. Fiduciary risks are assessed as substantial and special measures will be put in place to address them from financial management and procurement angles. Below are the risks identified at design to achieving the substantive Components, with associated mitigation measures.

**Table 1: ABDP main risks and mitigation measures**

Risk	Initial risk	Risk mitigation measure	Final risk
Smallholders fail to reach financial viability during limited period of Programme engagement.	H	<ul style="list-style-type: none"> <li>• Programme interventions lead to increased real demand for fish.</li> <li>• Effective extension and training in business as well as technical aspects.</li> </ul>	L
Large-scale value chain operators impede transformation to an incentive-based system.	M	<ul style="list-style-type: none"> <li>• Potential profits for large- as well as small-scale operators, on the understanding that everybody wins or nobody wins.</li> <li>• Transparency of marketing channels.</li> </ul>	L
Political/governance problems prevent adequate engagement of the public sector in PPPP deals.	M	<ul style="list-style-type: none"> <li>• Open dialogue and awareness raising of stakeholders.</li> <li>• Legal contracts underpinning public-private-producer partnerships.</li> <li>• Each PPPP having a specific role for the public sector.</li> </ul>	L

Risk	Initial risk	Risk mitigation measure	Final risk
Policy and business environment deters potential National or foreign investors in aquaculture subsector based on smallholder production.	H	<ul style="list-style-type: none"> <li>• Policy dialogue with GoK on business-related policies to ensure sustainability and robustness of reforms.</li> <li>• Technical Assistance to advise GoK on robust PPPP arrangements.</li> </ul>	M
Financial sector will not take up financing of the targeted aquaculture value chain actors.	H	<ul style="list-style-type: none"> <li>• GoK instructions to Financial Institutions to lend a proportion of their portfolio to rural economic enterprises.</li> <li>• Interventions of the Programme aiming at derisking lending to and/or investing in value chain actors.</li> <li>• Synergies with PROFIT and complementary capacity building interventions planned for other financial institutions not benefiting from PROFIT.</li> <li>• Provision of matching grants to support investments and activities for which access to finance from the financial services sector will prove to be too challenging.</li> </ul>	L
Small-scale farmers and other value chain actors will not take up financial products on offer to develop their aquaculture business.	H	<ul style="list-style-type: none"> <li>• Provision of adequate support to enhance profitability of the business.</li> <li>• Implementation of a comprehensive financial literacy training programme.</li> <li>• Financial Institutions to promote accessible products appropriate to aquaculture.</li> </ul>	M
High transaction costs deter enterprises from entering outgrower arrangements with Programme smallholders,	H	<ul style="list-style-type: none"> <li>• Ensure that PPPP deals specify minimum level of demand from small-scale producers.</li> <li>• ABDP to build the capacity of smallholders as rural enterprises to deliver on their contracts.</li> </ul>	M
Resistance to modernisation of roles of public and private sectors in rural economy.	M	<ul style="list-style-type: none"> <li>• Promotion of equitable PPPP arrangements for technical support services and operating strategic facilities continues to be owned by GoK.</li> <li>• Awareness raising and dissemination of best practices regarding sector reform and modernisation.</li> <li>• Strengthening of institutional capacity to deliver residual services, such as extension advice and training, adaptive research, disease surveillance, quality assurance and veterinary investigations.</li> </ul>	L
Entrenched gender inequalities and lack of women's participation in community structures. Lack of support for women from men or local leaders.	M	<ul style="list-style-type: none"> <li>• Extensive efforts to ensure participation of women.</li> <li>• Self-selection of individuals and groups engaging with ABDP.</li> <li>• Strengthening women's voice in local decision-making bodies.</li> <li>• Transparency of material contributions of women to community welfare.</li> </ul>	L

Risk	Initial risk	Risk mitigation measure	Final risk
Risk of adult takeover if women and youth economic activities increase in value and/or become more profitable.	M	<ul style="list-style-type: none"> <li>Strengthening of women's and youth's organizations, including the representation of their interests in the market.</li> <li>Investing in women's literacy programmes and entrepreneurship training.</li> <li>Monitoring ABDP targeting performance, including gender and youth impact.</li> </ul>	M
Poor maintenance of investments and/or inadequate business skills result in early collapse of individual/group fish production or related enterprises.	H	<ul style="list-style-type: none"> <li>Concerted training on basic management skills, focused on creation of and adherence to business plans.</li> </ul>	M
Limited local fish marketing opportunities for lack of local purchasing power.	H	<ul style="list-style-type: none"> <li>Gradual build-up from low risk/low return activities based on local capital formation.</li> <li>Multiplier effect of accelerated velocity of circulation in local economy.</li> </ul>	M
The drive towards agreed outcomes is subverted by old habits of dependency that concentrate attention on immediate material benefits.	H	<ul style="list-style-type: none"> <li>Implementation through existing structures and experienced partners.</li> <li>Interventions based on proven approaches and/or upscaling successful modalities.</li> <li>Application of self-selection and sound financing arrangements for all private enterprise developments.</li> </ul>	M
Vulnerability to climate and environment risks among farmers due to limited knowledge.	M	<ul style="list-style-type: none"> <li>Integrated environmental education and training for farmers within Programme training interventions and linkages to information channels.</li> </ul>	L
Pollution or eutrophication of water bodies through effluent discharge from ponds or commercial farms and processing facilities.	M	<ul style="list-style-type: none"> <li>Integrated farming approach in which used water from ponds is diverted to farmland to provide nutrients for crop production.</li> <li>Awareness creation among farmers through training and exposure visits.</li> <li>Regular monitoring of water quality by farmers and relevant support institutions.</li> <li>Environmental Impact Assessments for commercial farms and processing entities.</li> </ul>	L
Poor siting of ponds limiting water availability and increasing siltation due to soil erosion.	M	<ul style="list-style-type: none"> <li>Environmental studies are part of the implementation of Component 1.</li> <li>Ponds should be sited in areas where water availability is regular and water from natural bodies can flow in through gravity.</li> <li>Soil erosion prevention measures such as bench terraces, cover cropping or mulching can be done to reduce siltation of ponds.</li> </ul>	L

Risk	Initial risk	Risk mitigation measure	Final risk
Water stress and drought as consequences of climate change and/or climate variability.	M	<ul style="list-style-type: none"> <li>• Efficient water use, for example, the use of ultra-violet pond liners with good control of algae growth to limit water loss, depending on cost effectiveness.</li> <li>• Use of Climate Smart Aquaculture (CSA) technologies such as aquaponics that have low water demands, wherever practical and cost effective, (bearing in mind the initial cost is high).</li> <li>• Fast maturing fish species in support of CSA.</li> </ul>	L
Outbreaks of malaria due to stagnant pond water.	H	<ul style="list-style-type: none"> <li>• Support relevant institutions in the development of best practices and environmental management guidelines.</li> </ul>	M
Irresponsible use of chemicals by fish farmers.	M	<ul style="list-style-type: none"> <li>• Training for farmers on safe use, handling and disposal of chemical products.</li> </ul>	L
Programme Fiduciary Risk at Design	H		M

## IV. Programme costs, financing, benefits and sustainability

### A. Programme costs

198. The total costs for the ABDP, including physical and price contingencies, are estimated at USD 143.3 million (KES 14.90 billion). The base costs of activities under Component 1: Smallholder Aquaculture Development are assessed at USD 68.04 million (KES 7.08 billion) representing 56% of the total base costs; the estimated costs of Component 2: Aquaculture Value Chain Development are USD 47.12 million (KES 4.90 billion, 39%); and the costs for the Implementation Support Component 3: Programme Management, Monitoring and Evaluation are estimated at USD 6.55 million (KES 0.67 billion, 5%). Table 1 below presents a breakdown of the Programme costs by Component and expenditure accounts respectively. Physical and price contingencies were estimated at USD 21.57 million (KES 2.24 billion), being 18% over the total base costs. ABDP detailed cost tables and summary tables are lodged in the Programme Life File.

**Table 1: Programme Costs by Component and Expenditure Accounts**

Kenya Aquaculture Business Development Project Components Project Cost Summary							
	(KSh '000)			(US\$ '000)			% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total	
<b>A. Smallholder Aquaculture Development</b>							
Smallholder Aquaculture Development	5,320,535	1,330,134	6,650,669	51,159	12,790	63,949	53
Development of Enterprises in Support of Smallholder Aquaculture Production	292,157	73,039	365,196	2,809	702	3,512	3
Community Nutrition Initiatives	47,828	11,957	59,784	460	115	575	-
<b>Subtotal</b>	<b>5,660,519</b>	<b>1,415,130</b>	<b>7,075,649</b>	<b>54,428</b>	<b>13,607</b>	<b>68,035</b>	<b>56</b>
<b>B. Aquaculture Value Chains Development</b>							
<b>1. Smallholder Based Aquaculture Value Chain Development</b>							
Identification of Potential Areas of Intervention	480,938	120,234	601,172	4,624	1,156	5,781	5
Investments for Development of the Value Chains	2,810,398	702,599	3,512,997	27,023	6,756	33,779	28
<b>Subtotal</b>	<b>3,291,335</b>	<b>822,834</b>	<b>4,114,169</b>	<b>31,647</b>	<b>7,912</b>	<b>39,559</b>	<b>33</b>
<b>2. Aquaculture Enabling Environment and Support Services</b>							
Policy Engagement	38,272	9,568	47,840	368	92	460	-
Public Infrastructure	52,416	13,104	65,520	504	126	630	1
Extension Services	372,403	93,101	465,504	3,581	895	4,476	4
Aquaculture Research	62,400	15,600	78,000	600	150	750	1
Fish Health and Surveillance Services	95,597	23,899	119,496	919	230	1,149	1
Financial Services	8,320	2,080	10,400	80	20	100	-
<b>Subtotal</b>	<b>629,408</b>	<b>157,352</b>	<b>786,760</b>	<b>6,052</b>	<b>1,513</b>	<b>7,565</b>	<b>6</b>
<b>Subtotal</b>	<b>3,920,743</b>	<b>980,186</b>	<b>4,900,929</b>	<b>37,699</b>	<b>9,425</b>	<b>47,124</b>	<b>39</b>
<b>C. Project Management, Monitoring and Evaluation</b>							
1. National Project Coordination Unit	469,306	117,327	586,633	4,513	1,128	5,641	5
2. Regional Project Coordination Unit	75,238	18,809	94,047	723	181	904	1
<b>Subtotal</b>	<b>544,544</b>	<b>136,136</b>	<b>680,680</b>	<b>5,236</b>	<b>1,309</b>	<b>6,545</b>	<b>5</b>
<b>Total BASELINE COSTS</b>	<b>10,125,807</b>	<b>2,531,452</b>	<b>12,657,259</b>	<b>97,364</b>	<b>24,341</b>	<b>121,704</b>	<b>100</b>
Physical Contingencies	810,065	202,516	1,012,581	7,789	1,947	9,736	8
Price Contingencies	1,052,553	178,040	1,230,594	10,121	1,712	11,833	10
<b>Total PROJECT COSTS</b>	<b>11,988,425</b>	<b>2,912,008</b>	<b>14,900,433</b>	<b>115,273</b>	<b>28,000</b>	<b>143,273</b>	<b>118</b>

Kenya Aquaculture Business Development Project Expenditure Accounts Project Cost Summary							
	(KSh '000)			(US\$ '000)			% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total	
<b>I. Investment Costs</b>							
<b>A. Goods, Services and Inputs</b>							
Vehicles and Motorbikes	143,234	35,808	179,042	1,377	344	1,722	1
Equipment and Materials	3,619,926	904,981	4,524,907	34,807	8,702	43,509	36
<b>Subtotal</b>	<b>3,763,159</b>	<b>940,790</b>	<b>4,703,949</b>	<b>36,184</b>	<b>9,046</b>	<b>45,230</b>	<b>37</b>
<b>B. Training, Workshops and Studies</b>							
1. Workshops	180,777	45,194	225,971	1,738	435	2,173	2
2. Training	350,022	87,506	437,528	3,366	841	4,207	3
3. Studies	-	-	-	-	-	-	-
<b>Subtotal</b>	<b>530,799</b>	<b>132,700</b>	<b>663,499</b>	<b>5,104</b>	<b>1,276</b>	<b>6,380</b>	<b>5</b>
C. Grants and Awards	1,029,766	257,442	1,287,208	9,902	2,475	12,377	10
D. Technical Assistance	20,800	5,200	26,000	200	50	250	-
E. Consultancies	1,523,987	380,997	1,904,984	14,654	3,663	18,317	15
F. Non Consultancies Services	4,992	1,248	6,240	48	12	60	-
G. Works	674,652	168,663	843,315	6,487	1,622	8,109	7
<b>Total Investment Costs</b>	<b>7,548,156</b>	<b>1,887,039</b>	<b>9,435,195</b>	<b>72,578</b>	<b>18,145</b>	<b>90,723</b>	<b>75</b>
<b>II. Recurrent Costs</b>							
A. Salaries and Allowances	2,111,922	527,981	2,639,903	20,307	5,077	25,384	21
B. Operations and Maintenance	465,729	116,432	582,161	4,478	1,120	5,598	5
<b>Total Recurrent Costs</b>	<b>2,577,651</b>	<b>644,413</b>	<b>3,222,064</b>	<b>24,785</b>	<b>6,196</b>	<b>30,981</b>	<b>25</b>
<b>Total BASELINE COSTS</b>	<b>10,125,807</b>	<b>2,531,452</b>	<b>12,657,259</b>	<b>97,364</b>	<b>24,341</b>	<b>121,704</b>	<b>100</b>
Physical Contingencies	810,065	202,516	1,012,581	7,789	1,947	9,736	8
Price Contingencies	1,052,553	178,040	1,230,594	10,121	1,712	11,833	10
<b>Total PROJECT COSTS</b>	<b>11,988,425</b>	<b>2,912,008</b>	<b>14,900,433</b>	<b>115,273</b>	<b>28,000</b>	<b>143,273</b>	<b>118</b>

## B. Programme financing

199. The ABDP would be financed with an IFAD Loan drawn from the 2016-18 Performance Based Allocation System cycle, which is estimated at USD 40 million corresponding to 27.9% of the total Programme costs. Other donors are expected to contribute USD 27.9 million representing 19.5% of total cost, while FAO would contribute USD 400,000 (0.3%). Beneficiaries would contribute USD 43.6 million (30.4%) and GoK USD 31.4 million (21.9%). The details of financing arrangements are shown in the following Table. The financing gap of US\$27.7 million may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to availability of funds and internal procedures) or by co-financing identified during implementation. Discussions are currently underway with Kreditanstalt für Wiederaufbau (KfW) and Gesellschaft für Internationale Zusammenarbeit (GIZ) to cover some or all of the financing gap.

**Table 2: Financing Plan by Components (USD'000)**

	Components by Financiers (US\$ Million)											
	IFAD		Other Donors		FAO		Beneficiaries		The Government		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
<b>A. Smallholder Aquaculture Development</b>												
Smallholder Aquaculture Development	17.2	22.9	13.6	18.2	0.4	0.5	16.0	21.3	27.7	37.0	74.9	52.3
Development of Enterprises in Support of Smallholder Aquaculture	1.9	45.4	1.9	45.0	-	-	0.3	6.1	0.1	3.4	4.1	2.9
Community Nutrition Initiatives	0.2	32.7	0.4	57.7	-	-	-	-	0.1	9.6	0.7	0.5
<b>Subtotal</b>	<b>19.3</b>	<b>24.2</b>	<b>15.9</b>	<b>20.0</b>	<b>0.4</b>	<b>0.5</b>	<b>16.3</b>	<b>20.4</b>	<b>27.8</b>	<b>34.9</b>	<b>79.7</b>	<b>55.6</b>
<b>B. Aquaculture Value Chains Development</b>												
<b>1. Smallholder Based Aquaculture Value Chain</b>												
Identification of Potential Areas of Intervention	3.2	47.6	3.0	43.7	-	-	-	-	0.6	8.7	6.8	4.7
Investments for Development of the Value Chain	6.5	16.2	6.1	15.0	-	-	27.3	67.7	0.5	1.1	40.4	28.2
<b>Subtotal</b>	<b>9.8</b>	<b>20.7</b>	<b>9.0</b>	<b>19.1</b>	<b>-</b>	<b>-</b>	<b>27.3</b>	<b>57.9</b>	<b>1.1</b>	<b>2.2</b>	<b>47.2</b>	<b>32.9</b>
<b>2. Aquaculture Enabling Environment and Support</b>												
Policy Engagement	0.3	60.8	0.2	30.7	-	-	-	-	0.0	8.4	0.5	0.4
Public Infrastructure	0.3	42.3	0.3	42.3	-	-	-	-	0.1	15.5	0.8	0.5
Extension Services	2.8	54.3	1.1	21.4	-	-	-	-	1.2	24.3	5.1	3.6
Aquaculture Research	0.4	47.7	0.3	39.7	-	-	-	-	0.1	12.7	0.8	0.6
Fish Health and Surveillance Services	0.6	43.2	0.6	43.2	-	-	-	-	0.2	13.5	1.3	0.9
Financial Services	0.1	45.8	0.1	45.8	-	-	-	-	0.0	8.5	0.1	0.1
<b>Subtotal</b>	<b>4.5</b>	<b>51.2</b>	<b>2.5</b>	<b>29.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.7</b>	<b>19.6</b>	<b>8.7</b>	<b>6.1</b>
<b>Subtotal</b>	<b>14.2</b>	<b>25.4</b>	<b>11.6</b>	<b>20.8</b>	<b>-</b>	<b>-</b>	<b>27.3</b>	<b>48.9</b>	<b>2.7</b>	<b>4.9</b>	<b>55.8</b>	<b>39.0</b>
<b>C. Project Management, Monitoring and Evaluation</b>												
1. National Project Coordination Unit	5.6	84.5	0.2	5.0	-	-	-	-	0.8	12.0	6.7	4.7
2. Regional Project Coordination Unit	0.9	83.0	0.2	5.2	-	-	-	-	0.1	13.2	1.1	0.7
<b>Subtotal</b>	<b>6.5</b>	<b>83.3</b>	<b>0.4</b>	<b>5.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.9</b>	<b>11.6</b>	<b>7.8</b>	<b>5.4</b>
<b>Total PROJECT COSTS</b>	<b>40.0</b>	<b>27.9</b>	<b>27.9</b>	<b>19.5</b>	<b>0.4</b>	<b>0.3</b>	<b>43.6</b>	<b>30.4</b>	<b>31.4</b>	<b>21.9</b>	<b>143.3</b>	<b>100.0</b>

## C. Summary benefits and economic analysis

200. **Benefits and beneficiaries.** The ABDP aims to improve the productivity and incomes of substantial numbers of small-scale farmers' households from primary fish production, predominantly from supplemental inland aquaculture. Individual production farmers' group formation under Component 1 will provide technical assistance and provide support for enhancing their existing ponds and for developing vertically integrated linkages for mounting partnerships and synergies among stakeholders under Component 2, with the probability that successful producers will progress to more purposeful business models pulling with them as many small-scale fish farmers as possible.



201. Direct beneficiaries are estimated at about 35,500 small-scale farmers and landless youth and women in supportive activities. Among these, about 15,760 households will receive additional assistance under Component 2 for developing and implementing PPPPs and BPs as part of IIAs outgrowers' schemes, Small Aquaculture Groups (SAGs), and Aquaculture Support Enterprises (ASEs). This would include around 2,500 households through support to ASEs and about 13,250 fish farmers' households participating in IIAs out-growers schemes, PPPPs and SAGs. Table 3 lists the number of direct beneficiaries per Component.

202. The cost per direct beneficiary would be about USD 660, without considering the indirect beneficiaries who would benefit from access to an affordable diet based on fish protein for several hundred thousands of the poorest people in Kenyan rural areas.

**Table 3 ABDP direct beneficiary households**

		Number of groups	Average number of members	Number of beneficiary households
<b>Component 1</b>				
	ASEs. 2-member groups	1,500	2	3,000
	5-member groups	500	5	2,500
	TA and rehabilitation of fish growing facilities/ponds	780	30	23,400
	TA (mainly medium HHs)	220	30	6,600
Subtotal		3,000	-	35,500
<b>Component 2</b>				
	ASEs	250	10	2,500
	SAGs	90	30	2,700
	Out-growers' Scheme	22	250	5,500
	PPPPs	6	800	4,800
	Out-growers Scheme Pilot	1	250	250
Subtotal		369	-	15,750
<b>TOTAL</b>		<b>3,369</b>	<b>-</b>	<b>35,500</b>

Note: ASE = Aquaculture Support Enterprise and SAG = Small Aquaculture Groups. Totals (15.750) exclude duplications. The 2,500 ASE members from C2 and 13,260 fish farmers from C1 are expected to be graduates from C1 who would benefit from C2.

203. Through its two substantive Components, the ABDP will generate positive economic and financial results to be obtained by thousands of small-scale fish farmers, as well as contributing to income generation and employment for non-farm actors including traders, processors and operators and the Kenya aquaculture sector as whole. Indirect beneficiaries will include the rural communities as a whole, which will receive benefit from improved nutrition education and an enhanced access to affordable diet. The Programme would build up the capacity of public and private supporting services to the aquaculture subsector with the express intention of increasing productivity, production and the real demand/consumption for/of fish products.

204. **Financial analysis.** Detailed financial analysis (presented in Appendix 10 and Working Paper 9) that was based on typical models representing the expected activities and beneficiaries, the likely effects of Programme support and interventions, and the average outcomes that could be obtained, both at the level of individual activities supported and through their joint activities, such as IIAs outgrowers schemes under PPPPs arrangements. The analysis extends to aquaculture support enterprises within the value chain. Benefits are quantified through the estimated incremental net benefits to be obtained from the activity and farm models where these supported activities are taking place within typical small farm production systems. The financial analysis yielded positive returns for the various models elaborated, including the proposed small number of larger-scale PPPP investments along the value chain.

205. For Component 1, the following HH models and farm models were elaborated, namely

- Improved conditions for growing tilapia and catfish through a project grant of KSh 50,000 to improve the pond (lining, protection against predators, etc.), and adoption of improved green water technology would result in increased net income.
- Farm models for a smallholder owning one pond only (including farm crops and livestock production) would increase net income, as a result of the above improvement, by about 25 to 30%.
- For medium farmers, owning 3 ponds on average, a farm model was also developed. Assuming that the farmers would receive only technical support by the ABDP and would access bank loans for improving their ponds, the farm model indicates that the FIRR after repayment (3 years) would be 60%.
- Support to non-farm aquaculture support enterprises (ASE). Two typical models were assessed, including support for an ASE for construction of fish ponds and another one for transporting fish to markets or inputs to farmers. Assuming that the groups would receive start-up capital of KSh 45,000 per ASE member and technical support, it results in a FIRR of more than 100% and 25.8% respectively.

206. For component 2, four key models were developed, including (i) developing a fish restaurant involving about 10 members (mainly women); (ii) a small aquaculture group (SAG) with about 30 fish farmer members coming together to improve their systems; (iii) an outgrower scheme around an aggregator working with about 250 fish farmers; and (iv) a PPPP model involving non utilized processing plants (owned by the government), along with an out-grower scheme with 800 fish farmers. All of the above activities would receive grant support by the project that would cover 100% of technical support as well partial support for their collective activities (about KSh 800,000 for the ASE's restaurant, KSh 4.4 million for the SAG; KSh 15.45 million for the IIA aggregator and 250 farmers; and KSh 42.84 million for the PPPP scheme including 800 outgrowers). The above aquaculture PPPP and business plan (BP) models assume that fish farming business would be more advanced than that practiced under component 1. Farmers would contribute as well in form of labor, own funds and loans they would access from financial institutions. The models show that FIRR values would be 49.7% and a NPV of KSh 2.975 million in the case of the ASE; FIRR 37.4% and NPV KSh 23.5 million for the SAG's BP; FIRR of 50.7% and NPV 226.5 million for the Aggregator/250 outgrowers; and FIRR 44.9% and NPV KSh 434.8 million for the PPPP – IIA outgrowers' BP.

**Table 4: Summary of Financial Analysis**

Type of Model /enterprise	Incremental annual Production ('000 KSh)	Working capital per cycle ('000 KSh)	Project Grant ('000 KSh)	Incremental annual gross margin ('000 KSh)	Benefit/ Cost Ratio	NPV ('000 KSh)	Return on family labour (KSh/day)
<b>Component 1</b>							
<b>Farm: Improved Green Technology for Tilapia</b>	48	9.87	50	18.9	1.42	75.4	411
<b>Farm: Improved Green Technology for Catfish</b>	21	15.3	50	10.6	1.32	133.8	420
<b>ASE model: pond construction (5 youth)</b>	1,200	28.5	225	1,133	5.45	8,120	515
<b>ASE model: transport of aquaculture inputs / outputs (2 youth)</b>	360	12	90	46	1.94	1,497	377
<b>Component 2</b>							
<b>ASE model for fish restaurant</b>	3,600	200	800	1,097	1.37	511.2	365
<b>Business plan for SAG with 30 producers</b>	11,556	1,760	4,405	11,286	1.57	23,719	866

<b>Business plan for an IIA outgrower scheme with 80 producers</b>	123,750	5,579	15,450	45,544	1.37	204,795	771
<b>PPPP for an outgrower scheme with 800 producers</b>	234,757	16,720	42,840	90,005	1.41	368,141	771

207. **Economic analysis.** The viability of the Programme from the Kenyan economy point of view has been estimated through an economic cost-benefit analysis and measured by the Economic Rate of Return (ERR). The main assumptions were as follow.

- All costs and benefits were estimated at 2017 values in constant terms over 20 years.
- The Programme economic costs and benefits were derived from 2017 market values excluding price contingencies, taxes and duties. Investment was adjusted with 0.88 as conversion factor (CF).
- As young people make up to 78% of the population and the Kenyan Youth Survey in 2015 showed that 55% of youth are unemployed with rural women at 68%, the financial wage rate was taken at an average of KES 300/day. Given the unemployment rates, the economic labour rate was adjusted with 0.7 as CF, which is KES 210.
- Imported fish feed is subjected to 10% import duty, so the market prices was corrected with 0.85 as CF.
- While assessing the profitability of Programme interventions, a 10% discount rate was used which is considered high as all prices were taken at 2017 constant value. As the annual inflation rate in Kenya is about 8%, in current values the discount rate used would be equivalent to 18%.

208. **Taking** into consideration the value of benefits to be generated by the ABDP proposed interventions, but excluding the less easily quantifiable benefits from the improvement on the nutrition of the poor as fish protein will be made available at an affordable price with positive effect on the development of more healthy children and adults, the EIRR was estimated at 21.1% and the Economic Net Present Value KES 7.48 billion. These results allow for the justification of the Programme's investments.

209. The expected ERR from C1 activities was estimated at 10%. This result indicator is important considering that the benefits from preparing about 13,260 fish farmers and about 2,500 youth for being ready to participate in interventions under C2 were not totally quantified for the C1 ERR. For this assessment, it was assumed that 90% of the 35,500 beneficiaries (31,950) would be improving their production activities as shown in the farm and activity models in Working Paper 10. C2 show an ERR of 34.2% including both subcomponents which is significantly high because it captures some of the benefits from C1 where readiness of beneficiaries to implement C2 PAs and BPs was developed.

210. A sensitivity analysis was performed in order to measure the robustness of the expected Programme impact, linked to potential adverse situations during implementation. Some of the major risks that could affect results are related to variations in fish productivity, the prices received by farmers for their produce, cost overruns, the rate of fish farmers incorporating to the Programme and the number of farmers adopting the proposed improved production technologies for increasing productivity and returns from aquaculture. The Programme seems to be relatively sensitive to reduction of productivity and fish prices, and robust against the risks in Programme cost increases, and against a reduced incorporation of beneficiaries adopting the proposed production improvements.

## D. Sustainability

211. As a development intervention, ABDP is embedded in the evolving GoK structures and has no separate existence or need for an "exit strategy". The Programme has inbuilt economic sustainability. The strengthening and use of existing, albeit limited, public services and community structures is

expected to establish a strong institutional framework that would support sustainability. Beneficiaries and stakeholders would be prepared from the outset for the post-Programme engagement period through effective training and advice and an orderly gradual transfer of ownership and management responsibilities.

212. The positioning of ABDP as a fixed-term initiative contributing to an open-ended GoK PPPP programme is appealing in terms of sustainability of the investment, but does draw attention to the continuing commitment of GoK to ensure the necessary recurrent budget for field support services. A post-Programme decline from the improved levels of household and enterprise fish production and related trade achieved during implementation is considered unlikely as the upgrade would be accomplished through the use of appropriate, affordable and widely available technologies and business skills in real market conditions.

213. The sustainability of the flow of ABDP benefits, assuming technically appropriate investments, depends on: the capacity and willingness of (non-poor) private sector operators to invest in the aquaculture value chains, thereby increasing the demand for smallholder fish production; a supply side response by fish producers to increased demand in domestic trade; value chain strengthening on input supplies, marketing opportunities, extension services, access to finance and improved natural resource management; and the robustness of small- and micro-scale enterprises built largely on own resources.

214. The ABDP approach to access to finance is based on the promotion of sustainable linkages with financial service providers operating in Kenya, which grouping should have a long term business strategy to develop their agribusiness portfolio and, in particular, aquaculture value chain financing. Matching grants are designed to fill financing gaps for specific support to innovative business models expected to be taken up by the financial service providers once proven creditworthy.

215. It is expected that increased smallholder productivity combined with the use of environmentally-friendly best practices in aquaculture would have a positive impact on the physical agricultural landscape, in particular the efficient use of scarce water resources and the quality of forest cover.

216. At the heart of this strategy is the avoidance of illusory “quick wins” derived from resource injections into feeble or non-existent management structures, but rather the concentration on incremental gains in understanding and capacity. Start-ups or existing enterprises at any scale cannot survive without business skills and the experience of dealing with the real economy. It is for this reason that ABDP insists on a sound business plan for all enterprise and infrastructure development, demonstrating the ability to meet the cost of borrowing. The vast majority of the proposed Programme grant elements are in the co-funding of infrastructure and equipment for smallholders. The planned two-year limit on ABDP direct investments in physical and mainly human capital in any enterprise is intended to bring about sustainability from the start, avoid dependency and encourage local ownership of the promoted activities. The rationing of resources allocated to each target community to the critical minimum required would optimise Programme outreach and be justified on equity grounds.

## Appendix 1: Country and rural context background

1. **Economy.** Kenya has a total land area of 582,646 km<sup>2</sup> and an estimated population of 46 million people. High fertility combined with declining mortality has contributed to a population growth rate estimated at 2.6% per year. Kenya's Arid and Semi-Arid Lands (ASALs) make up more than 80% of the country's land mass and are home to approximately 36% of its population. The remaining 64% of the population lives in medium- and high-potential areas in the central and western parts of the country, where the population density is up to ten times the National average of 69 people/km<sup>2</sup>. In October 2014, Kenya became a low-middle-income country. Despite uncertainties in the period leading up to elections, rising insecurity and erratic weather, growth is expected to continue in the next five years at an annual average of around 6%, facilitated by ongoing infrastructure development. However, the challenges of poverty and income inequality remain.

2. **Agriculture and smallholder farming.** The agriculture sector remains the backbone of the Kenyan economy, employing around 75% of the Kenyan population and accounting for about 65% of export earnings. The value added of the agriculture sector stood at 32.9% in 2016. Crop production comprising industrial crops, food crops and horticulture accounts for 82% of agricultural GDP and 94% of export earnings from agriculture. The remaining three subsectors of agriculture - livestock, fisheries and forestry currently account for the remaining 18% of agricultural GDP and 8% of export earnings from agriculture, but still have significant potential not fully exploited. About 12% of Kenya's land area is categorised as arable (high- and medium-potential areas) with adequate and reliable rainfall for rain-fed agriculture. The rest of the country is categorised as arid and semi-arid (ASALs) with an annual rainfall ranging from 150 to 550 mm in the arid areas and 550 to 850 mm in the semi-arid areas; it is therefore not well suited to rain-fed crop production.

3. About 80% of people working in agriculture are smallholders accounting for 75% of agricultural output and 70% of marketed production. Production is carried out on farms averaging 2-3 ha, for subsistence and commercial purposes. Small-scale farmers produce over 70% of the National production of maize, 65% of coffee, 50% of tea, 80% of milk, 85% of fish and 70% of beef and related products. Extension services are provided by a limited number of public extension agents focusing mostly on production and with limited linkages with research. Despite recent improvements, access to financial services remains limited with farmers relying mainly on costly and inadequate informal financial systems. Post-production management and handling is limited and the majority of farmers rely on traditional systems for storage and preservation, leading to up to 30% post-production losses. About 80% of rural households sell some of their agricultural produce, but the level of commercialisation ranges from less than 10% of farm output in relatively low-potential Counties to 80% in high-potential Counties. While physical access to markets has improved, poor feeder road connectivity, lack of market information and limited bargaining power cause farmers to sell mostly at farm gate at low prices.

4. **Natural Resource management and vulnerability to climate change:** The Kenyan economy relies strongly on natural resources to support people's livelihoods and to contribute to National income. With a land area of about 60 million hectares, only 15% of Kenya's land is arable supporting about 80% of the population; the rest of the land is the fragile arid and semi-arid ecosystem, and land use is largely pastoral. Of the total population, 80% live in rural areas and rely predominantly on natural resources for their livelihoods. The urban poor are also dependent on natural resources such as charcoal and wood for their fuel sources. Overall, the natural resource base, mainly forests, wetlands, dryland, aquatic and marine resources, remain under stress following population pressure, deforestation, coastal modification, degradation of the ecosystem, unsustainable use and poor governance of natural resources.

5. On the climatic side, according to the Stockholm Environment Institute, if climate change in Kenya is not addressed effectively, it is estimated that economic costs of its impacts will be 3% of GDP per year by 2030 and possibly 5% by 2050<sup>17</sup>. According to NEMA (2013) the main economic sectors that will be affected negatively by climate change are: agriculture, forestry and land use, water

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<sup>17</sup> SEI, 2009.

resources, marine and coastal resources, and tourism and wildlife. This vulnerability arises from the high reliance on natural resources. For example, Kenya is ranked as one of Africa's most water-scarce countries and currently, its population growth could cause water availability per person to fall from the 2008 levels of 792 m<sup>3</sup> to 350 m<sup>3</sup> by 2020<sup>18</sup>. With the occurrence of some climate change effects such as increased temperatures and altered rainfall patterns, this reduction in available water is expected to be even higher. The agricultural sector, which currently contributes over 30% of the country's annual GDP, will feel the impact of these changing climatic conditions because nearly 98% of crop production is rainfed and over 50% of animal production is in the arid and semi-arid regions.

6. **Food security and nutrition.** According to the global hunger index, Kenya remains a food-insecure country although there have been improvements in the hunger situation over the last five years, moving from a rating of 'alarming' in 2008 to 'serious' in 2011<sup>19</sup>. Overall, about 10 million Kenyans suffer chronic food insecurity and poor nutrition<sup>20</sup>. The underlying causes of food insecurity include: chronic poverty; poor infrastructure; high population growth; climate change; land fragmentation and degradation; poor natural resource management; dysfunctional markets; over-dependence on rain-fed agriculture and limited investments in the Arid and Semi-arid Lands (ASAL)<sup>21</sup>.

7. Concerning nutrition, the Global Nutrition Report 2014 shows that progress in reducing the prevalence of chronic undernutrition in Kenya (stunting) has been limited<sup>22</sup>. Estimated at 37% in 1998 the rate of prevalence of chronic undernutrition stood at 34% in 2014, with important differences across the country. Undernutrition is most widespread and severest in the Rift Valley where some Counties like Uasin Gishu record an undernutrition rate of 42.3% (DHS, 2014). The most affected age group are children of 18-23 months. In addressing chronic undernutrition, it is important to consider the three domains of nutrition security, namely food security, maternal and childcare, and environmental health.

8. **Agricultural/rural growth and climate change response policies.** The Kenya Vision 2030 is the National strategy for transforming Kenya into a newly industrialised middle-income country providing high quality life to all its citizens. It identifies agriculture as one of the six key economic sectors expected to drive the economy to a projected 10% economic growth annually over the next two decades. One of the strategies for achieving Vision 2030 is by improving regional connectivity.

9. The Agriculture Sector Development Strategy 2010-20 (ASDS) is based on Vision 2030. Its overall objective is to achieve an agricultural growth rate of 7% per year and to reduce food insecurity by 30% by promoting an innovative, commercially oriented and modern agriculture, by increasing productivity, commercialisation and competitiveness of agricultural commodities and enterprises and by developing and managing the key factors of production. The 2012 National Agriculture Extension Strategy (NASEP) aims at empowering the extension clientele through sharing information, imparting knowledge and skills, and changing attitudes so that they can efficiently manage their resources for improved quality of livelihoods. On youth empowerment, the policy provides for sensitisation of the youth on lucrative ventures in the agricultural sector and establishment of processing plants in rural areas for value addition of agricultural raw materials and expansion of employment opportunities.

10. The National Food and Nutrition Security Policy (2011) promotes a vision where "all Kenyans, throughout their life-cycle enjoy at all times safe food in sufficient quantity and quality to satisfy their nutritional needs for optimal health". Its objectives are to: (i) achieve good nutrition for optimum health of all Kenyans; (ii) increase the quantity and quality of food available, accessible, and affordable to all Kenyans at all time; and (iii) protect vulnerable populations using innovative and cost-effective safety nets linked to long-term development. The National Nutrition Action Plan (2012-17) recognises the importance of dietary diversity as well as improved knowledge, attitude and practices among the population.

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<sup>18</sup> WRI et al, 2007.

<sup>19</sup> Global Hunger Index. Challenge of Hunger: Taming Price Spikes and Excessive Food Price Volatility, 2011.

<sup>20</sup> Government of Kenya, "National Food and Nutrition Policy", June 2011, page 1.

<sup>21</sup> KIPPRA, policy dialogue on food security information needs in Kenya, Nairobi, March 2011.

<sup>22</sup> Stunting is the result of failure to receive adequate nutrition over an extended period of time.

11. **The aquaculture subsector.** It is estimated that in 2015 Kenya's fisheries and aquaculture sector contributed about 8% to the country's GDP. In 2015, around 2 million Kenyans derived their livelihood from fishing and fish farming activities (including 14 million in inland waters, 120,000 coastal water fishing and around 480,000 fish farming). According to the State Department of Fisheries, total fishery production in 2015 amounted to 163,000 mt, with the majority coming from inland capture fisheries (of which Lake Victoria provided about 90%), about 19% from aquaculture and 6% from coastal waters. Catches of Nile perch - the most sought and mainly exported fish species – seriously declined due to overfishing after the 2000 peak at 110,000 mt, but since 2007 stabilized at an average of 45,000 mt per year. Marine capture fisheries produce less than 9,000 mt per year (FAO, 2015).

12. Freshwater aquaculture development in Kenya in recent years has been fast growing. Compared to an annual production of about 1,000 mt in 2006, production has increased to an estimated 30,775 mt in 2015 according to GoK data. This has been mainly the result of a nationwide fish farming mass campaign as part of the Economic Stimulus Programme launched by the Government of Kenya (GoK) during the period 2009-2013. As a result, the area of fishponds has increased from 220 ha in 2009 to 1,873 ha in 2015 (introducing 7,700 new ponds) and other support has been provided along different aquaculture value chains. The main produced species were Nile tilapia (75%), African catfish, common carp and rainbow trout. Mariculture is not yet practiced commercially, despite different trials, which have demonstrated clear success in Kenya.<sup>23</sup> Nevertheless, there is a lack of reliable data as regards aquaculture production at County and National level and estimates from different sources range from 10,000 to about 40,000 mt per year. Based on mission finding and interactions with the Counties and several stakeholders, the IFAD mission estimates current aquaculture production to be around 15,000 mt per year.

13. Nevertheless, the aquaculture sector is gaining momentum as production from catch fisheries decreases and demand increases due to population growth. There is already a significant gap (250,000 mt in 2014), between the projected demand and production of fish, which is expected to increase (expected to be 360,000 mt/year by 2025). This lack of supply has resulted in a continuous decline of per capita average consumption, due to rising prices and limited availability. This shows the significant domestic growth potential of the aquaculture sector. The import of frozen fish, predominantly from China, has grown rapidly from 2,664 mt in 2011 to 5,853 mt in 2014 to fill the gap in local supply, since wild catch is falling and pond farmers are not able to supply consistent quantity and quality, although there are concerns regarding the quality of the imported fish.<sup>24</sup> The GoK is looking into ways of promoting aquaculture and using fish products for food relief programmes as a means to enhancing food security and improving health.

14. **Fish value chains.** The fishery sector in Kenya consists of interwoven activities and value chains: capture and farmed fish, fresh and processed fish, industrial and artisanal processing, domestic and export markets, food and feed products. While Kenya is one of the few countries that can access demanding export markets, the overall fish value chains remain less developed and less formal.

15. There are several constraints on the production side for aquaculture, such as poor low yields, out-dated technologies, inadequate technical skills, limited and low quality inputs (quality feed and fingerlings), scattered production over many small scale enterprises, inadequate credit and insurance facilities, and inadequate market information. Most fish products are handled, processed, transported and stored without proper equipment and through fairly unhygienic and un-standardised processes. In addition, insufficient marketing infrastructure and information limit the smallholders in marketing their fish at a profitable price.

16. **Aquaculture policy and regulations.** GoK has developed a robust policy and regulatory framework for fisheries, aligned to Vision 2030. The Fisheries Management and Development Act, enacted in 2016 provides the overarching legal framework for fisheries and aquaculture development and management in Kenya. The National Oceans and Fisheries Policy of 2011 provides the policy framework for development of fisheries and aquaculture. The policy prioritizes aquaculture

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<sup>23</sup> Mariculture is a specialized branch of aquaculture involving the cultivation of marine organisms for food and other products in the open ocean, an enclosed section of the ocean, or in tanks, ponds or raceways which are filled with seawater.

<sup>24</sup> IFAD 2016 Kenya Aquaculture Market Research.

development as the engine for revitalizing growth of Kenya's fisheries sector to contribute to food security, poverty reduction, employment creation, and reducing pressure on capture fisheries.

17. **Economic Stimulus Programme.** In 2009, the Government of Kenya implemented an ambitious aquaculture development programme under Economic Stimulus Programme (ESP) over a four-year period (2009-2013) at a cost of USD 40 million. The programme supported construction of ponds (300 in 160 constituencies), improved infrastructure for fish feeds and seeds, and construction of four fish processing facilities in four regions (Nyeri, Meru, Migori and Kakamega) to serve aquaculture farmers within and the surrounding Counties. Part of the funds was used to map zones of high aquaculture potential in which viable investments can be promoted. In total, 48,000 fishponds were constructed under the programme. During early stages, it supported as well aquaculture in reservoirs that were constructed by the programme before it was abandoned later due to high investment costs and non-availability of lands for the programme to construct man-made reservoirs to be dedicated for aquaculture. The programme supported the provision of subsidized feeds and seeds for the newly established ponds. It is worth mentioning that farmers contributed land only, while the ESP supported digging of the pond.

18. After the devolution (2013), fish farming was one of the devolved functions and some of the Counties abandoned the programme as they focused resources in areas, which were of priority. One of the lessons learned was that the distribution of the ponds was more political than logical as such ponds were constructed in areas where they were not sustainable for various reasons, including lack of water, local population not used to fish consumption, marketing a challenge and capacity building was limited (skills, access to fingerlings and fish feeds).

19. At present, several ponds are out of production due to issues with quality of feeds and fingerlings, as well as poor selection of sites for some of the ponds. Some of the fingerlings farms, supported by the programme are getting out of business in certain areas due to low demand.

20. The programme increased the number of small-scale farming units and resulted in substantial increase in aquaculture production capacity, however, the implementation have generated important lessons, both positive and negative, especially with regard to sustainability. These lessons include:

- Aquaculture has great potential to grow and can contribute to food security and is a great source of income to farmers, if challenges in availability of fish feed, fingerlings, advisory services among others are adequately addressed.
- Future programmes should include value addition and post-harvest management on large scale.
- Production and marketing clusters, and development of farmers' entrepreneurial and marketing skills were missing in the initial phase and should be piloted in subsequent phases.
- The private sector should lead efforts in value chains development through service provision, input provision (seed, feed, liners, harvesting gears) and marketing.
- Political influence during programme implementation should be avoided as results could be compromised. It was evident that politically motivated interventions that had no sound technical or social basis have failed.
- Aquaculture programmes are attractive to youth.
- Experience of state department of fisheries indicate that fish consumption can be increased through eat more fish campaigns, field days, field fairs and open school days.
- Post-ESP (a year after devolution), the programme was actually abandoned by devolved units as they had not been involved, thus it is essential that implementation take place through County Governments.
- Government financial flow, cultural factors and beneficiaries commitment and participation were important factors determining success of the programme.



- The need to include Research and Development (R&D) into the programme activities especially to ensure continuous improvements in quality of aquaculture inputs and management practices.

21. **Financial services.** Kenya has a well-developed financial services sector investing mainly in the urban/modern economy. The agriculture sector accounted for 5.7% of the total loan accounts of the banking system end of 2015, much below its share of the GDP of 24.2%. Most of the commercial bank financing of the sector is going to large agribusiness companies and medium or large scale commercial farmers who can provide hard collateral. Some SME value chain actors upstream and downstream of the producers can access finance from some Banks, MFBs, MFIs and SACCOs, but the forgotten link in the chain is the financing of small-scale farming, which is considered very risky. Some MFBs / MFIs have ventured into small-scale farmers financing without specific and well risk-mitigated products, usually with poor results. However, there is a growing interest in the agribusiness sector, in particular in line with new opportunities to develop profitable private enterprises, and several commercial banks and MFBs/MFIs have set up agribusiness departments recently and developed products under the agricultural Value Chain Financing (VCF) approach that builds on linkages between value chain actors to mitigate risks. These developments are timely to support the current rapid expansion of the aquaculture Subsector.



## Appendix 2: Poverty, targeting and gender

1. **Rural Poverty.** The incidence of poverty in Kenya dropped from 52.2% in 1997 to 45.2% in 2009.<sup>25</sup> The country ranks 145/186 in the Human Development Index.<sup>26</sup> Over 75% of the country's population live in rural areas, where poverty was estimated to affect 50.5% of the population in 2009. However, County and Sub-county poverty variations are visible. The ASALs have the lowest development indicators and the highest incidence of poverty in the country. The incidence of poverty in the ASALs was 55.3% in 2009 compared to the National average of 45.2% with arid areas having a higher poverty incidence estimated at 75.8% in 2009 compared to 47.6% in semi-arid areas and 41.3% in medium- and high-potential areas. Food security remains a major concern with an estimated 10 million people in the country categorised as chronically food insecure, the most affected being women and children in rural areas.<sup>27</sup>

2. Statistical series indicate significant movements of rural households in and out of poverty and between different poverty categories in the last ten years, highlighting the extreme vulnerability of rural households to external shocks such as poor health, inflation, market volatility, unemployment, riots, violence, displacement, drought and floods. Access to natural capital and the agro-ecological zone in which a household is located - from high rainfall to semi-arid and arid areas are primary determinants of the poverty level and vulnerability.

3. According to a National report, at County level, there are significant inequalities in poverty.<sup>28</sup> The proportion of individuals below the poverty line in Turkana (87.5%), Mandera (85.8%) and Wajir (84.2%) is four times that of Nairobi, which has the lowest poverty at 21.8% and almost double that of Laikipia (47.9%), the median County.<sup>29</sup> The incidence of poverty is higher in the northern and coastal parts of the country and significantly lower in others especially in Nairobi and the central.

4. The poverty level incidence in ten of the fifteen potential targeted Counties:

County	% individuals below poverty line <sup>30</sup>
Kisii	51
Migori	50
Kisumu	40
Homa Bay	48
Kakamega	49
Vihiga	39
Nyeri	28
Embu	35
Kirinyaga	26
Meru North	31
Busia	60

<sup>25</sup> Kenya Integrated Household Budget Survey (KIHBS), 2005/6; and 2009 National Population and Housing Census (Economic Survey, 2014).

<sup>26</sup> Human Development Index (HDI), 2013.

<sup>27</sup> National Food and Nutrition Security Policy, 2011.

<sup>28</sup> Exploring Kenya's Inequalities, 2013, National Bureau of Statistics.

<sup>29</sup> In 2005/06, the poverty line was estimated at KES 1,562 and KES 2,913 per adult equivalent per month for rural and urban households respectively. Nationally, 45.25% of the population lives below the poverty line (2009 estimates), down from 46.5% in 2005/06.

<sup>30</sup> Source: Exploring Kenya's inequalities, 2013, National Bureau of Statistics/ poverty table.

5. **Rural women in Kenya.** Poverty in Kenya has a gender and age dimension as a result of the different roles played by men and women in the society, and because gender disparities exist in terms of access, ownership and control of productive resources, as well as differences in capabilities. Kenyan women make significant yet often unrecognized contributions to the country's economy and gender gaps are particularly noticeable in the agricultural sector, as it provides support to the very poor.<sup>31</sup> Kenyan women are a major force in agriculture, providing over 70% of the labour, yet they own only a fraction of the land titles, thus reducing incentives to invest in land and possibly contributing to lower productivity.<sup>32</sup> A 2011 study found that a much higher percentage of men (81%) compared to women (19%) own land individually in Kenya. The study also found that men's overall landholdings tend to be at least four times larger than women's, and that men tend to farm larger parcels of land compared to women.<sup>33</sup> Women are also disadvantaged in their access to other types of agricultural inputs, such as extension information and services and access to credit. It is suggested that allocating land, labour, capital and fertilizer more equally would increase agricultural yields in Kenya by more than 20%, which demonstrates the serious consequences of gender disparity.<sup>34</sup>

6. **Challenges in the aquaculture sector for rural women.** Women farmers face several constraints and challenges in the aquaculture sector including: inadequate access to quality fingerlings and fish feeds, inadequate capital to invest in commercial aquaculture, low levels of skills and knowledge in the enterprise and poor access to technical and market information. In the context of the Programme area, Female Headed Households (FHH) is a highly vulnerable group because of deeply embedded socio-cultural attitudes and practices.

7. Other constraints such as lack of capital and access to institutional credit, competing use of time, poor technical skills and lack of access to extension services affect women more than men. Low presence of women in formal institutions and organisations limit their ability to have voice and access to better market and business opportunities.

8. **Approach in closing the gender gap.** The Programme is in line with the social pillar of Kenya's Vision 2030, which aims to ensure equity in power and resource distribution between the sexes, improved livelihoods for all vulnerable groups, and responsible, globally competitive and prosperous youth. Specific strategies involve: increasing women's participation in all economic, social, and political decision-making processes; improving access to all disadvantaged groups (including business opportunities, health and education services, housing and justice); and minimizing vulnerabilities through the prohibition of retrogressive practices (for examples, female genital mutilation and child labour) and by scaling up training for people with disabilities and special needs.

9. **Gender and social inclusion strategy.** The Programme gender strategy aims at equal involvement and benefits of women and men in the development of the aquaculture value chain. Women and men of different ages and socioeconomic categories, including youth, will be given equal chances to participate in ABDP activities and obtain equal returns. Increasing social capital among the poor is a guiding principle of the proposed Programme, which emphasizes the importance of enhancing economic and social inclusion of vulnerable and marginalized groups in targeted rural communities. This will comprise unemployed youth, elderly women and men, widows/orphans, the disabled and people living with HIV/AIDS.

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<sup>31</sup> Kenya ranks 121st out of 149 countries included in the Gender Inequality Index in 2013. Of adult women, 25.3% have reached at least a secondary level of education compared to 31.4% of their male counterparts. Female participation in the labour market (population ages 15-64) is 62.0% compared to 72.2% for men, and women's share of the seats in parliament in 2013 was 19.9%. For every 100,000 live births, 360 women die from pregnancy-related causes, and the adolescent birth rate is 936 births per 1,000 live births.

<sup>32</sup> AfDB (African Development Bank) (2007): "Country Gender Profile," Tunis.

<sup>33</sup> For example, a study in 2013 says that a significantly larger proportion of male (54%) than female (41%) primary farmers had received extension services over the previous year (World Bank, "Tapping the Potential of Farming in Kenya," Gender Policy Note, Washington, DC).

<sup>34</sup> World Bank (2009): Gender in Agriculture Sourcebook," Washington, DC.

10. ABDP will seek to mainstream gender-informed approaches in its design, implementation, and monitoring of activities by factoring in the different needs, constraints, and opportunities of women, men, girls, and boys across all Components. Specifically, the Programme will provide marginalized women, youth and other vulnerable groups with targeted interventions that recognize their different skill needs and resources compared to other members of the community.

11. This will be achieved investing in capacity building at all levels, especially introducing methodologies at household level to support women to share control of income generated and decision making (that is, selected tools from the Household methodology) and for supporting nutrition sensitive related interventions.

12. The Programme will contribute to three main outcomes for Gender Equality and Women's Empowerment (GE/WE):

- **Expand women's economic empowerment through access to and control over productive and household assets.** Women heading households and women in male-headed households will be empowered. Their financial, business and entrepreneurial skills will be strengthened to build small businesses and effectively engage in income generating activities (IGAs) and being organized around Aquaculture Support Enterprises (ASE) in the aquaculture value chain. Women fish farmers involved in production will also be targeted to receive training on husbandry practices (as well as other services/trainings) and accessing key technologies, equipment, financial and non-financial services to increase fish production and productivity, (women will represent at least 30% of fish producers and 50% of non-fish producers youth target group will be women youth).
- **Strengthen women's decision-making role in the household and community and their representation in membership and leadership of local institutions.** The use of capacity building, including household methodologies, will ensure that women are fully part of decision-making in the household and regarding VCs economic related activities. Particularly, the Programme will strive to support women's capacity to remain engaged in the different value chains and keep on benefiting from it as it becomes more commercial, supporting women to share control of income generated and decision making. Their participation in farmer's groups and also Farmers Field Schools (FFS) will be used to encourage their membership and leadership in related aquaculture farmers' groups and organisations and key committees created by ABDP and existing ones that will be strengthened by the intervention.
- **Achieve a reduced workload and an equitable workload balance between women and men, girls and boys.** Time and labour saving technologies as well as other types of technologies will be promoted by the Programme. Another main contributor for an equitable workload balance will be the application of Households methodologies.

13. The gender and social inclusion strategy will consider lessons from existing and past IFAD experiences in the country, as well as from other partners (such as FAO, FarmAfrica, AAK) and will support women farmers to take advantage of economic opportunities provided by value chain development and engage in viable business initiatives along the different sectors of the value chain (processing/added value/ marketing). Moreover, women will be supported in becoming active and vocal members of relevant organizations such as cooperatives and producer's organizations. It will also support (i) women smallholders' farmers access to services, inputs and assets; (ii) women and youth inclusion in capacity building; and (iii) nutrition education. In consideration of women's (i) low levels of literacy and numeracy, (ii) lack of business development and management skills and (iii) limited voice, leadership and decision making capacity in organizations and business management, the Programme will support the following initiatives:

- Financial literacy and leadership training for women. The training will work on their capacity to engage in business activities and become leaders. This activity will support women participation in groups, cooperatives and enterprises, enabling them to engage in profitable income generating activities and benefit from them. Training will target women who are

already member of producers' organizations, cooperatives or private enterprises or those who have the potential to be active members of one of those. The intervention will pay particular attention to encourage women in key leadership position.

- Women and youth producers/processors will be assisted in accessing financial services to purchase relevant assets and inputs for their economic activities. They will be supported in submitting applications to apply for financial support.
- The Programme will pay careful attention to ensure trainings respond to women's needs. To ensure their inclusion (50% participants) the extension agents will consider appropriate time, location and childcare facilities will be provided. The trainings will include topics of relevance for women.
- The Programme will involve strategies to improve the nutritional status of communities involved. At community level, curriculum on nutrition will be developed and integrated in the Subsector plans for trainings. It is also proposed that the activities on specific food promotion, behaviour change communication and nutrition education will be implemented at household level using the household methodologies approach.
- Selected tools from the Household methodology, whose success has been proven under other IFAD funded initiative in Kenya, will be used during capacity buildings at community level, to promote equal access of men and women to economic opportunities, decision-making processes and share of workload and also for improved nutrition.

14. **Youth.** To support youth employment in the rural areas, the Programme will identify and promote the involvement of young men and women along the various segments of the aquaculture value chains: (i) In services such as, transportation, distribution and labour employed in, for example, processing centres; and (ii) producers, introducing through them a business-oriented approach to production and marketing and as traders (agri-agents).

15. **Coordination and monitoring.** Specific attention will be given to women and youth throughout the Programme, starting by supporting the PCU with specific Technical Assistance (TA) in the area of gender, youth and nutrition. A gender focal point will be appointed to be responsible for gender and youth issues, including the further development, implementation and monitoring of the gender and youth strategy as well as supporting institutional strengthening.

16. Service providers supporting the implementation of activities (particularly those directly dealing with producers and groups) should have a demonstrable commitment to gender inclusive approaches, youth. In order to ensure adequate knowledge of relevant gender issues and how to tackle them during implementation of activities.

17. The M&E system will give strong emphasis to monitoring of targeting performance. All implementers, including service providers are required to provide disaggregated data on women and youth participation, in relation to overall Programme targets (30% participation of women and 20% of youth for fish farming beneficiaries; 100% youth for non-fish farmers including 50% women youth). Impact will be assessed on the basis of methodologically sound baseline, mid-term and completion surveys that will use key indicators to measure women's empowerment.

18. Outcome indicators will be all disaggregated by sex, gender and age and include number of women and youth accessing Programme services; number of women and youth in formal groups/organisations and in leadership position.



Sector.	Programme intervention.	Total beneficiary households	Subsistence beneficiaries <sup>35</sup> .				Smallholder farmers producing surplus for market. 20% total beneficiary HHs. <sup>36</sup>				Specialised fish farmers,
			80% total beneficiary HHs								
	fish farmers under C1 <sup>41</sup> .										
	Seed money for youth entrepreneurs under C1	5,500		2,500.	-	5,000.	-	-	-	500 <sup>44</sup>	-
	Technical assistance training.	35,420. <sup>45</sup>	23,400.	9,520.	4,680	5,000. <sup>46</sup>	6,500.	2,100	1,300.	500. <sup>47</sup>	20-
	Access to finance (bank, MFIs, etc).	(74% of total). 26,425.	(70% of subsistence SAG C1). 16,380.	(30% of level 1 SAG+ 50% level 1 ASE for C1). 6,914	(20% of level 1 SAGs C1) 3,276.	(80% of level 1 youth ASEs). 4,000.	(85% of market SAG C1). 5,525.	(30% of market SAG + ASE C1). 1,808.	(20% of market SAG) 1,105.	500.	20-
	Nutrition education.	Direct 35,400 HHs. Outreach 300,000 (indirect).	23,400.	9,520.	4,680.	5,000.	6,500.	2,100.	1,300.	500.	-

<sup>42</sup> Due to focus on youth, only level 2 youth fish farmers would receive grant support under component 1 to improve ponds. All others (women and men) level 2 fish farmers are eligible for TA support only.

<sup>43</sup> Grants for cottage feed industry and fingerling producers under component 1

<sup>41</sup> Component 1 is termed C1

<sup>44</sup> Both level 1 and level 2 non farmers youth will receive TA and seed money.

<sup>45</sup> Breakdown is 23,400 level 1 fish farmers; 6,500 level 2 fish farmers; 5,000 level 1 non-producers youth;

<sup>46</sup> Youth entrepreneur accessing trainings and business/employment opportunities.

<sup>47</sup> Youth entrepreneur accessing trainings and business/employment opportunities.



Sector.	Programme intervention.	Total beneficiary households	Subsistence beneficiaries <sup>35</sup> .				Smallholder farmers producing surplus for market. 20% total beneficiary HHs. <sup>36</sup>				Specialised fish farmers,
			80% total beneficiary HHs								
Component 2 Support for aquaculture value chain development	Grant outgrower scheme and Aquaculture Support Enterprises.	(44%) 15,760 beneficiaries of C1 participating in C2.	(40% of subsistence SAG C1). 9,360.	(30% of level 1 SAG from C1+50% level 1 ASE from C1. 3,808.	(20% of subsistence SAGs C1). 1,872.	(40% of level 1 ASEs C1) 2,000.	(60% of market level 2 SAG C1) 3,900.	(30% of market (level 2) SAG+ASE from C1). 1,290.	(20% of market (level 2) SAGs C1). 780.	(80% of market (level 2) ASE C1). 400.	100.
	Technical assistance for production and non-production.	(44%) 15,760 beneficiaries of C1 participating in C2.	(40%). 9,360.	(30% of level 1 SAG +50% level 1 ASE). 3,808.	(20%) 1,872.	(50%). 2,000.	(60%). 3,900.	(30%). 1,290.	(20%) 780.	(80%). 400.	100.
	Access to financial services (banks, MFIs).	(44%) 5,760 beneficiaries of C1 participating in C2.	(40%). 9,360.	(30% of level 1 SAG +50% level 1 ASE). 3,808	(20%) 1,872	(50%). 2,000.	(60%). 3,900.	(30%). 1,170.	(20%) 780	(80%). 400.	100

TARGETING CHECKLISTS	DESIGN
1. Does the main target group - those expected to benefit most - correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	The Programme intends to reach about 35,500 beneficiary households out of which majority are poor men and women smallholder farmers involved in the aquaculture sector operating at subsistence level. Other target groups correspond to the more disadvantaged categories, including women, FHHs, unemployed youth and also disabled and HIV/Affected people.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences?	Target groups have been described based on different socio economic opportunities, livelihood strategy and gender roles within the household. They are classified as: smallholder farmers producing for subsistence; smallholder farmers producing a surplus for the market; specialised farmers; women, women and youth.
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups?. What is the evidence? (Matrix on analysis of project Components and activities by principal beneficiary groups completed?)	The aquaculture value chains supported by ABDP will be of interest for producers as well as for other actors (sub-groups) involved in all segments of the aquaculture VC. Women are shown to be good at certain areas of the VC process, including processing and marketing. The Programme has identified key areas for support and activities (formation of ASE/ entrepreneurial opportunities/ Income generation) that are conducive to the roles of women, youth and other sub-groups.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, involving some or all of the following measures and methods:	
4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based projects or programmes, geographic areas (and within these, communities) with high concentrations of poor people.	Poverty has been used as one of the criteria for geographic selection.
4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households.	At least 30% of total beneficiaries will be women. Furthermore, specific activities will target exclusively women, unemployed youth, disabled and HIV/AIDS affected people. In total youth will number 5,500 households.
4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups.	Improved services for fish production and productivity, enhanced access to market, financial services, alternative business/entrepreneurial opportunities will be enjoyed by all beneficiaries in the Programme target areas.

TARGETING CHECKLISTS	DESIGN
4.4 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power.	Consultation and awareness creation with communities to ascertain their willingness to participate in the Programme will be undertaken. Inclusive and consultative processes that ensure that communities are properly consulted. Groups' formation and consultation will consider socio cultural characteristics and measures will be taken to overcome cultural barriers where present. This will be specifically done for ensuring women participation.
4.5 Enabling measures –to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building.	Awareness raising activities for gender and poverty are considered in the Programme at all levels. Household methodologies will be implemented through the groups – aimed at transforming the gender relations, which are usually embedded with gender inequalities.
4.6 Attention to procedural measures - that could militate against participation by the intended target groups.	Women, women head of household and youth specific groups will be supported through mentoring, coaching in order to build confidence and negotiation skills. Training programmes will include sessions on leadership for women groups/cooperatives. Participatory methodologies will be applied throughout the all process.
4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and service providers.	A gender, youth and nutrition expert will be recruited. He/she will be responsible for poverty targeting, gender & youth focus.
5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and be assessed at mid-term review?. Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?	Monitoring and evaluation of poverty targeting, gender and youth focus will be part of the Programmes' supervision schedule. All people-centred indicators will be disaggregated by gender and age, and enriched by qualitative information and analysis. Reporting on poverty targeting, gender and youth focus will be part of the reporting requirements.

#### IFAD's KEY FEATURES OF GENDER-SENSITIVE DESIGN AND IMPLEMENTATION

Criteria	Design
1. The project design report contains – and project implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each project activity from the gender perspective to address any unintentional barriers to women's participation.	Women will be one of the priority target groups as the Programme will offer women empowerment opportunities in all the sectors of the aquaculture value chain: from production/processing/post-harvest/ adding value/ to marketing, on the basis of gender roles but also on the economic opportunities identified. It is reported in detailed Programme description of PDR.

Criteria	Design
<p>2. The project design report articulates – or the project implements – actions with aim to: Expand women’s economic empowerment through access to and control over productive and household assets.</p>	<p>ABDP will support women’s membership in groups. This will enable women to receive training and new technologies and have access to financial and other services. Out of a total of 30,000 producers, women will account for 30% minimum members. Furthermore, women will be 50% of the members of ASEs.</p>
<p>Strengthen women’s decision-making role in the household and community, and their representation in membership and leadership of local institutions.</p>	<p>Women will be at least 30% of groups’ members (fish farmers producers/ FFSs) and the Programme will support leadership training to ensure women are in leadership position.</p>
<p>Achieve a reduced workload and an equitable workload balance between women and men.</p>	<p>Labour saving and time saving technologies will be promoted by the Programme. These will be particularly relevant for women and youth engaging in processing activities along the value chain.</p>
<p>3. The project design report includes one paragraph in the targeting section that explains what the project will deliver from a gender perspective.</p>	<p>The social gender and social inclusion strategy is reported in the PDR and is articulated around the following: The strategy will be operationalized along three pillars of activity to: (i) provide direct-targeted programmes and investments to women and youth to boost their human development status and social capital; (ii) ensure full representation of men, women, youth, and all social groups in community-level institutions and decision-making processes; and (iii) provide targeted information, education, capacity building to all stakeholders regarding gender awareness as well as on HIV, nutrition and related social aspects.</p>
<p>4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant project Components.</p>	<p>A detailed gender strategy will be developed based on the key elements described in in this paper. The draft strategy will focus on:</p> <ol style="list-style-type: none"> <li>i. Improving decision-making patterns in the household, membership in and leadership of community-based organizations, marketing institutions (cooperatives) and other community activities.</li> <li>ii. Increasing the effective participation of women in Programme activities.</li> <li>iii. Achieving a more equitable access to Programme resources including skills training, technology and other support services.</li> <li>iv. Improving practical benefits of women such as increased income, assets, greater financial security and more livelihood options.</li> <li>v. Gender awareness creation and capacity building.</li> </ol>
<p>5. The design document describes - and the project implements - operational measures to ensure gender- equitable participation in, and benefit from, project activities. These will generally include:</p>	

Criteria	Design
5.1 Allocating adequate human and financial resources to implement the gender strategy	A gender, youth and nutrition expert will be recruited to provide technical assistance to the PCU. A gender focal point will be appointed to ensure that women and youth are participating in the Programme activities as equal partners, and that issues specifically related to women and youth are being adequately addressed. The Programme will support training of staff and partners on gender and social inclusion at all levels.
5.2 Ensuring and supporting women's active participation in project-related activities, decision-making bodies and committees, including setting specific targets for participation.	Quotas for participation have been set for 30% women in farmers' producer groups and 50% women in Aquaculture Support Enterprises (ASEs).
5.3 Ensuring that project/programme management arrangements (composition of the project management unit/programme coordination unit, project terms of reference for staff and implementing partners) reflect attention to gender equality and women's empowerment concerns.	The terms of reference for the Programme Coordinator will reflect responsibility for gender focus and social inclusion, in addition to have a gender focal person and <i>ad hoc</i> ToRs for the gender, youth, and nutrition experts.
5.4 Identifying opportunities to support strategic partnerships with Government and others development organizations for networking and policy dialogue.	The Lead Agency for the Programme implementation is the State Department of Fisheries in the Ministry of Agriculture, Livestock, and Fisheries. Under the decentralized structure, the Programme will interact with the County Governments of the participating Counties. Within the Counties, the Programme will collaborate with the Gender and Youth Officers. At community level, to increase awareness on fish consumption and preparation, the Programme will organize activities, together with key partners such as the ministry of health, ministry of education and ministry of gender and youth. For youth related interventions, the Programme will seek collaboration with ILO.
6. The project's logical framework, M&E, MIS and learning systems specify in design – and project M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.	The baseline survey will include a gender analysis. This will provide a basis to track women's empowerment through Programme support. The logical framework includes gender sensitive indicators that will support collection and analysis of gender disaggregated data and information.



## Appendix 3: Country performance and lessons learned

### Country performance

1. Since 1979, IFAD has invested USD 353.3 million in 18 programmes and projects in Kenya with a total cost of USD 693.0 million to support Kenya's efforts to reduce rural poverty.
2. In 1995, the entire IFAD portfolio was suspended due to poor project performance, weak management and lack of appropriate financial accountability, including lack of audits. The period 2001-07 marked a phase of re-engagement portfolio development for IFAD in Kenya. The first few new operations in Kenya became operational in mid-2001, followed by three other projects developed during the period of the first Country Strategic Opportunities Programme (COSOP).

### Current portfolio

3. There are currently five on-going IFAD programmes/ projects in Kenya.
4. **Programme for Rural Outreach of Financial Innovations and Technologies.** The goal of PROFIT is to contribute to the reform of the financial sector policy in Kenya and to increase financial sector appetite to lend to the smallholder agriculture sector, through development of a range of innovative financial products. The total programme cost is USD 832 million, which comprises USD 293 million IFAD loan, USD 600,000 IFAD grant, leveraging of funds from the financial sector, and GoK and community contributions. The programme is being implemented from 2010-19 and benefits 196,000 households.
5. **Upper Tana Natural Resources Management Project.** UTaNRMP is contributing to improving the livelihoods of poor rural households through increased food production and income, as well as sustainable management of natural resources. Total funding USD 32 million IFAD loan with USD 18 million Spanish Fund cofinancing. Target is 205,000 households and runs 2012-20.
6. **Kenya Cereal Enhancement Programme.** KCEP aims at contributing to National food security and support to smallholder farmers to graduate from subsistence to commercial agriculture by increasing the production of cereal staples and incomes of smallholders in medium to high potential production areas of targeted crops (maize and beans). The programme uses an innovative e-voucher system to support smallholder's access to quality inputs (funding level of USD 22 million EU contribution through IFAD) and targeting 100,000 households (2014-18).
7. **Kenya Cereal Enhancement Programme – Climate Resilient Agricultural Livelihoods Window.** KCEP-CRAL aims at reducing rural poverty and food insecurity among smallholders in Arid and Semi-Arid Lands by developing their economic potential, while improving their natural resource management capacity and resilience to climate change in increasingly fragile ecosystems (IFAD Loan and Grant USD 638 million, IFAD ASAP Grant USD 10 million, EU contribution through IFAD USD 117 million, 2015—22, direct household beneficiaries 100,000). KCEP-CRAL has a parallel financing of USD 117 million from FAO and USD 102 million from WFP. KCEP-CRAL targets 100,000 households.
8. The programme is being implemented through partnership arrangements with private sector (banks and agro-dealers) and with MoUs with research institutions and service providers (training and capacity building in post-harvest management, crop husbandry and so on). The programme is being implemented through an innovative e-voucher system, which allows small-scale farmers to access inputs from agro-dealers under a graduated subsidy arrangement.
9. **Smallholder Dairy Commercialization Programme.** SDCP started in 2006 and is expected to end in 2019. The programme fosters market driven development of the smallholder dairy

sector in Kenya, working with poor smallholder dairy farmers and traders to strengthen their capacity to respond to market opportunities. The programme is implemented through organized dairy groups that are supported through packages of innovative technologies to improve on dairy productivity and then linked to milk processors through an aggregator model operated by the groups with support from private sector. The funding for the programme comprises USD 345 million IFAD loan and USD 845,000 IFAD grant, and targets 24,000 households.

### **Current COSOP (2013-18)**

10. The current COSOP developed jointly between IFAD and GoK and guiding IFAD's investments in Kenya has three strategic objectives.
  - Improved natural resources management that is gender-responsive, climate resilient, sustainable and community based.
  - Improved access to productivity enhancing assets, technologies and services for vulnerable rural women, men and young people in target areas.
  - Enhanced, sustainable access to markets for smallholder farmers, agro pastoralists and rural entrepreneurs.
11. To contribute to these strategies, IFAD's investments follow a value chain approach to support smallholder farmer graduation from subsistence to commercial farming using public-private sector partnerships arrangements. The three strategic objectives are in line with of Kenya's vision 2030 and the Kenya Constitution 2010, which has a strong focus on gender inclusiveness and empowerment. Areas of COSOP that are directly relevant for ABDP design include:
  - Youth and gender focus.
  - Sustainable access to markets for smallholder aquaculture producer.
  - Improved access to productivity enhancing technologies (feeds and fingerlings) for women, youth and rural fish farmers.

### **Country Programme Evaluation**

12. The most recent Country Programme Evaluation (CPE) was carried out in 2010-11 and rated IFAD-GoK partnership in the past decade as moderately satisfactory. Overall, results were found encouraging, especially in areas of natural resources management and environmental conservation, community development, and marketing of smallholder farmers' produce.
13. Major weaknesses were large diversity of project interventions; an excess focus on fertile areas of the South West to the detriment of arid and semi-arid areas, the lack of a coherent agenda to drive the systematic tracking of innovation and scaling up; weak efficiency of operations due to slow replenishment of project special accounts, delays in payments of services, high overall project management costs, multiple Components and institutions involved in project execution; and insufficient attention to policy dialogue and partnerships with bilateral and multilateral donors.
14. The CPE also underlined a number of areas of concern regarding the performance of the Government, including weak project implementation capacity at the district level, small allocation of counterpart funds, insufficient commitment to policy implementation, slow flow of funds, and inadequate financial management, auditing and procurement processes.
15. Major lessons from the long experience of IFAD in Kenya include the following.
  - Modest investments in NRM and climate adaptation that are well integrated into project activities have a significant positive impact on projects.



- IFAD's contribution to improving rural incomes and livelihoods can be enhanced by: (i) increasing the geographical and sectoral focus of investments; (ii) increasing attention to policy dialogue and partnerships; and (iii) extending the geographic outreach to include the economic potential of arid and semi-arid lands (ASALs) where possible and relevant.
- The IFAD programme has built-in provisions for stronger partnerships, as is already happening with the European Union for KCEP and KCEP-CRAL.
- The GoK and other partners value IFAD's bottom-up approach, focus on rural smallholder farmers, and emphasis on community-driven development and grass-roots institution-building.
- Longer-term engagement and scaling up of investments must be planned strategically (case of KCEP, UTaNRMP and SDCP).
- There is room for improvement in Government performance in a number of areas, including the low budgetary allocation to agriculture, weak project implementation capacity at the County level, and the fragmentation of institutional architecture.
- IFAD's impact can be improved by strengthening linkages between country/regional grants and individual projects.

### **Incorporation of lessons learned**

16. The lessons learned from the implementation of the previous COSOP and the CPE were considered in the development of the current COSOP and largely in the design of ongoing programmes and ABDP. UTaNRMP, for example, fully integrates NRM and climate change adaptation for effective poverty reduction. There is a major focus on policy dialogue under the new COSOP and this has been captured in the ABDP design. A linkage to sustainable markets is given prominent focus through promotion of the aggregator model and PPPPs model. As with current COSOP strategic focus, ABDP will promote strong partnerships with service providers (including research and training institutions), the private sector and Non Governmental Organizations (NGOs).
17. The weak capacity at the County level will be supported through capacity building, supplementary engagement of seasoned NGOs, the private sector and community based service providers in the area of aquaculture and construction of community structures.
18. Aquaculture interventions in Central Kenya by UTaNRMP (37 groups) through matching grants managed to establish aquaculture group enterprises. The project provided capacity building on technologies in collaboration with nearby universities. Fish has been consumed by farmers and sold fresh in local markets through kiosks, restaurants, supermarkets and the Nyeri based fish processing facility constructed with funding from Economic Stimulus Package and now operated by a farmers' cooperative. However, the production has not been conducted on a commercial scale, as the ponds are group owned with groups of 15 – 25 farmers owning one pond. These interventions have been useful in introducing fish to local diets and some skills in fish production.
19. SDCP has been particularly successful in increasing dairy production and productivity through establishing farmers groups based on commercially active farmers in the dairy value chain. While valuable lessons can be drawn from SDCP experience in group formation and training, there are clear differences between aquaculture and dairy value chains, including the fact that some aquaculture production base; such as ponds may need to be managed collectively. SDCP higher-level marketing and post-harvest activities through apex organizations and cooperatives were less successful.
20. **IFAD's comparative advantage.** The proposed Programme is in line with IFAD strategic objectives and Kenya COSOP (2013-18) and in particular with strategic objective two 'Improved access to productivity enhancing assets, technologies and services for vulnerable rural women,

men and young people in target areas' and objective three 'Enhanced, sustainable access to markets for smallholder farmers, agro pastoralists and rural entrepreneurs'. As Aquaculture is growing fast in Kenya and promising to be one of the important sectors driving rural development in the country, IFAD as a key player in rural development and smallholder agriculture has great advantage to support GoK in its effort to vitalize aquaculture. IFAD can help GoK bring in global experiences and catalyse partnerships with other development partners, international finance institutions and global research centres.

### **Lessons learned from the Economic Stimulus Programme 2009-13**

21. The experience gained from the aquaculture initiatives under the GoK's ESP is of direct relevance to the current proposal. The main lessons learned are set out below, as communicated by the State Department of Fisheries.
  - Aquaculture has a great potential to grow and could contribute to food security and is a great source of income to farmers, if challenges in availability of fish feed, fingerlings, advisory services among others are adequately addressed.
  - Future programmes should include value addition and post-harvest management on large scale. Production and marketing clusters, and development of farmers' entrepreneurial and marketing skills were missing in the initial phase and should be piloted in subsequent phases.
  - The private sector should lead efforts in value chains development through service provision, input provision (seed, feed, liners, harvesting gears) and marketing.
  - Political influence during programme implementation should be avoided as results could be compromised. It was evident that politically motivated interventions that had no sound technical or social basis have failed.
  - Aquaculture programmes are attractive to youth.
  - Beneficiaries' participation and commitment is of paramount importance to the success of the programme.
  - Experience of State Department of Fisheries indicates that fish consumption can be increased through eat more fish campaigns, field days, field fairs and open school days.
  - Post-ESP (a year after devolution), the programme was actually abandoned by devolved units, as they had not been involved. Thus, it is essential that implementation take place through County Governments.
  - Flow of funds from the Government budget is a limiting factor for success of the programme.
  - There is a need to include R&D into the programme activities especially to ensure continuous improvements in quality of aquaculture inputs and management practices.
22. The lessons learned from the ESP Programme indicate that there have been serious challenges as regards the sustainability of the interventions as the majority of the ponds constructed as well as processing facilities constructed are not operational today. Nevertheless, the sector would not be where it is right now without the ESP Programme as it set in motion the development of the sector. Moreover, the aquaculture sector is still in its pre-mature stage and lessons need to be learned to move forward.
23. Part of the reason that the constructed facilities and ponds are not operational is because of the decentralisation of the responsibility for the Programme to the Counties during its last year of implementation. The Counties did not have the capacity to take over those responsibilities, which led to the abandonment of the processing facilities and a lack of extension services to the pond owners. Moreover, a lessons learned from ESP is that the intervention was insufficiently coupled with technical assistance to the farmers, for most of which aquaculture was a new

business. A lack of technical knowhow and business orientation led to the situation that when subsidized inputs stopped, the farmers were not able to make a profit and purchase appropriate inputs. Moreover, some areas of intervention experienced recurrent droughts, which led to the drying up of some of the ponds.

24. The ABDP will address the above lessons learned by: building the capacity of County extension services; revitalizing the processing facilities by involving private sector parties who are able to operate them on a commercial and profitable basis; coupling any form of support with quality technical assistance; and by using thorough selection criteria as regards the selection of beneficiaries and sites, which include rainfall and water availability.



## Appendix 4: Detailed Programme description

### Introduction

1. The Aquaculture Business Development Programme comprises two mutually supportive substantive Components concentrated on growing the value chains in the aquaculture Subsector. The first is concentrated on the large and increasing number of smallholders who are producing fish as an adjunct to their mixed farming enterprises, and on the incomes and health of the wider communities in which they live. The second Component supports the mass of primary producers by deepening and broadening the fish value chains with larger-scale integrated businesses and other public and private entities providing services to the industry. The substantive ABDP Component activities and investments are facilitated by an implementation support structure providing physical and financial management, and proactive knowledge management, monitoring and evaluation functions.

### Component 1: Smallholder aquaculture development

2. The first Component aims at mobilising and assisting smallholders and non-farming rural people to earn supplementary income from aquaculture and related support services, and for their wider communities to benefit from improved diet and nutritional status. The firm intention is to establish financially and environmentally sustainable productive activities, moving poor households from subsistence to market-oriented farming systems and services related to the aquaculture value chain.

3. The Component will work with rural communities within which aquaculture is being practiced by smallholders, engaging with existing village leadership structures and farmer organisations, and with existing and specially-formed groups with a shared interest in aquaculture production or closely-related support activities. The common goals would be supplementary income generation (Subcomponents 1.1 and 1.2) and improved diet and nutritional status among smallholders (Subcomponent 1.3 as a crosscutting intervention).

4. The Programme will form 780 Smallholders Aquaculture Groups (SAGs) of farm producers and about 2,500 Aquaculture Support Enterprises (ASEs). The SAGs will total 29,900 beneficiary households of which 30% women and 20% youth, while the ASEs formation will account for about 5,500 individuals of which 50% are women. Additionally, the component will support owners of cottage feed industry and fingerlings facilities. Collective action through the formation and strengthening of such groups will help individual farmers and entrepreneurs to achieve stronger bargaining power and marketing potential and improved access to advisory and financial services as well as business opportunities.

5. Technical Assistance (TA) to be recruited competitively or identified as a project partner would play the vital role of providing key technical assistance at the county level, given the capacity gaps. It would also backstop the PCU through provision of TA that would be attached to the PCU as well as on ad-hoc basis.

### Subcomponent 1.1: Smallholder aquaculture production

6. The first Subcomponent would concentrate on raising the productivity and incomes of smallholders with the land and resources to farm fish for profit.

#### ***Activity 1.1.1 Community mobilisation and group building***

7. **Community scoping and selection of participants.** The Programme will work with community-based organisations and local/traditional institutions to mobilise and sensitize communities to aquaculture-related opportunities, to get buy-in to ABDP initiatives and to enhance as much as possible the demand driven nature of the intervention. This activity will be undertaken in each

Sub-county and will consider public consultations with communities as a whole as well as with important subgroups, such as women groups, if needed.

8. Utilising self-targeting as well as direct targeting mechanisms and as per categories defined in the targeting section, the identification of groups and selection of participants will be based on gap analysis and clear criteria set out in this PDR. A participatory mapping exercise based on wealth ranking criteria will be undertaken at community level to identify levels of poverty and eligible participants, and to facilitate the identification and location of sources of suitable fish feeds and fingerlings. To ensure that the intervention will capture the intended target groups and avoid elite capture, implementation teams supporting the process of selection will receive induction training at the start-up phase. Training will focus on how to apply the specific selection criteria/group screening methodology and specific support where needed for the mobilisation of women and youth, HIV affected and disabled.

9. **Formation/strengthening of Smallholder Aquaculture Groups.** The Programme will facilitate the formation of fish farming groups and organisations based on existing clusters of nearby fish producers with the potential for group sourcing of inputs and primary marketing activities, and to act as an institutional focus for extension and training activities. The targeted producers would comprise both existing small-scale farmers (men, women and youth) for whom aquaculture is one among other enterprises contributing to their livelihoods and new entrants into the Subsector with a focus on women and youth as well as a minority of semi-commercial farmers for whom fish farming is a primary source of income.

10. 29,900 smallholder producers (including subsistence as well as medium-scale farmers) will be organized in 780 new and existing aquaculture groups. When groups/clusters exist and are considered viable, they would be included in the Programme, otherwise new clusters would be formed including both existing aquaculture farmers and new entrants. For the new entrants, participation of women and youth will be encouraged to reach 50% membership, with minimum youth participation of 20%. To identify better the specific needs of the groups and its members, a training needs assessment will be conducted in order to inform the preparation of the training modules and the better methodology to conduct the training.

#### ***Activity 1.1.2 Aquaculture infrastructure development***

11. **Site selection.** The selection of target ponds and beneficiaries will be based on a set of criteria that ensures: soil suitability; availability of sufficient water throughout the year; availability of adequate land production level; willingness to join producer clusters; and other criteria that qualify the beneficiaries as vulnerable members of the community. Site suitability assessment will be done before final selection of proposed aquaculture infrastructure rehabilitation or new aquaculture production. Strategic Social and Environmental Impact Assessments (SEIAs) will be carried out to ensure suitability and sustainability. The sites that use underground water or spring water may not require further assessment. Those that use small shared streams will require mobilization of the entire community in the valley and a design specification that guarantees that all water resource users are adequately considered in the siting of ponds. Any existing Water Resource Users' Associations will be engaged in negotiation on the use of such streams before new ponds are constructed.

12. **Construction/rehabilitation of ponds.** There are many aquaculture production facilities (ponds and others) constructed before and during the Economic Stimulus Programme (ESP, 2009-13) that are now under-performing or dormant for a variety of reasons and would form the initial target for support. There are also opportunities for new aquaculture production units or supplementary investment in existing facilities, such as limited support (goods) for improved water supplies for individual farmers, pond liners and protection against predators. Only ponds that are found to have no issues with water resources or land suitability will be considered. The prerequisite of a dependable year-round water supply for both established and new facilities will be assessed on a case-by-case basis.

13. Facilities requiring high investment costs for rehabilitation because they have been installed in the wrong location or have severe water supply constraints will be excluded. In general, support for this activity will not exceed the set investment limits (USD 500 per beneficiary household). Beneficiaries will be expected to contribute labour earth works and help as needed.

14. For new facilities, the Programme will provide limited support through the provision of goods, (up to USD 500 per farmer on average). The construction of new facilities will have priority if the site has been selected properly and is intended for a priority Programme target group, with a focus on youth and women. Support for new ponds will be provided in a manner similar to that for rehabilitation, with beneficiaries contributing with labour, earth works and other resources in kind. In areas where land availability is a limiting factor, emphasis will be on the rehabilitation of existing facilities and the development of smaller facilities, such as ponds suitable for catfish.

15. For all such rehabilitation and construction investments, the Programme will seek a technical solution that is both feasible and affordable, preferably employing gravity, wind-powered or solar-powered low-lift pumping (in the case of ponds and other relevant facilities), with emphasis on optimal water use efficiency and making facilities climate proof through saving water, using renewable energy and introducing climate-smart technologies.

16. No subsidies for working capital will be provided by the Programme. Assessments during the Programme design show that financial institutions would be willing to lend for such purpose under mixed farming systems. All financial models were developed under such assumption, shows it would be feasible from financial point of view.

### ***Activity 1.1.3 Small-scale aquaculture input industry development***

17. Whilst the larger-scale operators are expanding their outreach and input marketing arrangements for the rapidly growing aquaculture Subsector, smallholders can be left out in sourcing affordable good quality feed and fingerlings. Given the understandable wish of enterprises of all scales to bring their input supply arrangements in-house or under tight control, and the desirability of having multiple suppliers in the marketplace, the Programme would support small-scale producers to establish robust links to existing accessible value chain operators or to produce their own supplies. An inventory of existing fingerlings and feed producers from the Kenya Fisheries Service (KFS) will be used to evaluate access to fingerlings and feeds for individual and SAG members to facilitate the application of economies of scale in their operating and variable costs. Input costs of provided by small scale producers are more adequate for semi intensive producers who are supported under Component 1.

18. There are a number of small- and medium-scale fish feed producers in the Programme Counties, some dating from the ESP, some being a side-line for fish producers and many not functioning to design capacity. There are frequently reported issues in the cottage feed industry with the balance between quality and price, suggesting that few of the units are financially viable. On a case-by-case basis, ABDP would contribute part of the cost of appropriate machinery and/or equipment needed to establish or restore production for ten producers. Each proposal for grant assistance would be presented as a bankable business plan. Training would be provided on request from any small-scale feed producers across the Programme Counties, explicitly for the benefit of SAGs outside aggregator arrangements. Fish feed production is a likely choice for ABDP ASEs.

19. Similarly, the Programme would contribute to the capacity building of the small-scale/back-yard fingerling industry. These will be linked to research and extension services under the programme in order to access and improve quality of brood stock. Production is regarded as a potentially lucrative enterprise, but it has to be very carefully operated and managed to be sustainable. The Programme would offer modest grant support to build the capacity of the small-scale fingerling industry where SAGs/ASEs make a convincing case.

20. Linkages with research institutions, SAGs and aqua-shops will be sought and developed.

### **Activity 1.1.4 Aquaculture productivity**

21. **Aquaculture technical and business training.** The purpose of the activity is to improve fish production and productivity of smallholders through enhancements of their means of production. The farmers identified for the interventions will have different challenges and needs to improve their productivity and technical assistance will be provided. Lessons learned from previous experiences in the Subsector point to a lack of adequate skill creation and technical training to fish farmers, with insufficient follow up and coaching to consolidate technical and business knowledge. A large proportion of the prospective beneficiary producers are involved in fish farming on a subsistence level, lacking capacity as well as the advanced technologies and practices needed to engage efficiently in the markets. The Programme intends to address these shortcomings with concentrated technical training, skills transfer and follow-up.

22. The SAGs will receive training in all technical and managerial aspects of pond fish production and working as a group, including governance, representation, group dynamics, record keeping, leadership, transparency and accountability, financial management at group level and financial literacy. The training will be conducted in the first year of ABDP engagement with each individual SAG, with refresher training carried out periodically as required. The training and capacity building for producers will be tailored to the specific needs of beneficiaries and will include:

- management of aquaculture production: fish health, disease control, feed quality and feeding procedures, climate resilient pond design and operation, seed production and selection, water quality management;
- post-harvest handling, food safety and hygiene;
- environmental management: water use, recycling and waste management, reduction of greenhouse gases emissions, environmental responsibility and compliance, and climate smart aquaculture;
- fish farming as a business and marketing: planning and budgeting, book keeping, organizational skills, financial management and business plan preparation; and
- nutrition education and gender awareness.

23. The ambition is to enable 29,900 fish producers to increase, improve and maintain their productivity as well as their entrepreneurial skills to do farming as a business. This would include 23,400 subsistence farmers, who own 1-2 ponds. The Programme objective of this intervention is to graduate at least 60% from *Level 1 Subsistence smallholder farmers* to *Level 2 Semi-commercial smallholder producers*. Producer groups that meet required threshold production levels individually and collectively will qualify as s and will be linked to the closest IAA in their regions through contractual agreements. Those beneficiaries that do not qualify for schemes will be supported through the ASEs to venture into alternative markets through value addition at local level and the establishment of aquashops, as set out in the following Subcomponent.

24. **Extension support.** The principal means of training and skills transfer will be by County and Sub-county fisheries field staff (trained, capacitated and made mobile in Subcomponent 2.2) supported by County Implementation Teams and technical assistance. FAO will take a leading role in devising the optimum arrangements and technical specifications of an appropriate public sector extension support service for smallholders engaged in aquaculture. ABDP will enter into an MoU with FAO for supporting implementation of FFS at the county level.

25. Extension support would be organised with an appropriate mix of demonstrations, Farmers' Field Schools (FFSs) and farmer-to-farmer exchange visits, with methodologies that maximize the participation of women. Sustainability is served by the introduction of fisheries trainers in each community to continue with extension services post-ABDP for those producers not involved in aggregator arrangements.



## **Subcomponent 1.2: Development of enterprises in support of smallholder aquaculture production**

26. The second Subcomponent would promote income-generating activities for other individuals and groups not doing primary fish production. The objective would be to promote Aquaculture Support Enterprises (ASEs) as a means of income generation and empowerment for non-producers of fish, focusing on youth (5,500 youth; 50% women), by improving their access to resources and productive assets. This initiative complements the Programme assistance to SAGs by targeting marginalised people from the same rural communities.

### **Activity 1.2.1 Establishing/strengthening youth ASEs**

1. **Establishment of youth ASEs.** To support youth employment and self-employment in rural areas, the Programme will promote the involvement of young men and women in aquaculture-related enterprises, introducing through them a business-oriented approach to the Subsector. To this end, and in parallel with the County-led ASE formation campaign, the Programme will implement a “champion”-led ASE development initiative applying a methodology promoted successfully by ILO: Start and Improve Your Business (SIYB). This is one of the largest global business management coaching programmes. It has four training packages that respond to stages of business development. Master trainers are responsible for youth groups of 10-20 individuals, providing selection, formation, training and mentoring for one year.

2. **Training of “champions” and young entrepreneurs.** An initial 500 young potential rural entrepreneurs (at least 30% women) will be selected as “champions” that the Programme will support to initiate and consolidate their business ideas and plans.<sup>48</sup> Selection will be through a screening process using questionnaires to determine preparedness, having clear ideas and willingness to invest. The potential entrepreneurs will receive intensive SIYB training on how to develop a concrete business idea and then be helped to devise a bankable business plan.

3. These “champions” will then become responsible to support another ten youth each in rural areas to take up opportunities for employment or self-employment along the aquaculture value chain segments. At full development, the final number of youth involved in the scheme will be 5,500, (50% women).

4. The Programme will support the establishment and strengthening of ASEs engaged in any business activities related to the aquaculture value chain by investing in: the identification of profitable markets with growth potential for fishery products and services, principally youth - led; awareness creation in communities and the identification of entrepreneurial young labour market entrants; technical assistance; skills/business training and practical advisory services; access to credit for small business start-up and growth; and business services.

### **Activity 1.2.2 Development**

5. **Organisational skills training for ASEs.** An assessment will be undertaken at Sub-county level to come up with a menu of economically viable options to be presented to the beneficiaries and simple technologies for value addition. The options may include: labour for development of fish farms; transportation of aquaculture products; fish farm employment; adding value to fish products (processing, packaging); establishing fish eateries; and fish trading. Beneficiaries organized in ASEs will be enabled to advance their entrepreneurial skills based on the particular economic activities in which they are involved.

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<sup>48</sup> Among others, the mission found that young teachers in the villages have the capacity and skills to be potential Champions. This is due to their level of education and teaching capacity to transmit knowledge to others, as well as natural leadership in the communities.

6. Training for ASEs will include skills relating to adding value to fishery products, post-harvest handling, processing of aquaculture commodities, business development, financial planning, credit management and marketing.

7. For fish preservation and value addition, solar dryers will be considered and the technology promoted at group level. Women traders will be targeted to receive specific training on fish handling, hygiene and technologies for fresh fish conservation, (such as a freezer/cooler box). Nutrition education modules will be integrated into training modules. Exchange visits will be organised to promote group-to-group and farmer-to-farmer learning.

8. Technical assistance will be provided to ASEs as part of enterprise development. Seed money for implementation of business plans with 10% contribution of the ASE.

### **Subcomponent 1.3: Community nutrition initiatives**

9. The objective of this subcomponent is to contribute to good nutrition using fish as the food vehicle to improve diet quality of women, children and households in the targeted Counties. Fish consumption is beneficial for growth and development and is associated with reduced risk of coronary heart diseases (FAO–WHO, 2011). Fish represents a key source of protein as well as being rich in micronutrients and essential fatty acids. However, the consumption of fish depends upon availability, access and awareness raising on its nutritional and health benefits. In some of the ABDP target Counties, fish demand and consumption are poor, particularly for catfish due to cultural beliefs, religion and myths, no scales, very big heads and regarded as inferior because of its low selling price.

10. GoK is promoting aquaculture and the use of fish products to enhance national food security. Kenya's 2014-2017 National Nutrition Action Plan recognizes fisheries as one of the major sectors that contribute to the goals of the national nutrition agenda, (FAO, 2015).

11. There is substantial potential for aquaculture to contribute to community nutritional status and food security, both directly through fish production and indirectly with the reuse of pond water and fish waste as a rich source of manure for vegetable gardens. This intervention is intended to contribute to an increase in annual fish consumption as well a good nutrition outcome by overcoming two key constraints: low availability and affordability of fish, especially for poor households; and culturally grounded practices that limit fish consumption.

12. To address these issues, the Programme will incorporate nutrition awareness/information sharing activities and the promotion of fish value-added product development in all community interactions with the SAGs and ASEs. These supplementary interventions will be of importance to both improving diet quality and increasing the demand and consumption of fish in areas and communities where fish (pond fish and catfish) is not yet accepted fully as a good alternative for more traditional dishes. At village level, ABDP nutrition initiatives would be driven by the community members themselves and focus on the most disadvantaged and malnourished women, children and households within the vicinity.

13. Two pathways — “income pathway” and “own production pathway” — will be adapted by the Programme in addressing the underlying issues of fish consumption, affordability, access to fish and intake of nutritious and diverse foods. Income pathway will be the main driver for group nutrition and diet training and own production pathway for the school fish feeding programmes and fish fairs. These two pathways will be mutually integrated taking into consideration the available climate-smart, gender and nutrition approach as influencers to maximize impact on nutritional outcomes. To ensure a positive influence on family diet, the Programme will work at both household and community levels using specific tools from household methodology approach and Gender Action Learning System (GALS). For instance, the Gender-household methodology approach will be explored to ensure positive influences on family diet. The implicit theory of change for these community nutrition initiatives is the engagement in the fish supply chain as a vehicle for income and nutritious foods for healthy eating, contributing to good nutritional outcomes. All community facilitators and extension

staff will be trained to adopt and apply these methodologies. The expected outreach of the nutrition initiatives is 300,000 people.

#### **Activity 1.3.1 Nutrition knowledge, curriculum and training materials development**

14. **Nutrition surveys and studies.** The Programme will fund nutrition surveys and studies on topics agreed with SDF&BE to test fish-related issues in rural diet and nutrition. The *ad hoc* enquiries should be congruent with the Programme's overall knowledge management and M&E framework in terms of approach and methodology. Aside from the scientific aspects of nutrition, there is much to learn about the behavioural, cultural, habitual and economic factors influencing rural diet in Kenya, including fish consumption.

15. **Nutrition curriculum.** In concert with associated GoK technical agencies, the Programme will contribute to updating and overhaul of the nutrition elements of the primary and secondary school curricula to the benefit of the whole national school population.

16. **Community nutrition communication materials.** A range of fish- and nutrition-related communication materials, including posters, hard copy information leaflets and recipes in appropriate languages, short video presentations and radio features, will be commissioned to support the rural community nutrition campaigns. The materials would be utilised primarily by the Programme field staff (Subcomponent 1.1) but also be made available to the concerned technical units of non-ABDP Counties.

#### **Activity 1.3.2 Community nutrition actions**

17. **Fish fair events.** This Programme activity in each interested community or cluster of communities will aim at promoting fish consumption, with a specific focus on catfish processing and value addition. The nutritional benefits of catfish are well documented but for various reasons its consumption is not widespread in Kenya. The fish fair events may involve awareness-raising messages using television and radio programmes, interactive drama during a fish fair event in a school or community and/or an "Eat more fish campaign". The primary target locations will be non-traditional fish eating communities. Farmers will be engaged in the identification of "fish champions" within the community to facilitate the promotion of fish consumption. For instance, identification of a well-known fish cook from a restaurant/fish eatery to promote improved fish recipes and value-added fish products, such as fish samosas (prepared with minced fish egg), fish fingers, fish balls, fish oil and fish soup serve with cornmeal and green vegetables.

18. **School fish feeding programme.** This activity will build on positive experiences with school fishponds, including some ponds developed under the ESP. The identification of beneficiary schools will focus on public schools within the Programme area with a high proportion of malnourished and poor children as well as poor school attendance records. This activity will target at least two public primary schools per County within the vicinity of a viable fish farming association and/or grower for access to good quality inputs and regular support on productivity, reaching at least 28 schools over the first two years of implementation. Each participating school will be linked to the extension services to promote fish consumption and diet quality.

19. The purpose of this intervention is to contribute to school meals and raise awareness on the nutritional benefits of fish. The Programme aims to have a spillover effect on the promotion of fish consumption from school children to family members at home. In Kirinyaga, a private school is feeding about 200 students from the fish pond within the school premises and the pond water and fish waste are used for growing vegetables in complementing the school meals. This activity will explore synergies with other relevant stakeholders (WFP, FAO) and sectors (Ministry of Education). The aim is to demonstrate to schools the benefits of fish farming and fish utilization for sustainability. Details on the collaboration and engagement modalities with potential stakeholders and exit strategy need to be developed at Programme inception.

20. **Cautionary note.** The engagement of beneficiaries in the most economically advantaged methods for fish farming, including more intensive aquaculture systems, may result in unintended

adverse effects on nutrition outcomes. For instance, labour and time constraints encountered in the advanced fish farming systems could impact on feeding practices, dietary intake and care giving, especially among women and children. Possible negative impact could be addressed by GALS and climate smart actions such as labour- and time-saving devices, or the use of solar and other green technologies.

## **Component 2: Support for aquaculture value chains development**

21. This Component comprises interventions to broaden and deepen the aquaculture value chains in Kenya, (for examples, tilapia, catfish, and ornamental fish), with a series of strategic investments, using Public-Private-Producers-Partnerships (PPPPs) as well as support for implementation of Smallholders Aquaculture Groups' (SAGs) and Aquaculture Support Enterprises' (ASEs) business plans. The purpose of the Component is to make the core activities of all aquaculture value chain actors financially viable and bankable.

22. The Component is shaped around awareness creation and strengthening of linkages and networks among value chain actors. Proposed interventions include identification of viable investments, support to the selected PPPPs and group business plans, and creation of an enabling environment by strengthening necessary support services. The enabling environment will include policy, legal and regulatory framework, public infrastructure, extension and research services, development and enforcement of quality standards for inputs and products, access to financial services, and development of entrepreneurial, business and management capacities.

23. The Component is expected to reach and to improve the incomes of about 15,660 aquaculture farmers (5,100 women, 5,050 youth) as well as 100 specialised aquaculture farmers (aggregators, etc). Interventions will be focusing on groups of fish producers and non-fish producers to deliver services around the value chains. Beneficiaries are expected to achieve a 50% increase in production and income. In addition, indirect beneficiaries will include consumers of quality fish and fish products, which will improve their food and nutritional security.

### **Subcomponent 2.1: Smallholder-based aquaculture value chain development**

24. The objective of the Subcomponent is to contribute to the establishment of a commercially viable aquaculture value chain in Kenya, with a focus on small- and medium-sized aquaculture pond producers. To achieve this objective, it is proposed to use tripartite agreements among the Programme, the aggregator/private party and smallholder producers; this three part agreement is referred to as the public private producer partnerships (PPPPs). In addition to PPPPs, this Subcomponent will also finance investments for ASEs and SAGs through a business plan competition window. Implementation of this Sub-component will be supported by Transaction Support Consultancy Firm / consortium, referred to hereon as the Transaction Advisor.

25. The Subcomponent would seek to identify the opportunities as well as the weak and missing links in the aquaculture value chains, for example, cold storage facilities, processing plants, refrigerated transport and the creation of robust PPPPs that would address the challenges. In doing so, the Programme will conduct detailed value chain analyses concentrated on the target Counties. The analysis will identify existing infrastructure currently in the public sector where there are opportunities for enhancing performance and efficiency by using PPPPs.

26. Current assessments indicate the need for adoption of a business-oriented approach. The precise nature, mix and scope of investments will be determined based on information collected during the detailed value chain analysis. Gaps identified so far indicate the following preliminary areas of intervention.

- Investments to improve the productivity of existing smallholder aquaculture producers from the current average of 60-100 kg/pond up to 250-350 kg/pond through appropriate production technologies, proper management and good quality inputs.

- Unsustainable environmental practices, low productivity of cages in Lake Victoria and cage culture in general as well as under-utilization and low productivity of dams/reservoirs for aquaculture and the absence of guidelines on aquaculture use of such water bodies.
- Investments to operationalize existing value addition infrastructure through improved management and the creation of linkages between producers and final markets.
- Investments to support post-production activities such as processing, value addition and marketing at different levels.

27. The PPPs are conceived as vehicles to bring in the benefits of economies of scale, (that is, lower average cost per kg of fish), and to overcome identified weaknesses in all relevant segments of the aquaculture value chain. The PPPs will be based on mutually beneficial contractual obligations among the ABDP, at least one commercially-driven aquaculture agent and the aquaculture producers. The PPPs will include two generic models:

- **PPPP to support business plan for Independent Aquaculture Aggregator (an outgrower model).** Individual PPPP proposals will be developed as a potential tripartite agreement between the GoK/ABDP, the aggregator/private party (to be identified through a transparent selection process) and smallholder producers. This model will be developed as contracts between the aggregator and smallholders as a scheme. The contract will include: (i) the obligation of the producer to supply a given volume of fish within a given time-frame, adopting and using recommended technologies and the quality inputs provided/sold by the aggregator; (ii) the obligations of the private partner to buy back fish at a pre-established price and to provide inputs at bulk prices and technical assistance and other services to the producers, based on their needs. The groups will also be linked to processors and markets.
- **PPPP concession/lease model.** Another possible model would include an agreement between public and private parties in the form of a lease contract or concession for the private party to use and manage public infrastructure for commercial purposes. Such an agreement would include well-defined performance targets with the possibility of extending support to SAGs, ASEs and other smallholders whether standalone or organized around an IAA outgrower scheme for the provision of inputs as well as post-harvest and marketing services. The private party in charge of the lease contract could also combine the IAA role in this case.

28. As discussed above, one of the main focuses of the first model is creating outgrower schemes that include production and incorporating key nodes along the value chain. This would typically involve a nucleus farm and essentially large number of smallholders. The model could cater as well for few additional innovative transactions focusing more on areas such as value addition, marketing or input provision. The overarching condition is that large numbers of smallholders is directly involved in all of the transactions. The first model will provide as well for a business plan competition window, which is conceived as a vehicle to support ASEs and SAGs directly to identify business opportunities on specific segments of the value chain, mostly uncovered by the outgrower transactions. With regard to the second model, each of the PPPs that involve a lease contract would also provide linkages with SAGs, ASEs and IAAs.

29. The Subcomponent will raise the awareness of targeted SAGs, ASEs and IAAs as well as other key actors regarding the opportunities, including possible synergies between individual and organized aquaculture farmers, Aquaculture Support Enterprises, independent aquaculture private sector/aggregators (IAAs), fish products buyers, technical assistance providers and financing institutions (FIs). These awareness-raising activities will take place through meetings and workshops at different levels and stages, and will involve various categories of audiences.

30. The development of any PPPP proposal would involve identification of potential size of production, the number of smallholder households to be involved and other risk sharing arrangements among the different parties. The proposal and subsequent agreement should identify risks involved for all parties, including the IAAs (working with large number of smallholders, quality of production,

marketing risk, and so on) and the smallholder producers, (declining prices, bankruptcy of the aggregator, reliability of supply of services and inputs). Subsequently, mitigation mechanisms will be identified and included in the proposal.

31. Risk mitigation measures such as the provision of matching grants or support packages by the Programme to the private party are intended to share the risks involved in developing linkages with the smallholders and to facilitate producer-value adder-retailer-consumer linkages by contract or other forms of agreement. The Programme will identify the pool of key private sector players and indicate the roles or potential roles to be played by each party. The aggregator/private party is to provide part of the financing through raising debt or providing its own equity. The support by the Programme will not cover 100% of the financing required to create such partnerships.

32. ABDP financing in all cases will be awarded by an ABDP financing committee, comprised of government relevant entities, financial institutions, and other value chain actors, upon evaluation of proposals with the support of the above mentioned Transaction Advisor. Evaluation criteria will include technical aspects and financial proposals. In the financial proposals, the bidding variables will be: lowest matching grant requested in the case of IAA contracts; maximum lease fee paid to the County Government in the case of Lease contracts; and maximum economic rate of return in the case of the business plan competition. In all cases, the Transaction Advisor will undertake a due diligence assessment on behalf of the ABDP.

33. Selection criteria would include technical viability of the business plan, level of support for smallholders (including number of small holders), equity or debt financing raised by the private party or the group and technical capacity of the group or private party, innovation, number of targeted smallholders, elements of environmental conservation and inclusion of climate smart agriculture. The grant will not finance 100% of the cost of any of the transactions or business plans. The IAA, private party or group is expected to provide its contribution in advance.

34. ***Activity 2.1.1 Independent aquaculture aggregators PPPP model***

35. This Activity will finance about 22 Independent Aquaculture Aggregators (IAA) PPPP contracts. Selection of the IAA will be done according to competitive bidding procedures. For a typical IAA transaction that involves an outgrower scheme, two main contracts are to be signed, one that is expected to rule the use of a project grant based on a well-defined business plan signed between the ABDP and the IAA, and another signed between the IAA and the aquaculture farmers. The latter will be a fish purchase agreement that will ensure a market for the sales of the small aquaculture producers at market prices and the provision of technical support and quality inputs. It is expected that these two contracts will enhance the ability of the IAA to get long-term commercial co-financing for the development of his/her productive infrastructure. It will also enhance the ability of small aquaculture producers to get working capital from commercial sources.

36. Selection criteria of the IAAs that can participate in the bidding for contracts would include: experience in agribusiness in Kenya, experience of the proposed team in the area of aquaculture, equity contribution by the private sector and financial capacity.

37. Key obligations of the IAA under the PPPP contract will be to coach farmers in all technology aspects of establishing and operating aquaculture ponds, do procurement of fish feed and fingerling inputs of appropriate quality, verification that such inputs comply with best technical standards, and do the marketing and sales activities for all participant aquaculture farmers. The IAA will commit to buy fish from the small pond aquaculture producer fish outputs at market prices. The obligation of the aquaculture pond producer will be to supply a given volumes of fish of an agreed quality, within a given timeframe. He/she will also commit to adopting the promoted technological know-how using quality inputs (feed and fingerlings) procured by the aggregator.

38. It is expected that at the end of the contractual period (normally around 5 years) the typical IAA will be working with about 250 aquaculture farmers each owning three ponds on average, achieving a

combined production volume of about 262 mt of fish per year, while at the same time achieving lower costs of production.

39. Funding under this Component includes investment financing for the Aggregators and the small aquaculture pond owners, both of which will be documented in the business plans presented by the aggregator in response to calls for proposals issued by the ABDP. It is expected that investments in an aggregator's typical business plan include a warehouse with cold storage and an area for fish feed storage, a refrigerated truck, outlet furniture and five motorbikes. It will also include the investment cost of pond rehabilitation and/or construction of new ponds for at least 250 farmers and a description of how he/she will conduct business, where the farmers are located and where the target market is located, the area they will cover, how the farmers are going to produce fish, pond siting and digging, and pond management.

40. Based on transaction and economic models, financing from the ABDP will include a maximum 45% grant of the aggregator investment, maximum 60% cost of pond upgrade (if needed) and maximum 55% of new ponds. In addition to the investment funding, the ABDP will finance the two-year cost of five technical extensionists (for example, graduates from RIAT, an aquaculture vocational institute in the project area) who will work hand-in-hand with the pond owners, coaching them in the rehabilitation/construction and operations and management of the aquaculture production processes. After the second year, the cost of the technical extensionists will pass to form part of the fixed cost staff of the aggregator, to help him/her on the management of all aspects of the value chain management.

41. To receive funding from the ABDP, IAAs can be organized either as a limited liability company or as a cooperative, both managed professionally. Private sector contributions by farmers can include labour for siting and digging ponds, the cost of land for ponds and cash to cofinance liners.

42. For this IAA PPPP model to work, the banks and other private sector financiers will provide working capital to small aquaculture producers and long-term funding for the IAAs. It is expected that the IAA will commit equity funding in addition to grants from the ABDP and loans from banks. The participation of private financiers will be the actual test of commercial viability of the IAA PPPP model.

#### ***Activity 2.1.2 Lease PPPP contract***

43. This Activity will finance PPPP lease contracts to operate and maintain the four fish processing plants built during ESP as well others to be identified during implementation. Each of these PPPP transactions would be possibly supported by a large IAA outgrower contract or multiple IAA schemes for the supply of fish to the fish processing plants. The concessions will be tendered according to competitive bidding procedures, based on a feasibility study for upgrading and expanding the productive capacity of the fish processing plants. Two main category of contracts are to be signed, one that is expected to rule the use of the fish processing plant signed between the County Government and the Fish Processing Plant leasing contractor, and the other category would be signed between the Fish Processing Plant leasing contractor and the smallholder aquaculture producers (supported by an IAA). The latter will be a fish purchase agreement that will ensure a market for the sales of the small aquaculture producers at market prices. As in the previous case, these two contracts are expected to enhance the ability of the lease contractors and small aquaculture producers to access commercial finance.

44. For the four processing plants that was constructed under the ESP, key obligations of the lease contractor (in addition to purchasing fish from the small aquaculture producers) will be to undertake structural adjustments of the fish processing plants, for example, an overhaul of the production line, installation of blast freezer, plate freezer, environment friendly oven, and purchase of a refrigerated truck if one is not in place. Based on need, the lease contractor will develop a source of potable water (small water treatment plant when necessary) and install a back-up generator, to be included in the feasibility study.

45. It is expected that the lease contractor will increase the utilization of the fish processing plant production capacity from the current 12 mt/week to 20 mt/week, equivalent to 1,040 mt/year. It is also expected that each lease contractor will be supplied by four IAAs ) or develop a larger outgrower scheme that is equivalent to the four IAAs) who will be coordinating the production of small aquaculture producers as described in the previous section.

46. Funding under this Activity includes investment financing for the IAA and for the small aquaculture (e.g. pond) producers, both of which will be documented in the business plans of the lease contractors. The lease contractor in charge of the facility can play the role of the IAA for the smallholders to be linked to the facility or it can be linked to smallholders who are supported by IAAs who are not involved in the operation of the processing plant. In either case, IAAs are expected to put in place fish productive infrastructure and logistical services for small farmers producing fish for the fish processing plant. The models includes financing for four warehouses with cold storage, an area for fish feed storage and a refrigerated truck (if needed). It will also include funding for the investment cost of pond rehabilitation and/or construction of new ponds for at least 800 farmers.

47. It is expected that the lease contractor will not receive zero subsidy for implementation of the business plan for the facility itself and will pay a lease fee to the County, with the lease fee to be determined by competitive bidding during tendering of the contract. However, as discussed above ABDP has provisions for supporting IAA schemes to be linked to the facility. Financing from the ABDP will include a maximum 45% grant of the aggregator investment, maximum 60% cost of pond rehabilitation and maximum 55% of new ponds. In addition to the investment funding for each IAA, the ABDP will also finance the two-year cost of five technical extensionists that will work hand in hand with the pond owners, coaching them in the rehabilitation/construction and operations and management of the aquaculture production processes. After the second year, the cost of the technical extensionists will pass to form part of the fixed cost staff of the aggregator. To receive funding from the ABDP, the IAA can be organized either as a limited liability company or as a cooperative.

48. For the Lease PPPP model to work, the banks and other private sector financiers will provide investment and working capital funding to the lease contractors, IAA and small aquaculture producers. In doing so, such financiers will do their own due diligence assessment.

49. It is expected that this activity will support as well other number of transactions that involve infrastructure elements that are similar in size to the above-mentioned processing plants, albeit with different ownership arrangements. While this may require variation of the transaction and contractual arrangements, the elements of a large infrastructure facility supported by one or more IAAs would remain the same.

### ***Activity 2.1.3 Business plan competition window***

50. This Activity will finance business opportunities in the aquaculture value chain discovered by SAGs and ASEs. For example, cases when/where developing linkages between the private sector/aggregators and SAGs/ASEs prove not possible, the ABDP will work closely with the SAGs and ASEs to develop alternatives for individual business plans outside the private sector aggregator model. This will be targeting as well individual SAGs and ASEs showing the potential to graduate to a semi-commercial level of operations, as follow.

- **Business plans of SAGs:** SAGs that are targeted and trained under Component 1 and have progressed sufficiently will be invited to submit stand-alone business plans when it is not feasible to link them to any of the PPPPs models above. A maximum of 90 groups would be supported under this model. The plan should include mechanisms for the inclusiveness of all members, (including women and youth), and for the provision of inputs.
- **Business plans for ASEs:** ASEs that are targeted and trained under Component 1 and have progressed sufficiently will be invited and guided to develop stand-alone business plans for non-producing commercial activities along the value chain, only when it is not feasible to link them to



any of the PPPPs models above. ASEs may need to merge to be able to develop and implement BPs, envisaged under this activity. A maximum of 200 of BPs for ASEs are envisaged to be supported by this activity. The plan should include mechanisms for inclusiveness of all members, (including women and youth).

51. Groups would only be eligible to participate in the process of developing proposals for business plans if they have progressed sufficiently and if it is not possible to link them to an IAA outgrower scheme or PPPPs arrangement. Well-defined criteria for inclusion of such groups will be developed and used so that elite capture is avoided. The ABDP will guide selected SAGs and ASEs throughout the process and monitor their performance closely. Examples of possible proposals for business plans for SAGs and ASEs would include the following.

- Improving marketing through small-scale stands and fish eating places.
- Improving post-harvest handling and management through small-scale facilities for filleting and freezing.
- Small-scale value addition and processing facilities for making fish-balls, fish sausages and other value-added products.
- Improving aquaculture system management through the provision of goods to improve/upgrade the productive base or address challenges along with technical assistance for improved pond management.
- Developing aquaculture around small dams and reservoirs, taking into consideration different water uses and environmental regulations in case of non-utilized reservoirs. This can only be done after the development of environmental guidelines and SEIAs.

The first three stand alone proposals would fit an ASE BP. When coupled with the fourth proposals it would be fit for a SAG.

52. While the Programme would provide a grant/support package, participating SAGs and ASEs are expected to raise part of the financing through their own resources. Matching grants (maximum 70% in the case of ASEs and 44% in the case of SAGs) will finance part of the costs required for the business plan, with the balance to be contributed by the groups through loans or own contribution.

53. The MoUs between ABDP and individual ASEs and SAGs, based on their business plans, will include clear binding targets and responsibilities. Both target groups will be closely and regularly monitored by the Programme and ASEs will receive additional mentoring support. Special consideration will be provided for women and youth and sufficient numbers of smallholders and marginalised groups would be served by each business plan.

54. Business plans that aim at building resilience and climate smart approaches will receive priority or additional support. Examples are: making the facilities climate proof through saving water; using renewable energy for pumping and post-harvest; and introducing climate smart technologies. Where relevant, the prerequisite of a dependable year-round water supply for established and new facilities will be assessed, preferably employing gravity, wind-powered or solar-powered low-lift pumping (in case of ponds and other relevant facilities), with emphasis on optimal water use efficiency, using renewable energy and introducing climate-smart technologies for post-processing.

55. Instructions to participate in the business plan competition will be detailed early during preparation of the Programme Implementation Manual. The business plan competitions would include the definition of solid stand-alone business models whereby the proponents of each business plan define credible value propositions based on market assessments.

#### **Other Considerations**

56. Acceptable business plans would be eligible to receive project support packages such as matching grants that would finance part of the costs required for the business plan, subject to the following conditions:

- The MoUs between ABDP and individual SAGs and ASEs will have clear binding targets and responsibilities. The target groups will be monitored closely and regularly and get additional mentoring support from the Programme.
- The MoUs between the Programme and the private party for the IAA business plan will include signing binding agreements between the private party and the smallholders. The private party will provide technical support for production, inputs at bulk prices and marketing support at set prices, dissemination of appropriate technologies and liaison with the financing institutions to provide funding to participating groups. The private party would need to confirm that the business plan prepared gives special consideration to women, youth, sufficient number of smallholders and marginalised groups. In turn, the producers will be obliged to use recommended technologies and provide required quantities and quality of produce at the set time. The Programme would follow up regularly to ensure that all parties are implementing the business plans as per contract agreements.
- PPPP agreements would grant a private party a time-bound concession or lease agreement to bring into production existing dysfunctional Government-owned infrastructure. In doing so, a clear transaction model with set performance indicators and a lease/concession fee will be used to develop the contractual agreement. One of the requirements would be for the leaseholder to maintain the infrastructure in an acceptable condition, operate the facility at optimal level, produce quality products and serve a sizeable number of smallholders, women and youth.

57. The Component will provide incentives to proposals that emphasize building resilience and adopting climate smart technologies. Examples include the availability of dependable year-round water supply for established and new facilities, environmental friendly approaches, such as employing gravity, wind-powered or solar-powered low-lift pumping (in the case of ponds and other relevant facilities), with a focus on optimal water use efficiency. In general, emphasis will be placed on making the facilities climate proof through water saving, the use of renewable energy for pumping and post-harvest management and introducing climate smart technologies.

58. As discussed above, a specialized service provider will carry out activities under this Subcomponent. The responsibilities of the service provider will include but not be limited to conducting a detailed value chain analysis, the review and verification of business plan proposals and transaction advisory work for the concession/lease options. The service provider will also carry out the selection process and due diligence. Selection of the service provider will be done competitively at or before the time of Programme inception. The service provider should be a consortium comprising transaction advisors, legal advisors, technical advisors and promotion advisors.

59. Selection criteria for the private sector players in the business plan competition would include: experience of agribusiness in Kenya; experience of the proposed team in the area of aquaculture; equity contribution; financial capacity; number of smallholder beneficiaries the private sector is willing to take on board as part of the PPPP arrangements; nature of technology to be used with regard to environmental and social impacts as well as climate resilience; appropriateness of suggested technologies, inputs and management practices; and plans for linking smallholders to the financial sector.

60. There will be possibilities for SAGs in the vicinity of the aggregator to be included in the PPPP outgrower business plan arrangements. Implementation efforts will focus on linking SAGs to an aggregator as a first priority. The aggregators will be selected based on geographical coverage, mutual acceptance by the groups and the aggregator to work together, level of competence of the groups and matching of the business vision and proposals by the group to the PPPP concept at hand. In some cases, shortlisted private parties for a given PPPP selection process may receive additional information and financing to enable them to prepare proposals. Binding contracts/MoUs would be created between the Programme and the private party, to ensure the grants be used as proposed.

A second set of contracts will be used to bind the private sector with the small producers, including mutual obligations.

61. The selection of the second model PPPPs will be based on due diligence done by the transaction advisory group of the service provider. These PPPPs will be used for involving the private sector to improve/complete existing public infrastructure investments, such as the value-adding processing plants established by ESP, that are not operational or are working at very low levels of capacity utilization. This type of PPPP will be in the form of lease contracts, design/redesign-build-operate contracts, concessions or other appropriate arrangements. Efforts will be made to link SAGs and the private party in a manner similar to the outgrower model.

62. When and where it is not possible to link SAGs to an outgrower or concession/lease model, the Subcomponent will revert to supporting the business plans of individual SAGs, selecting and implementing the best business plans for the graduated SAGs. The selection will be done using a business plan competition approach using well-defined and transparent criteria. The criteria will include completeness of the proposal from both technological and management angles, market access, environmental assessment, viability of the proposal, soundness of the support required, own financing plan by the group and sustainability.

63. Assessments of the financial market carried out during the design have shown that financial institutions would be hesitant to come forward to deal with individual farmers or small groups. The matching grants/support packages provided by the Programme to finance partial implementation of the PPPP activities (outgrower and lease/concession) by the private party or the business plans of the SAGs and ASEs, will be covered from the Programme and other cofinancing sources, representing a contribution to the development of the aquaculture value chain segments to jump-start the adoption of new technologies and linkages, leading to higher levels of productivity and competitiveness as a necessary means to improve small-scale aquaculture farmers' income.

64. Matching grants recipients will not have to repay them. However, they will have to contribute with their own counterpart financing to cover a proportion of the investment, depending on the type of beneficiary and the amount of the investment. Indicative acceptable contribution levels would be: ASEs 30%, SAGs 45%, AAI 52%, etc. At least 25% of the private party costs for each investment will have to be made available up-front in cash.

65. As regards the PPPP models, the business plans should include clear targets, objectives and what the involved parties want to achieve together. They should also specify what activities, such as technical assistance, working capital, and investments, will be financed by the business plan and how they will be financed. The matching grant will cover the part of the BP, mostly related to support to smallholders. The balance of each investment not covered by a matching grant will have to be filled by own funds or through resources provided by other financing institutions such as banks and credit unions. The private party will be required to assist allied SAGs to liaise with financial institutions to obtain loans to support production and other activities in relation to the contracts between the private party and the SAGs. (Assessments conducted during the design have indicated acceptance by the banks for such arrangements). SAGs that are linked to a PPPP model will not be eligible for receiving matching grants on their own from the Programme.

66. Specific items and activities to be supported depending on the size of enterprise may include: investments in equipment (transport, office equipment, ICT tools/mobile applications, cold storage, product processing, vehicles) and infrastructure (storage/warehouse and cold chain facilities); technical assistance and training (in logistics, storage, marketing, aquaculture production, accounting, financial literacy, food processing, machinery, packaging, labelling, traceability, quality control, and food safety and hygiene); and working capital for the bulking of inputs (feed, fingerlings). Moreover, for the farmers or SAGs linked to the outgrower schemes, support can include training and extension services related to good production practices, adoption of modern and improved technologies, climate-smart aquaculture, post-harvest handling and financial literacy.

67. Business plans or proposals that aim at building resilience and climate smart approaches will receive priority or additional support. Where relevant, the prerequisite of a dependable year-round water supply for established and new facilities will be assessed, preferably employing gravity, wind-powered or solar-powered low-lift pumping (in case of ponds and other relevant facilities) with emphasis on optimal water use efficiency. In general, the focus will be on making the facilities climate proof through the promotion of water saving, renewable energy and climate smart technologies for post-processing, such as solar energy.

68. **Partnership with Netherlands supported PPP.** The Government of the Netherlands has supported development of a PPP consortium (FoodTechAfrica), which managed to introduce an advanced fish feed facility that would serve aquaculture in Eastern Africa. The facility is supported by a grant in order to de-risk the investment. FoodTechAfrica has developed a model aggregator scheme in Mashakos, which involve pond aquaculture and advocating linkages for provision of inputs and introduction of the advanced single tank recirculation system. The ABDP would explore possibilities to create synergies with this interesting initiative and explore possible synergies with FoodTechAfrica and the Netherlands funded program to develop lesson learnt for using PPPP / BP approach in aquaculture, and scale up early enough during the program implementation.

## **Subcomponent 2.2: Aquaculture sector enabling environment and support services**

69. This Subcomponent will strengthen the overall enabling environment needed for the sustained development of the sector.

### ***Activity 2.2.1 Policy engagement***

70. ABDP will facilitate policy review and advocacy to improve policy practices at both National and County levels. The initial list of topics includes: preparation of a National Aquaculture Strategic Plan; a review of the legal, policy and institutional environment for aquaculture development to ensure its relevance to the Subsector's development and evolving aspirations, including small aquaculture farmers and adequate PPPPs; the development of aquaculture regulations linked to the newly enacted Fisheries Management and Development Act N<sup>o</sup> 35 of 2016; and domestication of the new National legislation into the devolved Counties' fisheries administration, policy and guidelines.

71. Programme emphasis will be on support and technical advice to the responsible Government authorities to develop the frameworks and enabling environment (policy, codes, regulations, environmental and social safeguards, site identification, EIA) for climate smart aquaculture, for example, towards sustainable cage culture development.<sup>49</sup> Specifically, the Programme will support the State Department of Fisheries to develop coherent regulations for cage culture, including site suitability mapping and robust criteria for the award of concessions for cage culture investments, and Strategic Environmental Impact Assessments for cage culture and for aquaculture in dams and reservoirs. Interventions may include analysis of the ease of doing fish farming business in Kenya as compared to other countries of the East African Community, in particular Uganda and Tanzania. The Programme will not support cage culture in Lake Victoria until the above guidelines are developed. No support for Cage culture in Lake Victoria is envisaged under Component 1. Under Component 2, only pilot investments for that purpose would be supported.

### ***Activity 2.2.2 Public infrastructure***

72. The Programme would address the upgrading of inland fish marketing infrastructure under the responsibility of local authorities and likely to remain in the public sector. The scope may include the refurbishment of physical plant (markets, cold storage at key marketing points for perishable fish

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<sup>49</sup> Environmental Management and Coordination Act 1999.

products) and value-adding services in more remote locations still not served by private sector operators (internal distribution of produce, post-harvest handling, processing, branding).

73. As with the private sector-led business plans, any public sector investments in inadequate or missing climate resilient and low emission infrastructure and services deemed necessary for commercial aquaculture in the targeted area would be addressed in a PPP framework. Possible PPP mechanisms may comprise the leasing of existing Government-owned aquaculture demonstration facilities to entrepreneurs to run on a commercial basis or the encouragement of private entities to finance and manage processing or breeding facilities in target areas to support smallholders, (with or without capital sharing with the public party). Private sector partners will be expected to bring in equity finance. Robust risk sharing arrangements between the parties will be needed to attract such private sector investments, along with links brokered between the private sector and commercial financial institutions to raise debt for financing such private sector-led activities.

### **Activity 2.2.3 Extension services**

74. The extension officers at both County and Sub-county level are pivotal to delivering aquaculture production and management information under Component 1 and maintaining flow of advice and encouragement post-Programme. The demand for aquaculture services has been rising rapidly but the gradual increase in supply disrupted by conduct of the ESP and the devolution of subsectoral responsibilities to the new County administrations. It is a necessary condition for ABDP success and sustainability that the extension cadres receive appropriate in-service training and retraining, and that sufficient capacity is installed in the country to deliver strong vocational training for future field staff.

75. To this end, the Programme will develop and scale-up existing aquaculture training programmes at RIAT (in the Western region), Sagana (in the Central region) and possibly other units as appropriate, mainly by building up curricula to respond to the specific training needs of the Programme. Nutrition, business, environmental education and climate resilience will be embedded in the extension modules. In addition to classroom skills transfer, emphasis will be placed on practical “hands on” training around ponds and facilities similar to those operated by the majority of smallholders. The supplier institutions may be assisted with minor upgrading of teaching facilities.

76. ABDP will train the aquaculture field staff of the target Counties, as well as a number of Master Trainers and Trainers of Trainers (ToT), in short courses at RIAT, Sagana or other institutions as appropriate.

77. From Programme inception, the delivery of public extension services will be supported with transportation for extension staff at County and Sub-county levels, (vehicles and motorcycles respectively) and with the recurrent cost of extension field operations.

78. Looking to the future and focusing on sustainability, the Programme will pilot alternative extension delivery models, including pay-per-visit, as possible successors to public service provision. However, any such extension services will be provided at a subsidized cost initially to ensure poor farmers are not crowded out.

### **Activity 2.2.4 Aquaculture research**

79. The Programme will commission qualified state and private institutions to conduct scientific and technical research activities linked to ABDP objectives. It is assumed that the large-scale businesses will pursue their own research into the most advanced production technologies for commercial reasons, including technologies concentrated on seed, feed, aquaculture facility management and best practices, and production systems that maximise productivity, taking into consideration building resilience to the impacts of climate change and strengthening early warning systems (including water quality and quantity requirements per County as well as the identification of appropriate micro-climates/agro-ecological zones for aquaculture within Counties).

80. The Programme will partner with WorldFish and National research and training institutions, including the Kenya Marine and Fisheries Research Institute (KMFRI) and Universities to introduce improved and better performing fish breeds, and with the private sector for feeds and seeds research. A preliminary listing of priority research topics has been drawn up. The Programme will also commission a suitability assessment of potential aquaculture sites, including for cage culture.

#### ***Activity 2.2.5 Quality assurance services***

81. The Programme would facilitate the development of a credible National quality and safety monitoring system to consolidate advances in the conduct of domestic trade and open up opportunities for exporting aquaculture fisheries products. The system would comprise a product branding and traceability mechanism, seed and feed standards, domestic and external certification processes, and Residue Monitoring Plans. As a foundation for such modern quality assurance services, the Programme will support the development of culture-specific risk management systems for the inputs, production and products of smallholder aquaculture operators.

82. The main ABDP contribution would be the upgrading and certification of dedicated laboratories in Kisumu, Nairobi and Mombasa to international standards to carry out the key rigorous scientific tests in aquaculture quality and residues monitoring, and input quality certification for fish seeds and feed.

83. Linkages will be developed with the above mentioned institutions to carry quality control of inputs and production under the ABDP.

#### ***Activity 2.2.6 Fish health and surveillance services***

84. ABDP will assist GoK in addressing an important weakness in the public sector supporting small-scale aquaculture and fisheries in general, namely the lack of effective fish health and surveillance services. Nationally, the plan is to build up the technical capacity of Veterinary Services to deal with aquaculture, as a relatively new specialisation, and to install essential equipment related to surveillance in the existing KMFRI laboratories located in Sagana and Kisumu.

85. For each target County, the Programme would train pathologists on fish health surveillance techniques and provide appropriate field equipment to enable regular and reliable surveillance services. It is expected that the large-scale producers will organise such back-up monitoring in-house as a necessary feature of their business plans.

#### ***Activity 2.2.7 Financial services***

86. Financial needs identified for small-scale pond farmers are related to access to quality inputs like fingerlings and feeds (for an estimated amount of KES 50,000 each production cycle) and investment for establishing new ponds once business has proven profitable. For other value chain actors upstream and downstream the value chain, financial needs depend on the nature and size of the enterprise. Finance is needed for working capital and for investments in means of production (equipment, machinery, vehicles and so on). Financing needs may range from a few hundred to several million USD.

87. There are diversified opportunities for the aquaculture value chain actors to access finance depending on their nature and needs, from Banks, MFIs, Savings and Credit Cooperative Societies (SACCOs) or impact investment funds. The Programme will work to ensure that the Subsector increases its attractiveness and creditworthiness to financial institutions and investment funds, to derisk to a sufficient level lending to small-scale producers and value-adders, and to build the capacities of the lenders to develop appropriate financial products and extend access to their services to the rural communities (for institutions not benefiting from PROFIT support). The institutions will look for a strong track record in aquaculture in the absence of collateral. Specific products may be designed for women and (especially) youths, deemed more risky by financial institutions due to their lack of business experience and higher mobility.

88. The various businesses under the PPPP approach are likely to secure access to finance (including for subcontracted small-scale farmers) at least for the businesses with a sound track record. Matching grants are justified for new aggregators in the aquaculture value chain. Justification is not only the difficulty to access finance from the financial sector in the absence of track record, but also the need to incentivize new entrants to develop an outgrower scheme, considering the high level of risk involved.

89. The Programme will also build synergies with the GoK/IFAD funded PROFIT Programme. The Credit Facility and Risk Sharing Facility could be leveraged to finance the more risky SAGs model, since their concessional conditions may further attract the financial institutions to venture into this financing. The Business Support Service Facility will be leveraged to ensure that PROFIT supported financial institutions develop adapted financial products for the aquaculture value chain. PROFIT completion date is June 2019, but leverage may continue after termination of PROFIT, GoK intending to sustain the Programme inputs. Moreover, although TSP support under PROFIT will end in 2018, and aquaculture might not be addressed systematically, it is assumed that the financial institutions will acquire through this support a generic capacity to design adapted products for any agricultural value chain.

90. The Programme will promote access to finance by facilitating linkages between value chain actors and financial institutions, the objective being to ensure that the right information is provided on the demand and supply sides. The Programme will support Counties to organize stakeholders meetings or events with participation of SAGs, ASEs and other value chain actors with financial service providers. This light level of involvement is deemed sufficient, given the lenders are expected to market their own products and potential clients are to contact directly the financial institutions. PROFIT will also contribute to these linkages, during its regular meetings with the financial institutions benefiting from the RSF or the Credit Facility.





## Appendix 5: Institutional aspects and implementation arrangements

### A. Institutional framework

1. **Devolution.** The constitution of Kenya (2010) brought fundamental changes to the way the country is governed. The new constitution established 47 Counties and transferred to them many National Government functions. The Counties are semi-autonomous units of governance with responsibility for County legislation, executive functions and the provision of public services. The current division of responsibilities between the Counties and the National Government gives the Counties a major role in the development of the agricultural sector and the delivery of associated services. The National Government retains the roles of policy formulation, development of regulations and standards, research, National planning, monitoring and evaluation, training and capacity building in the sector. The Counties are subdivided into Sub-counties, wards and villages for ease of provision and delivery of services to the people. The transfer of functions to the County Governments was, for a variety of reasons, accelerated compared to the original schedule. In this context, the Counties form an important institutional reference point for ABDP operations.

2. Regarding development priorities at the decentralised level, the Kenyan Public Finance Management Act 2012 provides that every County shall prepare a development plan in accordance with the provisions of the Constitution of Kenya for approval by the County Assembly. The development plan informs the budget priorities for the coming year. The County plans consist of: a 5-year County Integrated Development Plan (CIDP) which informs the County's annual budget; a 10-year County Sectoral Plan; a 10-year County Spatial Plan using the Geographic Information System (GIS); and where applicable, city and municipal plans. The County Integrated Development Plan (CIDP) reflects the strategic mid-term priorities of the County Governments and contains specific goals and objectives, a costed implementation plan, provisions for monitoring and evaluation, and clear reporting mechanisms. Citizen participation is mandatory in the planning process.

3. **Agriculture sector.** The 2010 Constitution put a ceiling on the number of ministries. For agriculture, the three ministries at National level were merged into one to address the fragmentation of responsibilities between agriculture and rural development-related ministries. Agriculture, Livestock and Fisheries are now in one ministry – the Ministry of Agriculture, Livestock and Fisheries (MoALF) with three State Departments each headed by a Principal Secretary reporting to one Cabinet Secretary. The regulatory framework governing Kenya's agriculture is also undergoing significant legislative reforms following the coming into force of three newly enacted laws - the Agriculture, Fisheries, and Food Authority (AFFA) Act 2013, the Crops Act (2013), and the Agricultural and Livestock Research Act (2013).

4. These new laws are meant to transform Kenya's agricultural sector into a commercially oriented and internationally competitive industry. They unify the 131 laws that have governed agriculture in the past and merge the 24 state corporations associated with agriculture into a single regulating entity (the Agriculture, Fisheries and Food Authority - AFFA). They also combine all state agricultural research institutes, including KARI, into one organisation (the Kenya Agricultural and Livestock Research Organization - KALRO) with 18 sector-specific research institutes. Under the new regulatory framework, AFFA will now oversee operations of Kenya's agricultural sector. Its functions include: licensing and law enforcement; farmer registration to enable the country to better provide services such as training and extension; a checks and balances system to allow Kenya meet international standards and agreements; and policy guidelines on agricultural issues that local entities must implement in order to ensure that National standards and policies remain consistent country-wide. At the devolved level, the powers of the County include (a) crop and animal husbandry; (b) livestock sale yards; (c) County abattoirs; (d) plant and animal disease control; and (e) fisheries.

## **B. ABDP leadership and management**

5. The State Department of Fisheries and Blue Economy (SDF&BE) is the lead implementing agency of the Programme on behalf of the National Government. SDF&BE is part of the larger Agriculture, Livestock and Fisheries Ministry that headed by a Cabinet Secretary, but each of the three state Directorates (SDA, SDF&BE, and SDL) is headed by a principal secretary. SDF&BE is organized into three directorates: (i) Directorate of Aquaculture Technology Development, (ii) Directorate of Fisheries Policy Research and Regulations and (iii) Directorate of Fisheries Resources Development and Marketing. The Kenya Marine and Fisheries Research Institute (KMFRI) is a semi-autonomous Research Institute under the SDF&BE. Some of the functions of the SDF&BE will be taken over by the Kenya Fisheries Service (KFS) once its structures are put in place.

6. The KFS is established under an Act of Parliament, Fisheries Management and Development Act No. 35 of 2016. The Act also provides for establishment of the Kenya Fisheries Advisory Council. Functions of the Kenya Fisheries Services include ensuring appropriate conservation measures, development of standards on management, sustainable use and protection of the country's fisheries resources, promotion of appropriate technologies for aquaculture development and issuance of licences for commercial aquaculture nationwide.

7. SDF&BE will have overall responsibility for the management and oversight of the Programme supported by a Programme Coordination Unit. As the lead agency, it will appoint a desk officer who will act as the interface between the SDF&BE and the Programme. The details of the Programme implementation modalities, roles and responsibilities of different parties, as well as the coordination between the Counties and National implementation will be detailed in the Programme Implementation Manual (PIM). In future, the leadership of the Programme may be delegated to the newly formed Kenya Fisheries Service, once its structures are put in place.

8. **ABDP Steering Committee.** A Programme Steering Committee (PSC) under the chairmanship of the Principal Secretary SDF&BE will be set up to provide overall policy guidance to ABDP. It will have diverse composition to cater for all stakeholders. The main responsibility of the PSC will be to ensure successful implementation of the Programme. The PSC tasks include reviewing Programme progress against targets, assessing management effectiveness, deciding on corrective measures where appropriate, identifying lessons learned and good practices, approving AWPBs and reviewing progress and achievements, etc. The Programme Implementation Manual will outline the details of requirements and responsibilities.

9. The PSC will meet quarterly, participate in the Programme supervision and implementation support missions, and undertake its own semi-annual monitoring visits to the Programme target Counties.. The other members will be drawn from National Treasury, the State Departments of Devolution, Cooperatives, Water, Labour and Social Services, Health, farmers representatives, and any other co-opted member depending on need; such as youth representative and other relevant IFAD funded projects and programs; such as UTaNRMP and PROFIT. The PSC will have representation from the governors of the Counties, participating in the Programme on a rotational basis, (two representatives at a given time).

10. **Programme Coordination Unit (PCU).** For the day-to-day coordination and management of the Programme, and according to the financing agreement between the GoK, IFAD and other financiers, the SDF&BE will set up and delegate oversight and supervision responsibilities to the Programme Coordinating Unit (PCU). At the head office, the PCU will consist of a Programme Coordinator, an aquaculture specialist, procurement specialist, Knowledge Management and M&E Officer, Financial Controller, Accountant, Programme Assistant, support staff and Drivers. The regional sub-unit will be headed by an Aquaculture specialist reporting to the PC. The unit will also have a Programme Assistant, support staff and a driver. ToRs for senior PCU staff and key service providers are set out in Appendix 5.4 and the Programme Implementation Manual.

11. The PCU staff will be competitively recruited by the State Department of Fisheries using a private sector recruitment human resources firm. Recruitment of both the Programme Coordinator and

the Financial Controller are conditions of disbursement. The PCU will be located within the programme areas. The location of the PCU could be in Kisumu (Western Kenya) or any other central location within the Programme areas. If the PCU is established in the Western region, a subsidiary office (Regional Project Coordination Unit) would be established in Central / Eastern region or vice versa.

12. The PCU will ensure that the Programme is implemented according to the financing agreement between the GoK and IFAD and other financiers, and will facilitate a conducive environment for Programme activities, including the partnerships required for effective implementation. The PCU will coordinate implementation of the Programme activities according to the Annual Work Plan and Budgets (AWPBs) approved by the PSC and IFAD.

13. Specifically, the PCU will be responsible for: (i) financial and administrative management of Programme resources; (ii) planning of Programme activities and consolidation of the AWPB; (iii) contracting and procurement of Programme-related services and supplies; (iv) coordination of the activities of the various Programme partners; (v) mobilization and coordination of the activities of the various Programme partners; (vi) supervision and documentation of all activities; (vii) setting up and maintaining a flexible M&E database to reflect Programme activities, outcomes and impact; (viii) Knowledge management; (ix) preparation of progress reports; and (x) monitoring the preparation of ESIA and implementation of the ESMP. It will support target Counties in preparing County level AWPBs, monitoring Programme implementation, supervising the TSPs contracted by the Programme to ensure timely delivery of contractual outputs and managing MoUs with public sector institutions working with the Programme. The PCU will report directly to the PSC. The PCU with support from the TA would carry out the tasks in relation to the SECAP.

14. **County Implementation and Governance Structure.** The 2010 constitution brought fundamental changes to the way Kenya is governed by creating 47 devolved units (Counties) with administrative, executive functions, County legislative powers and provision of public services. The constitution also spelled out a phased out devolution of functions to Counties. Agriculture, Livestock and Fisheries were some of the key functions that were devolved to Counties. Other devolved services include water, health, early childhood development, management of markets and certain classes of infrastructural development. The implementation of the Programme in the Counties will therefore be done in compliance with devolution law.

15. The implementation at County level will be done as well in full compliance with the Programme objectives, implementation arrangements and fiduciary requirements. The Programme Implementation Manual will outline the details of requirements and responsibilities. The sections below provide an overall description of operations at the County level; details of these arrangements will be set out in the PIM, which will be finalised before the first disbursement.

16. **County Programme Coordination Committee (CPCC).** At the decentralised level, a County Programme Coordination Committee (CPCC) will be established and chaired by the Governor or his/her appointee. The CPCC will comprise the County Programme Coordinator (as the Secretary), Department of Veterinary Services, Water Department, Department of Cooperatives, the Department responsible for gender, youth and social development, a nutritionist and representatives of the farmers' umbrella organization, the private sector and NGOs. The PIM will outline the composition of the CPCCs, key objectives and responsibilities, procedure for preparation and endorsement of the County AWPB and ensuring compliance with the overall Programme objectives and procedures.

17. The CPCC will review Programme progress against targets at the County level, assess management effectiveness, decide on corrective measures where appropriate, review lessons learned and good practices, approve County AWPBs and review progress reports. The County AWPBs and procurement plans as well as implementation of the Programme at the County level have to be developed in close coordination with the overall Programme coordinator for compliance with the overall ABDP objectives, implementation arrangements, and fiduciary requirements. Each County AWPB has to be endorsed by the overall Programme Steering Committee.

18. **County Programme Implementation Team (CPIT).** The CPIT will be responsible for Programme implementation within each County as per the established MoUs with the national PCU. It will be established within each County Fisheries Directorate and will be headed by the County Programme Coordinator (CPC) who will be selected from among the County fisheries staff with a deep understanding of the fisheries sector, environmental considerations, water resources management. The CPIT will comprise mainly staff from the County Department of Fisheries with participation of county staff from other relevant departments; such as, Veterinary Services, NEMA, WRMA, Gender Youth and Social Services, Accountant, representative of aquaculture farmers, NGOs working in the sector, the private sector and any other entity as required. It will work directly with programme beneficiaries and will report to the County CEC in charge of fisheries. The CPIT will include the National Treasury Accountant who is responsible for the Programme financial management at County-level.

19. The CPIT will coordinate implementation of the Programme activities according to the County-level AWPB approved by the CPCC and endorsed by the Programme PSC. Other activities include mobilization of farmers and creating awareness, extension and advisory services, supporting organization of farmers groups, leading the preparation of the County AWPBs and of implementation progress reports for submission to the PCU, coordinating extension services and M&E functions at the County level. The Coordinator will work with a team of extension staff (one per Sub-county) at the County level. The CPC will be responsible for preparing the County AWPB and the progress reports for submission to the Programme Manager for review and collation. Each CPIT will be equipped with a vehicle and three sets of computers and accessories. It will receive technical backstopping from the TA and the PCU in developing their annual work plan and budget.

20. The CPIT will include a *County Service Delivery Coordinating Unit Tender Committee* with the legal authority to approve procurement awards. Overall, the country legal framework for public procurement provides clear guidance for the procurement practitioners to be carried out at the County level.

21. To ensure smooth implementation of the Programme, it will be important to ensure stability of tenure of the County Programme Coordinator. In this regard and where possible, it is recommended to ring-fence the position from regular transfers and assignment of other duties so that the objectives of the Programme can be delivered.

22. **Sub-county Programme Implementation Team (SCPIT).** The SCPIT, led by the Sub-county coordinator, preferably the Sub-county Fisheries Officer (SCFO), who will be responsible for coordinating Programme implementation at the Sub-county level. The SCPIT members include: Sub-county Fisheries Officer (SCFO), Sub-county Veterinary Officer (SCVO), Sub-county Cooperative Officer (SCCO), Sub-county Social Development Officer (SCSDO), Sub-county Water Officer, two farmers' representatives and relevant partners/NGOs. They will provide public extension support and work with direct Programme beneficiaries to build their capacity either directly or through links to service providers hired by the Programme or working in partnership with the Programme. They will support the County team in identifying Sub-county level activities that will be included in the County Annual Work Plan and Budget. Each SCPIT will be equipped with a set of two motorcycles and a computer and accessories.

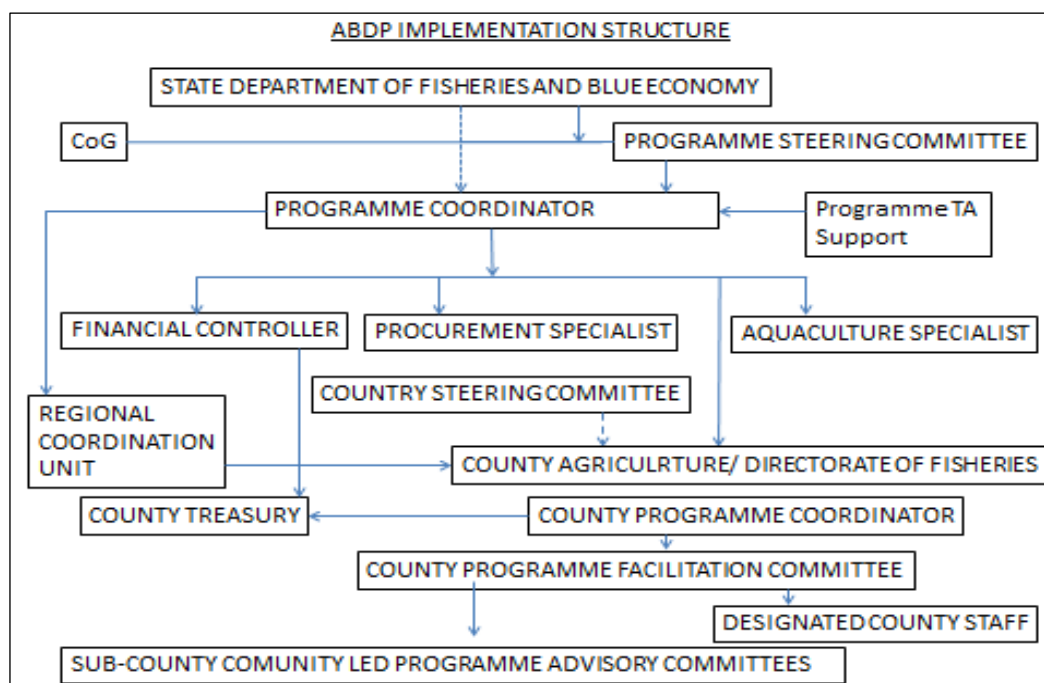
23. **Technical Assistance (TA).** Implementation will be supported by technical assistance (TA) teams, through project partners/service providers. The TA will support overall project implementation and in particular the first component. Under Component one, the TA will provide support to selected areas of expertise on full time basis to be linked to the PCU at their head office. These expertise will include among others; chief technical advisor; community development expert, gender, youth, and nutrition expert, and entrepreneurial opportunities development expert. It will also provide technical support to the PCU on assignment or part-time basis to support Component 1, Sub-component 2-2 and Component 3. This would include for example county level assessment and improvement planning of aquaculture production facilities (such as ponds), support to improvement and construction of smallholder aquaculture production facilities (ponds and others), curriculum

preparation for training of extension staff, implementation of training plans, implement activities that support policy dialogue, knowledge management and ESMP development and implementation monitoring at the project level, etc.

24. At the county level, the TA, will form county specific support teams to support county implementation, for all components. Each team will consist of a fisheries officer and technician and will be provided with Motorcycles for transportation. In doing so, the County level TA will support CPITs and SCPITs in preparation and implementation of plans and reporting as well as day to day implementation. As mentioned above, the TA will support county implementation as well through adhoc TA provisions, for specific assignments such as site assessment, ESMP compliance, technical support for infrastructure improvement, training of ASEs, etc.

25. The recruitment of the service provider / agreement with project partner to carry out the above mentioned TA, needs to be performed as early as possible during Programme implementation, with the recruitment process to be funded from the retroactive financing or start-up advance. The PCU will be responsible for finalization of the ToRs in accordance with the PDR and Programme Implementation Manual (PIM), obtaining IFAD No objection to the ToRs and selection process. It will also be responsible for finalising the selection of the service providers and the agreement with each Programme partner. All of the above will happen in accordance with the PDR, PIM and IFAD guidelines.

### ABDP Implementation Structure



26. At start-up and prior to disbursement of funds to the Counties, the PCU will facilitate the signing of a performance-based Memorandum of Understanding between the Programme PCU and each target County for execution of the Programme. The MoU will define roles and responsibilities of each party (at National, County Sub-county and ward levels) for Programme execution including monitoring and evaluation (in line with Programme M&E system) as well as financial management and procurement requirements. Given the nature of the Programme that require implementation effort that would span over several Counties, the Programme will make provisions to sustain execution of activities through support by service providers/Programme partners in close collaboration with the Counties, as indicated in the MoU signed at start-up with the Lead Agency.

27. In addition to the above mentioned MoUs, the Programme implementation will require developing MoUs between the PCU and: (i) Counties where the programme will be implemented; (ii)

Kenya Marine and Fisheries Research Institute (KMFRI) and WorldFish for implementing the Research Institutions Strengthening activities; (iii) Existing aquaculture training programmes at RIAT (in the Western region) and Sagana (in the Central region) or possibly other alternative units as appropriate for training of the county extension staff; (iv) Fish quality laboratories in Kisumu, Nairobi and Mombasa as well as other laboratories that can support the quality assurance function. Such MoUs would aim at supporting building capacity for fish quality assurance in general and to support project activities under components 1 & 2 in particular; (v) Veterinary Department of the MoALF for building their capacity with regard to fish disease based on relevance; (vi) Any other party identified to support programme implementation.

28. Among other things, each MoU will clearly specify, the scope of the work to be undertaken, staffing and institutional arrangements to be put in place to ensure successful programme implementation, estimated budget for specific activities, reporting and audit requirements, activity tag transfer as opposed to general cash releases, implementation records, monitoring arrangements as well as clearly defined accountability and performance evaluation criteria. The MoUs will need to be monitored closely by the lead Programme agency and will: (i) specify that the above listed parties will maintain a register of assets acquired with the proceeds of the Financing; and (ii) be submitted to IFAD for its prior approval. No MoUs will be modified without the prior consent of IFAD.

### **C. Implementation arrangements for Component 1: Smallholder aquaculture development**

29. Component 1 implementation will be led by the PCU at national level and County technical cadres at County level. Implementation at both levels will be supported by the above mentioned TA<sup>50</sup> technical assistance and professional backstopping from the State Department of Fisheries.

30. Under Component one, the TA will provide technical assistance in selected technical areas of expertise to be linked to the PCU at their head office. These expertise will include among others; chief technical advisor; community development expert, gender, youth, and nutrition expert, and entrepreneurial opportunities development expert. It will also provide technical support to the PCU on assignment or part-time basis in selected topics; such as development and implementation of environmental and social management plans, county level assessment and improvement planning of aquaculture production facilities (such as ponds), support to improvement and construction of smallholder aquaculture production facilities, curriculum preparation for training of extension staff, training etc. At the county level, TA, will form county specific support teams to support overall implementation, for all components (Fisheries Officer and Fisheries Technician). These County TA teams will support CPIT and SCPIT in preparing AWPBs, reporting, implementation, etc. This arrangement will include as well support to activities under other sub-components; such as policy dialogue, knowledge management and ESMP development and implementation monitoring at the project level.

31. The County will identify the stakeholders, sensitize them and constitute the CPIT and SCPITs. Both teams will mobilize in turn the communities through holding of local meetings or *barazas* to create awareness of ABDP and solicit their participation in Programme activities. This activity will result in the formation of community committees who will collaborate with the County teams and the TA to identify problems and opportunities and to draw up a strategy for overcoming the problems and exploiting the opportunities. The community committees will participate in selecting Programme beneficiaries based on rigorous selection criteria. A manual with implementation guidelines for beneficiary selection will be produced by the TA and training provided to key partners at ABDP start-up. In the Sub-counties, the SCPIT will be responsible for the implementation, monitoring and sustainability of the Programme at the community level.

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<sup>50</sup> Paras 23 – 25.

### **Subcomponent 1.1: Smallholder aquaculture production**

32. The Subcomponent will work with groups of smallholder aquaculture producers (SAGs). ABDP will provide:

- technical advice to smallholder aquaculture producers on site selection for ponds, pond construction, seed selection and stocking density, pond fertilization, fish health, record keeping, savings, financial literacy, business management skills, collective marketing, quality standards and food safety, value addition and processing; and
- small grants to support purchase of inputs for production based on felt needs of the producer. The grant amount will not exceed USD 500 per producer.

33. Service providers / project partners (FAO and TA), the Counties, the State Department of Fisheries, the Programme and Community-led advisory committees will work in collaboration, each entity having specific roles and responsibilities for the key activities considered by the Subcomponent. The technical assistance provider/Programme partner will provide hands-on support to the County Implementation Teams in driving these activities. Collaboration will be established with development partners (such as FAO and GIZ) as they are already operating in the Subsector and there would be mutual benefit in operating together. A dedicated service provider/Programme partner will undertake implementation support for the activities under this component and management support at the county level.

34. The SAGs will be formed at Ward level. Each will have up to 40 farmers. For ease of mobilization, farmers forming a group should be in close proximity. Each group must have a constitution and be registered by the Department of Social Services at the County level. The group will have a chairperson, secretary and treasurer who are democratically elected by the members.

35. Where applicable, such as in pond construction, the communities will be involved to give in-kind contributions. The TA will carry out site assessments, all required environmental assessments and studies, ESIA, backstop design of required interventions, backstop supervision and technical support for execution of interventions. In addition, the TA will support finalizing the guidelines and the required EIA for cage culture and aquaculture in dams/reservoirs.

36. Food and Agriculture Organization (FAO) will provide support to farmers training under Subcomponent 1.1 using Farmers' Field School (FFS) approach. A specific MoU will be signed between the PCU and FAO for training of aquaculture farmers in areas of production, management, business planning, nutrition etc. FAO would provide technical support initially through a stand-alone TCP that would be implemented during the early stages of the Programme duration. Specific arrangements will be developed afterwards by the ABDP for continuation of FAO support in this area. The ABDP will provide complimentary financing for implementation of the FFS, to complement the TCP from FAO during the initial period.

37. A training needs assessment will be carried out by the TA and the CPIT and SCPITs. The assessment will consider not only the needs at community level to inform training modules/materials and methodologies but also have focus on capacity gaps of County extension services to ensure sustainability of the intervention, (namely, coaching and follow up on a regular basis). Support for and active participation of extension service staff to community training sessions will ensure a smooth transition process from service providers to extension cadres. The TA, working in collaboration with the CPIT, SCPITs and other stakeholders, will develop an appropriate training programme and share it with the PCU for concurrence and approval.

### **Subcomponent 1.2: Development of Aquaculture Support Enterprises**

38. The Subcomponent will support the youth to come into the non-fish production aspects of the aquaculture value chains. Aquaculture Support Enterprises (ASEs) will be formed in parallel to SAGs as vehicles for collaborative income-generating activities and interaction with ABDP resources. The TA for Component 1 will support the implementation of this Subcomponent working in collaboration

with the CPITs and SCPITs, in identification of the champions, arranging with training service provider (SIYB), identification of entrepreneurship opportunities, provide training to ASEs on technologies and opportunities, provide TA, etc. Each ASE will be assisted to develop a simple business plan that will be supported. The procurement function (goods and services) will be the responsibility of the PCU or the County, depending on the items at hand and in accordance with the procurement arrangements for the Programme. Each ASE will be required to provide contribution of 10% of the seed money.

39. The Programme will enter a formal MoU with the in-country service-providers of the ILO-backed Start and Improve Your Own Business scheme, to deliver the intensive targeted youth employment and income generating activities of the Subcomponent. SIYB Master Trainers are available in Kenya. The Programme will engage 30 Master Trainers as technical assistance to train the 500 youth “champions”, organized in 30 groups across 14 Counties. Each master trainer will be responsible for one group and will accompany and mentor them for one year. The Programme will explore possibility for obtaining technical backstopping by ILO. A separate MoU may be agreed upon between ABDP and ILO.

### **Subcomponent 1.3: Community nutrition initiatives**

40. The ABDP nutrition activities will be implemented in collaboration with identified potential partners under the coordination of a Gender, Youth and Nutrition expert at Programme level (provided by the TA). To ensure effective implementation on the nutrition sensitive activities, the extension workers will be supported on training and refresher programmes on nutrition-sensitive interventions. The contributions of ABDP interventions will be monitored through periodic food surveys. The baseline food survey will provide benchmark data for an evidence-based contribution to nutrition outcomes.

41. Community facilitators will be trained to adopt and apply the GALS methodology, building on the experience of other IFAD-funded interventions in the country. The primary targeted households will be those of farmers involved in SAGs and ASEs formed by the Programme. An initial 300 households will be targeted and then the initiatives replicated at community level to other households using a Training of Trainers approach.

42. The nutrition surveys and studies, nutrition curriculum development and community nutrition communication materials activities will be conducted by the best-qualified public and/or private sector entities within Kenya or, if necessary, the East Africa region.

43. The organization and implementation of fish field days will involve close collaboration with community leaders, the extension services, health professionals and other stakeholders.

44. Funding of about USD 1,500 per school would be provided for inputs to ensure a viable fishpond for schools selected for the School fish-feeding programme. Each school would be required to contribute 10% of the total cost in kind while ABDP covers the other 90% of the cost.

## **D. Implementation arrangements for Component 2: Aquaculture value chain development**

45. Overall responsibility for the implementation of Component 2 will rest with the PCU, working through private sector businesses, SAGs and ASEs for Subcomponent 2.1: Smallholder-based aquaculture value chain development and public sector institutions for Subcomponent 2.2: Aquaculture sector enabling environment and support services. The PCU will also be responsible for ensuring that the implemented activities are in line with the ESMP of the project. TA on demand from that was discussed at depth in Component 1<sup>51</sup>, will be used for this purpose.

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<sup>51</sup> Paras 23 – 25.



## **Subcomponent 2.1: Smallholder-based aquaculture value chain development**

46. This Subcomponent will be implemented by contracts aiming at orchestrating the establishment of a commercially viable and market-driven private sector comprising aquaculture producers and entrepreneurs. To receive matching grant funding ruled by the contracts, the prospective recipients would be organized as a legal person, preferably as a cooperative or a limited liability company. The main contractual executing entities will be as follow.

- **Public-Private-Producer Partnerships (PPPPs).** Each PPPP will be composed of a commercially driven aquaculture aggregator and multiple aquaculture producers to jointly use a common platform to manage all segments of the aquaculture value chain.
- **Small Aquaculture Groups (SAGs).** The ABDP will support small aquaculture groups that are not linked to common platform of the PPPPs.
- **Aquaculture Support Enterprise (ASEs).** The Programme will finance ASEs that might provide inputs or undertake value addition related to the common platform of the PPPPs.

47. As contracts will be the main modality of implementation, this subcomponent will be supported by an experienced contractual advisory firm, referred here on as “The Transactions Advisor”. The Transactions Advisor is expected to bring in track record experience on the facilitation of Public Private Partnership contracts and business plan based contracts. The Transactions Advisor is expected to undertake its job through two main teams of experts:

- the first team will be composed of a business plans development specialist supported by a fisheries business plan development specialist, a financial engineering specialist, lawyer, community mobilisation/public relations specialist, and an executive secretary; and
- the second team will be on demand and will be composed of a lead international transactions advisor, supported by a lawyer with experience in PPP contracts, a fisheries specialist with experience of private sector operations in fisheries.

48. To facilitate the recruitment of the Transaction Advisor and to define the rules of engagement, ABDP will hire an experienced Public Private Partnership Specialist at a very early stage of implementation. The PPPP Specialist will work with the National and County Governments to establish a Public-Private-Producer-Partnership Evaluation Committee, including appropriate membership. (PPPP Specialist ToRs are attached as Appendix 5.2).

49. The PPPP specialist will also commission a detailed aquaculture value chain assessment to identify aquaculture value chain bottlenecks where the private sector aggregators can bring in critical technical expertise and financing to both improve operational efficiency of public assets (currently in non-functional status and/or underperforming) and work in partnership with aquaculture producers to improve their production skills. This can include the development of proposals for new investments to address weaknesses in the value chains

50. The Transaction Advisor will develop PPPP contractual models for market based aquaculture value chain development and for the leasing of the county fish processing plants, including contracting procedures, bidding documents, qualification criteria, and selection criteria. They will also work in collaboration with the SDF&BE, PCU, CPFT, County Government Department of Fisheries and other stakeholders in on the ground geographical identification of weak aquaculture value chain segments and areas where medium and large aquaculture entrepreneurs could bring critical expertise in the management of the whole value chain.

51. The Transaction Advisor will define a programme of work whereby the private aggregators/fish-processing plant managers will be recruited to enter into partnerships with both the ABDP and small aquaculture producers with the aim of achieving joint competitive advantages in the aquaculture business. The awarding of contracts for private aggregators will be decided by the Evaluation Committee.

52. The Transaction Advisor specialists will also work with SAGs and ASEs to facilitate their involvement in the development of aquaculture business opportunities not linked to PPPP contracts. They will disseminate information, rules and procedures regarding the process of business plan competition for SAGs/ASEs. Thereafter, they will conduct all stages of the business plan competition process, (except the awarding of contracts which will be done by the Evaluation Committee), ensuring that contracts are signed, providing support to the initial stages of implementation and making sure that performance indicators are met and the provisions of Memoranda of Understanding are implemented.

53. The services to be provided by the Transaction Advisor team will also include: (i) preparation of promotional material and the conduct of stakeholder consultations with prospective PPPPs; (ii) calls for expressions of interest, conduct of due diligence of the expressions of interest and presentation of proposals to the PPPP Evaluation Committee; (iii) engagement of service providers through a competitive process to undertake feasibility studies, market analysis, formulation of PPPP contractual modalities and development of aquaculture PPPP policies; (iv) support to GoK and the private sector in closing the deals and signing the contracts; and (v) possible support for the initial stages of implementation of the contracts.

54. There are four levels of implementation for this subcomponent:

- (i) Building awareness and dissemination stage, which involves holding workshops, meetings, identifying key players. This would include smallholders, SAGs, ASEs, aquaculture farmers' organizations, public sector at national and county level, IAAs, private sector, financial institutions, technical assistance players, etc. Mobilization and identification of potential parties will be carried out by implementation teams at the county level, the PCU, and the Transaction Advisor. This is expected to yield identification of a base of potential partners who are ready to participate in the BP / PPPPs arrangements as well as PPPPs geographical areas and potential areas and models;
- (ii) Process of selection of PPPP/BP winning proposals on competitive basis. This would involve: (a) advertisement, (b) provision of TA by the Transaction Advisor to those eligible to participate and have expressed interest, and (c) evaluation of the proposals by a committee that would involve, as a minimum, the lead implementing agency, county government, relevant government entities, key value chain players (financial institutions, large industries, academia, experts, etc. The transaction advisor will provide technical backstopping to the process but will not be part of the evaluation process;
- (iii) BP / PPPP implementation will involve signing MoUs / contracts between the programme and the winning group/ IAA / private party and between the winning party and the smallholders. In most cases two concurrent contracts will guide such partnerships including (a) contracts between the Programme and the private party, whether an IAA or for a lease contract that would outline the obligations of the private party in return for receiving the Programme support in the form of a matching grant, for the right to lease a government owned facility, or for both; and (b) contracts between the private party and the individual smallholder producers that would guide the obligations of both parties and would be in line with the above mentioned agreement between the private party and the Programme. The private party can be organized in the form of a limited liability company or a cooperative. Alternatively; the Programme will sign MoUs with SAGs and ASEs to outline the implementation of the business plan that would receive the Programme support;
- (iv) Start of implementation of the BP / PPPP arrangement. The winning party should be satisfying their equity contractual obligation prior to receiving Programme support. During this stage the programme with support by the transaction advisor and other TA and partnership arrangements in place will follow closely the implementation and satisfaction of the contractual arrangements by all parties.

## **Subcomponent 2.2: Aquaculture sector enabling environment and support services**

55. The PCU will support National and County Governments as well as financing institutions to improve the overall enabling environment necessary for successful implementation and sustaining the benefits and achievements of the Programme. In doing so, the PCU will support selected Programme partners in the areas, identified in the PDR. The various activities under this Component will be supported through the TA (referred to in Paras 23 – 25)<sup>52</sup>. MoUs will be signed with the Programme partners before the start of implementation of the activities or transfer of running costs.

### **Activity 2.2.1 Policy engagement**

56. The Programme will engage in policy dialogue to improve subsectoral practices and efficiency at the County and National levels, working closely with the Directorate of Fisheries Policy, Research and Regulations to review the aquaculture policy and regulatory framework. Issues to be addressed will include the operating environment for cage culture (carrying capacity, regulations, delineation of maps, and strategic environmental and social impacts assessments for cage culture and the use of reservoirs for aquaculture), guidelines for effective PPPs in the sector, and other policy and legal bottlenecks constraining progress. Given limited capacity at the National and County levels to conduct effective policy reviews and advocacy, the above mentioned TA (referred to in Paras 23 – 25) will include provisions for commissioning consultancy assignments for these purposes including policy dialogue workshops and forums to development draft policies for discussion.

57. At the County level, the Programme will support domestication of the policies developed at the National level to ensure that the devolved mechanisms are backed by law. All policy dialogue efforts will be implemented in close coordination with knowledge management aspects under the Programme.

### **Activity 2.2.2 Public infrastructure**

58. The Programme will support the National and County Governments in identifying public infrastructure, such as markets, hatcheries and stores that are used to support aquaculture value chains, that are in need of physical upgrading and institutional strengthening. The Programme will carry out assessments of the condition of such infrastructure and services, and gauge the needed support.

59. When and where possible, locally-appropriate PPP arrangements will be devised to bring in private capital and expertise to ensure the proper upgrading and sustainability of such infrastructure. The private sector can be brought in through management contracts, concessions or full privatisation. For such activities, feasibility and implementation will be carried out by the PPP Agribusiness Unit recruited under Component 2.1. Where needed, MoUs will be signed between the Programme and the entity in charge of the public infrastructure (Counties or National Government) to ensure that the operation of the supported infrastructure will be sustainable.

### **Activity 2.2.3 Extension services**

60. ABDP will support the capacitation of fisheries extension services in the Counties to carry out their envisaged role under the Programme. Training for County extension officers will be carried out in the best-qualified training centres, likely to be the Ramogi Institute of Advanced Technology and the Sagana Aquaculture Research Centre. Consideration will be given to identification of other potential training centres. Practical support will also be extended through the procurement of goods, such as motorcycles, computers and stationary, and the provision of running costs such as field days, DSA, fuel and maintenance.

61. Procurements of major items will be carried out by the PCU to ensure economy of scale, while smaller items, such as stationery, will be carried out through the County system using the methods

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<sup>52</sup> Para 23 – 25.

outlined in the procurement section. All activities must be included in the AWPB and PP, to be reviewed and approved at the County and National level Governments and receive IFAD No objection. Signing of individual MoUs with the Counties will have to take place before provision of the above-mentioned support. Accounting for the amounts transferred previously will be a condition for continued transfer of running cost support to the Counties.

62. The PCU will sign MoUs with the cooperating institutions to carry out training as required for County extension staff, Trainers of Trainers and Master Farmers. Training modules of different length and intensiveness may be organized, including courses for Master Trainers and Trainers of Trainers and courses that maximize the participation of women. Separate consultancy assignments will be commissioned with best-qualified entities to develop bespoke curricula and training modules. This could also be considered part of the TA discussed above (Para 23 – 25). The transfer of training costs will be done quarterly in advance on the basis of the programme outlined in the AWPB.

63. As an investment for the future, the Programme will fund minor upgrading of the vocational teaching facilities at Sagana and at RIAT (to a lesser extent as the latter received major support from GIZ recently) or alternatively other identified suitable training centre. The schedule of works will be based on needs assessments to be carried out by TA at Programme inception. The PCU will carry out the procurement of goods, works and services on behalf of the training centres in line with detailed MoUs.

#### ***Activity 2.2.4 Aquaculture research***

64. ABDP will support priority research activities that are directly relevant to smallholder aquaculture. While the Programme has identified possible areas for investigation, it will attempt to link research to demand from the beneficiaries and other key private and public sector actors along the aquaculture value chains. Most of the research enquiries will be carried out by National public research institutes, such as KMFRI. In addition, the Programme will promote the establishment of partnerships between renowned international centres of excellence, such as World Fish Centre, and KMFRI and others during the planning and implementation of research activities, framed by the signing of MoUs between the National agencies and international organisations. Support will include missions by international experts to Kenya. The main areas of focus in research will be: a) fish selection and breeding; b) fish nutrition and feed technology; c) field trials for growth; d) best management practices; e) climate smart aquaculture technologies; and f) marketing and information systems research in addition to commissioned research activities.

65. ABDP will support selected national aquaculture research initiatives through the procurement of machines, materials and the underwriting of running costs, as justified in individual proposals. MoUs will have to be signed between the Programme and the respective research institution based on the agreed scope, deliverables and timetable before any material support can be provided. Procurement will be carried out by the PCU in accordance with the procurement arrangements set out in the PIM.

#### ***Activity 2.2.5 Quality assurance services***

66. The Programme will recruit an international expert at inception to assess capacity gaps in the area of quality assurance at the SDF&BE, Fish Inspection and Quality Assurance Division. Based on the mission findings the Programme will engage a consultancy firm with expertise in fish quality assurance on a retainer basis to provide technical assistance in building of robust national quality assurance services for the fisheries sector and aquaculture Subsector.

67. Fish Quality assurance is a function of the SDF&BE (KFS). Laboratories at KMFRI would be mainly for research on quality assurance. However, the two institutions are side by side in Kisumu and could share laboratory facilities. In Sagana, they are in the same compound and can share the Quality Assurance/Research Facilities. The Programme would explore feasibility of upgrade of the dedicated quality assurance laboratories in Kisumu and Sagana to certification at national, regional and international standards to serve the Programme area. Dedicated quality assurance laboratories in Mombasa, Nairobi and Kisumu are likely to serve the wider national needs in quality assurance.

ABDP will support close collaboration with the national standards organization, the Kenya Bureau of Standards (KEBS).

68. ABDP will develop arrangements with the above mentioned laboratories for monitoring quality of inputs and production, for Programme beneficiaries.

#### **Activity 2.2.6 Fish health and surveillance services**

69. The Programme will support capacity building for fish pathologists at the County level as well as provision of fish disease surveillance field equipment to the participating Counties. The Programme will review the technical capacity of the SDF and KFS in the context of the institutional reorganisation that separates livestock and fisheries cadres to ensure that there is adequate support for fish health in the expanding aquaculture Subsector. At a minimum, essential diagnostic equipment would be provided to KMFRI laboratories in Sagana and Kisumu.

#### **Activity 2.2.7 Financial services**

70. The Programme will recruit a rural finance specialist<sup>53</sup> at inception to: contribute to the financial literacy training and awareness raising of accessible financial service providers within the SAGs/ASEs institution-building packages; and to intermediate with interested commercial banks and microfinance institutions in developing tailor-made financial products for the aquaculture value chains in Kenya. The Programme will retain flexibility in investing in further technical assistance and/or studies to investigate promising lending instruments emerging from the experience with the SAGs and ASEs.

#### **Memorandums of Understanding(MoUs)**

71. MoUs will be developed between the PCU and: (i) Counties where the programme will be implemented; (ii) Kenya Marine and Fisheries Research Institute (KMFRI) and WorldFish for implementing the Research Institutions Strengthening activities; (iii) Existing aquaculture training programmes at RIAT (in the Western region) and Sagana (in the Central region) or possibly other alternative units as appropriate for training of the county extension staff; (iv) Fish quality laboratories in Kisumu, Nairobi and Mombasa to support building capacity for fish quality assurance in general and to support project activities under components 1 & 2 in particular; (v) Veterinary Department of the MoALF for capacity building with regard to fish disease; (VI) Any other party identified to support programme implementation.

72. Among other things, each MoU will clearly specify, the scope of the work to be undertaken, staffing and institutional arrangements to be put in place to ensure successful programme implementation, estimated budget for specific activities, reporting and audit requirements, activity tag transfer as opposed to general cash releases, implementation records, monitoring arrangements as well as clearly defined accountability and performance evaluation criteria. The MoUs will need to be monitored closely by the LPA and will: (i) specify that the above listed parties will maintain a register of assets acquired with the proceeds of the Financing; and (ii) be submitted to IFAD for its prior approval. No MoUs will be modified without the prior consent of the Fund.

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<sup>53</sup> This would preferably be part of the TA for the Project.

## **Appendix 5.1: Draft preliminary outline ToRs for the service provider to implement Component 1 investments**

1. Component 1: Smallholder aquaculture enterprise development will be implemented by PCU and County implementation teams at all levels. The implementation teams are mainly composed of staff from County and National implementing institutions (County fisheries departments, PCU, SDF&BE support staff and research and training institutions) however specific TA is required to perform tasks to successfully reach the expected outcomes. Service Providers (SPs) will be contracted to fulfil specific areas/ type of expertise, which is currently lacking at National/County and Sub-county levels. Recruitment of specific technical assistance will be the responsibility of the Service Providers contracted by the Programme.

In line with outcome of Component 1 the activities to be performed by the Service Provider and experts hired, will focus on: (i) capacity building, improving the skills and empowering local communities, farmers' groups and their organisations to improve their fish production and productivity (i) diversifying the sources of household food supply (as well as household income) and adding value to fish products through local processing; (iii) improving post harvest handling, including local processing of fishery products to be marketed and facilitate linkages between producers and markets; and (iv) providing small-scale rural infrastructure to improve aquaculture productivity with community participation, including ponds and any other equipment relevant for aquaculture production.

Experts hired by the Service Provider (SP) will facilitate capacity building of existing Smallholder Aquaculture Groups (SAGs) and Aquaculture Support Enterprises (ASEs) as well as support aquaculture farmers that are willing to form new SAGs and ASEs. SP will provide intensive training and facilitate community participatory discussion about the situations and problems that arise, including adoption of successful training methodology at community level (such as Farmers Field Schools). SP will monitor ASEs progress and provide training in leadership for group leaders (chairman, secretary and treasurer) and village officials, capacity building and ASEs financial management.

Capacity building for SAGs as well as ASEs will be enhanced to ensure the sustainability of their business activities, by promoting greater cooperation with other farmer groups from nearby villages to form associations/federations at sub district level which able to connect farmers/micro-entrepreneurs directly with traders to reach large-scale production and sales. These groups will receive supports to build strong producer organizations aim to improve their bargaining position as a seller and that they can be directly connected to the buyer.

The SP will refer to the principle of gender mainstreaming and social inclusion to accommodate the needs, experiences, aspirations of men and women and youth who have different special needs so that gender gap can be reduced. Gender Mainstreaming in Programme implementation aims to enhance the role of women as agents of change, improve their skills and participation in decision-making so that gender transformation occurs gradually in the process of social and economic development.

Therefore, members of Aquaculture Support Enterprises (mainly women) will receive training in, literacy, small-scale enterprise management, maternal and child health and nutrition. Support development of market access, market information and business plans, including planned approach to ensure market demand for sustainability of income generating activities undertook and increase value-added.

**Outputs of SP:** In line with the Programme objectives, the overall expected output of the SPs contract is that communities are mobilised, beneficiaries selected and Groups established and trained. The Programme will establish and support an estimated 400 Smallholder Aquaculture Groups and 250 Aquaculture Support Enterprises (ASEs) and related trainings/services are delivered to respective beneficiaries. Furthermore, awareness creation on gender and nutrition will also be responsibilities of the SP, including introduction of tools from the household methodologies within capacity building activities.

#### Responsibilities of the SP:

- Provide consultancy and technical assistance related to the implementation of the Programme Component one in relation to: community mobilization/selection of beneficiaries/formation of groups and related trainings to be provided.
- Provide the quality services of capacity building facilitation to the beneficiaries and their institutions in targeted villages in community empowerment, value chain planning and development, marketing, financial management and others for SAGs as well as ASEs.
- Provide the services of qualified and experienced staff at all levels, including: County Manager acting as coordinator of field workers; County and Sub-county/Village Facilitators, including Farmers Field Schools Facilitators, Household methodology facilitators and also Community Development Specialists; Gender, Youth and Nutrition Specialists; Entrepreneurial Opportunities Development Specialists; and Climate Change experts.

The experts will be responsible for the following main tasks:

- **Community Development Specialist:** The main task will be to work in close collaboration with National counterparts and respective team/tasks force established at all levels: National, County and Sub-county level and to organize/ implemented and monitor community mobilisation/sensitisation activities, including application of selection criteria for the beneficiaries based on the agreed criteria in the PDR/PIM.

Support overall formation and strengthening of smallholder aquaculture groups (SAGs) and Aquaculture Support Enterprises (ASEs).

Overall responsibility for capacity building activities at community level, including SAGs as the training take place at community level.

- **Gender, Youth and Nutrition Specialist:** The main task will be preparation of a gender and social inclusion action plan to be implemented at County/Sub-county level, including working in close collaboration with community development specialist to ensure community mobilisation/sensitisation activities are organized in order to capture women and youth groups; ensuring affirmative actions are undertaken for their participation (quotas); The specialist will also be responsible for inclusion and application of specific tools from the household methodology into capacity building activities of groups. Furthermore, the expert will be responsible for preparation and implementation of the nutrition action plan and related activities.
- **Entrepreneurial Opportunities Developer Specialist:** The main task will be to identify on the basis of analysis (participatory methodologies) the opportunities that the Programme will offer along the value chain for non-farm actors, especially women, youth and other disadvantaged categories. A menu of options will be identified and it will guide activities related to Aquaculture Support Enterprises. The expert will support formation of groups and coaching along the life cycle of the Programme working in close collaboration with the other experts (community development expert/gender experts) as well as with local counterparts.
- **Climate change expert:** The main task will be to carry out environmental impact assessments for the Programme and assess the viability for pond/cage culture/reservoir aquaculture development in collaboration with other key experts. He/she will undertake: Assessment of Existing/Potential Cage/Ponds, Reservoirs and Environmental Assessment of Existing/New Cage/Pond/Reservoirs in the target Counties. The expert will also propose water quality and quantity requirements as well as specific agro-ecological/micro-climatic requirements per County. In keeping with the SECAP, the expert will develop an Environment and Social Management Plan (ESMP) for the Programme.

## **Appendix 5.2: Draft Terms of Reference for PPPP Specialist to recruit transaction advisory firm to support Public-Private-Producer-Partnership contracts and business plan competition**

### **Background**

1. The Business Aquaculture Development Programme (ABDP) is being proposed by the Government of Kenya to support enhanced commercial viability of the aquaculture sector. The ABDP development objective is to increase the incomes, food security and nutrition of poor rural households involved in fisheries and aquaculture in the targeted Counties. To do so, the ABDP includes support the development of aquaculture value chains.

2. ABDP support for the development of value chains comprises interventions to broaden and deepen the aquaculture value chains with a series of strategic investments, using Public-Private-Producer-Partnerships (PPPPs) as well as support for implementation of aquaculture farmers' cluster and Aquaculture-Support Enterprise (ASE) business plans. The purpose of the support of the aquaculture value chains development is to make the aquaculture producers' core activities financially viable and bankable.

3. At an early stage of implementation, ABDP will: (i) identify the main areas of possible interventions along the aquaculture value chains, including high yield investment opportunities and investments in missing value chain links, (ii) promote the understanding of the key Programme stakeholders and beneficiaries, (iii) establish a programme for the development of aquaculture business plans proposals and business plans competition for matching grants for the high yield investment opportunities; (iv) identify missing or weak aquaculture value chain links and formulate public-private-producer-partnership contracts to overcome them. To do so, the ABDP will support conducting a detailed value chains analysis with special focus on the target Counties. The analysis will identify other assets currently under GoK where there might be opportunities for enhanced performance using PPPPs contracts.

4. Gaps identified so far indicate the following preliminary areas of interventions.

- Investments to improve productivity of existing smallholder aquaculture producers from the current average of 60 - 100 kg/pond to up to 250 - 350 kg/pond through appropriate production technologies, proper management and good quality inputs.
- Investments to operationalize existing value addition infrastructure through improved management and creating linkages to producers and final markets.
- Investments to support post processing, value addition and marketing at different levels.

5. Immediately after the initial stage, starting at the second year of implementation, the ABDP will allocate financing through the business plan competition and through PPPP contracts. The groups to be included in the business plan competition will be selected using criteria that include geographical coverage, acceptance by the groups and level of competency of the groups. Funding awarded through business plan competition will include binding contracts with well-specified financial and operating milestones to ensure grants are used as proposed. A second set of contracts may be used to bind the private sector with the small producers using PPPP contracts. The beneficiary group using PPPP contracts will receive funding based on due diligence done by a PPPP Transaction Advisor. PPPPs will be used for involving the private sector to improve/complete infrastructure investment already in place, such as value-added processing plants established by ESP but not operational or working at very low levels of capacity utilization. Such PPPPs can be in the form of lease contracts, design/redesign-build-operate contracts, concessions or other appropriate arrangements.

6. The process of awarding ABDP funding through business plan competition and/or PPPP contracts will be coordinated by the ABDP Programme Coordination Unit, supported by an "investment allocation service provider company" (referred here on as "the service provider"). Awarding of funding will be done by an Evaluation Committee composed of \_\_\_\_\_ and based on well-defined investment rationale \_\_\_\_\_ (to be defined under this ToRs).



7. The present terms of reference for an individual PPP Advisor who will define specific Terms of Reference and a Performance Based Contract for the Recruitment and Establishment of the Transaction Advisory Firm as part of the ABDP Programme Coordination Unit (PCU).

### **Objective of the PPP Advisor Consultancy and Specifications for the Transactions Advisory Firm**

8. The objective of the PPP Advisor is to define specific Terms of Reference and a Performance Based Contract for the recruitment of the Transactions Adviser.

9. To comply with the above Objective, the PPP Advisor will take into account the following specifications:

- The Transactions Advisory firm is expected to be a track record company, with experience in business plans competition and due diligence of PPP contracts.
- Personnel of the service provider allocated to the ABDP Programme will include: a “PPPP aquaculture-business unit” manager that will report to the head of PCU. The PPPP aquaculture-business unit manager will be supported by two teams:
  - The first team will include a business plans development specialist supported by a fishery and a financial engineering specialist; and
  - The second team, will be on demand and will include lead international PPP transactions advisor, supported by a lawyer with experience in PPP contracts, a fisheries specialist, a financial engineering specialist, and a public relations and consultations specialist.
- The obligations of the Transactions Advisory Firm is to facilitate implementation of the ABDP investment programme using PPPP contracts will be defined in the specific ToRs developed by the PPP advisor.
- The contract for Transactions Advisory Firm will have two remuneration elements: a fixed fee and a success fee. The fixed fee will cover its fixed costs, without which it cannot operate; the success fee will be based on performance criteria to be determined according to the objectives in the PPPP contracts.
- Schedule of payment of success fees for the service provider - As the ABDP will be implemented over a 7-year period, ABDP will want to implement investment as soon as possible after the service provider has been hired. As such, the schedule of payments of the success fee to be paid to the service provider will need to be defined in stages around various milestones.
  - During the first stage (start-up stage), success criteria will include the preparation of a detailed aquaculture value chain assessment including identification of value chain constraints and bottlenecks, and preparation of a menu of potential investment to be financed by the ABDP.
  - Following the start-up stage, the success fee will be related to both, quality of portfolio on investments (that is, allocation of funding) and ideally initial returns on investments. Main criteria for defining the triggering factors of payments of success fees (and amounts) have to take into account prevention of moral hazardous behaviour of the service provider.
- Independent verification agent – An independent verification agent with business experience that will give ok for payment of success fees will be needed.

### **Outputs of the consultancy**

#### **A. Detailed ToRs for:**

- PPPP aquaculture-business manager.
- Business plan development specialist.
- Fishery specialist for business plan activities.
- Financial engineering specialist for business plan activities.

- Lead International PPP transactions advisor.
- Fishery specialist (on demand to work with PPP transaction advisor).
- Financial engineering specialist for modelling financial for PPP contracts.
- Public relations and stakeholder consultation specialist.

**B. Performance Based Contract for Recruitment of the Service Provider, including:**

- Detailed description of activities and milestones in the advisory job to be undertaken by the service provider to allocate investment funding using business plan and PPP contracts.
- Detailed rules for the remuneration of the service provider as defined in the specifications above.

**Experience of the PPP Advisor**

At least 15 years of experience as PPP transactions advisor and management of investment funds using business models and business plans. Masters in Business Administration (MBA) from a recognized university.

**Time Frame**

The PPP advisor is expected to deliver its work over a period of three months.

### **Appendix 5.3: Draft Terms of Reference – PPP Advisor to recruit service provider (to support business plan competition process and Public-Private-Producer-Partnership contracts)**

#### **Background**

1. The Business Aquaculture Development Programme (ABDP) is being proposed by the Government of Kenya to support enhanced commercial viability of the aquaculture sector. ABDP development objective is to increase incomes, food security and nutrition of poor rural households involved in fisheries and aquaculture in the targeted Counties. To do so, the ABDP includes support the development of aquaculture value chains.

2. ABDP support for the development of value chains, comprises interventions to broaden and deepen the aquaculture value chains with a series of strategic investments, using Public-Private-Producer-Partnerships (PPPPs) as well as support for implementation of aquaculture farmers' clusters and Aquaculture Support Enterprises (ASEs) business plans. The purpose of the support of the aquaculture value chains development is to make the aquaculture producers core activities financially viable and bankable.

3. At an early stage of implementation, ABDP will: (i) identify the main areas of possible interventions along the aquaculture value chains, including high yield investment opportunities and investments in missing value chain links, (ii) promote the understanding of the key Programme's stakeholders and beneficiaries, (iii) establish a programme for the development of aquaculture business plans proposals and business plans competition for matching grants for the high yield investment opportunities; (iv) identify missing or weak aquaculture value chain links and formulate public-private-producer-partnership contracts to overcome them. To do so, the ABDP will support conducting a detailed value chains analysis with special focus on the target Counties. The analysis will also identify other "assets" currently under the Government where there might be opportunities for enhanced performance using PPPPs contracts.

4. Current gaps identified so far indicate the following preliminary areas of interventions:

- Investments to improve productivity of existing smallholders' aquaculture producers from the current average of 60 - 100 kg to up to 250 - 350 kg/pond through appropriate production technologies, proper management, good quality inputs.
- Investments to operationalize existing value addition infrastructure, through improved management and creating linkages to producers and final markets.
- Investments to support post processing, value addition and marketing at different levels.

5. Immediately after the early stage, starting at the second year of implementation, the ABDP will allocate financing through the business plan competition and through PPPP contracts. The groups to be included in the business plan competition will be selected using criteria that include geographical coverage, acceptance by the groups, level of competency of the groups. Funding awarded through business plan competition will include binding contracts with well-specified financial and operating milestones to ensure grants are used as proposed. A second set of contracts may be used to bind the private sector with the small producers using PPPP contracts.

6. The beneficiary groups using PPPP contracts will receive funding based on due diligence done by a PPPP transaction advisor; also, these PPPPs will be used for involving the private sector to improve/complete infrastructure investment already in place, such as value added processing plants established by ESP but not operational or working at very low levels of capacity utilization. Such PPPPs can be in the form of lease contracts, design/redesign-build-operate contracts, concessions or other appropriate arrangements.

7. The process of awarding ABDP funding through business plan competition and/or PPPP contracts will be coordinated by the ABDP Programme Coordination Unit, supported by an

“investment allocation service provider company” (referred here on as “the service provider”). Awarding of funding will be done by an Evaluation Committee composed of \_\_\_\_\_ and based on well-defined investment rationale \_\_\_\_\_. (to be defined under this ToRs).

8. The present terms of reference for an individual PPP Advisor that will define specific Terms of Reference and a Performance Based Contract for the Recruitment and Establishment of the service provider as part of the ABDP Programme Coordination Unit (PCU).

### **Objective of the PPP Advisor Consultancy and Specifications for the Service Provider**

9. The objective of the PPP Advisor is to define specific Terms of Reference and a Performance Based Contract for the recruitment of the Service Provider.

10. To comply with the above Objective, the PPP Advisor will take into account the following specifications:

- The service provider is expected to be a track record company with experience in business plans competition and due diligence of PPP contracts.
- Personnel of the service provider allocated to the ABDP Programme will include: a PPP Aquaculture-Business Unit manager who will report to the head of PCU and be supported by two teams:
  - The first team will include a Business Plan Development Specialist, a Fishery Specialist and a Financial Engineering Specialist; and
  - The second team, will be on demand and will include lead international PPP Transactions Advisor, supported by a Lawyer with experience in PPP contracts, a Public Relations and Stakeholder Consultations Specialist.
- The obligations of the service provider to facilitate implementation of the ABDP investment programme using business plans and PPP contracts will be defined in the specific ToRs developed by the PPP Advisor.
- The contract for service provider will have two remuneration elements: a fixed fee and a success fee. The fixed fee will cover its fixed costs, without which it cannot operate; the success fee will be based on performance criteria to be determined according to the objectives of the business plans and the PPP contracts.
- Schedule of payment of success fees for the service provider. As the ABDP will be implemented over an 8-year period, ABDP will want to implement investment as soon as possible after the service provider has been hired. As such, the schedule of payments of the success fee to be paid to the service provider will need to be defined in stages around various milestones.
  - During the first stage (start-up stage), success criteria will include the preparation of a detailed aquaculture value chain assessment including identification of value chain constraints and bottlenecks, and preparation of a menu of potential investment to be financed by the ABDP.
  - Following the start-up stage, the success fee will be related to both quality of portfolio on investments (that is, allocation of funding) and ideally initial returns on investments. Main criteria for defining the triggering factors of payments of success fees (and amounts) have to take into account prevention of moral hazardous behaviour of the service provider.
- Independent Verification Agent – An Independent Verification Agent with business experience that will give ok for payment of success fees will be needed.

## **Outputs of the consultancy**

### **A. Detailed ToRs for:**

- PPPP Aquaculture-Business Manager.
- Business Plan Development Specialist.
- Fishery Specialist for business plan activities.
- Financial Engineering Specialist for business plan activities.
- Lead International PPPP Transactions Advisor.
- Fishery Specialist (on demand to work with PPPP Transaction Advisor).
- Financial Engineering Specialist for modelling financial arrangements for PPPP contracts.
- Public Relations and Stakeholder Consultation Specialist.

### **B. Performance Based Contract for Recruitment of the Service Provider, including:**

- Detailed description of activities and milestones in the advisory job to be undertaken by the service provider to allocate investment funding using business plan and PPPP contracts.
- Detailed rules for the remuneration of the service provider as defined in the specifications above.

## **Experience of the PPP Advisor**

At least 15 years of experience as PPPP transactions advisor and management of investment funds using business models and business plans. Masters in Business Administration (MBA) from a recognized university.

## **Time Frame**

The PPPP advisor is expected to deliver its work over a period of three months.

## **Appendix 5.4: Terms of reference of key PCU staff**

### **5.4.1 Programme Coordinator**

#### **Job Description**

1. The Programme Coordinator (PC) would provide overall management of the Programme on a day-to-day basis, implementing activities, ensuring the achievement of planned results and providing sound administration of Programme finances. S/he would also promote, with the assistance of Technical Advisors, good governance, participatory planning, and provide advice and technical assistance to Programme partners and participants. S/he would liaise with Programme implementing agencies, including the National Ministries, County Governments, private sector/aggregators as well as key stakeholders for PPPP implementation, financing institutions and others. The PC will be accountable to the Programme's Steering Committee. The main responsibilities of the PC include:

- Coordinate and work with relevant National ministries, County-level Government authorities, and institutions, international agencies, private sector/aggregators, financing institutions, non-Governmental organizations, beneficiaries and community-based organizations, and local communities in order to ensure smooth execution of the Programme activities.
- Establishes the Programme Coordination Office in Kisumu and associated annex in Sagana in accordance with the Programme documents;
- Finalizes the selection of the last four Counties that will be selected by end of year 2 of Programme implementation;
- Supports establishment of the Counties State Coordination Units in accordance with the Programme document using the procedures as indicated;
- Overall responsibility of the recruitment process of the service providers and formalization of MoUs with Programme partners and formation of other bodies that are necessary for the implementation of the different activities under Component 1 &2 as per the Programme document;
- Ensures that MoUs between the Programme and respected Counties are signed at Programme start-up.
- Provides overall management of the ABDP in coordination with the different CPFTs in a manner that is financially sound, professional, participatory, sensitive to local needs and socio-economic context, and in accordance with the policies, procedures, and guidelines set forth in the Programme design document and Programme Implementation Manual (PIM);
- Adheres to the Programme poverty targeting and youth and gender mainstreaming strategies and sensitizes implementation teams and partners to their rationale and implementation arrangements;
- Ensures and monitors the delivery of appropriate technical expertise (for examples, training, capacity building process, institutional strengthening, and policy advice) to the Programme and its partners/participants in the Programme area as specified in the final design report, and provide programmatic guidance to Programme staff;
- Ensures the efficient achievement of the Programme's outputs and outcomes as set forth in the Programme-related documents;
- Maintains the Programme management systems including the PPPP service provider, service provider/partner under Component - 1, CPFTs and field offices; and create a team-based, participatory work environment that promotes knowledge sharing and learning from experiences among members of the Programme staff, Counties teams and those of the

implementing partners, participating Government institutions at the National and Counties levels and with local/international technical advisors and consultants;

- Supervises the PCU, regional office and oversees the work of the different service providers and teams;
- Implements the Programme's performance measurement and monitoring systems, which includes regular performance monitoring and evaluation of the Programme using a participatory approach with partners/participants, and provides regular progress reports to different Coordination Committees, Programme Steering Committee, and others;
- Ensures timely preparation, clearances and approvals of AWPBs, Procurement Plans (PPs), and progress reports;
- Ensures that Counties AWPBs and PPs are prepared and approved and implemented in accordance with the overall Programme objectives, PIM and IFAD regulations and guidelines, including but not limited to fiduciary requirements;
- Organises in a timely fashion the financial and technical audit of the Programme in line with the Project Financing Agreement (PFA) and PIM;
- Facilitates and support the work of IFAD supervision, follow-up, midterm and completion missions;
- Manages with integrity, transparency the Programme funds, including the regular development of budgets, monitoring of expenditures, and providing to the PSC and responsible line agencies quarterly financial reports together with other key financial records for certification and audit (original receipts, bank statements, and other financial records as necessary);
- Guides the preparation of written materials (such as impact evaluations, policy papers, manuals, thematic studies and training materials), communication outputs (articles, newsletter, promotional materials and web-based articles), and special reports for the Programme;
- Ensures that strong local Programme management systems is maintained, by keeping County Coordination Bodies, the PSC, and IFAD, fully informed of all Programme-related activities, and consulted regularly on strategic issues, work plans, Programme evolution, and all major decisions related to the Programme;
- Builds and maintains strong collaborative relationships with the Programme's local networks and contacts, including partner organizations, PPPP stakeholders, other stakeholders and beneficiaries, and engage these individuals and organizations on a regular basis to integrate their feedback into the implementation and progress of the Programme;
- Coordinate the scaling up of the technological packages promoted by the Programme in coordination with Programme partners, such as FIs;
- Ensures harmonization of ABDP activities with the different Counties integrated development plans and coordinate closely with the different departments and agencies at the Counties and National levels;
- Pursues linkages and cooperation with other relevant bilateral/multilateral cooperation development projects/programmes where appropriate;
- Ensures that the Programme's poverty, gender and environment strategies are fully integrated into all features of Programme planning, implementation, monitoring and evaluation.
- Ensures natural resources management aspects are fully integrated in the programme interventions.

2. With specific reference to administration and financial management of ABDP funds he/she will have the following main responsibilities:

- ensures the completion of the procurement process and full compliance with IFAD and GoK procurement guidelines as well as other procurement arrangements outlined in the Programme documents;
- coordinate the contract administration of the service providers/specialists hired for implementation and assess their performance on a regular basis;
- secure the submission of a detailed expenditure report on quarterly advance payments;
- ensure timely endorsement of Withdrawal Applications and submit them to IFAD and Treasury;
- coordination of the preparation of annual work plans & budgets;
- management and motivation of Programme staff; and
- Liaise with the Fund on Programme implementation issues, and facilitate and participate in regular supervision of Programme activities.

3. Lead the Programme's agenda for policy dialogue at National and County levels, and specifically:

- provide guidance to PCU and Counties staff and the service providers/partners in identifying and analysing policy issues constraining Programme implementation;
- support the enforcement of relevant National and Counties regulations and the resolution of conflicts;
- bring together relevant stakeholders at different levels to review policy issues; and
- lead policy dialogue with key policy makers.
- Ensure gender and youth aspects are mainstreamed within all Components as planned.

4. Edits and reviews Programme deliverables.

5. Qualifications and Experience:

- A higher degree in Agricultural Economics, Economics, Business Administration, Fisheries, Aquaculture, Public Administration or related discipline relevant to fisheries/aquaculture areas with sound knowledge of contemporary issues in the rural economy of the Kenya.
- Demonstrated relevant professional work experience of at least five years in: 1) project management, including the leadership of multi-disciplinary expert teams and project financial administration and budgeting (experience in managing international cooperation programmes an asset), 2) managing initiatives related to poverty alleviation, and agriculture development, 3) promoting stakeholder/community awareness of and participation in Programme;
- Skills in process facilitation, strategic planning, and partnership building;
- Excellent communication skills and fluency in English and Kiswahili (comprehension, written, and spoken);
- Excellent understanding of the social, economic, political and historical trends underpinning poverty alleviation strategies and policy reform processes.
- Excellent analytical skills, sound judgment, resourcefulness, ability to take initiative, capacity to work in a self-directed manner and ability to create a team-based, participatory work environment.
- Background on NRM is a plus.
- Excellent PC user skills: Windows-based software;
- Ability and flexibility to travel intensively within Programme area, as may be required.



6. The incumbent should be prepared to sign as a condition of employment under a Special Service Agreement, an obligation to reside for the duration of the Programme in Kisumu. The initial contract will be for one year with six-month probation, period, renewable every year on continued satisfactory performance.

## 5.4.2 County Coordinator

### Expected Roles and Profile

- Coordinate with County's technical departments, the County level implementation of Programme annual work plans as per Programme Implementation Manual (PIM) and MoU;
- coordinate implementation of the activities at the County level, including those to be carried out by the implementing partners/service providers for both Components;
- oversee County programme and consulting services engaged in the implementation process;
- assist in implementation of the Programme with all diligence and efficiency, applying appropriate administrative, financial, and technical management methods;
- ensure preparation of AWPBs and PPs as well as implementation of activities are done in full compliance with the Programme financing agreement, Programme design report and PIM. All the above have to take into consideration IFAD requirements, guidelines and rules including the fiduciary aspects;
- lead the County Government efforts and other technical departments to implement the ABDP in targeted communities and areas;
- work with relevant County Government departments, Sub-county departments, ward teams, international agencies, NGOs, community-based organizations, and beneficiaries groups and communities in order to ensure smooth execution of the Programme activities;
- adheres to the Programme poverty targeting and gender and youth mainstreaming strategies and sensitizes implementation teams and partners to their rationale and implementation arrangements;
- support County Government institutions to identify and analyse policy issues and resolve conflict, bring together relevant stakeholders to review policy issues, and engage in policy dialogue with key policy makers at County level;
- provide advice and guidance to County Government departments, stakeholders and development actors for timely implementation of Annual Work Plans to attain expected results;
- maintain the Programme management information system for supervision and evaluation;
- assist in maintaining necessary documentation and accounts, giving the facts of all expenditures related to the Programme where required;
- participate in the preparation of quarterly and annual progress reports as well as completion reports and audit reports of Programme accounts;
- ensure that all activities within the Programme are screened against environmental guidelines in order to identify those classified EIA Category B for further review and monitoring of the implementation of the appropriate mitigation measures;
- assist in close supervision of all activities of the Programme, including field activities;
- assist in Programme administration including the preparation of quarterly, annual and completion reports;
- participate in supervision of all procurement transactions as well as the selection of contractors, suppliers, and service providers;
- participate in all Programme reviews; and
- Ensure gender and youth aspects are mainstreamed in all activities.
- Ensures that natural resources management aspects are fully integrated in the programme interventions.

### Minimum qualifications

- Post-graduate degree in Rural Development, fisheries and aquaculture, business management or related fields, with 10 years' experience in community development;

- ability to deal with senior officials and donor agencies;
- experience in project management;
- experience in contract management, contract development, monitoring and managing projects funded by donor agencies;
- experience in local capacity building and working with local Government, communities and community-based organizations;
- fluent in spoken and written English and good command of computer programmes and applications;
- Background on NRM is a plus.
- demonstrated ability to build, manage and work in a team; and
- strong interpersonal and communication skills

### 5.4.3 Financial Controller

#### Job Description

**Qualifications:** A professional accounting qualification, higher degree in economics, management or business administration, or a specialized degree in accounting and finances from a recognized high school; practical experience of at least 8 years in project financial management and accounting procedures in or with internationally financed projects (with IFAD will be an added advantage); a good knowledge of computer applications in the above related matters. Fluent (reading, writing and speaking) in English and in Kiswahili.

**Location:** Kisumu with occasional visits in the country and the Programme target Counties.

**Job Description:** Under the direct supervision and authority of the Programme Coordinator, the Financial and Administrative Manager will manage the departments of finance, accounting and audit of ABDP with the assistance of one Accountant and one Procurement Officer and in close collaboration with the M&E Officer. The specific duties are:

- Finances:
  - Timely production of all financial statements as per recommended formats required by the financing agreements and by the National legislation;
  - Management of Programme bank accounts;
  - Payment of suppliers' invoices upon approval by the technical officers and management;
  - Approval of payments by cheques, petty cash or any other legal method;
  - Daily, weekly and monthly follow-up of the Programme bank accounts in view of timely and sufficient replenishments of funds to avoid any disruption of the activities of the Programme;
  - Preparation of withdrawals applications of Programme funds from the loan/grant accounts of Programme financiers as per directives and methods duly approved and directed by them.
- Accounting:
  - Management of the department of accounting to ensure timely monthly, quarterly and annual production of financial statements run by the procured financial management software;
  - Presentation of accounts in accordance with National and international standards generally accepted and detailing accounts per nature, origin, destination, budget, location of the resources and expenditures;
  - Strict, regular follow-up of the justification of expenditure to be provided by Programme Partners, including external service providers;
  - Close collaboration with the other chief accountants of IFAD-supported projects for the establishment a cost effective system of protection of the Programme assets and an efficient system of distribution of fuel and office consumables;
  - Close collaboration with the ABDP M&E Officer for the establishment of the M&E system and the connection between this system and the accounting system;
  - Supervising the ABDP Account.
- Auditing:
  - Prepare for and facilitate independent audit missions as required by the financing agreements and the National legislation and ensure the follow-up to the recommendations of these missions;
  - Collaborate with the eventual Internal Auditor with a view to improving the accountability, transparency and efficiency of the Programme operations.
- Any other assignment or relevant duties in the field of his/her competences as may be reasonably assigned.

### **Outputs (expected results)**

1. Programme funds always available and disbursed for eligible expenditures and managed as per financier rules and National legislation.
2. Financial Statements and audit reports issued timely and reflecting the actual situation of resources and uses of Programme funds with indicators of Programme performance.
3. Excellent relations with all Programme partners at international, National, provincial and County levels; effective and efficient assistance to the various Programme partners, for all Programme Components.
4. Cost effective systems of protection of the assets, including production of statistical accounting information for the M&E system.

#### **5.4.4 Knowledge Management/Monitoring & Evaluation Officer**

##### **Job Description**

1. The Knowledge Management/Monitoring & Evaluation Officer (KM/M&E) will be responsible for the operation of the Programme's monitoring and internal evaluation system. The M&E system will be designed to provide an ongoing stream of management information, whilst evaluations will be undertaken by an external body.
2. The responsibilities will be to:
  - monitor routinely all Programme activities and prepare/submit quarterly and annual monitoring reports to the Programme;
  - identify and monitor key Programme performance indicators;
  - design and implement report formats so that all reports from implementing partners can be regularly and conveniently compiled;
  - provide technical expertise for determining the specific information needs of IFAD, other development partners and implementers so that these can be made known to targeted communities' groups to incorporate into their processes;
  - determine the requirements for evaluations by arranging and submitting ToRs and contracts for the conduct of these evaluations;
  - Take leadership in the preparation of Programme implementation manual (PIM), and
  - carry out other related tasks as agreed with the Programme Director.

##### **Qualifications and Experience**

- A postgraduate qualification in economics, social sciences, livestock or related discipline with a minimum of five years' experience in monitoring and evaluation.
- The candidate will be expected to have a thorough understanding of analytical tools and be computer literate.

### **5.4.5 Aquaculture Specialist**

#### **Job description**

The aquaculture specialist will be responsible for leading all the technical work related to the ABDP including capacity building of aquaculture extension staff at the County and Sub-county levels, identification of capacity needs of the beneficiaries, identification of research needs in the aquaculture sector, lead capacity building of Programme beneficiaries in aquaculture farming.

#### **Responsibilities**

- Coordinate all aquaculture related activities of the ABDP at National, County, Sub-county and the community level to ensure the Programme objectives are achieved.
- Provide advice to County and Sub-county extension staff on all matters relating to aquaculture development and in line with the Programme objectives.
- Assess training/capacity needs of the County aquaculture extension staff and plan, coordinate and implement a capacity building plan for the staff in collaboration with Programme staff and Programme partners.
- Assess training needs of the target aquaculture Programme beneficiaries and plan and coordinate a capacity building plan.
- Collaborate with RIAT, KMFRI in designing an appropriate capacity building plan for the County extension staff and the target communities.
- Supports the development, management and implementation of the SDF&BE aquaculture strategy, ensuring its on-going alignment with National priorities, sector plans, policies and legal frameworks.
- Support the PCU and the County level teams in AWPB making processes ensuring priority aquaculture activities are captured in the annual work plans and appropriately budgeted for.
- in collaboration with KMFRI and other partners identify priority areas for strategic aquaculture-related research in the biology, farming, climate change adaptation, value addition, storage, transportation and social sciences, and coordinate implementation of some of this research;
- Provide management advice and disseminate results to inform decision and policy making process on the aquaculture Subsector, biodiversity conservation and environmental protection;
- Provide policy and strategic advice on sustainability criteria for aquaculture.
- Preparation of ToRs for consultancy assignments and other contracts as well as reviewing technical proposals and lead the selection process;
- Support the KM and M&E officer in preparing technical impact reports in aquaculture initiatives.
- Ensures NRM are fully integrated in programme interventions.

#### **Other capabilities:**

- Ability to work independently and as a team player in multi-cultural environment;
- Ability to coordinate and facilitate meetings/ workshops/ consultations;
- Proven leadership skills.
- Strong skills in programme planning, financing, management, implementation and evaluation.

#### **Qualification**

An undergraduate degree in aquaculture from a recognized University or any other relevant subject and at least 8 years of work experience in Aquaculture sector five of which must be in a management level (preference will be given for experience in Aquaculture sector best practices). Experience with multi-disciplinary environment teams, (Government, NGO's, Donors, Civil Society), would be a strong asset. Knowledge of the institutional and legal framework of the aquaculture sector in Kenya, as well as of relevant policy issues an added advantage. Field experience with aquaculture specific activity will be an advantage. Background in NRM is required.;



## 5.4.6 Procurement Specialist

### Job Description

The Procurement Specialist will ensure smooth and quality implementation of procurement processes for the ABDP, he/she will be responsible for the preparation of the procurement plan, ensure that procurement processes are carried out as per laid down policies and processes in line with GoK procurement laws and policies and in compliance with IFAD procurement policies.

### Responsibilities:

- Provide guidance on preparation, publishing of bidding announcements in consultation with Programme Coordinator.
- Support the PCU for organizing bid evaluation meetings as follows: (1) arrange a venue and the timing of bid evaluations with evaluation panel members, (2) prepare necessary bid evaluation packages (bid documents, proposals, evaluation sheets) and distribute them to evaluation panel members, (3) attend bid evaluation meetings as a note taker and keep the minutes of the meetings.
- Guide the PCU and ensure quality throughout the procurement processes of: i. Preparation of Bidding Appraisal Committee establishment according to the binding laws; ii. Formulation of the summary of the technical proposals submitted by the Service Providers to the Appraisal committee.
- Examination and analysis of the Contractor's bid documents and verify that all items have technical certificates or specifications/Authorization letter/Certificate of Origin such as ISO certificate by working closely with the PSU.
- Support the County and Sub-county procurement teams in preparation of bid documents for procurements that are conducted at that level.
- Ensure procured items meet the quality and specifications in all bid documents, and, if not satisfied, advise the procurement committee and the Coordinator accordingly.
- Make necessary administrative and logistic arrangement to deliver and install the procured services and equipment in the target sites.
- Ensure the proper recipient and instalment of the equipment in the field in consultation with the PCU.
- Collect and file written confirmations from recipients on safe delivery and instalment for respective equipment; c) Capacity Building of the Programme Support Unit (PSU) and Beneficiaries.
- Participate in technical meetings and provide recommendation to improve the Programme implementation in terms of procurement based on capacity development needs;
- Provide technical guidance to beneficiaries on the proper way to use and maintain the equipment provided by the Programme applying the IFAD/ GoK rules and guidelines, including registering and use monitoring;
- Ensure timely delivery of procurement capacity building training to the target Counties within the Capacity Development strategies and that procedures are consistent with the legal and institutional framework for GoK.
- Ensure the existing public procurement legislation meets minimum procurement standards established in IFAD procurement Financial Rules and Regulations at all levels;
- In regard to the procurement of the civil construction work, he/she will provide guidance to the PCUs in quality assurance as well as in compliance of operations.

- Based on needs, travel to the target Counties to ensure and monitor safe deliver and hand over of the procured equipment and facilities.
- Perform other duties as assigned.

### 5.4.7 Accountant

**Duration:** renewable annually based upon positive performance assessment on a full time basis with a probation **period** of 6 months.

**Location:** **Kisumu/ Sagana** with **occasional** visits in the country (Programme target Counties).

**Qualifications:** At least a specialised degree in accounting and finances from a recognized Institution of higher learning; practical experience of at least 5 years in a project financial management unit and acquainted with accounting procedures in the public administration sector in or with internationally financed projects; a previous experience with IFAD procedures and financial regulations would be an added advantage; a good knowledge of computer applications in accounting such as Sage Pastel software, TOMPRO, SUN would be essential. Fluent (reading, writing and speaking) in English and in Kiswahili. A professional accounting qualification is desirable.

Used to work under pressure and meet crucial deadlines.

**Main Duties:** Under the direct supervision of the Financial Controller.

1. Verification of supplier's invoices for payment;
2. Timely posting of all Programme accounting vouchers on the accounting software;
3. Exercise proper custody of all posted vouchers and other accounting documents;
4. Verification and checking of bank statements and accounting software printouts;
5. Supervise and direct the accounting and logistical functions, to ensure efficiency;
6. preparation and submission of periodical financial reports on deadlines (GOK and IFAD formats);
7. preparation of Withdrawal Applications;
8. Regular spot check of petty cash fund and other reconciliation reports;
9. Timely replenishment of operational account with Programme bank account;
10. Authorisation of payment vouchers;
11. deputise for the FAM in his absence;
12. Facilitate financial audits and implementation support missions;
13. Regular follow up of smooth functioning of the accounting software, and make contact with ITC staff and software suppliers;
14. Submission of account printouts by Components to the heads of Components for analysis and comments;
15. Give advice to management on accounting and administration matters;
16. Liaise with bankers for bank matters;
17. Any other relevant duties as may reasonably be assigned by the Financial Controller.

## **Appendix 5.5: Terms of reference for the development of an Environmental Impact Assessment and an Environment and Social Management System for the Aquaculture Business Development Project in Kenya**

### **Introduction**

The Aquaculture Business Development Project (ABDP) has been developed based on a request by the Government of Kenya, to support smallholder fish production and accelerate expansion of the aquaculture sector through a value chain approach. The Programme will start with six Counties in the first year and expand to reach a maximum of fourteen by third year of implementation. The first Counties to be targeted comprise Homa Bay, Migori, Kakamega, Kirinyaga, Nyeri, Meru in year one, to be followed by Tharaka Nithi, Kisii, Kisumu, Siaya, Busia, Embu, Kiambu and Machakos in year two.

During the design phase of the project, the Social Environment Climate Assessment Procedures identified potential environment and climate risks and proposed mitigation measures. The Programme is categorized as a **Category B** project, and therefore requires an Environmental Impact Assessment (EIA) is undertaken and an Environmental and Social Management Plan (ESMP) developed in line with IFAD's environment and climate policies, as well as Government of Kenya's legal frameworks and requirements. The EIA and ESMP are ordinarily completed in the start-up phase of the project as a condition for the first withdrawal. The findings should also contribute to the development of the Project Implementation Manual (PIM).

### **Job description**

The consultant shall undertake an EIA of the project and develop an ESMP to guide the implementation of the project and primarily focus on mitigation of potential environmental and climate risks, monitoring and evaluation, actions to manage social and environmental issues, institutional procedures (responsibility, timelines, outputs, budgets, logistics etc.), and communication with stakeholders. Specifically, the consultant shall have key responsibilities as outlined below.

### **Specific responsibilities**

1. To undertake a comprehensive EIA of the entire project to describe the baseline conditions, potential environmental, climate and social risks and to propose mitigation measures for potential risks in the various project implementation sites/counties.
2. As part of the EIA, develop an ESMP for the entire project, and define outcomes, and monitoring indicators (baseline and project level) and procedures to track implementation and effectiveness.
3. Complement the ESMP with specific environmental management action plans to guide implementation. The action plans may include actions for management of: land and biodiversity resources, water resources and sources, solid and liquid waste, occupational health and safety, fish disease, parasites and pest management, and indigenous peoples if any. Priority and detail will depend on identified risks during the EIA.
4. Develop specific monitoring indicators and reporting processes and measures for each action plan identified in (2) above.
5. Prepare guidelines for undertaking environmental inspections and audits, where relevant, to verify compliance and progress toward the desired outcomes.
6. Provide guidelines to the project team on compliance with applicable national and local policies, laws, regulations, safeguards, performance standards, and procedures as required.
7. To identify and detail capacity needs for the PMU, institutions and stakeholders responsible for implementation of the ESMP, including proposing measures to strengthen capacity.

8. Develop stakeholder and community engagement and disclosure plans and procedures and propose communication channels, materials, forms and frequency.
9. To Identify and propose financial and human resources needs for all proposed activities, to ensure effective mainstreaming and implementation of the ESMP.
10. To contribute to the development of cage culture guidelines and any other policy related aspects.

#### **Key outputs**

1. An EIA report.
2. An ESMP inclusive of: activities forming sources of impacts, negative impacts, duration of impact, risk level, mitigation measures, required capacity building, responsible persons, reporting frequency, and budget.
3. Project monitoring indicators (to be integrated in the Project Implementation Manual (PIM)).
4. Project monitoring and evaluation programme/plan, with a monitoring schedule covering: aspects to be monitored, project phase (construction, operational and maintenance), monitoring indicators, frequency of monitoring, responsible institution/agency. Distinguish between those for the entire project and those for specific action plans.
5. Report on guidelines for compliance with national and local laws, as well as IFAD's policies.
6. Report with guidelines on required actions and procedures for environmental inspections and audits if needed.
7. A public communication, participation, and disclosure of information plan.
8. Develop a conflicts and grievance mechanism.
9. Provide recommendations for capacity development and management. This includes: structure, roles, responsibilities, specific expertise, communication lines, and clear lines of responsibility and authority.
10. Prepare a budget to cater for all activities including inspections and audits if needed.

#### **Minimum qualifications**

Post-graduate degree in natural resources management, environmental studies, environmental sciences or any other related field, with over ten years of experience undertaking EIAs.

Training in environmental impact assessments and audits and must be a registered Lead Expert.

Have some experience working within large donor funded projects.

Have some experience or sound knowledge of how government (national and counties) operates.

Must demonstrate technical knowledge of best practices, trends, and issues in the aquaculture sector.

Have project management experience.

Ability to work with computer applications and very good command of the English language.

Have very good report writing and communication skills.

Should be good in stakeholder engagement and community involvement.

Demonstrated ability work in a team.

Should be able to work independently.



## **Appendix 6: Planning, M&E and learning and knowledge management**

### **A. Planning**

1. **Planning processes.** Planning of the interventions will follow a bottom-up and gender/youth sensitive approach starting at the County level. At inception, the PCU will review and update the Logical Framework during ABDP start-up workshops with the participation of representatives from all stakeholder groups, including communities. Moreover, the PCU will prepare the Overall Work Plan & Budget as well as the first Annual Work Plan & Budget (AWPB).

2. The Programme will be implemented on the basis of an approved Annual Work Plan and Budget (AWPB) developed and approved by the beginning of each fiscal year. The PCU will be responsible for the timely development, implementation and monitoring of AWPBs. Moreover, County level AWPBs will be developed by the County implementation teams with supervision and support from the Programme M&E/KM team. County AWPBs will be reviewed and consolidated by the M&E/KM team based on the Programme operational and financial targets. Subsequently, the PCU, in consultation and collaboration with all implementing partners and other stakeholders, will prepare a consolidated AWPB including activities at the National level. The AWPB will be prepared in conformity with the GoK planning cycle. Timely preparation and submission of AWPBs will require adherence to a schedule linked to the Government budgetary approval process, and those of the National, County and sub-County implementing agencies. The AWPB will be submitted for approval to the Steering Committee and to IFAD for No objection.

3. The AWPB development process will take into account the utilisation and achievement of plans from previous years and link clearly the proposed budgetary envelope with physical results to be achieved. Moreover, performance-based contracts and MoUs with non-Governmental service providers will stipulate clearly the results to be achieved. Final payments will be contingent both on acceptance of the works or services and on receipt of a certified report quantifying the results achieved.

4. Decision-making mechanisms. ABDP decision-making will be founded on a unified PCU Management Information System (MIS) capturing physical and financial data, generating periodic and ad hoc reports as required, and informing management decisions. Driving an efficient planning process, the views and priorities of beneficiaries will be determined in Community Action Plans and through interaction with economic interest groups and community structures. All stakeholders have a role in monitoring and/or assessing implementation. In addition, pertinent information from a variety of sources will be fed into the integrated MIS.

5. Participatory planning and implementation reviews will be carried out to analyse and review lessons and challenges. Regular implementation support missions undertaken by IFAD will contribute to the discourse.

6. These crucial planning functions will be the responsibility of the PCU under the leadership of the Programme Coordinator. Within the PCU, the main burden of data analysis, reporting, monitoring and evaluation will be shared by a Senior M&E officer, two regional M&E officers and a knowledge management officer working under the supervision of the Programme Coordinator. With respect to planning and M&E, the ToRs of the M&E officers would include: (i) consolidation of County AWPBs; (ii) preparation of the Programme AWPB (iii) preparation of quarterly and annual progress reports; (iv) contribution to status reports for supervision missions; (v) preparation of ad hoc reports, as required, including VC analysis reports.

7. **Participatory M&E in community management processes.** Women and youth groups and service providers will play an important role in the M&E of the community organisations, business enterprises and public services promoted by the Programme. Beneficiaries will be drawn into

participatory M&E processes, taking into account ABDP focus on institution building, youth and women empowerment, and the promotion of resilient farmer groups and organisations. County extension officers and dedicated staff from implementing partners will collect data on site at the farm gate, using smart data collection tools operated on their mobile phones or tablets. A possible data collection tool to be used is Open Data Kit (ODK), which is a tool that allows data collection using mobile devices and data submission to an online server, even without an Internet connection.

8. Moreover, focused and community-based meetings will be organized to collect thematic information. The PCU M&E team will be responsible for coordinating and consolidating results from these community based M&E activities and include them into the overall framework. Studies will be commissioned to investigate and follow up on topics selected by stakeholders. These special studies and initiatives would concentrate on problem solving, results and outcomes rather than inputs.

9. **Integration of M&E activities into existing GoK systems.** GoK M&E capacity, and in particular the M&E capacity at County-level, will be of key importance in ensuring that data will be available to track progress and to adjust implementation modalities. In this context, an M&E capacity assessment of the targeted Counties will be carried out during the first year of Programme implementation to identify needs for capacity building. The Programme will support the capacity development of the concerned GoK structures to underpin the overall functioning both of ABDP and of future interventions in the rural economic sector. In this context, the M&E system will be aligned to the Government's National Integrated Monitoring and Evaluation System (NIMES).

10. The PCU M&E team and in particular the regional M&E officers will be responsible for consolidated monitoring and evaluation of all aspects of the Programme in Counties under their units following the formats and frequency established by the Programme. At the County level, the County level coordinators, with support from the County Programme implementation teams and relevant implementing partners, will be responsible for the collection of information, follow up and updating of data for their respective Counties.

11. **Progress reporting.** Each County level coordinator will be responsible for monitoring progress in its County within the standardised ABDP M&E framework and agreed set of indicators. The County Programme implementation teams will generate the data and track outcomes and outputs. The PCU will be responsible for the consolidation of M&E reports at Programme level. This decentralized data collection structure will allow Programme management to benefit from the provided information and avoid duplication of effort.

12. The County Procurement/Administration Assistants will maintain records and County coordinators in drafting reports on progress and impact assessment. Service providers and implementing agencies will submit regular progress reports as stipulated in contracts and MoUs. *Quarterly Progress Reports* will be generated by each County using a standard format preceded by a checklist of outstanding issues, if any, and actions taken. The reports will be presented to County Steering Committees for approval and submission. The PCU may conduct random field checks and verifications through independent auditors or other service providers.

13. An illustrated full *Annual Progress Report* will be compiled by the KMM&E Officers, featuring cumulative data on substantive Programme activities, M&E and supporting administrative functions, a table by Component/Subcomponent/Activity indicating clearly both planned and actual targets for key indicators based on the *ABDP Final Design Report*, compliance with legal requirements, a reconciliation of expenditures and any other topics that would be agreed upon during periodic implementation support missions.

14. **Mid-Term Review.** Alongside the AWPB cycle, a comprehensive *Mid-Term Review* will be conducted in PY4 to reassess the ABDP design in the light of implementation experience. The main objectives will be to assess: (i) Programme achievements against targets, including numbers of expected beneficiaries (women and youth); (ii) interim Programme impact; (iii) efficiency and effectiveness of Programme management; (iv) sustainability arrangements; (v) the initial impact of



piloted activities, distilling lessons learned, best practices and innovations, and determining potential scope and spaces for upscaling; and (vi) in general, the continuing validity of Programme design.

15. The MTR team will identify any constraints encountered during implementation and propose measures to improve overall Programme performance. The reviewers may propose adjustments to the approach, activities and/or implementation arrangements for the remaining life of ABDP and suggest revisions to Programme scope, objectives, Components, Logical Framework, M&E Plan, cost tables and the PIM.

16. **ABDP Completion Report.** Towards the end of ABDP implementation, the PCU will prepare a comprehensive internal *Programme Completion Report* (PCR), to summarise achievements set against design intentions, and, drawing on intermediate and final evaluation studies, to assess overall impact and prospects for sustainability of gains in the economic and social resilience of the target population. The PCR will include a stocktaking of innovations, lessons learned and good practice, and an assessment of the extent to which Programme knowledge and experience have been captured, analysed and documented for wider dissemination and possible upscaling. The PCR process will feature a validation workshop to provide an opportunity for stakeholders themselves to evaluate performance, to promote accountability, to identify and elaborate upon factors that would improve sustainability and to lay out key success factors and shortcomings.

## **B. Monitoring and evaluation**

17. **Role of M&E in results-based Programme management.** The main objectives of ABDP M&E are: (i) to provide timely and accurate information on implementation progress and constant feedback into the MIS for decision-making and addressing potential plan deviations and problem areas; (ii) to evaluate the performance of implementing agencies and service providers; (iii) to assess achievements at the levels of outcomes and impact; and (iv) to capitalize on and disseminate lessons learned. All M&E data will be disaggregated by gender, age and locality. A manageable number of key indicators drawn from the Logical Framework, institutional needs assessments, and business proposals by producers and value adders will inform the M&E design, taking into account IFAD's Results and Impact Management System (RIMS). These indicators will be reviewed and finalised during Programme start-up with gender-sensitive indicators included as required.

18. Since some of the actual implementation will be contracted out to service providers or private sector partners, monitoring requirements will be included in agreements as part of their contractual obligations. The Programme M&E system will report on the achievement of Subcomponent outputs and milestones and particular attention will be given to the monitoring and reporting of the graduation of smallholder fish farmers to semi-commercial aquaculture enterprises and the improvement of incomes, nutrition levels and livelihoods of direct and indirect beneficiaries, in particular youth and women. A detailed M&E manual will be developed during the first year of implementation clearly describing the roles and responsibilities of different Programme players in tracking and managing Programme results, including the system for data collection and management. Moreover, a remote sensing and GIS system shall be established as a complementary monitoring tool.

19. **Baseline and impact studies.** A thorough *Baseline Survey* will be conducted by a qualified service provider in a representative sample of communities within the targeted localities, with a small statistical control group selected in adjacent areas. In preparation of implementation activities, the survey will include: (i) the capacity and needs of non-producing women and youth groups; (ii) production and productivity levels of smallholder aquaculture producers; (iii) groups to be supported in market-oriented production and business ventures; (iv) needs for capacity building of individual producers and producer groups; and (v) needs for capacity building for Programme staff, County staff and service providers. The research will concentrate on benchmarking those aspects in which ABDP is intended to make a difference, including household assets and incomes, economic activity, social capital and social exclusion. The survey will also produce baseline figures for the logical framework indicators as well as additional indicators of the M&E framework. In addition, a

baseline study will be conducted to assess current environmental and climate conditions in the Programme area.

20. **Interim evaluation.** A mid-term evaluation will be carried out to inform the mid-term review. The evaluation will focus on the following key outcome/impact indicators: (i) level of satisfaction of beneficiaries with outcomes, based on a beneficiary assessment rating, such as the level of increased productivity or market access; and (ii) number of women and youth with increased access to assets, incomes or services resulting from enterprise developments. In addition, the evaluation will examine technical and management aspects of the interventions, with regard to appropriateness, sustainability and potential risks, as well as their environmental impact.

21. **Final impact evaluation.** The internal PCR will provide the basis for a substantial *Final Impact Evaluation* commissioned from an independent service provider at the end of implementation to assess (i) Programme effects and impact; (ii) sustainability of those effects; (iii) potential for upscaling Programme activities; (iv) lessons learned from implementation and recommendations for follow-up interventions; and (v) ABDP's outcomes and impact contributing to the achievement of National objectives in the rural sector. The research would mirror the scope and methodology of the *Baseline Study* to the extent possible, to detect any changes in precisely the same indicators selected and to attempt to attribute observed changes to Programme interventions and/or to other factors.

### C. Learning and knowledge management

22. **Programme knowledge products and learning processes.** ABDP will address three particular issues to ensure effective implementation: (i) building brand recognition and visibility, primarily to rural women and youth and their organisations; (ii) extending beneficiary access to enterprise development and value addition information, lessons learned and best practices; and (iii) facilitating the collection, sharing and dissemination of enterprise development and aquaculture commercialization related information, lessons learned and best practices.

23. Knowledge services will be tailored to meet the needs of beneficiaries. The content should be youth- and women-centred and channelled, with all services targeting these users; if unsatisfied, these target groups should be in a position effectively to influence service provision. To these ends, the Programme's overall learning and KM strategy to capture and disseminate knowledge at various levels would focus on four priorities: (i) generating trust and fostering linkages between partners; (ii) managing and sharing information, knowledge and experiences; (iii) improving the effectiveness and efficiency of the private sector in adding value and innovating; and (iv) creating conditions for replication, upscaling and sustainability.

24. **Learning routes.** The Programme structure has the flexibility to support continuous internal improvement and adaptation through "learning-by-doing" and rigorous analysis of the qualitative and quantitative information generated under implementation. With this constructive approach, ABDP can become progressively more effective, simplify processes, adapt quickly to emerging realities and lessons, and achieve optimum impact.

25. The ABDP design includes a limited number of activities repeated in many communities and is heavily reliant on human resources to transfer skills, so permitting a very rapid evolution of approaches and methodologies. ABDP interventions are expected to generate important learning in three activity domains of critical importance:

- ways and means to establish sustainable mutually-beneficial public-private-producer partnerships at all levels in the aquaculture sector;
- the development of robust systems for small-scale profitable and sustainable aquaculture production; and
- refinement of group-based mechanisms to accumulate, expand and invest local resources to generate incomes for poor rural households.

26. **Knowledge management and networking.** Knowledge management will play a central role in the Programme to inform future projects both nationally and regionally. Operational experiences would create valuable knowledge in the target areas. It is axiomatic that the knowledge generated, captured and analysed under implementation should be utilized to generate lessons and best practices to be shared with beneficiaries, public institutions, the IFAD country team, partners, financial institutions and others. In particular, the results of support to the establishment of the model will be widely publicized.

27. To support the sharing of results and to guide the implementation teams, a Knowledge Management and Communication Strategy will be developed in the first year of the Programme. Subsequently, implementation staff will be trained on knowledge management and communication tools and responsibilities. WhatsApp groups may be used to facilitate internal communication and knowledge sharing. Great focus will be put on the documentation of innovations, learning processes, pilots/trials and, in particular, the documentation and dissemination of Knowledge on Climate Smart Smallholder Aquaculture.

28. Annual ABDP planning workshops will provide fora for documenting lessons learned and identifying promising areas for knowledge generation, providing stakeholders with an opportunity to express needs, successes and constraints, as well as fostering collaboration and brokering partnerships. The main anchoring points for knowledge management would be identified, including research institutions, civil society, regional KM networks and specialised service providers. The Programme would package and disseminate information to the respective stakeholders in appropriate formats, such as brochures, studies, articles, newsletter, TV and radio, and social media.

29. The Programme will collaborate and share valuable lessons with other projects by sponsoring: (i) knowledge networking through periodic workshops and learning events; (ii) publication of “how-to” leaflets relevant to all work undertaken on restoration of natural assets; and (iii) audio-visual material that captures lessons learnt and impact. Special emphasis would be placed on knowledge regarding available technologies, marketing opportunities, climate change adaptation as well as nutrition.

30. **Regional knowledge networking.** The Programme will benefit from and contribute to existing regional knowledge networks as important fora to build and share approaches, tools, methodologies, technologies and best practices on sustainable aquaculture business development. South-South learning and sharing opportunities will be explored to ensure that ABDP beneficiaries and their organisations have access to up-to-date incremental knowledge and experience sharing on ways and means to improve their livelihoods. A communications plan and strategy will be developed to facilitate the above and to ensure adequate dissemination of ABDP learning and results as well as visibility of the Programme.

31. **Scaling-Up strategy.** The scaling up strategy of the Programme is in two contexts:

- *ABDP scaling up previous initiatives:* Building on, and taking to the next level, some of the technologies and models piloted by previous interventions including ESP, Trilateral Cooperation/GIZ and KMAP/FarmAfrica in the past few years.
- *Future scaling up of ABDP interventions:* Piloting new technologies and partnership models that will be scaled further by private and public sectors to turn the aquaculture sector into a robust economic sector contributing significantly in income and employment generation and food security.

32. **Scaling-up of past interventions through ABDP.** In the first instance, the Programme will build on and expand the use of technical knowledge and capacities and models produced especially by three precursor aquaculture programmes that have been implemented in Kenya variously within the past seven years. The ESP, Trilateral Cooperation and KMAP programmes were implemented in selected Counties of Kenya and have generated positive results that ABDP will build on, expand and adapt so that the benefits can reach a greater number of rural poor in a sustainable way.

33. ESP, a programme financed by Government of Kenya, introduced many new households into fish farming and significantly raised the number of fish ponds, new functional fish hatcheries and expanded the use of improved fingerlings production technologies at small-holder level (for example, for mono-sex tilapia). ESP also led to emergence of increased number of SMEs in aquaculture sector, mainly in response to a dramatic increase in the demand for quality fish seed and feed which were already in short supply. To a large extent the ESP enhanced the enabling environment and raised National attention for aquaculture, yet many challenges remained in terms of inadequate resources in terms of availability of seed and feeds; policy gaps and knowledge and technical skill capacity constraints to undertake commercial aquaculture.

34. The Trilateral Cooperation (TTC), a joint project of Kenya, Germany and Israel implemented in 2012-2016, aimed to enhance capacity for commercial aquaculture through a focused skills development programme in aquaculture value chain technologies. In particular, the TTC introduced an effective and relatively cheap approach of training farmers by identifying and equipping the training institution, training trainers (including extension officers, teachers and advanced farmers) and asking farmers to share the training cost to ensure their commitment. This training approach enhanced the knowledge for commercial fish farming, aqua-feeds and fingerling production.

35. The Kenya Market-led Aquaculture Programme (KMAP) implemented by FarmAfrica, with financial support from the Dutch Government, targets especially the medium to large scale fish farmers and input producers (hatcheries and feed mills), aiming to increase aquaculture productivity, entrepreneurial capacity and market access at all levels of the value chain. The aim is to bring up farmers holding a minimum of three ponds and above to a level of commercial viability by raising their production beyond a "tipping point" (in volume of production), which will allow them to lower their production, cost and compete effectively. To achieve their target of increasing aquaculture production by 4,000 MT per year, the project has selected to work only with fish farmers with the potential to commercialize their enterprises. This ultimately excludes the very poor farmers (less than 3 ponds) from the project's benefits.

36. Among the key lessons from these interventions is that production technical knowhow dissemination and application is an important missing factor and the adoption of intensification technologies will lower unit cost of fish production. Effort to develop aquaculture must address poor fish farming husbandry, fingerlings quality; fish feed quality, availability and cost; extension services provision; intensification of culture systems, uncoordinated marketing systems and inadequate value addition processes. The aquaculture sector is still perceived by the financial sector as too risky, however once risks are properly managed, commercial funding will be available to support development of the aquaculture sector. These lessons have been taken into account in the design of ABDP, which looks at the whole value chain, from inputs to consumption. ABDP will leverage resources and partnership to scale-up at least three aspects from preceding programmes; (i) a range of technologies piloted under the above interventions at all levels of the value chain (ii) the unique results-oriented and sustainable capacity building approaches that will bring more farmers into commercial aquaculture (iii) technical capacities (skills and infrastructure) developed by these programmes to expand their services and benefits to a larger number of small-holder farmers. While the previous projects were concentrated in particular regions, ABDP has a National scope targeting at least ten Counties spread across the country and therefore has a means to spread out the benefits.

37. Therefore, ABDP's scaling-up pathway will mainly be by expanding services to more smallholder farmers across the country and functional expansion, including financial services and market access through new commercial partnerships. The Drivers of scaling up will be the incentives provided by the Programme and increasing demand for services to develop aquaculture across Kenya's Counties.

38. **Future scaling up of ABDP Interventions.** Going forward, ABDP will leverage external financial resources and knowledge from public, private, community level and international actors to bring results to a larger number of smallholder farmers in a sustainable manner.

39. **Scaling pathway.** ABDP's scaling-up approach will be through a robust value chain approach. A Public-private-producer partnerships (PPPPs) model along the aquaculture value chains will be the tool to attract private-sector investments to the smallholder sector, aiming at providing beneficiaries with market access and value chain financing and reduce risks. The ABDP Business Model has three main actors: an established aquaculture entrepreneur (Private Sector/ aggregator), smallholder aquaculture producer who need an enabling environment to achieve economic and financial viability, and the public sector (County and National Government). In the business model, these three actors will need to get into a partnership through contracts. The major objective of the PPPP contract will be to facilitate technology transfer from the well-established aquaculture entrepreneur to the small farmer, with the public sector facilitating mainly provision of public goods and services. The established entrepreneurs are able to access finance from the commercial banks and/or investment funds. Going forward this will be the means to leverage resources and take to a larger scale the development benefits of ABDP. *The ABDP Business model is discussed in greater depth in the Value Chain Working Paper included with this submission.*

40. **Drivers of scaling up.** The key drivers of scaling up will be the private sector (aggregators) and the public sector both at the National level and the County level. Private-sector partners see potential for profit while Government agencies have demonstrated strong commitment to move the agenda forward. Politicians (at National, County and Sub-county levels) will be important drivers in future scaling-up striving to provide income opportunities and food security for their constituents. ABDP will support capacity building of National and County fisheries cadres, including the training of extension officers at both County and Sub-county level, to be the local-level catalysts for aquaculture enterprises. This will include training a number of Master Trainers and Trainer of Trainers (ToT).

41. **Scaling-up spaces.** The Government has taken measures to further open the space for scaling-up by removing obstacles to aquaculture sector development. Kenya's fiscal policy encourages private-sector driven, market-led sectoral development. The current political environment, especially the devolved County structures, is particularly favourable for aquaculture to thrive as they see its potential contribution for poverty reduction and food security. The National and County Government have opened the space for private sector, NGOs and community organizations to operate in the aquaculture sector. The fisheries sector institutional structure has also been significantly transformed, with requisite capacity development, to make it more focused and results oriented. The aquaculture policy will be further developed under ABDP to drive a rapid growth of the sector into the next decade.



## Appendix 7: Financial management and disbursement arrangements

### Overview of financial management systems

1. **Programme Financial Management (FM)** aspects will be implemented under the GoK FM regulations and procedures consistent with the Public Finance Management Act of 2012, and as amended in March 2015, as well as the IFAD guidelines.<sup>54</sup> The Programme will adopt appropriate systems that will include Financial Planning through AWPB, financial accounting and reporting, funds flow management, Procurement and audit. These systems will be made to perform efficiently and effectively to the benefit of the Programme implementation. The performance of the systems will be reinforced with oversight management at all levels including Programme Coordinator, MoALF management, SDF, Programme Steering Committee and the National Treasury. The performance responsibilities and functions required under these systems, their outputs, the expected result-oriented deliverables, and all other relevant details will be documented in the Programme Implementation Manual with appropriate templates upon the coming into force of the Financing Agreement.

2. **Anticorruption policy:** The systems governing the expenditure from the Programme funds will be subject to National and IFAD anti-corruption practices. IFAD applies a zero-tolerance policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. 'Zero tolerance' means that IFAD will pursue all allegations falling under the scope of this policy and that appropriate sanctions will be applied where the allegations are substantiated. All Programme staff, Programme parties and all stakeholders must be made aware of IFAD's as well as the National anticorruption policies and whistle blowing procedures.<sup>55</sup>

### Financial management risk assessment

3. **Country context and inherent risk.** The Corruption Perception Index (CPI), which tackles public perceptions for corruption in the public sector released by Transparency International (TI), indicates that Kenya is 149<sup>th</sup> out of 176 countries globally with a Score of 26/100, and 31<sup>st</sup> out of 46 in Sub Saharan African countries. The report shows an improvement in Kenya's percentage score from 25% (2015) to 26% (2016). Despite the slight improvement, this score could indicate that Kenya and its public institutions are not substantially accountable, transparent, effective and efficient, and hence making the overall Country risk assessment rated highly. The Government of Kenya has however enacted a parliamentary decree; the Public Financial Management (PFM) Act of 2012 – as amended by the 2015 PFM Bill, to provide for effective management of public finances by the National and County Governments. The Act also demands for the oversight responsibility of Parliament and County Assemblies, and further stipulates the different responsibilities of Government entities and other bodies with the objective of ensuring that:

- public finances are managed at both the National and the County levels of Government in accordance with the principles set out in the Constitution; and
- public officers who are given responsibility for managing the finances are accountable to the public for the management of those finances through Parliament and County Assemblies.

4. These measures, if adhered to, will greatly enhance efficiency and effectiveness in the management of public finances by public institutions.

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<sup>54</sup> Including the General Conditions, the Financing Agreement, the IFAD Guidelines on Project Audit and the Loan Disbursement Handbook.

<sup>55</sup> <mailto:anticorruption@ifad.org>

5. **The Programme specific control risk.** At this stage, the overall Control Risk is also assessed as High and is largely informed by a review of the Auditor General's reports for 10 Counties for the financial year ending 30th June 2015, where the Auditor was not able to express an opinion (in 3 of 10 Counties), qualified the financial statements (in 1 of 10) or awarded adverse opinions (for 6 of 10 Counties).<sup>56</sup> Given that ABDP activity implementation will be highly decentralised, the outcome of audit report assessment for Counties reflects an inefficient FM systems.

6. Four Counties' financial management structures were assessed during the design process: Kisumu; Kakamega; Homa Bay; and Kisii Counties. The mission concluded that the potential for adequate capacity exists, finding that there is an adequate qualified critical mass of qualified accountants both at the Ministry and in Counties who can fit into the accounting and reporting management structures. Given that the MoALF has experience in managing IFAD funded projects, and that the FM rating for projects in Kenya during the ESA Portfolio Performance review Report rates the Kenya portfolio moderately satisfactory, it is expected that the risk level can be lowered to Medium once mitigating controls have been implemented.<sup>57</sup> Possible control risks and mitigation measures are highlighted in the summarized assessment at design in Appendix 7.2.

### **Banking arrangements and flow of funds**

7. The National treasury will open two Designated Accounts (DA) in USD currency, and each will receive an appropriate initial deposit directly from IFAD. The first DA1 will be for the National Programme activities under SDF and its institutions and the second DA2 will be for the activities to be carried out in the Programme Counties. From the Designated Account, through the consolidated fund/Exchequer account, the National treasury will transfer funds to:

- The Development Fund (DF) account in the Ministry of Agriculture, Livestock and Fisheries (MoALF); and
- The County Revenue Fund (CRF) account in the Programme area of operation.

8. Management rules for the DA will be based on provision 4.04 of the new IFAD General Conditions for Financing, according to which operational conditions (bank, Authorized Allocation, currency, signatories) are specified in the Financing Agreement. The Authorized Allocation shall be calculated on the basis of the first six months of expenditure, currently estimated at USD 3.0 million. Depending on the cash flow requirements in subsequent years and satisfactory reviews by supervision missions that SoEs are fully supported, the Authorized Allocation may be increased to a maximum of USD 5 million upon discussions with IFAD. The following conditions will have to be met by the National Treasury/MoALF in order for IFAD to make the first disbursement of Programme funds to the DA:

- the first Annual Work plan and Budget (AWPB) needs to have received IFAD's No objection;
- National Treasury to open a Designated Account in USD and Operation Accounts in KES at PCU and CPFT;
- a Programme Implementation Manual needs to have been submitted to IFAD for No objection;
- purchase of a suitable off-the-shelf accounting software for the PCU; and
- the Programme/County Steering Committees need to have been established.

9. A start-up advance will be provided by IFAD to help implement the start-up activities. Where necessary, in order to quicken the process of implementing start up activities, the Government may pre-finance start-up activities and IFAD will reimburse accordingly.

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<sup>56</sup> Embu (adverse opinion), Kakamega (adverse opinion), Kiambu (qualified opinion), Kirinyaga (adverse opinion), Kisumu (Disclaimer of Opinion), Meru (adverse opinion), Migori (adverse opinion), Murang'a (Disclaimer of Opinion), Tharaka Nithi (adverse opinion) and Nyeri (Disclaimer of Opinion).

<sup>57</sup> <https://www.ifad.org/documents/10180/cb200bc1-20f1-48b7-99d0-dbfcd2820b60>



10. The DF and CRF accounts are constitutional accounts from which funds cannot be drawn directly to execute Programme activities. Both the PCU and the County Governments will be required to open IFAD dedicated operation bank accounts denominated in KES in their respective areas of operation, through which funds will be transferred for activity implementation. The accounting for County Government expenditure on IFAD related activities would be distinct to ensure result oriented monitoring, generation of Statements of Expenditure (SoE) and other technical reports that required to be submitted to the PCU regularly within set deadlines. A counterpart funding account denominated in Kenya Shillings will also be opened at the PCU to cover GoK contributions, mainly for taxes and duties.

11. **Management of County bank accounts.** The CPFT will prepare a funds transfer request to the National Treasury, to transfer funds to the CRF account, based on the County voted provision and tagged to specific activities as per AWPB. From the CRF, using the agreed upon FM structures, funds will be transferred to the County operation account for activity implementation. Having a separate County/IFAD Programme Account will enable the Programme staff to; manage the advances to Counties and retirement thereof; handle the first-in/first-out USD - KES exchange rate control; and prepare consolidated withdrawal applications for submission to IFAD through National Treasury.

12. The PCU finance department will review activity implementation and the related support documents before release of subsequent funds, prepare statements of expenditure and a back to office report – including cleared expenditure as fully supported, and balances yet to be utilized or not fully supported. Cashbooks fully reconciled to the bank statements will form part of the report. Transfers will be done whenever an activity is due for implementation in a specific County, and will be majorly dependent on proper and satisfactory utilisation of previously transferred funds. The relevant Component head will initiate activities – in liaison with FM department (which will confirm that previously transferred funds have been fully accounted for), for approval by the Programme before funds are transferred to the implementing County. Recurrent costs will be done on a quarterly basis. The County Programme Facilitating Team (CPFT) will be charged with the responsibility of ensuring that funds are used for intended purposes.

13. Disbursements from IFAD will be made by way of replenishments to the Designated Account, and/or direct payments and reimbursements as may be appropriate as per IFAD disbursement guidelines. For replenishments, the Fund will provide an initial advance, subsequently, the PCU will submit SoEs and the Fund will process the withdrawal application and replenish the Designated Account.

14. **Potential risks associated with the whole funds flow processes.** It is worth noting that although the funds may have reached the Programme designated account, the PCU will not have access to withdrawals until transfers have been done to the operation account. Experience from the existing IFAD projects has shown that transferring funds from the designated account, through the Ministry's development account, and finally to the Programme operation account has experienced significant delays and this has resulted in cash flow constraints affecting activity implementation. Since it is Government policy that all public funds should go through the Consolidated Fund, the only way this can be mitigated is for the Programme to be preparing withdrawal applications every time the 30% mark of the initial deposit has been spent or 90 days have passed, whichever occurs earlier. The MoALF should also endeavour to help release funds to the Programme operation accounts in time to avoid implementation delays.

15. At the County level, since the Programme structures will be embedded within existing County Government structures, there is likelihood that committing the budget in the form of raising the required requisition by the County Programme Coordinator (CPC) and following through the County Programme Facilitating Team (CPFT) FM structures might also experience certain delays. There is also the possibility of the County authorities diverting Programme funds to implement unauthorised activities. Constant reviews of County activities by the PCU team will help curb the possibility for fund misappropriation. The proposed Programme funds flow chart appears as below:

## Financial management capacity assessment and proposed implementation arrangements

16. The initial assessment of the capacity to manage the Programme Funds has been carried out at the Ministry and County levels. There are qualified accountants both at the Ministry and in Counties who can fit into the FM structures, and hence the mission has concluded that the potential for adequate FM capacity exists.

### Implementation arrangements at County Governments

17. The County Programme Steering Committee (CPSC) will establish a County Programme Facilitating Team (CPFT) from the existing staff of the Department of Fisheries, depending on the range of activities being undertaken within the County's Directorate of Fisheries. It is from the CPFT that an FM structure will be formed. The persons proposed to form the FM section include:

- The CPC - whose role in FM will be mainly to ensure that funds are disbursed according to the budgeted activities (voted provision). A vote book status report will be required indicating the voted provision amount and balance thereof, which should be referenced to the AWPB activity against which funds were transferred by the PCU.
- The County Service Delivery Coordinating Unit Tender Committee will have the legal authority to approve procurement awards. This Committee will be guided by the Country legal framework for public procurement, which provides clear guidance for the procurement practices to be followed at County level. An experienced procurement officer will be the secretary to this committee and his/her role will be to ensure that the National/IFAD guidelines on procurement are adhered to before raising the required purchase orders.
- The Fisheries Directorate Accountant, who will be responsible for Programme financial management at County level. It should be noted that the National Treasury Accountant (who would have otherwise been the CPFT accountant) is not allowed by law to manage funds from the CRF.
- Assign an officer from the examination department to certify that the payment is fully supported.
- Director of accounts.
- Chief Finance Officer.

These will be responsible for final approval and effecting payments.

18. The County Governments use the Integrated Financial Management Information System (IFMIS) for maintaining accounting records and there will be no need to acquire another FM system. The IFMIS has in-built controls that require a whole range of FM Department Officers to handle a transaction – from budgetary controls to payment approval, thus ensuring segregation of duties, and checks and balances. These, if adhered to, should be sufficient to ensure efficient FM at County Governments. The need to prepare analytical reports that the IFMIS cannot generate, (for examples, by Component, category and activity), will be done off the system.

### FM Implementation arrangements at Programme Coordination Unit

19. Within the Programme Coordination Unit, the FM Department will be responsible for the overall management and coordination of Programme implementation under the oversight of the State Department for Fisheries (SDF) of the MoALF. The management of accounting, reporting, procurement and funds flow will be a key responsibility of the PCU on behalf of MoALF as the Lead Agency.

20. The FM department will be manned by a Financial Management team that will be led by a Senior Qualified Financial Controller (FC). The FC will be assisted by two accountants who in addition to the day-to-day accounting activities at the PCU will be responsible for collecting, analysing and reporting on fund utilization at County level. Appropriate job descriptions will be developed for each of the positions.

21. **Accounting Software at the PCU.** Essentially, Government agencies are supposed to use IFMIS for financial accounting and reporting. However, IFAD financial reporting guidelines require expanded accounting and reporting that may not be provided under IFMIS. A dedicated off-the-shelf accounting and reporting software will have to be acquired by the PCU to satisfy financial reporting requirements. It is proposed that IPSAS will be used as the accounting standard for the Programme financial reporting. It is further proposed that the financial reporting will be carried out in a timely manner within the laid down deadlines.

22. **Financial Planning Through Annual Work Plan and Budget Process.** In line with normal GoK and IFAD procedures, Programme implementation will be based on approved Annual Work Plans and Budgets, (AWPBs). All National eligible Programme expenditure will be included under the MoALF vote and appropriated by Parliament whilst Counties will budget and be accountable for their own activities as per the Government's devolved budgetary process for presentation to Cabinet. Following the Annual Treasury Circular of the Government's budget cycle, the Programme will hold annual review workshops, including implementing partners, the PSC and beneficiaries to discuss progress during the prior financial year and to develop proposals for the forthcoming year. The PCU will assist the implementing partners including Programme Counties to formulate their AWPBs and be responsible for their timely consolidation into an AWPB for the Programme.

23. The full Programme AWPB will be presented to the PSC for approval and be forwarded as part of the MoALF and Counties' budgets to the National Treasury for entry into the Government's budgeting process. The individual AWPBs of the Programme Counties will have to be approved by their individual County assemblies before funds are transferred as "Conditional Grants" to the Counties' CRF account.

24. **Financial and Accounting Manual (FAM) as part of the PIM.** All procedures and the necessary guidelines for effective FM management ranging from Financial Data capture and accounting, reporting, funds flow disbursements, SoEs, withdrawal application submissions, audit and internal controls will be detailed in the FAM. The manual will be formulated after the Programme has entered into force, as it is then that key aspects and dynamics of the Programme will have been fully decided.

25. **Internal controls and oversight.** The FM internal Controls will be spelt out in the FAM. The SDF Principal Secretary and the Director of Finance will be expected to apply oversight on the overall implementation as well as coordination and management activities of the PCU. Other oversight will be expected from the Programme Steering Committee. At the County level, the County Chief Finance Officer and the County Secretary are expected to oversee overall implementation as well as the effective and efficient financial management of the Programme funds. The necessary controls to be instituted will range from proper record keeping and posting, authorization of accounting, procurement and administrative documents, balancing and checking, physical security of assets, double signing (approval) arrangements, to financial reporting and monitoring. An Internal Audit (IA) Department is vital to check overall compliance with internal controls and provide support towards improving systems, procedures and processes.

26. **Internal audit.** It is proposed that MoALF will designate one of the internal auditors on secondment from National Treasury to audit the PCU and periodically visit and review the internal audit processes performed by internal auditors at Programme Counties. Whereas internal audit departments exist at all Counties, the Internal Audit Committee is yet to be formed to review and take action on internal audit findings. Once this committee is put in place, the County audit reports (relevant to the Programme) will be reviewed by the MoALF Audit Committee. The designation of the Programme Internal Auditor will be done based on ToRs and curriculum vitae satisfactory to IFAD. The MoALF Audit Committee should receive and review regular reports on budget execution and on the implementation status of internal and external audit recommendations. Internal audit reports may be requested by IFAD in a mutually acceptable manner.

27. **External Audit.** The Office of the Auditor General in Kenya has been auditing the Financial Statements of IFAD funded projects in accordance with required international standards. It is proposed that the external audit of ABDP will also be carried out by The Office of the Auditor General. When the time is due for audit, appropriate ToRs and Financial Statements templates will be presented formally.

28. **FM Supervision plan.** The overall supervision will be complemented by desk review of progress and financial reports, the Programme's annual financial statements, internal audit reports and annual audits. IFAD will be expected to provide implementation support on a regular basis, especially as the residual risk has been assessed as High at the start. Implementation support will help staff to adapt quickly to the steep learning curve.

29. **Retroactive financing and project advance.** GoK will advance implementation of key initial activities to ensure early disbursement and reducing time lag between entry into force and first disbursement. This would include:

- PPPP advisor (USD 100,000) for component 2. This will be subject to 50% retroactive financing.
- Recruitment process for the PCU staff (advertisement, HR firm for recruitment) (USD 25,000). This will be done using ToRs in the PDR. Retroactive financing will be to the 100% retroactive financing.
- Financial Management Software (USD 30,000). This will be subject to 100% retroactive financing.
- Preparation of ESMP (USD 30,000) This will be financed in full from start-up advance.
- Consultancy for Finalization of the Project Implementation Manual and preparation of the first year Annual Work Plan and Budget (USD 10,000). This will be subject to 100% retroactive financing.
- Workshop for support of preparation of first year AWPB (USD 15,000). This will be subject to 100% retroactive financing.
- Renovation and Upgrade of Office Accommodation (Office preparation, fencing, conference room, security electric fence) (USD 100,000). This will be subject to 50% retroactive financing.
- Baseline surveys (USD 100,000). This will be subject to 50% retroactive financing.
- Salaries for the PCU staff and operating costs (USD 170,000). This will be subject to 60% retroactive financing
- Computers and printers (USD 33,000). This will be subject to 100% retroactive financing.

30. These amounts will be covered partially from GoK budget up to the tone of USD 363,000 while the remaining amount will be covered from start-up advance (USD 550,000). The retroactive financing will be drawn against the following categories:

- Civil Works (USD 50,000)
- Workshops (USD 15,000)
- TA, Studies, and Consultancies (USD 135,000)
- Goods, Equipment and Materials (USD 63,000)
- Operating Cost (USD 100,000)
- Other urgent activities.

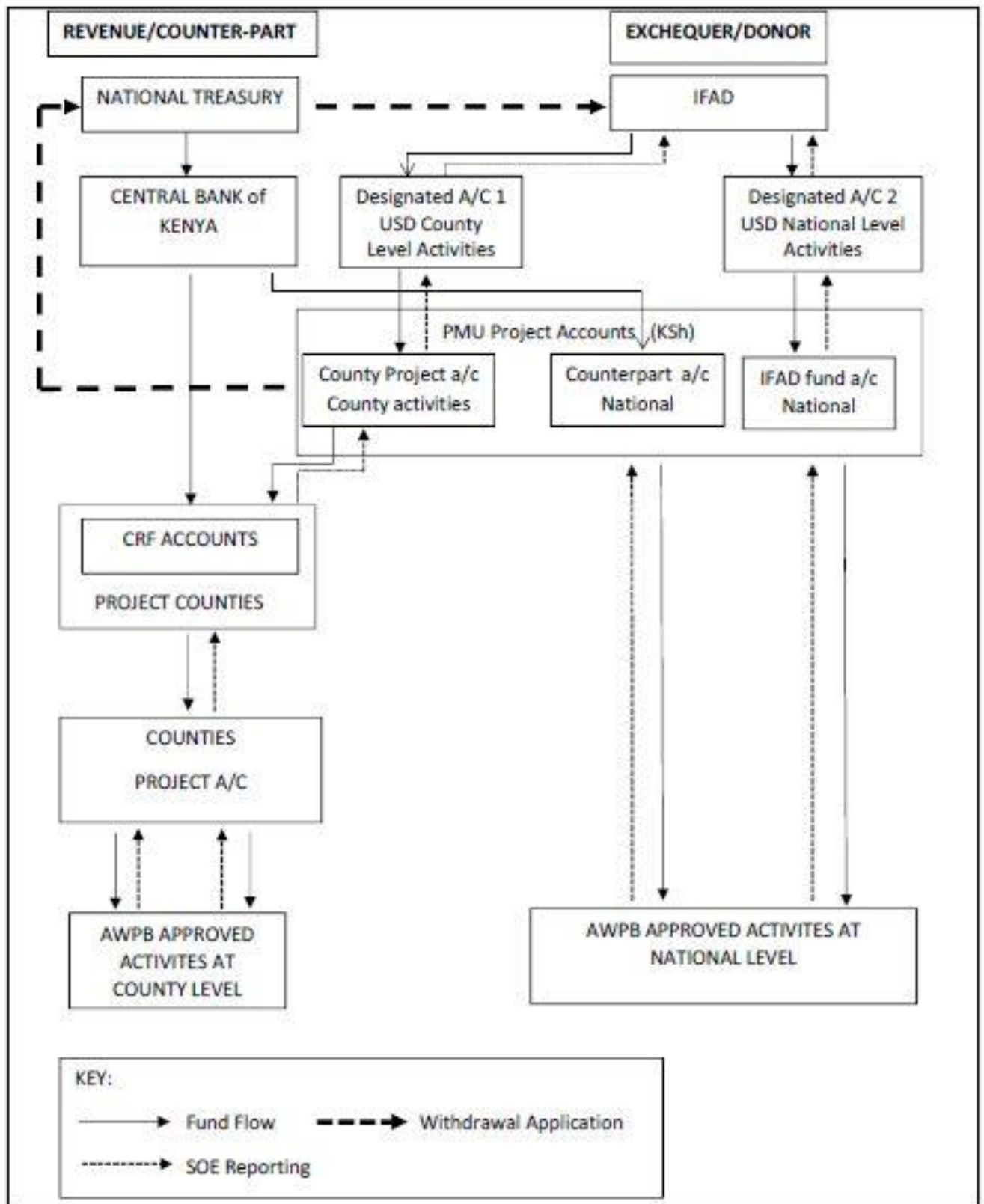
31. In order for GoK expenditure to become eligible for retroactive financing, it has to be incurred between 1<sup>st</sup> of October 2017 and entry into force. Upon entry into force and fulfilment of disbursement

conditions, eligible expenditures are reimbursed into the nominated Borrower's bank account in accordance with the provisions of the Financing Agreement (and subject to fulfilment of all conditions for retroactive financing). Retroactive expenditures are pre-financed by the prospective Borrower at its own risk.

32. The above activities will have to be listed clearly in the provisional AWPB and PP, which will be developed by the State Department of Fisheries and communicated to IFAD for review and no objection. This will need to be done prior to incurring any expenditure from government account, if it is to be considered for retroactive financing. The above items will have to be identified clearly as subject to retroactive financing as well as percentages that will be financed using this mechanism. The remaining percentages will be financed against the start-up advance. All such activities will have to fall within the project description and within the eligible categories. It will include limited operating cost for supporting the recruitment of the PCU as soon as possible to ensure meeting the disbursement conditions as soon as possible.

33. Retroactive financing must be included in the first financial statements of the project and audited, with appropriate separate disclosure of the amount in the Notes to the Accounts.

### Appendix 7.1: ABDP flow of funds



## Appendix 7.2: ABDP Financial Management Assessment Questionnaire

Risk Category	Initial Risk	Risk	Proposed mitigation measures	Final Risk	Timelines	Action by
<b>A. Inherent risk</b>						
Country Level	H	The Corruption Perception Index (CPI) score indicates that Kenya and its public institutions could substantially not be accountable, transparent, effective and efficient.	Regular implementation support by IFAD and engagement with the relevant GoK entities on the issues arising likely to negatively affect the Programme implementation.	H	Programme life	IFAD
Entity and Programme design	H	Funds flow issues at lead agency level that often could result in liquidity problems, hence hindering activity implementation.	MoALF to quicken funds transfer processes.	H	Programme life	MoALF
<b>B. Control risk</b>						
Organization and staffing	M	The Programme will be highly decentralized to County level. A CPFT will be selected from the existing County staff that may not have experience in management of IFAD funded projects. This poses a risk of not adhering to IFAD FM procedures that may result in rendering some expenditure ineligible.	Ensure that the appointment of the PCU FM staff is based on merit. Train the County CPFT in IFAD procedures and guidelines before disbursing funds to the County operation accounts.	M	After Programme start up workshop	MoALF
		Roles and make-up of the Programme Steering Committee not clear.	Role and composition of the steering committee to be clarified and agreed on with IFAD.		Before Programme take off	MoALF
Budgeting	M	Budget controls not in place at PCU.	Programme to capture budget into accounting software to monitor performance against targets.	M	After IFAD No objection on AWPB	PCU
		Ineligible activities could be erroneously included in County budgets.	PCU to review before consolidation and subsequent submission to MoALF for Parliamentary approval.		At AWPB consolidation	PCU
Funds Flow and disbursement arrangements	H	Delay in transfer of funds by the treasury to the MoALF development and CDF account. Delay in transfer of funds by the National Treasury/MoALF to the Programme operation accounts, and from the CDF account to the County operation	Engage the Programme Counties, National Treasury and the MoALF with the aim of agreeing the proposed Funds Flow chart and acceptable disbursement processing times. PCU to prepare replenishment WAs at the attainment of the 30% disbursement of the initial	M		MoALF/PCU

Risk Category	Initial Risk	Risk	Proposed mitigation measures	Final Risk	Timelines	Action by
		account.	allocation or 90 days, whichever comes earlier.			
		Delays in replenishment by IFAD of the designated accounts.	IFAD to expedite WA approvals.			IFAD
Internal controls	H	Internal controls at the PCU are not properly defined and documented at the PCU.	Spell out in the FAM internal controls and oversight procedures at County level, and SDF level. Review and update FAM and ensure that all are communicated to all stakeholders. Review application of these procedures at each time of implementation support. Use of IFMIS and off-the-shelf accounting software will be helpful too.	M	At Programme start up	PCU
Accounting systems, policies and procedures	H	Currently, there are no manuals to spell out clearly these procedures as guiding documents to Programme staff.	Training as noted above. Finance and Administration Manual to be developed. Adoption of IPSAS cash basis.	L	Start-up costs including development of manuals and training of the new staff	Lead Agency, IFAD for training on IFAD procedures
Reporting and monitoring	H	Financial management system (FMS) at the PCU.	For purposes of tracking expense and revenue, accounts by Component, category, Subcomponent and financier the PCU will acquire an off-the-shelf FMS that allows for the development of an analytical chart whose journals and accounts post to a separate ledger (the analytical ledger). The set-up of the chart will follow the layout of activities in Component, category, Subcomponent and financier form, as provided for in the Programme cost tables.	M	At Programme start	MoALF
Internal audit	H	No internal department at the PCU.	MoALF will designate one of the internal auditors on secondment from National Treasury to audit the PCU and periodically.	M	Programme life	MoALF
	H	Internal audit department at the Counties exists, but there is no internal audit committee to report to	Counties to form Internal Audit Committees to review recommendations and findings of County audit departments.	M	At Programme start up	County Governments
External audit		Late submission of audit reports.	Auditor General's Office to be invited in time to undertake the audit.	L	Programme life	PCU



<b>Risk Category</b>	<b>Initial Risk</b>	<b>Risk</b>	<b>Proposed mitigation measures</b>	<b>Final Risk</b>	<b>Timelines</b>	<b>Action by</b>
Programme Fiduciary Risk @ Design	H					
<b>Comments:</b>						
At this stage of design, and given that the Programme will be working under newly established systems between the National Government and the County Governments, the Programme Risk is rated high, but if the proposed structures/mitigation measures are put in place, the risk at Programme design may be occasioned to Medium.						



## Appendix 8: Procurement

1. **Procurement Regulations applicable to ABDP:** IFAD's procurement guidelines specify that National procurement systems will be used under the condition that the systems are assessed as satisfactory or better. The Programme will adopt the Kenya Public Procurement and Disposal Act 2015, the Public Procurement Regulations (to be issued soon), and the IFAD Procurement Guidelines 2010. National systems will apply to all procurement except international competitive bidding (ICB) for contracts above an agreed threshold. The IFAD guidelines state that ICB procurement will follow the procedures recommended by the World Bank. Kenyan National procurement systems under the oversight of the Public Procurement Regulatory Authority can be relied upon to undertake procurement below the agreed ICB thresholds.

2. Each Annual Procurement Plan will identify procedures that must be implemented by the Borrower in order to ensure consistency with the IFAD Procurement Guidelines. IFAD may require that all bidding documents and contracts and other records for procurement of goods, works and services financed by the Loans/Grants are:

- (a) Available for full inspection by the Fund of all bid documentation and related records;
- (b) Maintained for three years after completion of the bid or contract; and
- (c) IFAD may also require that the Programme cooperate with agents or representatives of the Fund carrying out an audit or investigation into procurement issues.

3. The Standard Bidding Documents (SBD) that were developed by the Public Procurement Regulatory Authority will be used for undertaking procurement under this Programme and consistency with IFAD Procurement Guidelines should be ensured. Concepts relating to Accountability, Competition, Fairness, Transparency, Efficiency, Effectiveness & Economy and Value for Money contained in IFAD's Procurement Guidelines and which are central to IFAD's Procurement Philosophy are discussed below.

4. The Procurement Process involves the purchasing, acquiring, hiring or obtaining of goods, works and services by any contractual means and can be defined in more detail as procurement of goods, procurement of works and procurement of services. The procurement cycle consists of General Procurement Notice, Tender Document Preparation, Pre-Qualification, Advertisement, Receipt of Tenders, Public opening of Tenders, Evaluate of Tenders, Award of Contract, Issue of Work Order or Purchase Order and Performance of contract.

5. Borrower/recipient officials engaged in procurement activity have a duty to:

- (a) Maintain and enhance the reputation of the borrower/recipient country by:
  - Maintaining the highest standards of honesty and integrity in all professional relationships;
  - Developing the highest possible standards of professional competence;
  - Maximizing the use of IFAD funds and other resources for which they are responsible for the purposes for which these funds and resources were provided to the borrower/recipient country; and
  - Complying with both the letter and the spirit of:
    - The financing agreement;
    - The laws and regulations of the borrower/recipient country;
    - Accepted professional ethics; and
    - Contractual obligations;

- (b) Declare any personal interest that may affect, or might reasonably be deemed by others to affect, impartiality in any matter relevant to their duties (conflict of interest). In a situation of this nature, the official concerned should not participate in any way in the procurement process, to avoid misprocurement; and
  - (c) Respect the confidentiality of information gained in the course of duty and not use such information for personal gain or for the unfair benefit of any bidder, supplier or contractor. Information given in the course of their duties shall be true, fair and not designed to mislead.
6. IFAD's review of and No objection to procurement plans are compulsory under all financing agreements directly supervised by IFAD. ABDP is one such agreement.
7. **IFAD monitoring and review** to ensure that the procurement process is carried out in conformity with IFAD procurement Guidelines and with the agreed procurement plan, IFAD will review arrangements for procurement of goods, works and services proposed by the borrower/recipient, including:
- (a) Contract packaging;
  - (b) Applicable procedures and procurement methods;
  - (c) Bidding documentation;
  - (d) Composition of bid evaluation committees;
  - (e) Bid evaluations and award recommendations; and
  - (f) Draft contracts and contract amendments.
8. The extent to which these review procedures will be applied to each project or programme will be contained in the letter to the borrower/recipient and the procurement plan. For full details on the review processes, refer to the Procurement Handbook.
9. **Misprocurement:** IFAD will not finance expenditures for goods, works or consulting services that have not been procured in accordance with IFAD Procurement Guidelines and the financing agreement. In such cases, IFAD may, in addition, take other remedial action under the financing agreement, including cancellation of the amount in question from the loan and/or grant account by declaring it ineligible. Even if the contract was awarded following IFAD's No objection statement, the Fund may still declare misprocurement if it concludes that this statement was issued on the basis of incomplete, inaccurate or misleading information furnished by the borrower/recipient, or that the terms and conditions of the contract had been modified without IFAD's approval.
10. **Institutional arrangements.** ABDP will be implemented under a two-tiered institutional arrangement, namely at the National and County levels. At the National level, MoALF will be the main implementing agency. County Governments will be the executing agencies at sub-National level.
11. With regard to procurement management, recruiting a qualified and experienced procurement officer at the National level per ToRs agreed with IFAD to among other regular functions, effectively monitor contracts and undertake post-procurement evaluations to strengthen systems, enhance performance, and measure improvement. With additional TA to strengthen procurement capacity, the institutions can undertake implementation, facilitation and coordination of the Programme with reduced risk. At the National level, the PCU anchored in the SDF&BE of MoALF will be responsible for implementing carrying all procurement transactions that use Open Tender and International Competitive Bidding (ICB) methods. In addition to other procurements on the National Level. At the County level, the CPFT to be established within the respective Counties' agricultural departments will spearhead execution of small procurement activities that apply request for quotations method.
12. At the County level, the procurement capacity is inadequate, mainly due to lack of experience in procurement under the donor-funded projects. Common areas of weakness in procurement arrangements at the County level include: (i) inadequate office space for the operations of

procurement staff; (ii) no sound procurement filing system or record keeping exist; (iii) lack of exposure to international procurement procedures; and (iv) limited degree of fairness in the competition for public procurement opportunities, particularly for Counties that do not have reliable internet connectivity. Other procurement capacity weaknesses noted in Counties include: (i) given that most CG procurement staff were recruited from the private sector they have limited exposure to public procurement operations and procurement under donor-funded projects; and (ii) there is a lack of regular procurement training plans for staff at all levels.

13. To enhance the procurement capacity at the County level, the ABDP will provide short-term training in IFAD procurement procedures (works, goods, and consultants) before Programme implementation commences. Subsequent regular procurement clinics will be held to deepen CGs' procurement capacity.

14. Establishment of an ABDP Special Procurement Committee (SPC). An ad-hoc Committee will be established by MoALF in order to i) fast track each step of ABDP procurement processes; ii) monitoring on the overall procurement processes of the Programme putting in place corrective actions when needed; iii) cooperate with ABDP in planning procurement processes and in preparing procurement documentation in order to assure the right timing of the processes and that tender documents are accurately prepared; follow up on the requests of No objections to avoid delays in treatment. Quarterly meetings will be organized between SPC, the PCU and the PS.

15. **Procurement Methods:** The methods which are permitted for the procurement of works and goods are: a) international competitive bidding (ICB), b) limited international bidding (LIB) or restricted tendering, c) National competitive bidding (NCB) or open tender, d) international or National shopping or requests for quotations, e) direct contracting, and f) procurement with community participation.

16. The methods which are permitted for the procurement of consulting services are: a) quality and cost-based selection, b) quality based selection, c) selection under a fixed budget, d) selection based on consultant' qualifications, e) least cost selection, f) single-source selection, and g) selection of individual consultants.

17. For each contract to be financed by IFAD proceeds, the types of procurement methods, estimated cost, prior review requirements and time-frame would be agreed between the Programme and IFAD respectively in the Procurement Plan.

18. **Public Private Producer Partnerships and other Private Sector Participation arrangements.** Public Private Producer Partnerships may include the following forms or combinations of them; partnerships; leasing; concession; service contract; management contract. Activities that could be financed by an ABDP as a matching contribution (or an incentive to initiate a PPP) include:

- (a) Pre-investment activities such as:
  - The elaboration and implementation of a communication and dissemination strategy to raise awareness of the Programme and its activities among all actors along the value chain;
  - Technical assistance and training for producers to form institutions, build capacity and adopt or upgrade their technologies to meet market requirements (for example, in logistics, storage, marketing, aquaculture, accounting, financial literacy, food processing, machinery, packaging, labelling, traceability, quality control, and food safety and hygiene);
  - Recruitment of independent consultancy firm for undertaking desk and field proposal appraisal;
  - Legal services to draft PPP agreements and negotiate and enforce contracts;
- (b) Technical assistance and coaching for aggregators through recruiting a competent transaction advisor;

- (c) Obtaining or renewing certification to comply with the quality standards of the buyer or end market;
- (d) Investments in collective, productive equipment such as transport, office, ICT tools/mobile applications, cold storage, product processing, vehicles; and
- (e) Other long-term investments required by Aggregators to renew their facilities or invest in new ones (such as storage/warehouse and cold chain facilities).

19. Activities from (a) to (c) will be directly implemented by the Programme following the same Procurement arrangements for other activities. While activities (d) and (e) will be implemented through special arrangements, including competitive processes.

20. For the selection of the aggregators under the first category (short-term investments), open competitive bidding procedures followed by the Programme will be applied as follows:

- (a) A call for proposals for business plans to interested private-sector companies and producers' organizations.
- (b) The business plans should then be reviewed, assessed and selected following a set of pre-established eligibility and selection criteria.
- (c) Development of eligible proposals into full-fledged business plans, Programme through the recruited transaction advisor will provide technical advice during this stage.
- (d) Final selection of business plans based on the selection criteria.

21. For the selection of the aggregators under the second category (long-term investments), open competitive bidding procedures followed by the Programme will be applied as follows:

- (a) Wide advertisement is done providing potential bidders detailed information and enough time for preparation of applications.
- (b) Prequalification of potential bidders is done using well-designed criteria.
- (c) Bidding documents are well-prepared, clear and non-discriminatory . The Programme may provide technical advice during this stage.
- (d) Procedures for bid submission are clear and bid opening is public.
- (e) Bid evaluation criteria are transparent, well defined in the bidding documents.
- (f) Negotiation of the final contract, if required, is done only within the parameters defined in the bidding document, and after receiving IFAD No objection.
- (g) Selection of one firm/aggregator for award of contract is done based on most economically advantageous offer.

22. When preparing to select PPPP partners and business plan proposals, it is critical to identify an institution with the most appropriate competencies to manage the selection process. It is challenging to assess business plans submitted by partners – especially the aspects related to financial viability, community engagement and compensation – since they tend to rest on a number of assumptions. It is recommended to recruit a specialized service provider to perform this function.

23. Depending on whether the initial mapping exercise leads to the identification of multinationals or SMEs, some due diligence is required to assess the selected company's capacity and reliability in case of long-term investments. Similarly, producer organizations must be assessed to determine whether they would be reliable business partners for the selected private company in a PPPP arrangement.

24. As provided by the PTA note "How to do Public-Private-Producer Partnerships (PPPPs) in Agricultural Value Chains" the eligibility and selection criteria will include but not limited to:

- (a) Proven know-how and technical expertise related to the selected product and services (key requirement).
- (b) Willingness to invest both human and financial resources in the PPPs.
- (c) Formal buy-in and commitment of the small-scale producers involved in the PPP business plan, as evidenced by a formal agreement/contract.
- (d) The company's production practices and those of its smallholder suppliers are environmentally friendly and comply with social (labour, gender) standards.
- (e) The partner's strategy is not simply focused on short-term profits but on long-term, viable business relationships with producers; it is an integral part of its business model rather than a corporate social responsibility initiative.
- (f) Producers are willing to engage in stable and continuous commercial relationships with business partners, as opposed to opportunistically looking for the best buyer in each season.
- (g) Private sector has proven experience and/or formal commitment to establishing business partnerships with small producers.
- (h) In the case of international companies, capacity to partner with local firms.

25. A standard contract agreement will be developed as part of the implementation manual for the establishment of PPP. The PTA note provides some key elements for typical contract specifications that should be taken into consideration during preparation of the standard contract agreement.

26. Good practices recommend allowing the Service Provider to have more flexibility in operational, managerial and investment decisions aiming at more innovative solutions. Use of output results (performance indicators) is a good means of giving the Service Provider the maximum scope to innovate or otherwise use his skills and experience to design efficient solutions without being constrained by past practices. With the above factors appropriately addressed, the private sector has greater incentive to reduce costs.

27. The Service Provider can procure goods, works and services required by the facility using its own procurement practices (subject to eligibility conditions defined under paragraph 64 of Procurement Guidelines and having no conflict of interest as defined in paragraph 19b of Procurement Guidelines), provided the Service Provider was selected based on open competitive bidding procedures determined acceptable by IFAD.

28. **IFAD financed procurement of works, goods and consultancy services.** While eventually the **specific thresholds** for procurement financed under the Programme would be stipulated in the Letter to the Borrower, the recommendations are the following:

- (a) Works estimated to cost more than USD 1 Million equivalent would be procured through International Competitive Bidding (ICB) method using the World Bank's applicable Standard Bidding Documents (SBDs). Works estimated between USD 25,000 and USD 1 million equivalent would be procured through National Competitive Bidding (open tender). While works estimated below USD 25,000 would be procured through National Shopping (request for quotations) or Community Participation. Direct contracting would have to be identified and approved by IFAD in advance for those cases that justify use of such method.
- (b) Goods estimated to cost more than USD 200,000 equivalent per contract would be procured through the II Competitive Bidding (ICB) method using the World Bank's applicable SBDs. Goods estimated to cost between USD 25,000 and USD 200,000 equivalent per contract would be procured through National Competitive Bidding (open tender). Goods estimated to cost less than USD 25,000 equivalent per contract would be procured through the Shopping methods (request for quotations). Direct contracting

would have to be identified and approved by IFAD in advance for those cases that justify use of such method.

- (c) Consultancy services. Quality and Cost Based Selection will be the standard method applied unless otherwise approved. The following thresholds and processes will apply: i) International Request for Proposal (RFP) – for contracts with a value of USD 100,000 equivalent and above; ii) National Request for Proposal (RFP) – for contracts with a value of less than USD 100,000 equivalent and more than USD 10,000 equivalent. Contracts with a value of USD 10,000 equivalent or below, or procurement of individual consultancy or Technical Assistance services, will be based on National Shopping (request for quotation).
- (d) Non-Consultancy services. The following thresholds and processes will apply: i) Request for Quotations using NCB (open tender) method – for contracts with a value above USD 10,000. Contracts with a value of USD 10,000 equivalent or below, will be National Shopping (request for quotation from predetermined shortlist).

29. However, these financial thresholds may be adjusted as appropriate, with prior IFAD approval, depending of the nature of the assignment. In addition, the method of procurement to be followed would be pre-determined in each approved annual procurement plan.

30. **Prior Review Thresholds:** For the purposes of Appendix I, paragraph 2, of IFAD's Procurement Guidelines, the following shall be subject to prior review by the Fund. These thresholds may be modified by the Fund during the course of Programme implementation.

- (a) First five contracts for goods and equipment undertaken by the NPC, first three contracts for goods and equipment undertaken by each respective County, and thereafter, award of any contract for goods and equipment estimated to cost USD 100,000 equivalent or more;
- (b) First five contracts for works undertaken by the PCU, first three contracts for works undertaken by each respective County, and thereafter, award of any contract for works estimated to cost USD 100,000 equivalent or more;
- (c) First five contracts for consultancy services undertaken by the PCU, first three contracts for consultancy services undertaken by each respective County, and thereafter, award to a firm of any contract for consultancy services estimated to cost USD 50,000 equivalent or more;
- (d) First five contracts for non-consultancy services undertaken by the PCU, first three contracts for non-consultancy services undertaken by each respective County, and thereafter, and thereafter, award to a firm of any contract for non-consultancy services estimated to cost USD 20,000 equivalent or more;
- (e) First five contracts for individuals undertaken by the PCU, first three contracts for individuals undertaken by each respective County, and thereafter, award to an individual of any contract for consulting services estimated to cost USD 10,000 equivalent or more; and
- (f) Award of any contract through direct contracting, single source selection, including selection of United Nations' agencies, irrespective of the amount. Furthermore, for consultancy services, all Terms of Reference, Short-listing (if applicable) and draft contracts would be subject to IFAD prior review.

31. The aforementioned may be modified from time to time as notified by the Fund to the Borrower-Recipient.

32. **Synchronization of civil works.** Once the tender documents are finalised as described above, they should be submitted to IFAD for prior review. IFAD would commission an engineering consultant to review them prior to issuing its observations and/or clearance.



33. **Performance based contracts:** The ABDP envisages performance-based contracts for both Technical Service providers and Financial Service providers. Thus, during the procurement of these providers, the performance criteria would be clearly specified on the basis of which disbursements would be made. All bidding documents and contracts for the procurement of services financed by IFAD loan and grant would include a provision requiring bidders, suppliers, contractors, sub-contractors and consultants to permit IFAD to inspect their accounts, records or other documents relating to the bid submission and contract performance and to have them audited by IFAD-appointed auditors and investigators, as appropriate.

34. **Post-review:** All other contracts would be subject to post-review and may be subject to procurement audit by the Fund. The Programme staff would maintain accurate records of all procurement activities and documents related to the Programme. The procurement files would be maintained for review by IFAD supervision missions and independent audits. The Programme staff would also consolidate procurement activities into quarterly and annual progress reports.

35. **Ex post review:** The Programme would retain all documentation up to five years after the closing date of the financing for examination by IFAD or by independent auditors. This documentation includes, but not be limited to, the signed original contract, the evaluation of the respective proposals and recommendation of award. IFAD does not finance expenditures for goods, works or consulting services that have not been procured in accordance with the procedures specified in the financing agreement. In such cases, IFAD may, in addition, exercise other remedies under the financing agreement, including cancellation of the amount in question from the financing. Even if the contract was awarded after obtaining a No objection from IFAD, IFAD may still declare misprocurement if it concludes that the No objection was issued on the basis of incomplete, inaccurate or misleading information furnished by the Programme or the terms and conditions of the contract had been modified without IFAD's approval.

36. **Register of Contracts:** Procurement carried out at regional level would be recorded and registered against the Procurement Plan. In addition, all contracts, with or without prior IFAD approval, would be listed in the Register of Contracts maintained by the procuring entity with the dates of approval as provided by IFAD. When a contract is amended, the amendment would be recorded in the Register of Contracts. If a contract is cancelled or declared ineligible for financing by IFAD, this information would be written in the Register of Contracts. As this register facilitates the review and approval of payment requests on contracts, it is to be updated and submitted to the IFAD country Programme director on a quarterly basis. The sample form to be used and instructions are detailed in **Annex 6 of IFAD's Loan Disbursement Handbook**. It would also be necessary that the PCU prepare annual statistics disaggregated by type and methods of procurement, for the overall procurement transactions carried out for the Programme.

37. **Issuing the Bidding documents.** All bidding documents for the procurement of goods, works and services would be prepared by the procurement officer with the support of the technical expert(s), who would supply specifications, terms of reference, Bills of Quantities as required.

### **Draft 18 months Procurement plan**

38. A preliminary 18-Month Procurement Plan has been prepared and detailed in Appendix 8.1 below. This plan which, has been developed for Goods, Works and Services, may ensure economy and efficiency in processing.

39. Similar items have been packaged together or have been bulked into annual procurement packages, to the extent feasible, to avoid splitting of contracts to achieve economies of scale and ensure efficiency in procurement.

40. Accurate and realistic planning and prioritization of needs is an essential prerequisite to effective procurement and a key tool for monitoring Programme implementation. At the time of negotiation of each project, the borrower/recipient, in consultation with IFAD, must establish an 18-month procurement plan, which must include, as a minimum:

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Reference	A unique reference for the procurement contract
Description	A description of the procurement contract
Estimated cost	This is the base cost and the expected physical and price contingencies for the procurement item
Number of Packages	An estimate of the expected economical packages for the procurement items
Procurement Method	The method of procurement as per the IFAD guidelines
Start Date	The date the procurement has to be planned, including initial stages of establishing detailed requirements, preparation of bidding documents and gaining all the necessary approvals as Public Procurement Act
Bid Opening Date	The expected date for opening of the bids
Domestic Preference	Domestic preference will be applicable for all ICB contracts
Prior Review	Transaction will be subject to prior review by IFAD in accordance with the provisions of the Procurement Guidelines

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### Appendix 8.1: Preliminary 18-Month Procurement Plan

Project Title:		The Government of the Republic of Kenya - Ministry of Agriculture, Livestock and Fisheries (MoALF)																								
Document:		Draft Procurement Plan																								
Financers:		IFAD Loan (xxxxx); IFAD Grant (xxxxx)																								
Period:		1 April 2018 to 30 September 2019 (18 months)																								
Update:																										
Type:		Goods																								
Exchange rate:		1 USD = 100 KES																								
Code/AWB	Component / unit	Code PF	Description	Plan vs Actual	Qty	Unit Cost US	Unit Cost USD	Amount KES	Amount USD	Method	Prior/ Post Rev.	Preparation of Tendering Process		Bidding Process		Evaluation Process		Contract				Responsible Entity	Comments			
												Bid Document	No Qty IFAD	Publication	closing/opening	Technical and Financial Evaluation	IFAD No Objection	Notification of award	Signature	Duration / Day	Ending Date					
	Project Management, Monitoring and Evaluation	ABDP/G/NCR/2018/01	Purchasing Financial Management Software	Planned	Lumpsum			KES 3,000,000	\$30,000	NCB	Prior	01/10/2017	08/10/2017	15/10/2017	29/10/2017	13/11/2017	20/11/2017	23/11/2017	01/12/2017	90	01/03/2018	SDF&BE	Advance contracting and retroactive financing			
				Revised																						
				Actual																						
	Project Management, Monitoring and Evaluation	ABDP/G/NCR/2018/02	Purchasing Laptops, Color Printers and Laser Printers	Planned	Lumpsum			KES 3,300,000	\$33,000	NCB	Prior	01/10/2017	06/10/2017	13/10/2017	27/10/2017	11/11/2017	18/11/2017	21/11/2017	29/11/2017	30	29/12/2017	SDF&BE				
				Revised																						
				Actual																						
	Project Management, Monitoring and Evaluation	ABDP/G/N6/2018/03	Purchasing Photocopiers	Planned	Lumpsum			KES 1,200,000	\$12,000	NS	Prior	01/04/2018	08/04/2018	15/04/2018	22/04/2018	01/05/2018	08/05/2018	11/05/2018	15/05/2018	30	14/06/2018	PCU				
				Revised																						
				Actual																						
	Project Management, Monitoring and Evaluation	ABDP/G/N6/2018/04	Purchasing Office Equipment	Planned	Lumpsum			KES 1,200,000	\$12,000	NS	Prior	01/04/2018	08/04/2018	15/04/2018	22/04/2018	01/05/2018	08/05/2018	11/05/2018	15/05/2018	15	30/05/2018	PCU				
				Revised																						
				Actual																						
	Project Management, Monitoring and Evaluation	ABDP/G/N6/2018/05	Purchasing Office Furniture	Planned	Lumpsum			KES 1,700,000	\$17,000	NS	Prior	01/04/2018	08/04/2018	15/04/2018	22/04/2018	01/05/2018	08/05/2018	11/05/2018	15/05/2018	15	30/05/2018	PCU				
				Revised																						
				Actual																						
	Project Management, Monitoring and Evaluation & Support for Aquaculture Value Chains Development	ABDP/G/CB/2018/06	Purchasing 4x4 pick up Vehicles	Planned	10	KES 4,000,000	\$40,000	KES 40,000,000	\$400,000	ICB	Prior	01/04/2018	15/04/2018	22/04/2018	06/06/2018	27/06/2018	07/07/2018	12/07/2018	02/08/2018	180	29/01/2019	PCU				
				Revised																						
				Actual																						
	Support for Aquaculture Value Chains Development	ABDP/G/NCR/2018/07	Purchasing Motorcycles	Planned	18	KES 400,000	\$4,000	KES 7,200,000	\$72,000	NCB	Prior	01/04/2018	08/04/2018	15/04/2018	29/04/2018	14/05/2018	21/05/2018	26/05/2018	10/06/2018	90	08/09/2018	PCU				
				Revised																						
				Actual																						
	Support for Aquaculture Value Chains Development	ABDP/G/NCR/2018/08	Purchasing Extension Materials	Planned	Lumpsum			KES 4,000,000	\$40,000	NCB	Post	01/07/2018	NA	08/07/2018	22/07/2018	06/08/2018	NA	10/08/2018	15/08/2018	90	14/09/2018	PCU				
				Revised																						
				Actual																						
	Support for Aquaculture Value Chains Development	ABDP/G/NCR/2018/09	Purchasing Field Equipment and lab Equipment for SAGANA and Kisumu	Planned	Lumpsum			KES 7,500,000	\$75,000	NCB	Post	01/08/2018	NA	08/08/2018	22/08/2018	06/09/2018	NA	10/09/2018	15/09/2018	60	14/11/2018	PCU				
				Revised																						
				Actual																						
	Support for Aquaculture Value Chains Development	ABDP/G/NCR/2018/10	Purchasing Breeding and Selection Equipment	Planned	Lumpsum			KES 6,000,000	\$60,000	NCB	Post	01/08/2018	NA	08/08/2018	22/08/2018	06/09/2018	NA	10/09/2018	15/09/2018	60	14/11/2018	PCU				
				Revised																						
				Actual																						
	Support for Aquaculture Value Chains Development	ABDP/G/NCR/2018/11	Purchasing Equipment Needed for Certification of Laboratories	Planned	Lumpsum			KES 8,000,000	\$80,000	NCB	Post	01/09/2018	NA	08/09/2018	22/09/2018	07/10/2018	NA	11/10/2018	16/10/2018	60	15/12/2018	PCU				
				Revised																						
				Actual																						
	Smallholder Aquaculture Development	ABDP/G/AS/2018/12	Goods & Materials for Ponds of School fish feeding programmes	Planned	Lumpsum			KES 400,000	\$4,000	LS	Prior	01/12/2018	08/12/2018	11/12/2018	18/12/2018	25/12/2018	01/01/2019	04/01/2019	11/01/2019	30	10/02/2019	CPPT				
				Revised																						
				Actual																						

SDF&BE State Department of Fisheries and Blue Economy  
 ICB international competitive bidding  
 NCB national competitive bidding  
 NS national shopping  
 LS local shopping

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The Government of the Republic of Kenya - Ministry of Agriculture, Livestock and Fisheries (MoALF)																					
Project Title:		Aquaculture Business Development Programme (ABDP)																			
Document:		Draft Procurement Plan																			
Financers:		#FAD Loan (xxxx); #FAD Grant (xxxx)																			
Period:		1 April 2018 to 30 September 2019 (18 months)																			
Update:																					
Type:		Works																			
Exchange rate:		1 USD = 100 KES																			
Code AWB	Component / unit	Code PP	Description	Plan vs Actual	LS or open	Amount KES	Amount USD	Method	Prior/ Post Rev.	Preparation of Tendering Process		Bidding Process		Evaluation Process		Contract				Responsible Entity	Comments
										Bid Document	No Obj IFAD	Publication	closing/opening	Technical and Financial Evaluation	No Obj IFAD	Notification of award	Signature	Duration / day	Ending Date		
	Project Management, Monitoring and Evaluation	ABDP/CW/NCB/2018/01	Renovation/Refurbishment for Kisumu HQ	Planned Revised Actual	BOQ	KES 10,000,000	\$100,000	NCB	Prior	01/10/2017	08/10/2017	12/10/2017	26/10/2017	10/11/2017	17/11/2017	22/11/2017	30/11/2017	150	29/04/2018	SDF&BE	Advance contracting and retroactive financing
	Support for Aquaculture Value Chains Development	ABDP/CW/NCB/2018/02	Rehabilitation of RIAT and SAGANA Training Facilities (2 LOTS)	Planned Revised Actual	BOQ	KES 15,000,000	\$150,000	NCB	Prior	01/12/2017	08/12/2017	12/12/2017	26/12/2017	10/01/2018	17/01/2018	22/01/2018	30/01/2018	180	29/07/2018	PCU	
	Smallholder Aquaculture Development	ABDP/CW/LS/2018/03	Building Ponds for School fish feeding programmes	Planned Revised Actual	BOQ	KES 600,000	\$6,000	LS	Prior	01/09/2018	06/09/2018	10/09/2018	17/09/2018	24/09/2018	29/09/2018	03/10/2018	10/10/2018	60	09/12/2018	CPFT	
SDF&BE	State Department of Fisheries and Blue Economy																				
BOQ	bill of quantities																				
NCB	national competitive bidding																				
LS	local shopping																				

Republic of Kenya  
 Aquaculture Business Development Programme  
 Final Design Report  
 Appendix 8: Procurement

The Government of the Republic of Kenya - Ministry of Agriculture, Livestock and Fisheries (MoALF)																													
Project Title: Aquaculture Business Development Programme (ABDP)																													
Document: Draft Procurement Plan																													
Financers: IFAD Loan (xxxxx); IFAD Grant (xxxxx)																													
Update: 1 April 2018 to 30 September 2019 (18 months)																													
Type: Consultancy																													
Exchange rate: 1 USD = 100 KES																													
General Description of the acquisition and procurement method																													
Ref./Code AWB	Component / unit	Code PP	Description	Lumpsum or Time based	Amount KES	Amount USD	Selection Method	Prior/ Post Rev.	Plan vs Actual	Terms of Reference		Request for Expression of Interest		Short List				Request for Proposal				Evaluation Process				Contract Finalization		Responsible Entity	Comments
										Date Prep.	Date No-objection	Date Prep.	Closing Date	Date Prep.	Date No-objection	Date Prepared	Date No-objection	Invitation Date	Submission/ Opening Date	Submission/ Evaluation Report (T)	No-objection Report (T)	Opening Financial Proposals	Submission/ Combined Eval Report	No-objection Eval Report	Contract Award	Contract Signature			
	Project Management, Monitoring and Evaluation	ABDP/CS/OCBS/2018/01	Baseline Survey	Lumpsum	KES 4,000,000	\$40,000	OCBS	Prior	Planned	01/10/2017	08/10/2017	13/10/2017	23/10/2017	02/11/2017	07/11/2017	17/11/2017	22/11/2017	24/11/2017	15/12/2017	25/12/2017	22/12/2017	27/12/2017	30/12/2017	06/01/2018	10/01/2018	25/01/2018	SDF&BE		
	Project Management, Monitoring and Evaluation	ABDP/CS/CQS/2018/02	Recruitment of individual Consultant to Develop the Project Implementation Manual	lumpsum	KES 1,000,000	\$10,000	CQS	Prior	Planned Revised Actual	01/10/2017	06/10/2017	12/10/2017	26/10/2017	03/11/2017	09/11/2017	NA	NA	NA	NA	14/11/2017	20/11/2017	NA	NA	NA	23/11/2017	30/11/2017	SDF&BE	Advance contracting and retroactive financing	
	Project Management, Monitoring and Evaluation	ABDP/CS/OCBS/2018/03	Contracting HR firm for the recruitment of the PCU staff	Lumpsum	KES 2,000,000	\$20,000	CQS	Prior	Planned Revised Actual	01/10/2017	08/10/2017	11/10/2017	23/10/2017	02/11/2017	07/11/2017	NA	NA	08/11/2017	22/11/2017	16/12/2017	11/12/2017	18/12/2017	06/12/2017	11/12/2017	11/12/2017	16/12/2017	SDF&BE		
	Support for Aquaculture Value Chains Development	ABDP/CS/CQS/2018/04	Recruitment of Aquaculture Business/PPPP Advisor	lumpsum	KES 10,000,000	\$100,000	CQS	Prior	Planned Revised Actual	01/10/2017	08/10/2017	12/10/2017	27/10/2017	06/11/2017	13/11/2017	NA	NA	NA	NA	23/11/2017	30/11/2017	NA	NA	NA	05/12/2017	19/12/2017	SDF&BE		
	Project Management, Monitoring and Evaluation	ABDP/CS/OCBS/2018/05	Electronic Database Development and Website Development	Lumpsum	KES 1,000,000	\$10,000	OCBS/RFQ	Prior	Planned	01/07/2018	08/07/2018	NA	NA	NA	NA	18/07/2018	25/07/2018	27/07/2018	10/08/2018	17/08/2018	22/08/2018	27/08/2018	30/08/2018	04/09/2018	07/09/2018	14/09/2018	PCU		
	Support for Aquaculture Value Chains Development	ABDP/CS/OCBS/2018/06	Contracting Transaction Support Consultancy Firm / Consortium	Time based	KES 500,000,000	\$5,000,000	OCBS	Prior	Planned Revised Actual	01/08/2018	10/08/2018	20/08/2018	04/09/2018	19/09/2018	24/09/2018	10/10/2018	15/10/2018	20/10/2018	04/12/2018	25/12/2018	01/01/2019	08/01/2019	12/01/2019	17/01/2019	22/01/2019	21/02/2019	PCU		
	Support for Aquaculture Value Chains Development	ABDP/CS/OCBS/2018/07	Contracting Consultancy Firm to Carry out Policy Studies	Lumpsum	KES 16,000,000	\$160,000	OCBS	Prior	Planned Revised Actual	01/09/2018	10/09/2018	20/09/2018	05/10/2018	20/10/2018	25/10/2018	10/11/2018	15/11/2018	20/11/2018	04/01/2019	25/01/2019	01/02/2019	08/02/2019	12/02/2019	17/02/2019	22/02/2019	24/03/2019	PCU		
	Support for Aquaculture Value Chains Development	ABDP/CS/CQS/2018/08	Recruitment of individual Consultant to assess the Existing Public Sector Facilities	lumpsum	KES 600,000	\$6,000	CQS	Prior	Planned Revised Actual	01/10/2018	06/10/2018	11/10/2018	25/10/2018	02/11/2018	NA	NA	NA	NA	NA	12/11/2018	17/11/2018	NA	NA	NA	20/11/2018	27/11/2018	PCU		
	Support for Aquaculture Value Chains Development	ABDP/CS/OCBS/2018/09	Contracting Consultancy Firm for Upgrading of Curricula (FBS approach, business farming, Technical Knowledge, Nutrition, etc.)	Lumpsum	KES 15,000,000	\$150,000	OCBS	Prior	Planned Revised Actual	01/10/2018	10/10/2018	20/10/2018	04/11/2018	19/11/2018	24/11/2018	10/12/2018	15/12/2018	20/12/2018	03/02/2019	24/02/2019	03/03/2019	10/03/2019	14/03/2019	19/03/2019	24/03/2019	23/04/2019	PCU		
SDF&BE	State Department of Fisheries and Blue Economy																												
CQS	Selection based on consultants' qualifications																												
OCBS	quality and cost-based selection																												
RFQ	request for quotations																												



## Appendix 9: Programme cost and financing

### Programme cost

1. The total costs for the ABDP, including physical and price contingencies, are estimated at USD 143.3 million (KES 14.90 billion). The base costs of activities under Component 1: Smallholder Aquaculture Development are assessed at USD 68.04 million (KES 7.08 billion) representing 56% of the total base costs; the estimated costs of Component 2: Aquaculture Value Chain Development are USD 47.12 million (KES 4.9 billion, 39%); and the costs for the Implementation Support Component 3: Programme Management, Monitoring and Evaluation are estimated at USD 6.55 million (KES 0.68 billion, 5%). Table 1 below presents a breakdown of the Programme costs by Component. Physical and price contingencies were estimated at USD 21.57 million (KES 2.24 billion), being 18% over the total base costs.

**Table 1: Programme costs by Component**

	Components Project Cost Summary						% Total Base Costs
	(KSh '000)			(US\$ '000)			
	Local	Foreign	Total	Local	Foreign	Total	
<b>A. Smallholder Aquaculture Development</b>							
Smallholder Aquaculture Development	5,320,535	1,330,134	6,650,669	51,159	12,790	63,949	53
Development of Enterprises in Support of Smallholder Aquaculture Production	292,157	73,039	365,196	2,809	702	3,512	3
Community Nutrition Initiatives	47,828	11,957	59,784	460	115	575	-
<b>Subtotal</b>	<b>5,660,519</b>	<b>1,415,130</b>	<b>7,075,649</b>	<b>54,428</b>	<b>13,607</b>	<b>68,035</b>	<b>56</b>
<b>B. Aquaculture Value Chains Development</b>							
<b>1. Smallholder Based Aquaculture Value Chain Development</b>							
Identification of Potential Areas of Intervention	480,938	120,234	601,172	4,624	1,156	5,781	5
Investments for Development of the Value Chains	2,810,398	702,599	3,512,997	27,023	6,756	33,779	28
<b>Subtotal</b>	<b>3,291,335</b>	<b>822,834</b>	<b>4,114,169</b>	<b>31,647</b>	<b>7,912</b>	<b>39,559</b>	<b>33</b>
<b>2. Aquaculture Enabling Environment and Support Services</b>							
Policy Engagement	38,272	9,568	47,840	368	92	460	-
Public Infrastructure	52,416	13,104	65,520	504	126	630	1
Extension Services	372,403	93,101	465,504	3,581	895	4,476	4
Aquaculture Research	62,400	15,600	78,000	600	150	750	1
Fish Health and Surveillance Services	95,597	23,899	119,496	919	230	1,149	1
Financial Services	8,320	2,080	10,400	80	20	100	-
<b>Subtotal</b>	<b>629,408</b>	<b>157,352</b>	<b>786,760</b>	<b>6,052</b>	<b>1,513</b>	<b>7,565</b>	<b>6</b>
<b>Subtotal</b>	<b>3,920,743</b>	<b>980,186</b>	<b>4,900,929</b>	<b>37,699</b>	<b>9,425</b>	<b>47,124</b>	<b>39</b>
<b>C. Project Management, Monitoring and Evaluation</b>							
1. National Project Coordination Unit	469,306	117,327	586,633	4,513	1,128	5,641	5
2. Regional Project Coordination Unit	75,238	18,809	94,047	723	181	904	1
<b>Subtotal</b>	<b>544,544</b>	<b>136,136</b>	<b>680,680</b>	<b>5,236</b>	<b>1,309</b>	<b>6,545</b>	<b>5</b>
<b>Total BASELINE COSTS</b>	<b>10,125,807</b>	<b>2,531,452</b>	<b>12,657,259</b>	<b>97,364</b>	<b>24,341</b>	<b>121,704</b>	<b>100</b>
Physical Contingencies	810,065	202,516	1,012,581	7,789	1,947	9,736	8
Price Contingencies	1,052,553	178,040	1,230,594	10,121	1,712	11,833	10
<b>Total PROJECT COSTS</b>	<b>11,988,425</b>	<b>2,912,008</b>	<b>14,900,433</b>	<b>115,273</b>	<b>28,000</b>	<b>143,273</b>	<b>118</b>

Expenditure Accounts Project Cost Summary							% Total Base Costs
(KSh '000)			(US\$ '000)				
Local	Foreign	Total	Local	Foreign	Total		
<b>I. Investment Costs</b>							
<b>A. Goods, Services and Inputs</b>							
Vehicles and Motorbikes	143,234	35,808	179,042	1,377	344	1,722	1
Equipment and Materials	3,619,926	904,981	4,524,907	34,807	8,702	43,509	36
<b>Subtotal</b>	<b>3,763,159</b>	<b>940,790</b>	<b>4,703,949</b>	<b>36,184</b>	<b>9,046</b>	<b>45,230</b>	<b>37</b>
<b>B. Training, Workshops and Studies</b>							
1. Workshops	180,777	45,194	225,971	1,738	435	2,173	2
2. Training	350,022	87,506	437,528	3,366	841	4,207	3
3. Studies	-	-	-	-	-	-	-
<b>Subtotal</b>	<b>530,799</b>	<b>132,700</b>	<b>663,499</b>	<b>5,104</b>	<b>1,276</b>	<b>6,380</b>	<b>5</b>
C. Grants and Awards	1,029,766	257,442	1,287,208	9,902	2,475	12,377	10
D. Technical Assistance	20,800	5,200	26,000	200	50	250	-
E. Consultancies	1,523,987	380,997	1,904,984	14,654	3,663	18,317	15
F. Non Consultancies Services	4,992	1,248	6,240	48	12	60	-
G. Works	674,652	168,663	843,315	6,487	1,622	8,109	7
<b>Total Investment Costs</b>	<b>7,548,156</b>	<b>1,887,039</b>	<b>9,435,195</b>	<b>72,578</b>	<b>18,145</b>	<b>90,723</b>	<b>75</b>
<b>II. Recurrent Costs</b>							
A. Salaries and Allowances	2,111,922	527,981	2,639,903	20,307	5,077	25,384	21
B. Operations and Maintenance	465,729	116,432	582,161	4,478	1,120	5,598	5
<b>Total Recurrent Costs</b>	<b>2,577,651</b>	<b>644,413</b>	<b>3,222,064</b>	<b>24,785</b>	<b>6,196</b>	<b>30,981</b>	<b>25</b>
<b>Total BASELINE COSTS</b>	<b>10,125,807</b>	<b>2,531,452</b>	<b>12,657,259</b>	<b>97,364</b>	<b>24,341</b>	<b>121,704</b>	<b>100</b>
Physical Contingencies	810,065	202,516	1,012,581	7,789	1,947	9,736	8
Price Contingencies	1,052,553	178,040	1,230,594	10,121	1,712	11,833	10
<b>Total PROJECT COSTS</b>	<b>11,988,425</b>	<b>2,912,008</b>	<b>14,900,433</b>	<b>115,273</b>	<b>28,000</b>	<b>143,273</b>	<b>118</b>

## Financing plan

The ABDP would be financed with an IFAD loan for ABDP, drawn from the 2016-18 Performance Based Allocation System cycle, which is estimated at USD 40 million corresponding to 27.9% of the total Programme costs. Other donors are expected to contribute USD 27.9 million representing 19.5% of total cost, while FAO would contribute USD 400,000 (0.3%). Beneficiaries will contribute USD 43.6 million representing 30.4% of the total cost and the GoK will contribute USD 31.4 million (21.9%). The details of financing arrangements and the disbursements by semester are shown in the Tables 2 and 3 respectively. The financing gap of US\$27.9million may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to availability of funds and internal procedures) or by co-financing identified during implementation. Discussions are currently underway with Kreditanstalt für Wiederaufbau (KfW) and Gesellschaft für Internationale Zusammenarbeit (GIZ) to cover the financing gap.



**Table 2: Financing Plan by Components (USD'000).**

	Components by Financiers (US\$ Million)											
	IFAD		Other Donors		FAO		Beneficiaries		The Government		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
<b>A. Smallholder Aquaculture Development</b>												
Smallholder Aquaculture Development	17.2	22.9	13.6	18.2	0.4	0.5	16.0	21.3	27.7	37.0	74.9	52.3
Development of Enterprises in Support of Smallholder	1.9	45.4	1.9	45.0	-	-	0.3	6.1	0.1	3.4	4.1	2.9
Community Nutrition Initiatives	0.2	32.7	0.4	57.7	-	-	-	-	0.1	9.6	0.7	0.5
<b>Subtotal</b>	<b>19.3</b>	<b>24.2</b>	<b>15.9</b>	<b>20.0</b>	<b>0.4</b>	<b>0.5</b>	<b>16.3</b>	<b>20.4</b>	<b>27.8</b>	<b>34.9</b>	<b>79.7</b>	<b>55.6</b>
<b>B. Aquaculture Value Chains Development</b>												
<b>1. Smallholder Based Aquaculture Value Chain</b>												
Identification of Potential Areas of Intervention	3.2	47.6	3.0	43.7	-	-	-	-	0.6	8.7	6.8	4.7
Investments for Development of the Value Chain	6.5	16.2	6.1	15.0	-	-	27.3	67.7	0.5	1.1	40.4	28.2
<b>Subtotal</b>	<b>9.8</b>	<b>20.7</b>	<b>9.0</b>	<b>19.1</b>	<b>-</b>	<b>-</b>	<b>27.3</b>	<b>57.9</b>	<b>1.1</b>	<b>2.2</b>	<b>47.2</b>	<b>32.9</b>
<b>2. Aquaculture Enabling Environment and Support</b>												
Policy Engagement	0.3	60.8	0.2	30.7	-	-	-	-	0.0	8.4	0.5	0.4
Public Infrastructure	0.3	42.3	0.3	42.3	-	-	-	-	0.1	15.5	0.8	0.5
Extension Services	2.8	54.3	1.1	21.4	-	-	-	-	1.2	24.3	5.1	3.6
Aquaculture Research	0.4	47.7	0.3	39.7	-	-	-	-	0.1	12.7	0.8	0.6
Fish Health and Surveillance Services	0.6	43.2	0.6	43.2	-	-	-	-	0.2	13.5	1.3	0.9
Financial Services	0.1	45.8	0.1	45.8	-	-	-	-	0.0	8.5	0.1	0.1
<b>Subtotal</b>	<b>4.5</b>	<b>51.2</b>	<b>2.5</b>	<b>29.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.7</b>	<b>19.6</b>	<b>8.7</b>	<b>6.1</b>
<b>Subtotal</b>	<b>14.2</b>	<b>25.4</b>	<b>11.6</b>	<b>20.8</b>	<b>-</b>	<b>-</b>	<b>27.3</b>	<b>48.9</b>	<b>2.7</b>	<b>4.9</b>	<b>55.8</b>	<b>39.0</b>
<b>C. Project Management, Monitoring and Evaluation</b>												
1. National Project Coordination Unit	5.6	84.5	0.2	5.0	-	-	-	-	0.8	12.0	6.7	4.7
2. Regional Project Coordination Unit	0.9	83.0	0.2	5.2	-	-	-	-	0.1	13.2	1.1	0.7
<b>Subtotal</b>	<b>6.5</b>	<b>83.3</b>	<b>0.4</b>	<b>5.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.9</b>	<b>11.6</b>	<b>7.8</b>	<b>5.4</b>
<b>Total PROJECT COSTS</b>	<b>40.0</b>	<b>27.9</b>	<b>27.9</b>	<b>19.5</b>	<b>0.4</b>	<b>0.3</b>	<b>43.6</b>	<b>30.4</b>	<b>31.4</b>	<b>21.9</b>	<b>143.3</b>	<b>100.0</b>

Note: ABDP detailed cost tables and summary tables are lodged in the Programme Life File.

**Table 3: Disbursements by Semesters and Government Cash Flow**

Kenya Aquaculture Business Development Project Disbursements by Semesters and Government Cash Flow (US\$ Million)								
	Financing Available				Total	Costs to be Financed by Government		
	Other					Project Costs	Cash Flow	Cumulative Cash Flow
	IFAD Amount	Donors Amount	FAO Amount	Beneficiaries Amount				
2018 - 1	1.8	0.7	0.1	0.3	2.9	3.6	-0.8	-0.8
2018 - 2	1.8	0.7	0.1	0.3	2.9	3.6	-0.8	-1.5
2019 - 1	3.3	2.5	0.1	2.5	8.4	10.4	-2.0	-3.5
2019 - 2	3.3	2.5	0.1	2.5	8.4	10.4	-2.0	-5.5
2020 - 1	4.1	3.4	-	5.2	12.7	15.4	-2.7	-8.2
2020 - 2	4.1	3.4	-	5.2	12.7	15.4	-2.7	-11.0
2021 - 1	3.5	2.8	-	5.2	11.5	14.2	-2.6	-13.6
2021 - 2	3.5	2.8	-	5.2	11.5	14.2	-2.6	-16.3
2022 - 1	2.9	2.1	-	4.1	9.0	11.6	-2.5	-18.8
2022 - 2	2.9	2.1	-	4.1	9.0	11.6	-2.5	-21.4
2023 - 1	2.3	1.5	-	2.9	6.7	9.2	-2.5	-23.9
2023 - 2	2.3	1.5	-	2.9	6.7	9.2	-2.5	-26.3
2024 - 1	1.4	0.8	-	1.7	3.9	5.8	-1.9	-28.3
2024 - 2	1.4	0.8	-	1.7	3.9	5.8	-1.9	-30.2
2025 - 1	0.6	0.1	-	0.0	0.7	1.4	-0.7	-30.9
2025 - 2	0.6	0.1	-	0.0	0.7	1.4	-0.7	-31.6
<b>Total</b>	<b>40.0</b>	<b>27.7</b>	<b>0.4</b>	<b>43.6</b>	<b>111.7</b>	<b>143.3</b>	<b>-31.6</b>	<b>-31.6</b>



## Appendix 10: Economic and Financial Analysis

### Programme objective and beneficiaries

1. The ABDP aims to improve the productivity and incomes of substantial numbers of small-scale farmers' households from primary fish production, predominantly from supplemental inland pond/tank aquaculture but also from cage technology on natural water bodies and dams, with due regard for the potential environmental risks associated with the technology. Given the conditions in the project areas, most aquaculture farmers are / will be adopting small pond aquaculture technology. Individual production farmers' group formation under Component 1 (C1) will provide technical assistance (TA) under the farmer field schools (FFS) approach and provide support for enhancing their existing ponds and for developing vertically integrated linkages for mounting productive alliances (PAs) and synergies among stakeholders under Component 2 (C2).

Direct beneficiaries are estimated at about 35,500 small-scale farmers and landless youth and women in supportive activities. Among these, about 15,750 households will receive additional assistance under C2 for developing and implementing business plans as part of out-growers' schemes, Small Aquaculture Groups (SAGs), PPPPs and Aquaculture Support Enterprises (ASEs). This would include around 2,500 households through support to ASEs and about 13,250 fish farmers' households participating in out-growers schemes, PPPPs and SAGs. Table 3 lists the number of direct beneficiaries per Component.

**Table 1: ABDP direct beneficiary households**

		Number of groups	Average number of members	Number of beneficiary households
<b>Component 1</b>				
	ASEs. 2-member groups	1,500	2	3,000
	5-member groups	500	5	2,500
	TA and rehabilitation of fish growing facilities/ponds	780	30	23,400
	TA (mainly medium HHs)	220	30	6,600
Subtotal		3,000	-	35,500
<b>Component 2</b>				
	ASEs	250	10	2,500
	SAGs	90	30	2,700
	Out-growers schemes with Aggregators	22	250	5,500
	PPPPs	6	800	4,800
	Pilot Outgrower model	1	250	250
Subtotal		369	-	15,750
<b>TOTAL</b>		<b>3,369</b>	<b>-</b>	<b>35,500</b>

Note: ASE: Aquaculture Support Enterprise and SAG: Small Aquaculture Groups. Totals (15,760) exclude duplications: the 2,500 ASE members from C2 and 13,260 fish farmers from C1 are expected to be graduates from C1 and would benefit also from C2.

Through its two main Components, the ABDP will generate positive economic and financial results to benefit thousands of mostly small-scale fish farmers, contributing to income generation and employment also for non-farm actors including traders, processors and operators and the aquaculture sector, as follows.

- The objective of C1 is to strengthen the capacity of 29,900 fish farmers' households to increase production and improve productivity as well as to create opportunities for 5,500 non-farming youth actors for developing micro-enterprises along the aquaculture value chain. In addition to the 29,900 small fish farmers' households, C1 will support the formation of about 2,000 ASEs including 5,500 non-farm members targeting particularly landless youth including women. Under Subcomponent 1.3, it will contribute to improve the diet quality of the rural population by promoting increased consumption of fish products (protein) and enhancing the dietary diversity. The outreach of the Subcomponent is estimated at about 500,000 people.
- C2 comprises interventions to broaden and deepen the aquaculture value chain with a series of strategic BPs selected under a competitive platform including: (i) non-farmer groups (2,500 households), smallholder aquaculture groups (2,700 fish farmers households), and developing and supporting business plans involving 10,550 fish farmers as out growers around several Aggregators' and PPP schemes within a strengthened public sector framework. The purpose is to develop synergies among stakeholders, making the aquaculture producers' core activities financially viable and bankable. C2 would also seek to build up the capacity of public and private supporting services with the intention of increasing fish productivity, production and the demand/consumption for/of fish products.

The total costs for the ABDP, including physical and price contingencies, are estimated at USD 141.79 million (KES 14.75 billion). The costs of activities under Component 1: Smallholder Aquaculture Development are estimated at USD 67.8 million (KES 7.05 billion) representing 56% of the total base costs. The costs of Component 2: Support for Aquaculture Value Chain Development are USD 46.35 million (KES 4.82 billion) representing 38% of the total base costs. The Implementation Support Component 3 costs (Programme Management and M&E) are estimated at USD 6.31 million (KES 656 million), 5% of the total base costs. Price and physical contingencies were estimated at USD 21.34 million (KES 2.22 billion). Considering the 35,500 direct beneficiaries' households would average six members per household, the Programme would benefit around 213,000 persons directly. The cost per direct beneficiary would be about USD 660, without considering the indirect beneficiaries who would benefit from access to an affordable diet based on fish protein for several hundred thousands of the poorest people in Kenyan rural areas.

## Financial Analysis

### A. Analysed Models

The economic and financial analysis was based on typical models representing the expected activities and beneficiaries, the likely outcomes of Programme support and interventions, and the average results that could be obtained by the Programme, at the level of individual activities, and within their farm production systems, their activities within the out-growers schemes with aggregators, and/or under PPPPs arrangements. *Activity models* are presented for C1 and C2 interventions, showing results for typical existing production systems, such as ponds, and for ASEs. In addition, *farm models* for typical smallholder production systems, including subsistence livestock and cropping activities estimate the expected impact on beneficiaries' income. Several interlinked model sets represent the benefits expected from C2 interventions, quantifying results from expected BPs involving: (i) non-farm ASEs, (ii) associations or SAGs organized for improving ponds management, TA and marketing, (iii) business plans involving SAGs and aggregators; and (iv) PPPPs where public and private assets are combined for supporting several fish farmer groups and private investors. Benefits are quantified through the incremental net benefits to be obtained from the institutional synergies, where the Programme interventions will focus including small farm production systems and the business plans involving cooperation between several stakeholders.

### B. Component 1 Smallholder aquaculture development

#### Support for pond rehabilitation improving productivity on existing ponds

More than half of the C1 targeted 35,500 HHs (small fish farmers and landless beneficiaries) are not expected to move beyond the subsistence level, but to improve incomes by adopting an enhanced green water technology with the use of improved quality fish fingerlings and feed or starting small

ASEs. About 15,70 HHs will improve further their operations, productivity and incomes as they integrate associations and alliances to develop business plans with the additional support of Component 2, moving towards a more commercial oriented activity.

The models used for representing the impact on those in the first group adopting an intermediate technology are assumed to be currently producing an average of 40 kg of fish per cycle of 10 to 12 months in their 300 m<sup>2</sup> ponds. They are expected to evolve with the C1 support, after minor investment of about KES 50,000 (USD 500) in lining and/or protection against predators, into an enhanced situation where 80 to 160 kg of fish is produced under an intermediate technology. Net income derived from each pond (before labour costs) would increase from KES 1,540 to somewhere between KES 12,040 (with 80 kg of fish) and KES 20,440 (with 160 kg of fish), improving net revenues between 8 to 13 times. Since most of the farmers also have some livestock and produce basic grains, the improved pond productivity under the C1 support instruments would result in a net income increase in the range of 27% to 49%. Tables 1 to 10 in Working Paper 10 summarise the expected results from Component 1.

#### ***Support to non-farming Aquaculture Support Enterprises (ASEs).***

Around 5,500 beneficiaries (mainly youth including women) will be organized under C1 into about 2,000 Aquaculture Support Enterprises (ASEs). Some will be groups already operating (in trading and/or processing fish), while others will be created as new entities. These groups will be instrumental for strengthening non-farm actors to be involved in fish supporting services, creating opportunities for income generation and providing services along the value chain. The ASEs will be especially oriented to disadvantaged groups, improving their access to resources and assets. Two cases were assessed to estimate the benefits of ASEs: (i) a group of five youth organized for construction of farmers' fish ponds; and (ii) a group of two youth aiming to transport inputs (fingerlings, fish feed) or products (fresh fish) to/from fish farmers. The financial internal rate of return (FIRR) of these example cases would be more than 100% and 25.8% respectively, (Tables 10 and 11 in Working Paper 9). The ASEs will receive training and focused mentoring under C1, and some with good potential will be eligible for moving forward to accessing a seed capital facility under C2 to strengthen their operations.

### **C. Component 2 Support for aquaculture value chain development**

#### ***Support to creation/strengthening of Aquaculture Support Enterprises (ASEs)***

It is estimated that about 250 out of the 2,000 C1 supported ASEs will become eligible for new enterprise creation or improvement support, including for cofinancing through seed capital for new developments. New transportation services, processing, retailing, small village fish restaurants or other forms of value addition and/or marketing ventures will be demanded as the value chain develops. A theoretical case was identified involving ten members (mostly youth including women) organized for installing a small restaurant in their village for preparing and serving a variety of fish based meals. It would require an investment of about KES 1 million for buying kitchen appliances and equipment, tables, chairs, cutlery, and other elements required for operating the food serving outlet. After operating and labour costs, (estimating a daily remuneration of KES 300 per ASE member), the investment would yield a 17.3% FIRR, creating employment opportunities for ten youth and providing the community with fish-based nutritious and affordable meals. A Programme seed capital of KES 800,000 (USD 8,000 or USD 800 per beneficiary, covering 80% of the investment) will allow starting and consolidating this Aquaculture Support Enterprise, (see Table 12 in Working Paper 10).

#### ***Supporting Small Aquaculture Groups' Business Plans***

Some small-scale fish farmers are expected to participate in active SAGs and/or to engage in out-growers schemes with aggregators, presenting BPs for further support and upgrading their aquaculture activities under C2, including increasing production, post-harvest handling and joint marketing. About 2,700 farmers in 90 SAGs (with an average of 30 members per group) are expected to present proposals to develop schemes to improve production further, combining marketing facilities and permanent technical and management assistance with an aquaculture specialist to be hired as the SAG manager and technical advisor.

An example BP is shown for a SAG based on real situations observed in the field during Programme preparation. Pond production would be increased under a C2-supported BP from the 80 kg to 160 kg of fish attained after C1 rehabilitation to about 300 kg per pond, which could be attained with proper TA and marketing support, using adequate inputs and management practices. Seeding of the group's ponds would be scheduled to produce fish all year round, for a constant supply to an outlet to be installed in their village. The net income obtained per pond could be doubled from KES 13,940 to KES 28,560, as enhanced management is developed (increasing yields to 360 kg per pond per cycle). Some farms are expected to adopt practices that are more intensive and complete two cycles per year with a production of 600 kg per pond and net revenue of KES 64,580 (Tables 13 and 14 in Working Paper 9).

The impacts of these improvements will encourage construction of additional ponds as the SAGs become more business-oriented and bankable and induce new entrants of women and youth to the activity. Farmer groups expressed their will to support women and young members of their communities prepared to initiate aquaculture activities. Models for new ponds show a net income of KES 69,900 per year (Table 15 in the Working Paper 9), which could support the construction of additional ponds in the third and fourth year after starting the activity.

The modelled SAG's BP would include investments for improving and expanding farm production structures and for incorporating post-harvest and marketing facilities. The BP case shown in Working Paper 9 (Tables 13 to 15) is based on a group of fish farmers with ponds rehabilitated under C1 presenting a proposal for expanding their production and developing new facilities to process and market their fish. The BP could involve investments of about KES 9.9 billion (USD 99,000) aiming at: (i) improving and expanding their ponds; (ii) installing new ponds for new entrants which would become active members of their SAG; (iii) hire a manager for the SAG who would also function as TA provider; (iv) install a cold storage chamber and coolers for transporting fish; (v) incorporate a small 3-wheel motorcycle truck; (vi) install an equipped outlet in their village for selling fish; (vii) buy some materials; and (viii) start and operate a revolving fund for financing inputs to farmers as they adopt the new practices.

With the support of the hired technical manager and the new investments, fish production from the SAG could be increased from 4.8 mt to 28.7 mt in six years, which would be handled, transported, cooled and sold by the SAG mainly in their own outlet in the village. A seed capital of KES 4.4 million (USD 44,000) could be provided by the Programme (about USD 1,460 per beneficiary household) for financing 100% of the TA and 80% of the required investment in assets. They would also access Bank loans for KES 2.6 million mainly for financing the revolving fund, loan to be repaid in three years. With their business plan, the group would get an aggregate net income growing from KES 786,000 to KES 5.8 million as the investments mature. On average, each of the 30 participating members would increase their income by about 2.7 times, from KES 75,000 to about KES 206,000 per year, (Table 30 in Working Paper 10).

### ***Business model for an out-grower scheme between an aggregator and smallholders***

A similar analysis for an aquaculture BP that involves an aggregator was developed and presented for this assessment. An input producer/supplier or fish trader could lead as an aggregator of about 250 fish farmers (158 smallholders with one or two ponds and 92 farmers with three or more ponds), providing TA, financed inputs, post-harvest handling and marketing, introducing certainty in a business where there are several missing links that makes the venture too risky for individual small fish producers. Farmers would increase their income by two to three times as shown in Tables 16 to 20 in Working Paper 10. The aggregator's budget (Table 22 in Working Paper 9) would involve an investment of about KES 20.76 million which could be supported by a Programme support package of KES 9.9 million (47%). The other 53% would be financed by the aggregator through a KES 8.3 million loan to be obtained from commercial banks. The amount of Programme support (in form of matching grant) as well as financing plan would depend on the proposal developed by the group. The expected FIRR for the aggregator investment would be 22.5% and the NPV KES 17.1 million.

In addition, under the same aggregators-BP, the partnership would provide support to the above mentioned 250 fish farmers for enhancing their fish productivity and financing the construction of new ponds for women and youth, which all together would require about KES 46.8 million in support for the outgrowers development. Overall, the out-growers scheme would require an investment of about KES 67.6 million (USD 676,000) out of which KES 15.45 million would be provided as matching grants covering 22% of the BP investment and the rest covered with commercial loans of KES 26.52 million (39%) and from own resources (39%) to be provided by the aggregator and allied farmers. Fish production from the farmers would increase as a result of this BP from 66.2 mt to about 370 mt.

### ***Business model for a PPP arrangement between private, public and smallholders***

Component 2 would also comprise interventions to broaden and deepen the aquaculture value chain with a series of strategic PPPs within a robust modern public sector framework, as well as support for SAG development. Public facilities that are producing far below their installed capacity would receive appropriate financial support under PPPP arrangements including strong managerial support. Binding contracts will be established between the ABDP, the allied producers, the service providers, aggregators and other concerned actors in the value chain in each PPPP.

Table 23 in Working Paper 9 presents a budget model under these parameters, involving one of the four fish collection and processing centres installed under the ESP. The model is based on a profile proposal prepared by the Meru Fish Farmers Cooperative currently having 150 members and a huge potential for producing fish. The Government would grant a concession or lease contract to the aggregator/private party. The contractual agreement would be based on a valid transaction model including about 800 fish farmers receiving TA, financed inputs, post-harvest handling, fish processing and adequate marketing arrangements. As in previous cases, farmers would increase their income by three to four times.

Table 23 in Working Paper 9 summarizes the PPPP private operator's budget excluding the 800 allied fish farm activities. It involves an investment of about KES 55.6 million (USD 556,000), which could receive a Programme support package of KES 21.6 million (38%, USD 216,000). The other 62% would be financed by the operators including (if necessary) a KES 22.2 million loan (USD 222,000) to be obtained from commercial banks. The FIRR for the private operator would be 22.8% and the NPV KES 55.8 million. Overall the PPPP BP arrangement including the 800 outgrowers would require an investment of about KES 155 million (USD 1.55 million) out of which KES 42.84 million (USD 428,400) would be provided as a support package covering 28% and the rest financed through a commercial loan of KES 61.6 million (39%), and 33% from own funds from the private partner and allied farmers. Fish production from the allied farmer groups would increase from 111.7 mt to about 667.5 mt.

## **Economic analysis**

In this section, corrections were introduced to show the economic justification from the Kenyan economy point of view, eliminating transfer payments (matching grants, taxes or subsidies). The indicators used are the economic IRR (ERR) and the NPV (ENPV). The main assumptions were:

- (a) All costs and benefits were estimated at 2017 values in constant terms over 20 years.
- (b) The Programme economic costs and benefits were derived from the 2017 market values excluding price contingencies, taxes and duties. Investment was adjusted with 0.88 as conversion factor (CF).
- (c) As young people make up to 78% of the population and the Kenyan Youth Survey in 2015 showed that 55% of youth are unemployed with rural women at 68%, the financial wage rate was taken at an average of KES 300/day. Given the unemployment rates, the economic labour rate was adjusted with 0.7 as CF, which is KES 210.
- (d) Imported fish feed is subjected to 10% import duty, so the market prices was corrected with 0.85 as CF.

- (e) *Discount rate:* While assessing the profitability of the Programme interventions, a 10% discount rate was used which is considered high as all prices were taken at 2017 constant value<sup>58</sup>.

Taking into consideration the value of benefits to be generated by the ABDP proposed interventions, but excluding the less easily quantifiable benefits from the improvement on the nutrition of the poor as fish protein will be made available at an affordable price with positive effect on the development of more healthy children and adults, the ERR was estimated at 21.1% and the ENPV KES 7.48 billion. These results allow for the justification of the Programme's investments. Table 2 show the ERR of the assessed supported PAs and Programme components (see details in Working Paper 10).

**Table 2 Economic Results of Assessed Components**

	ERR %	ENPV (in KES M)	Beneficiaries	
			BP	HHs
<b>Component 1</b>	<b>10.0</b>	<b>4</b>		<b>31,950</b>
<b>Component 2</b>				
ASEs BP	49.7		250	2,500
SAGs BP	37.4		90	2,700
Aggregators BP	50.7		22	5,500
PPPPs BP	44.9		6	4,800
AquaHub BP	21.3		1	260
Support & Enabling Environment Costs		-863	-	-
<b>Subtotal Component 2</b>	<b>34.3</b>	<b>7,848</b>	<b>369</b>	<b>15,760</b>
<b>Component 3</b>				
Project Management, M&E Costs	-	-377	-	-
<b>Overall ABDP</b>	<b>21.1</b>	<b>7,475</b>		<b>31,950</b>

The expected ERR from C1 activities was estimated at 10%. This result indicator is important considering that the benefits from preparing about 13,260 fish farmers and about 2,500 youth for being ready to participate on the ASEs and PAs to be developed under C2 were not totally quantified for the C1 ERR. For this assessment, it was assumed that 90% of the 35,500 beneficiaries (31,950) would be improving their production activities as shown in the farm and activity models in Working Paper 10. C2 shows an ERR of 34.2% including both subcomponents which is significantly high because it captures some of the benefits from C1 where readiness of beneficiaries to implement C2 PAs and BPs was developed.

Table 3 summarizes the economic costs and benefits for the overall Programme. Fish production from beneficiaries is expected to grow from a farm gate value of about KES 1,680 million to about KES 8,924 million (530% increase). It was also assumed for this assessment that 64% of the fish expected to be produced at Programme maturity that it would be handled and sold through the SAGs and aggregators, adding value and developing new market niches for their out grower' increased fish production.

<sup>58</sup> While assessing the profitability of the project interventions, a 10% discount rate was used which is considerably high as all prices were taken at 2017 constant value. The social discount rate values all costs and benefits of the project in terms of their contribution to the marginal utility of consumption of the project beneficiary, which declines as consumption increases. Benefits that occur when consumption is high therefore are valued less than benefits that occur when consumption is low. If the beneficiary economy is expected to grow over time, future consumption will be higher, and future benefits will therefore be valued less. The expected growth rate of the beneficiary together with an assumption on how fast the marginal utility of consumption falls as consumption increases, determine the discount rate. The fact that poorer people value consumption of an additional is captured through the other two components of the discount rate: the marginal utility of consumption and the expected growth of consumption (higher growth increases the discount rate as it implies that current generations are poorer than future ones). The elasticity of the marginal utility of consumption has three different possible interpretations: (1) the coefficient of relative risk aversion, (2) the inverse of the elasticity of intertemporal substitution, and (3) a measure of inequality aversion. The values proposed in the literature vary tremendously depending on which concept is being used. Given the complexity in determining the social discount rate, we decided to use 10% which is clearly an overestimation of this parameter.



**Table 3. ABDP Summary Economic Analysis<sup>59</sup>**

ECONOMIC BUDGET (AGGREGATED) (In KSHs Million)	Without	With Project											
	Project 1 to 20	1	2	3	4	5	6	7	8	9	10	11	12 to 20
<b>Main Production</b>													
Agricultural and Livestock Products	2,348	2,348	2,348	2,348	2,348	2,348	2,348	2,348	2,348	2,348	2,348	2,348	2,348
Fish Products (Tilapia, Catfish & Fingerlings)	1,682	1,682	1,735	2,031	3,246	5,721	8,755	11,518	13,636	14,814	15,205	15,309	15,316
ASEs Value of Production	-	-	-	10	163	549	989	1,332	1,593	1,728	1,746	1,746	1,746
<b>Sub-total Main Production</b>	<b>4,031</b>	<b>4,031</b>	<b>4,084</b>	<b>4,389</b>	<b>5,758</b>	<b>8,618</b>	<b>12,092</b>	<b>15,198</b>	<b>17,578</b>	<b>18,890</b>	<b>19,299</b>	<b>19,403</b>	<b>19,411</b>
<b>On-Farm Use</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>82</b>
<b>On-Farm Consumption</b>	<b>2,105</b>	<b>2,105</b>	<b>2,105</b>	<b>2,112</b>	<b>2,128</b>	<b>2,146</b>	<b>2,159</b>	<b>2,167</b>	<b>2,171</b>	<b>2,171</b>	<b>2,171</b>	<b>2,171</b>	<b>2,171</b>
<b>Net Value Of Production</b>	<b>1,844</b>	<b>1,844</b>	<b>1,896</b>	<b>2,195</b>	<b>3,547</b>	<b>6,390</b>	<b>9,851</b>	<b>12,949</b>	<b>15,325</b>	<b>16,637</b>	<b>17,046</b>	<b>17,150</b>	<b>17,157</b>
<b>Production Cost</b>													
Investment	-	125	291	1,348	1,811	1,509	1,048	656	50	-	-	-	-
<b>Operating</b>													
Purchased Inputs	1,766	1,766	1,804	2,021	2,923	4,773	7,084	9,260	10,983	11,988	12,348	12,442	12,448
Labor	1,242	1,242	1,244	1,261	1,379	1,652	1,968	2,214	2,389	2,474	2,490	2,494	2,494
<b>Sub-total Operating Costs</b>	<b>3,007</b>	<b>3,007</b>	<b>3,047</b>	<b>3,282</b>	<b>4,302</b>	<b>6,425</b>	<b>9,052</b>	<b>11,474</b>	<b>13,372</b>	<b>14,462</b>	<b>14,838</b>	<b>14,936</b>	<b>14,943</b>
<b>Sub-Total Production Cost</b>	<b>3,007</b>	<b>3,133</b>	<b>3,338</b>	<b>4,629</b>	<b>6,113</b>	<b>7,934</b>	<b>10,100</b>	<b>12,131</b>	<b>13,421</b>	<b>14,462</b>	<b>14,838</b>	<b>14,936</b>	<b>14,943</b>
<b>Other Costs</b>													
Component 1 Support Investments	-	222	709	872	759	615	488	309	103	-	-	-	-
Component 2 Support Investments	-	213	242	223	159	131	112	80	14	0	0	0	0
Component 3 Support Investments	-	91	62	67	71	79	64	62	59	0	0	0	0
<b>Sub-Total Other Costs</b>	<b>-</b>	<b>526</b>	<b>1,012</b>	<b>1,163</b>	<b>989</b>	<b>825</b>	<b>663</b>	<b>452</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>OUTFLOWS</b>	<b>3,007</b>	<b>3,659</b>	<b>4,350</b>	<b>5,792</b>	<b>7,103</b>	<b>8,759</b>	<b>10,763</b>	<b>12,582</b>	<b>13,597</b>	<b>14,462</b>	<b>14,838</b>	<b>14,936</b>	<b>14,943</b>
<b>Cash Flow</b>	<b>-1,164</b>	<b>-1,815</b>	<b>-2,454</b>	<b>-3,597</b>	<b>-3,555</b>	<b>-2,369</b>	<b>-912</b>	<b>366</b>	<b>13,372</b>	<b>14,462</b>	<b>14,838</b>	<b>14,936</b>	<b>14,943</b>
<b>Net Economic Benefits</b>	<b>941</b>	<b>290</b>	<b>-349</b>	<b>-1,485</b>	<b>-1,427</b>	<b>-223</b>	<b>1,247</b>	<b>2,533</b>	<b>3,899</b>	<b>4,346</b>	<b>4,378</b>	<b>4,385</b>	<b>4,386</b>
<b>IRR = 21.1%, NPV = 7,477.85</b>													
<b>Financing Summary</b>													
Grants	-	64	142	555	683	557	391	227	17	-	-	-	-
Contribution from own savings	-	53	174	647	723	514	397	119	2	-	-	-	-
Disbursements on Long Term Principal	-	33	84	415	584	500	343	230	19	-	-	-	-
Transfer from Previous Period	183	183	189	224	337	543	792	1,030	1,203	1,311	1,349	1,359	1,360
<b>Total Inflows</b>	<b>183</b>	<b>333</b>	<b>588</b>	<b>1,841</b>	<b>2,327</b>	<b>2,115</b>	<b>1,922</b>	<b>1,607</b>	<b>1,241</b>	<b>1,311</b>	<b>1,349</b>	<b>1,359</b>	<b>1,360</b>
Long Term Repayments	-	-	2	17	161	356	534	530	434	272	131	32	-
Transfer to Next Period	183	189	224	337	543	792	1,030	1,203	1,311	1,349	1,359	1,360	1,360
<b>Total Outflows</b>	<b>183</b>	<b>189</b>	<b>226</b>	<b>354</b>	<b>705</b>	<b>1,148</b>	<b>1,564</b>	<b>1,733</b>	<b>1,745</b>	<b>1,621</b>	<b>1,489</b>	<b>1,392</b>	<b>1,360</b>
<b>Net Financing</b>	<b>-</b>	<b>145</b>	<b>362</b>	<b>1,487</b>	<b>1,623</b>	<b>967</b>	<b>358</b>	<b>-126</b>	<b>-504</b>	<b>-310</b>	<b>-140</b>	<b>-33</b>	<b>-</b>

## Sensitivity analysis

A sensitivity analysis was performed in order to measure the robustness of the expected Programme impact, linked to potential adverse situations during implementation. Some of the major risks that could affect results are related to variations in fish productivity, the prices received by farmers for their produce, cost overruns, the rate of fish farmers incorporating to the Programme activities under C1, and to the PAs and BPs to be supported under C2, and the number of farmers adopting the proposed improved production technologies for increasing productivity and returns from aquaculture. The Programme seems to be relatively sensitive to reduction of productivity and fish prices, and robust against the risks in Programme cost increases, and against a reduced incorporation of beneficiaries adopting the proposed production improvements. Details are presented in Working Paper 9. The risk of reduction of production due to drought indicates the importance of climate smart activities for building resilience to drought. Table 4 show the expected results in case of some of these adverse scenarios and a combination of them.

<sup>59</sup> Main production in the Table includes the value of fish sold by farmers to their SAGs, PPPPs and AquaHub farm, and the value of the same fish processed and sold by these entities. Under the purchased inputs (operating costs), the value of fish paid by SAGs to farmers is included, which compensates the double counting of fish in the main production values. The way the aggregation was done makes the economic viability of the project even stronger. Since all project costs were added in the aggregation exercise including institutional strengthening for aquaculture sector enabling environment, infrastructure development and nutrition initiatives, makes the economic viability of the project even stronger than the positive results expected.

**Table 4: Sensitivity Analysis**

	<b>Scenario</b>	<b>ERR (%)</b>
A	Base	21.1
B	Investment Costs Up 10%	19.5
C	Investment Costs Up 20%	17.9
D	Adoption Rate Down 20%	19.1
E	Adoption Rate Down 40%	16.2
F	Fish Prices Down 10%	14.9
G	Fish Prices Down 20%	7.2
B + D	Costs +10% and Adoption – 20%	17.6
C + E	Costs + 20% and Adoption – 40%	13.4
B + F	Costs + 10% and Prices – 10%	13.5
C + G	Costs + 20% and Prices – 20%	5.0

## **Appendix 11: Draft Programme Implementation Manual**

1. The Programme Implementation Manual (PIM) provides guidelines for the implementation of the Aquaculture Business Development Programme (ABDP). The purpose of the manual is to elaborate procedures and regulations to guide the managers and other development partners to ensure efficient and timely implementation of the Programme. It provides detailed descriptions of the structures and practical steps required and guidance on coordination, financial management, procurement, audit, planning monitoring and evaluation, knowledge management and learning.
2. The document is intended to elaborate and clarify stakeholder's roles as a strategy towards achieving efficiency and timeliness in Programme implementation while ensuring adherence to prevailing Government of Kenya (GoK) and the International Fund for Agricultural Development (IFAD) Regulations. The manual is intended to be a guide and does not in any way replace any rules, regulations or conventions existing between parties of the Programme. It is expected that while the implementing agencies will use it as a guide, it will not replace logical thinking or norms. Any partner who finds the need to deviate from the provisions therein will seek for concurrence of the stakeholders.
3. A draft of the PIM has been compiled during the final design process, bringing together relevant information detailed in the main report and Working Papers. The manual will be revised and elaborated further by the PCU at inception and then maintained as a living document throughout implementation in the light of experience.
4. The current draft PIM is presented as Working Paper 11. The following Table of Contents sets out the scope of the manual. In this configuration, the PIM includes the Financial and Accounting Manual (FAM) as a constituent part.

## **Aquaculture Business Development Programme Programme implementation manual**

### **Table of contents**

#### **Programme scope and implementation**

- A. Programme description.
  - Component 1: Smallholder aquaculture development.
  - Component 2: Support for aquaculture value chain development.
  - Programme cost.
- B. Implementation plans.
  - Programme start-up activities.
- C. Implementation and institutional arrangements.
  - Programme governance.
  - Programme Steering Committee.
  - Programme Management and Coordination.
  - Programme Coordination Unit.
  - County Programme Coordination Committee.
- D. Programme planning and budgeting.
  - AWPBs.
- E. Roles and responsibilities of implementing agencies.

#### **Programme Financial Management**

- F. Guidelines for Management of Programme Funds.
- G. Financial Responsibilities of Parties to the IFAD Loan Agreement.
  - National Treasury.
  - Lead Programme Agency (SDF&BE).
  - IFAD.
  - Programme Coordinating Unit (PCU).
  - Beneficiary Communities.
  - Roles of Kenya National Audit Office.
- H. Programme cost.
- I. Financial Planning: The Annual Work Plan and Budget Process.
  - Flow of Funds.
  - Programme accounts: PCU Programme Accounts; County Accounts.
  - Disbursement methods: Advance revenue mode; Direct Payment Mode; Reimbursement Mode; Letter of Commitment.
  - Programme Initial Deposits.
  - Accounting for Programme funds in Counties.
- J. Financial management.
  - Financial management capacity assessment.
  - Financial management risk assessment.
  - Accounting system.
  - Financial Internal Controls: Internal controls and oversight; Maintenance of Accounting Records.
  - Auditing: External Audit; Internal audit.
- K. Procurement.

Regulations Governing Procurement.

Procurement at the PCU level.

- International Competitive Bidding: Preparation of bid documents; Bid opening; Bid Evaluation; Award of Tender; Contract formation and performance.

- Local Competitive Bidding.

- Local Shopping.

- Public Private Producer Partnerships and other Private Sector Participation arrangements.

- Draft 18 months Procurement plan.

Procurement at the community level.

Procurement Thresholds.

Prior Review Thresholds.

### **Performance monitoring, evaluation, reporting and communications**

L. Monitoring and Evaluation: Monitoring; Evaluation.

Requirements for Monitoring Progress in Programme Implementation.

- Internal supervision.

- Periodic Reporting.

Annual Work Planning and Budgeting.

- AWPB Progress Monitoring.

- Annual Review Workshop.

External Supervision Missions: Supervision by IFAD.

Mid-Term Review.

Impact monitoring.

Programme databases.

Baseline survey.

Impact Evaluation.

Environmental Impact Assessment studies.

Final impact evaluation.

M. Programme knowledge products and learning processes.

N. Gender and social dimensions.

O. Safeguards, anticorruption policy and accountability mechanism.

P. Record of PIM changes.



## Appendix 12: Compliance with IFAD policies

1. The ABDP design is aligned to all relevant IFAD strategies and policies, including:
  - IFAD Strategic Framework 2016-25;
  - Targeting Policy – Reaching the rural poor (2010);
  - IFAD policy on gender equality and women's empowerment (2012);
  - Gender Mainstreaming in IFAD10 (2016);
  - IFAD Climate Change Strategy (2010);
  - Environment and Natural Resource Management Policy (2011);
  - Social, Environmental and Climate Assessment Procedures;
  - Private-Sector Strategy: Deepening IFAD's engagement with the private sector (2011);
  - Rural Enterprise Strategy;
  - Rural Finance Policy (2009);
  - Programme M&E, Innovation, Knowledge Management;
  - Procurement;
  - Policy on Supervision and Implementation Support; and
  - Preventing Fraud and Corruption.

Of these, the Environment and Natural Resource Management (ENRM) Policy: Resilient livelihoods through the sustainable use of natural assets has particular significance for the subject Programme. The policy distils lessons learnt in previous IFAD initiatives that have sought to reduce rural poverty through interventions related to the sustainable use of the environment. The ten core principles encapsulate both the core issues to be addressed and suggested approaches.

### IFAD ENRM policy: summary of core principles

IFAD will promote:

- 1 Scaled-up investment in multiple-benefit approaches for sustainable agricultural intensification.
- 2 Recognition and greater awareness of the economic, social and cultural value of natural assets.
- 3 'Climate-smart' approaches to rural development.
- 4 Greater attention to risk and resilience in order to manage environment- and natural-resource-related shocks.
- 5 Engagement in value chains to drive green growth.
- 6 Improved governance of natural assets for poor rural people by strengthening land tenure and community-led empowerment.
- 7 Livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management.
- 8 Equality and empowerment for women and indigenous peoples in managing natural resources.
- 9 Increased access by poor rural communities to environment and climate finance.
- 10 Environmental commitment through changing its own behaviour.

Also important in this context is the ABDP alignment to the *Climate Change Strategy* goal of maximising IFAD's impact on rural poverty in a changing climate and precisely relevant to two statements of purpose: to support innovative approaches to helping smallholder farmers build their

resilience to climate; and to inform a more coherent dialogue on climate change, rural development agriculture and food security.

In line with *IFAD Rural Finance Policy*, the Programme promotes linkages with financial service providers under market based conditions and focuses on capacity building interventions on both the demand and supply sides to contribute to sustainable access to finance. Matching grants are designed to complement identified financing gaps, in particular related to the financing of innovative approaches. Performance based modalities should contribute to the efficient use and significant impact of the grants in terms of outreach and the development of sustainable businesses.

The *IFAD Policy on gender equality and women's empowerment* (2012) crystallizes thirty years of experience in the field into three succinct precepts:

- Promote economic empowerment to enable rural women and men to participate in and benefit from profitable economic activities.
- Enable women and men to have equal voice and influence in rural institutions and organizations.
- Achieve a more equitable balance in workloads and in the sharing of economic and social benefits between women and men.

The Programme approach is geared to real Kenyan conditions and cultural norms, including prevailing gender roles. Measures include direct consultation of women in intervention planning and implementation. The design features proactive community mobilisation and the generation of participatory modalities of community economic and social development.

In the Kenyan context and within the framework of recent IFAD experience in the country, a number of measures and mechanisms would be implemented for ensuring the involvement of women and youth, including:

- the holding of separate sessions with women and youth to ascertain their opinions and needs; and
- the integration of gender mainstreaming responsibilities into the terms of reference of all Programme staff as a principle to be respected.



## Appendix 12.1: Social, Environmental and Climate Review Note

### A. Major site characteristics and issues

1. **Introduction.** Agriculture is the backbone of Kenya's economy and plays a critical role in ensuring food security and livelihood to millions of Kenyans. The sector contributes about 25% of the GDP, employing 60% of the population and providing a livelihood to 80% of the rural population.<sup>60</sup> Kenya's land surface area is classified as high potential (12%), medium potential (8%) and 80% arid or semi-arid agricultural land.<sup>61</sup> National food security is a key objective of the agricultural sector, largely due to a rapidly growing population, projected to grow to 55 million by 2020 and cyclical drought in some parts of the country. Diversification of food sources and dietary habits is one of the approaches the government is embracing to contain food insecurity in the country. The fisheries and aquaculture sectors offer immense opportunities for food and nutrition security at household level.

2. Kenya's fisheries and aquaculture sector contributes to 0.5% of the GDP. The country is endowed with both marine (coastal) and inland (fresh) water resources. The inland water resources include lakes, dams, rivers and streams. Some of the major lakes include Lake Turkana and Lake Victoria (contributes about 90% of inland capture fisheries). The aquaculture sector in Kenya though underexploited is growing rapidly and has the potential to contribute significantly to fish production, and food and nutrition security.<sup>62</sup> However, this potential has remained untapped due to challenges such as poor quality feeds and seed, inadequate skills among farmers, poor husbandry and environmental degradation among others. The aquaculture business development project seeks to develop the business viability of the smallholder aquaculture sector in Kenya. The project will be implemented in the Mt. Kenya region, the Lake region, Western Kenya and some parts of Eastern Kenya, which are already practicing aquaculture.

3. Aquaculture in Kenya is largely practised at subsistence level (extensive and semi-intensive systems), with few medium and large-scale commercial farms (intensive systems). Aquaculture can be broadly defined as fresh water aquaculture and marine aquaculture. Marine aquaculture is largely underdeveloped and includes species such as crabs, shrimps and oysters. Fresh water aquaculture can be further grouped into: warm water culture (tilapia and African cat fish, in low lands) and cold water aquaculture (Rainbow trout farming, mainly in the highlands). Tilapia constitutes the largest portion of fish farmed in Kenya within aquaculture systems.<sup>63</sup>

4. Climate change and environmental degradation are major threats to the sustainability of the aquaculture sector in Kenya. The major climate and environment challenges in the aquaculture sector relate to changes in temperature and precipitation patterns, extreme weather events, declining water quality and siltation. In line with IFAD's Climate Change Strategy (2010) and the Environment and Natural Resources Policy (2010), this SECAPs (Social, Environmental and Climate Assessment Procedures) note looks into environment and climate risks that are likely to be associated with this project, and proposes relevant mitigation measures. It also highlights the enabling policy and institutional structures that promote sustainable aquaculture production in Kenya. Information presented in this SECAPS note was gathered through secondary means (literature review), observation and interviews during field visits undertaken in March and June 2017. This SECAP note is a post quality enhancement (QE) version based on feedback received during the QE meeting held on 15th May 2017.

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<sup>60</sup> KARI (2012). Policy responses to food crisis in Kenya. KARI, IFPRI food security portal.

<sup>61</sup> UNDP (2012). Sustainable development in Kenya: stocktaking in the run up to Rio +20. UNDP, UN DESA.

<sup>62</sup> Mbugua, H M (2008). Opportunities in fish farming for employment and sustainable livelihoods in Kenya. Ministry of Fisheries, Kenya.

<sup>63</sup> State Department of Fisheries (SDF) (2017). Fisheries in Kenya. SDF portal ([www.kilimo.go.ke/fisheries](http://www.kilimo.go.ke/fisheries))

## B. Environmental, social and climate related issues in aquaculture

### Agro ecological zones suitable for aquaculture in Kenya

5. Kenya's geographic and climatic conditions favour warm water, freshwater and marine water aquaculture development as shown in Table 1.<sup>64</sup> The Table indicates which species can be cultured in different areas of Kenya.

**Table 1: Agro-ecological zones favourable for aquaculture in Kenya**

Zone	Agro-ecological conditions	Mean temp range	Fish species
Highlands (Humid zone) (Rift Valley, Central Kenya)	>1,500 m altitude, >1,000 mm rainfall, volcanic soils, loamy soils	5 - 22 <sup>0</sup> C	Trout
Central province and Rift Valley	>1,500 m altitude, >1,000 mm rainfall, volcanic soils, loamy soils	10 - 26 <sup>0</sup> C	Trout, Common carp and Tilapia
Lake region, Western Kenya (Sub humid zone)	1,000-2,000 m altitude, <1,000 mm rainfall, loamy sandy soils or dark red clays	22 - 34 <sup>0</sup> C	Common carp, Catfish, Tilapia
Plains and Northern Kenya	300-500 mm, > 1,200 m altitude, shallow sandy infertile soils	15 - 30 <sup>0</sup> C	Common carp, Tilapia, Catfish

Source: FAO, 1982; FAO, 2016

6. The State Department of Fisheries in Kenya (SDF) has also developed aquaculture suitability maps for the entire country. The following regions/counties are considered suitable for aquaculture development due to their favourable agro-ecological conditions. These include: Busia, Kakamega, Kirinyaga, Homa Bay, Kiambu, Kisii, Kisumu, Kitui, Machakos, Meru South, Nyeri, Vihiga, Kitale, Kajiado, Mwingi, Malindi, Kilifi and some parts of North Horr. During the aquaculture economic stimulus project (ESP), SDF developed detailed suitability maps for locations/villages within counties for the following: Busia, Kakamega, Kirinyaga, Homa Bay, Kiambu, Kisii, Kisumu, Kitui, Machakos, Meru South, Nyeri, Vihiga. These maps will inform project site selection.

### Land resources and aquaculture production

7. Although most parts of the country are suitable for aquaculture, with a potential of 1.4 million hectares, this potential is largely under tapped, with limited interventions in the Central, Nyanza, Western, Rift Valley and Coastal regions of Kenya. Land scarcity and tenure are limitations for aquaculture development, especially among the youth and women. It is imperative therefore that the available land is managed sustainably. Soil erosion is the most common form of land degradation in Kenya and is more prevalent in the arid and semi –arid regions of the country.

8. Declining soil fertility and soil toxicity due to overuse of agrochemicals, siltation and sedimentation, and unsustainable farming practices contribute to low productivity.<sup>65</sup> Some of the possible drivers of land degradation in aquaculture production across counties include soil erosion,

<sup>64</sup> FAO (1982). Aquaculture extension in Sub-Saharan Africa. FAO, Rome, 1982.

<sup>65</sup> FAO (2016). Fisheries and aquaculture country profiles. Republic of Kenya.

siltation and sedimentation of water bodies, deforestation, and loss of vegetative cover. The project will consider investing in some forms of sustainable land management practices to prevent land degradation. This may include specific site selection for location of ponds or aquaculture zones within counties. Mapping of new or existing aquaculture systems will be done to ensure due consideration is made to appropriate sites, soils and water sources. Other measures will include: soil erosion control practices, especially in steep gradients, afforestation to conserve the water towers supplying water to ponds and reservoirs, and a careful determination of the ecological and physical carrying capacity of specific regions/counties, relative to available land resources.

9. Of importance too is alternative land access and tenure among the youth and women (leasing, or group formation). The project may also look into aquaculture technologies that require minimal land such as aqua phonics. It is also necessary to determine whether land tenure systems would negatively affect natural resource management in aquaculture producing regions and propose remedial measures where necessary. This should also involve mitigation of user conflicts, especially in situations where communal/family land is used by individuals. A social carrying capacity analysis may be useful to determine the number of ponds or aquaculture systems a social system can take without leading to significant negative resource use conflicts at household and community levels.

10. Water resources: Kenya is considered a water scarce country with freshwater resources amounting to 552 cubic meters per capita in comparison to the universal minimum of 1,000 cubic meters. Population growth, climate change (drought and floods), unpredictable rainfall patterns and water resources degradation are likely to lead to a fall in this per capita availability to 235 cubic meters by 2025. Improvement of water management and irrigation development are recognized as critical to water security in Kenya's vision 2030 strategy document.<sup>66</sup> Most smallholder farmers rely on water from natural surface sources such as rivers, streams and springs. A few rely on dams, wells and boreholes.

11. Given the dependence of smallholder farmers on natural water sources for aquaculture production, prudent water resource management (conservation, efficient water saving technologies as well as water quality management) will be crucial to ensuring the sustainable use. This is especially so for water constrained counties in Eastern Kenya, Nyanza and some parts of Central Kenya. Selection of sites for pond construction should take into consideration a constant and reliable (preferably natural gradient flow) source of water. Areas with severe water limitations may not be encouraged to engage in aquaculture unless they have alternative technologies or sources of water. Sustainable use and management of water resources should also entail growing fish species in agro ecological conditions best suited for them (for example, trout in highlands/forests) and promoting integrating aquaculture with crop production (to limit effluent discharge into rivers and provide nutrition to crops).

12. Water quality is critical for successful aquaculture production and processing, and health. Water quality for aquaculture is compromised by: poor feed conversion within ponds and water bodies leading to sedimentation/siltation, fish faeces, eutrophication/algal blooms that may limit the amount of oxygen available for fish, water polluted with heavy metals or toxic chemicals. Building the capacity of farmers to monitor water quality is thus very important. Farmers should also be trained on how to monitor and manage abnormal temperature and oxygen levels as these two have a profound impact on the health and survival of fish. Fish processing facilities also need to invest in clean technologies and effluent waste management regimes to avoid water or soil pollution.<sup>67</sup>

13. This project will largely focus on pond culture among smallholder farmers. However, during field visits, it was noted that cage culture is widely practiced particularly in Lake Victoria, and that there are no regulations being implemented to guide sustainable production. It was further observed

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<sup>66</sup> Vision 2030, SMTP 2013-2019.

<sup>67</sup> FarmAfrica (2016). Kenya market led aquaculture programme strategic environmental assessment and environmental management plan. FarmAfrica.

that cage culture best practices, such as carrying capacity, netting and quality of cages, and feeding regimes, were not observed by most farmers. Although cage culture has many benefits, it poses significant environmental challenges, the key one being pollution of water bodies (for example, through faeces, feed sedimentation, poor quality cages, algal blooms, disease outbreaks). The potential for social conflicts is also high if cage farming limits other water uses or abstracts water use. Thus, the project intends to contribute to the development of cage culture guidelines (for examples, guidance on waste management, environmental monitoring and carrying capacity) and to demonstrate cage culture best practices.

14. Trout farming was equally noted to be pervasive especially in the colder parts of Mount Kenya region. Trout farming fetches good income for farmers (10 USD @ Kg). If done inappropriately, trout farming could contribute to water pollution and abstraction of natural bodies. Many farmers engaged in trout farming indicated that they had received authorization from the Water Resources Management Authority (WRMA) and Kiganjo Trout Centre. It was however not clear who was monitoring quality and environmental pollution at farm level. The project may not go into trout farming but may consider looking into trout farming guidelines and engaging relevant stakeholders on mitigation of negative environmental impacts, as well as demonstration of best practices.

15. Aquaculture in artificial reservoirs though not very pervasive yet, is also an area the project finds necessary to develop guidelines and best practices to guide interventions. The key environmental issues to look into when developing standards and guidelines include: siltation and sedimentation as a result of soil erosion, flooding, appropriate harvesting technologies (such as gill nets), recommended fish species, use of cage culture, carrying capacity and stocking, reservoirs' physical design requirements, water quality specifications, pollution control, conservation of biodiversity, income generation activities and coordination between line ministries and departments.

16. Forest and energy resources: Kenya's forest cover stands at 1.24 million and is mainly spread across humid and sub humid parts of the country. Forest cover in Kenya has declined significantly over the years due to unsustainable utilization and management. To conserve the water towers, the project may look into sensitizing or training farmers on sustainable use of forest resources, establishment of tree nurseries and afforestation. The energy sector is very intertwined and dependent on the forest sector because Kenya's primary source of electricity is hydropower. Intensive aquaculture production is very reliant on electricity for filtration and re-circulation of water through pumps. Unreliable and expensive electricity may pose challenges, necessitating the need for renewable and green technologies such as solar pumps.

17. Climate change: climate change and climate variability have had far reaching impacts on Kenya's economy. The sectors of the economy most affected by climate change are: agriculture, forestry, water resources and land use among others. The most common manifestations of climate change in Kenya are prolonged drought (La Niña) and extreme floods (El Niño), which lead massive crop failure and loss of livestock. Receding lakes and drying up of rivers are among other impacts. The country's high vulnerability is exacerbated by over reliance on the natural resource base and low adaptive and coping capacities. Low ability to adapt and cope is compounded by poverty, weak institutions, poor access to resources and infrastructure and lack of information.

18. Smallholder aquaculture is heavily dependent on rainfall. The impacts of climate change will be most pronounced by drought, which causes the drying up of ponds and subsequent loss of fish, reduced food and nutritional security and lowered incomes. The current prolonged drought situation in the country has led to the drying of many ponds and loss of livelihood for several families across fish farming counties. Extreme floods could also destroy ponds, cause soil erosion and increase siltation and pollution (in water bodies and ponds), and lead to loss of fish. Therefore, building adaptation and resilience strategies into the Programme design will be critical.

19. Exploring the potential of climate smart aquaculture approaches at smallholder level could be one such strategy. These may include: solar pumps to pump water to hatcheries or processing plants, simple interventions at farm level (for examples ultra-violet pond liners to reduce loss of water, soil

erosion control, ensuring ideal pond design and depth to conserve water, aqua phonic systems to limit water and land utilization). Visits revealed that farmers had very limited understanding of the scale of the impacts of climate change and adaptation or coping measures to take in different situations. The Programme will also invest in environmental and climate adaptation education and sensitization for farmers as this was noted to be a gap during field visits, with awareness as part of the training package offered to farmers to enable them have a better understanding of environmental management and climate change related impacts as well as required interventions to enable them adapt.

20. Disease management: Fish disease outbreaks in water bodies and ponds are a threat to the sector and the livelihoods of farmers. Kenya lacks capacity in fish pathology and does not have dedicated facilities to diagnose, treat or manage fish diseases. There is thus need to develop this capacity through training staff at county level and upgrading existing institutions to monitor and manage disease outbreaks.

21. Research needs: To ensure that the project is well guided on specific aspects related to environment and climate matters, further and more rigorous research is required at county or region levels on the following areas: requirements and standards for aquaculture production in water reservoirs and cages, carrying capacity for lakes and reservoirs, water (quality and quantity) and soil assessment per fish species and geographical zone, and cage culture best practices.

### **C. Policies, legislation and strategies supporting environmental management and climate change adaptation**

22. To demonstrate its commitment to sound environmental management and climate change mitigation, the Kenya government has developed several policies, legislations and strategies, some of which are supportive of aquaculture. However, it is worth noting that there is need for strong collaboration between different ministries, departments and authorities regulating aquaculture activities due to the fragmented nature of the policies, regulations and legislations (see Table 2 below).

**Table 2: Policies, Legislations, strategies and guidelines supportive of aquaculture in Kenya**

<b>Title</b>	<b>Description</b>	<b>Implementing institution</b>	<b>Role in aquaculture</b>
National Aquaculture Policy (2011).	Promote and facilitate sustainable development of aquaculture.	MoALF –SDF&BE.	Provides a regulatory framework to guide the development, management and regulation of the aquaculture sector.
National Aquaculture Strategy and Development Plan (2010-2015).	Strategy to implement the National Aquaculture Policy.	MoALF –SDF&BE.	Provides the implementation framework for aquaculture in relation to extension, research, private sector development, marketing and capacity building.
The Environmental Management and Co-ordination Act, N° 8 of 1999 (Revised 2012).	Sustainable Management of the environment; and procedures for conducting EIA.	NEMA.	The Act stipulates that environment action plans (EAPs) are prepared every five years at National and county levels. EAPs identify strategies and actions required to mitigate adverse environmental effects and integrate them in development plans and processes.

<b>Title</b>	<b>Description</b>	<b>Implementing institution</b>	<b>Role in aquaculture</b>
Climate Change Act, 2016.	The Act provides a regulatory framework for an enhanced response to climate change, provides mechanisms and measures to improve resilience to climate change and promote low carbon development.	Ministry of Environment and Natural Resources.	The act seeks to mainstream climate resilience in all development plans, and encourages the use of climate proof/clean/green technologies.
The National Climate Change Response Strategy (2010).	The National Climate Change Response Strategy involves comprehensive strategies developed to respond to climate variability and climate change.	Ministry of Environment and Natural Resources.	Proposes a programme of activities and actions to adapt, mitigate, and cope with climate change. For aquaculture, the strategy advocates for integrated water resource management.
Fisheries Act 2016.	Seeks to promote the sustainable use, conservation and management of fisheries resources and habitats in Kenya.	SDF&BE.	The Act endeavours to promote sustainable aquaculture in carefully determined zones as a viable option to contribute to food security and replenishment of natural habitats.
Environmental Management and Coordination (Water Quality) Regulations (2006).	Provides water quality regulations for drinking water, water for industrial use, agricultural, recreational, Fisheries, wildlife, and any other Purposes	Ministry of Environment and Natural Resources.	Defines water quality standards and monitoring parameters; application for effluent discharge into aquatic environment; and specifies the fees that may be charged under the Regulations.
Environmental Management and Coordination (Wetlands, River Banks, Lake Shores and Sea Shore Management) Regulations (2009).	These Regulations make provision for the management, conservation and sustainable use of wetlands and wetland resources and the sustainable utilisation and conservation of (resources on) riverbanks, lakeshores and the seashore.	Ministry of Environment and Natural Resources.	Sets out required permits. Under section 42 of EMCA; Stipulates that permits must be issued by the relevant lead agency and an EIA licence issued by NEMA; and projects having a significant impact on a wetlands, riverbanks, lakeshores or the sea require an EIA.
EIA Guidelines and Administrative procedures (2002).	Provides guidelines and administrative procedures for conducting EIAs in Kenya according to EMCA.	NEMA.	Provides guidelines for conducting EIA and ESIA for fish farming. It also provides reporting and monitoring guidelines for EIA/ESIA.
The Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations (2006).	The Act states that no person shall engage in any activity that may have an adverse impact on any ecosystem, lead to the introduction of any exotic species, or lead to unsustainable use of natural resources, without an EIA License.	Ministry of Environment and Natural Resources.	EIA required for introduction of exotic species in to water bodies.

<b>Title</b>	<b>Description</b>	<b>Implementing institution</b>	<b>Role in aquaculture</b>
Water Act (CAP 372) N° 8 (2002) (Revised 2012).	Promotes sustainable use of water for production purposes for attainment of National cultural and socio-economic development aspirations' (Promote efficient use).	Water Resource Management Authority.	Provides guidelines for the use of water and requirements and procedures for water use permits.
Animal Diseases Act (CAP 364), (revised 2012).	Provides for prevention, management and control of animal diseases.	MoALF; State Department of Livestock (SDL) - Directorate of Veterinary Services (DVS).	Provides guidelines for management of fish disease outbreaks.
The County Governments Act (2012).	Provides the county governments' power, functions and responsibilities to deliver services.	County Governments.	Monitor fish farming in Counties.
Land Act (2012).	An Act to give effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land based resources, and for connected purposes.	Government of Kenya.	Administration and management of public, community and private land.
The Science, Technology and Innovation Act, N° 28 (2013).	Provision for the co-ordination and regulation of the progress of science, technology and innovation in Kenya.	National Commission for Science, Technology and Innovation; Kenya Marine and Fisheries Research Institute (KMFRI); and academic institutions.	Promote and undertake research on current cultured species; new culture species; fish seed and feeds; and monitor impacts of aquaculture.
Investment Promotion Act, N° 6, revised (2012).	Promote and facilitate investors to obtain the necessary licences to invest.	Kenya Investment Promotion Authority.	Promote and facilitate private sector investment in aquaculture.
Pest Control Products Act, N° 6 (revised 2012).	Regulates the importation, exportation, manufacture, distribution and use of products used for the control of pests and of the organic function of plants and animals and for connected purposes.	Pest Control Products Board.	Provides guidelines on use of chemicals.
Pharmacy and Poisons Act, CAP 244, (revised 2009).	Management of the use of veterinary supplements/medicinal in aquaculture.	Pharmacy and Poisons Board.	Provides guidelines for the use of veterinary supplements/medical medicines.
Fish Inspection and Quality Assurance (FIQA).	Ensures fish inspection and quality assurance are done according to laid down procedures.	SDF – FIQA.	Drawing up and implementation of the residue monitoring and control plan for aquaculture, inspection and enforcement of residue legislation, of aquaculture enterprises.

Source: FarmAfrica, 2016; East African Community, 2016; Kenya Government Acts and Policies.

#### D. Environmental, climate and social category

23. Smallholder aquaculture poses medium risks to the environment. Nationally and at county level, there are strategies, legislations, institutions and action plans to reduce the potential negative impacts. It can thus be concluded that the environmental impacts this project may have are manageable and/or reversible. This project is therefore categorized as a Category B project. For this project to remain a category B project, engagement in cage culture, trout farming and reservoirs is limited to development of guidelines for sustainable production and demonstration of best practices.

24. As identified in text and outlined in Table 3 below, there are environmental risk mitigation measures that can address raised concerns. These mitigation measures constitute the basis for the development of an Environment and Social Management Plan (ESMP) and provide guidance for Environmental Impact Assessment (EIA) if required. Both climate and social risk analysis are recommended before implementation and in tandem with the ESMP. For sustainability of interventions, environmental education and climate adaptation measures will be a key output of training offered to farmers by institutions such as RIAT.

##### Climate risk categorization

25. The project's climate risk classification is moderate. Investments will focus on aquaculture systems sensitive to climate change and will require measures to reduce levels of vulnerability. The project will promote climate smart aquaculture to reduce vulnerability and increase the coping capacities of beneficiaries. Promotion of sustainable land and water management practices as well as capacity building at farm and institutional levels will further reduce vulnerability. The project proposes assessments and research into aspects such as carrying capacity, stocking densities, cage culture and trout farming best practices, water quality and quantity requirements per region as a means to making informed decisions on scaling up of interventions. Strong collaboration between relevant institutions such as NEMA, WRMA, ministries of fisheries, forestry and agriculture, and county governments will harness synergies and focused interventions.

**Table 3: Environment and climate risks and mitigation measures**

Potential social, environmental, and climate risks	Mitigation Measures
Pollution or eutrophication of water bodies through effluent discharge from ponds or commercial farms and processing facilities.	<ul style="list-style-type: none"> <li>• Integrated farming approach in which water from ponds is diverted to farmland to provide nutrients for crop production.</li> <li>• Awareness creation among farmers through training or exposure visits.</li> <li>• Regular monitoring of water quality by farmers and relevant support institutions.</li> <li>• Environmental Impact Assessments for commercial farms and processing entities.</li> </ul>
Unauthorised water abstraction and diversion from natural water bodies, thereby limiting water use by other users.	<ul style="list-style-type: none"> <li>• Water abstraction or diversion should be permitted by the Water Resources and Management Authority (WRMA).</li> </ul>
Pond location and design.	<ul style="list-style-type: none"> <li>• Water quantity and quality assessments per County, determine appropriate depth of the pond, soil quality assessment.</li> </ul>
Fish diseases outbreaks.	<ul style="list-style-type: none"> <li>• Domesticated EAC Partner states criteria for listing and notifying fish diseases in accordance with OIE Aquatic Animal Health Code.</li> <li>• Aquatic animal health surveillance system – training, upgrading existing facilities.</li> <li>• Develop fish health and welfare standards and code of practice.</li> <li>• Strict translocation protocols.</li> <li>• Ensure correct stocking densities, and handling protocols.</li> <li>• Good husbandry at farm level.</li> </ul>



<b>Potential social, environmental, and climate risks</b>	<b>Mitigation Measures</b>
Poor citation of ponds thereby limiting water availability and increasing soil erosion.	<ul style="list-style-type: none"> <li>• Ponds should be cited in areas where water availability is regular and where water from natural bodies can flow in through gravity.</li> <li>• Soil erosion prevention measures such as bench terraces, agroforestry, cover cropping or mulching can be done to prevent soil erosion and siltation of ponds.</li> <li>• Creation of buffer zones at water sources.</li> <li>• Abiding by WRMA and water user associations (WUA) guidelines</li> </ul>
Water stress and drought as a result of climate change or climate variability,	<ul style="list-style-type: none"> <li>• Efficient water use – use of ultra-violet pond liners to limit water loss (but with good control of algae growth) and use of climate smart aquaculture technologies such as aqua phonics that have low water demands.</li> <li>• Fast maturing fish species.</li> </ul>
In adequate aquaculture zones/suitability maps.	<ul style="list-style-type: none"> <li>• Strengthened current ones to include a range of factors such as soil, water and health aspects.</li> </ul>
Flooding as a result of climate change or climate variability.	<ul style="list-style-type: none"> <li>• Building trenches along ponds to divert excess water during flooding into dry ponds or reservoirs to store excess water.</li> </ul>
Cage culture could result in environmental pollution and disease outbreaks.	<ul style="list-style-type: none"> <li>• Development of cage culture guidelines and protocols (domestication of already existing EAC cage culture guidelines, 2016).</li> <li>• Environmental monitoring and reporting plan.</li> <li>• Waste management plan.</li> <li>• ESIA.</li> <li>• Site, suitability and carrying capacity determination.</li> <li>• Demonstration of best practices (site selection, feeding, fingerlings production, nets used, quality of cages, management).</li> </ul>
Trout farming may lead to environmental degradation.	<ul style="list-style-type: none"> <li>• Assess National level guidelines – Kiganjo Trout Centre for adequacy.</li> <li>• Demonstration of best practices.</li> <li>• Follow WRMA guidelines and seek permits for water use.</li> </ul>
Stocking reservoirs.	<ul style="list-style-type: none"> <li>• Development of guidelines and demonstration of best practices.</li> <li>• Assessment of required environmental management practices.</li> <li>• Determination of appropriate harvesting technologies and fish species.</li> </ul>
Drought.	<ul style="list-style-type: none"> <li>• Draining one pond to fill another, water harvesting, lining ponds.</li> </ul>
Agro-ecological unsuitability of fish species and introduction of aquaculture for some regions.	<ul style="list-style-type: none"> <li>• Develop agro-ecological aquaculture zones/maps to guide aquaculture development and species selection in implementing counties.</li> </ul>
Reduction in water availability as a result of over exploitation of forests.	<ul style="list-style-type: none"> <li>• Promote afforestation and reforestation measures.</li> </ul>
Predators (frogs, crocodiles, birds).	<ul style="list-style-type: none"> <li>• Fencing around the pond.</li> <li>• Clear bushes around ponds.</li> <li>• Netting above the water to control birds.</li> </ul>
Pond design and management.	<ul style="list-style-type: none"> <li>• Consider the neighbouring land uses and potential pollution sources.</li> </ul>
Outbreak of diseases due to poor food safety standards.	<ul style="list-style-type: none"> <li>• Develop criteria for food safety and handling at farm level, including traceability mechanisms.</li> <li>• Train farmers on good food safety standards and handling.</li> </ul>
Outbreak of malaria and bilharzia due to proliferation of mosquitoes and bilharzia parasites.	<ul style="list-style-type: none"> <li>• Encourage clearance of bushes around homes and use of mosquito nets or repellents.</li> <li>• For Bilharzia, avoid walking bare feet in ponds and use protective gear.</li> <li>• Involve public health and create awareness.</li> </ul>

<b>Potential social, environmental, and climate risks</b>	<b>Mitigation Measures</b>
Degradation of the quality of lake water and exacerbation of the hyacinth problem due to unregulated cage culture.	<ul style="list-style-type: none"> <li>• Undertake studies and assessment on the viability of cage culture.</li> <li>• Support relevant institutions in the development of cage culture best practices and environmental management guidelines.</li> <li>• Pilot best practices for demonstration purposes, based on the outcomes of the strategic environmental impact assessment or an EIA.</li> </ul>
Expensive and unreliable electricity for intensive aquaculture.	<ul style="list-style-type: none"> <li>• Green technologies such as solar pumps.</li> </ul>
Increase in harmful algae blooms.	<ul style="list-style-type: none"> <li>• Monitoring and early warning system in place.</li> <li>• Efficient feeding regimes and high feed quality.</li> </ul>
Irresponsible use of chemicals by fish farmers.	<ul style="list-style-type: none"> <li>• List of allowable chemicals.</li> <li>• Training for farmers on safe use, handling and disposal of chemical products.</li> </ul>
Vulnerability to climate and environment risks among farmers due to limited knowledge	<ul style="list-style-type: none"> <li>• Development of farmer targeted early warning systems.</li> <li>• Integrated environmental education and training for farmers within project training interventions.</li> </ul>
Loss of harvest due to predators such as birds, frogs and monitor lizards.	<ul style="list-style-type: none"> <li>• Fencing ponds and use of nets to control predators.</li> </ul>
Loss of stock due to disease, or drought.	<ul style="list-style-type: none"> <li>• Staggered fish stocking and separation of ponds to reduce risks.</li> <li>• Planting trees around ponds can reduce the impact of drought.</li> </ul>
Poor fish waste management (for example, scales produced after washing).	<ul style="list-style-type: none"> <li>• Use of fish waste as manure for crops or as a Component of fish feed.</li> </ul>
Accidental falling and drowning in ponds (for example, by children).	<ul style="list-style-type: none"> <li>• Fencing off ponds and putting up warning signs.</li> <li>• Public awareness.</li> </ul>
Resource use/social conflicts.	<ul style="list-style-type: none"> <li>• Community participation and consultation in all stages of the project.</li> <li>• Ensure due procedure and protocols are adhered to.</li> <li>• Grievance/complaints channelling mechanism.</li> </ul>

### **Environment and Social Management Plan (ESMP)**

26. The ESMP is an important building block for attaining sustainable development, and mitigating environment, climate and social risks outlined in Table 3 above. The ESMP will also ensure that project activities comply with IFAD's environment and climate policies, SECAPs, and the Government of Kenya's legal frameworks and requirements. The overall responsibility of the ESMP will rest with the State Department of Fisheries and the National Environment Management Authority in collaboration with other relevant line ministries.

27. The ESMP should be completed in the start-up phase of the project as a condition for the first withdrawal. The key aspects of the ESMP that would need to be taken into consideration when designing and undertaking it include: stakeholder engagement, screening to identify specific environmental and social risks; risk classification; environmental and social impact assessment; environmental and social commitment plan; implementation, monitoring and reporting; capacity development for environment and social standards; disclosure of relevant project information; and a grievance mechanism.

28. The monitoring of the ESMP will be done annually or biannually during supervision missions. Evaluation will be undertaken at mid-term level and at project completion. The monitoring indicators (output, outcome and impact level) will be developed during the ESMP development stage and

integrated in the PIM. Indicators should also include some output indicators mentioned in the RIMS under strategic objective 1 (increasing productive capacities) and strategic objective 3 (environmental sustainability and climate resilience).

### **E. Environmental benefits**

29. The project is likely to contribute to the following environmental benefits: adoption of climate smart approaches and technologies such as aquaponics, is likely to lead to efficient use of water and land, thus leading to higher farm productivity and incomes per acre; pond fish is likely to be less contaminated with heavy metals such as mercury, thereby leading to lowered incidences of mercury poisoning and related health complications; integration of pond culture with crop production systems is likely to contribute to less effluent disposal in lakes/rivers, and provide nutrition for crops, thereby saving costs on fertilizers and ensuring clean water bodies for multiple uses; development of guidelines and demonstration of best practices for cage culture is likely to reduce environmental pollution of the water bodies, adhere to the carrying capacity, and reduce social conflicts; sound water quality management is likely to increase the production and productivity in ponds, thereby leading to higher incomes for farmers; environmental conservation activities or risk mitigation measures such as soil erosion control and afforestation are likely to reduce siltation in ponds, thereby increasing production and incomes. Trees will also serve as carbon sinks. These benefits will be costed during the first year of implementation when the real impacts are clear and quantifiable.

### **F. Incentives for good practices**

30. The project will reward good practice through a recognition mechanism that provides exposure and learning experiences for outstanding farmers, processors and other value chain actors.

### **G. Participatory processes**

31. The project will ensure community participation and involvement of all relevant stakeholders in consultative processes and decision making, especially on management and utilization of environmental resources.

## Appendix 12.1 Social, Environmental and Climate Review Note

### Annex A Guiding questions for environment, social and climate risk screening

Question	Yes/No or N/A	Comments/explanation
<b>Category A – the following may have significant and often irreversible or not readily remedied adverse environmental and/or social implications.</b>		
<b>Project Location</b>		
1. Will the project develop (GS1) any wetlands?	NO	
2. Would the project potentially cause significant adverse impacts to habitats and/or ecosystems and their services (Conversion of more than 50 ha of natural forest, loss of habitat, erosion/ other form of land degradation, fragmentation, hydrological changes)? (GS1,2,5)	NO	
3. Does the proposed project target area include protected areas and their buffer zones, ecologically sensitive areas, coral reefs, mangroves swamps, small island ecosystems; areas of global/National significance for biodiversity conservation and/or biodiversity-rich area; habitats depended on by endangered species? (GS1)	NO	
<b>Natural resource management</b>		
4. Will the project lead to unsustainable NRM practices (fisheries, forestry, livestock) or/and result in exceeding carrying capacity? (GS4,5,6)	NO	
5. Does the project involve fisheries development in situations where little up-to-date information exists on stocks and sustainable yield? (GS4)	NO	
6. Does the project pose a risk of introducing invasive species? (GS1)	NO	
7. Does the project include manufacture and transportation of hazardous and toxic materials that may affect the environment? (GS2)	NO	
<b>Water</b>		
8. Does the project involve large-scale irrigation schemes (GS7) rehabilitation/ development (above 100 ha per scheme)?	N/A	
9. Does the project involve significant extraction (GS7) of ground water (above recharge capacity)?	NO	
10. Does the project include water-based (ground or surface) development (GS7) where it is believed that significant depletion due to climate change or overutilization has occurred?	NO	
11. Does the project involve significant extraction or diversion of surface water leaving the river flow below 20 % above environmental flow also taking into account downstream users? (GN8)	NO	
12. Does the project include drainage or correction of natural water (GS7) bodies (glacier lake drainage, river training)?	NO	
13. Does the project make use of wastewater (industrial, mining, sewage effluent)?	NO	
<b>Infrastructure</b>		

Question	Yes/No or N/A	Comments/explanation
14. Does the project include construction/rehabilitation of roads (GS10) that entail the total area being cleared above 10% of private land?	N/A	
15. Does the project include construction/rehabilitation of large-scale dam(s)/reservoir (more than 15 m high, or 5—15 m high with a reservoir exceeding 3 million m <sup>3</sup> )? (GS8)	N/A	
<b>Social</b>		
16. Would the project result in economic displacement <sup>68</sup> (loss of assets or access to resources) or physical resettlement of more than 20 people or impacting more than 20% of an individual asset? (GS13)	N/A	
17. Would the project result in conversion and/or loss of physical cultural resources? (GS9)	NO	
18. Will the project have significant social adverse impacts (affecting access to and/use rights to land, access to potable water and water for other uses) on local communities (including Indigenous People) or other project-affected parties? (GS13)	NO	
19. Will the project result in significant use of agrochemicals that may lead to life-threatening illness and long-term public health and safety concerns? (GS14)	NO	
<b>Rural Finance</b>		
20. Does the project support any of the above (Q1 to 19) through the provision of a line of credit to Financial Service Providers? (GS12)	NO	
<b>Category B – the following may have some adverse environmental and/or social implications that can be readily remedied.</b>		
<b>Location</b>		
21. Does the project involve agricultural intensification and/or expansion of cropping area in non-sensitive areas? (GS?)	NO	
<b>Natural resource management</b>		
22. Does the project involve land use changes (agricultural intensification and/or expansion of the cropping area) and resources that may have adverse impacts on habitats, ecosystems and/or livelihoods? (GS1, 2 and 12)	NO	
23. Will the project result in increased use of agrochemicals (GS2) that may affect the natural environment/human health? (GS14)	NO	
24. Do the project activities include rangeland and livestock development? (GS6)	NO	
25. Does the project involve fisheries where there is information on sustainable yield? Is there any risk of overfishing, habitat damage and knowledge of fishing zones and seasons? (GS4)	NO	

<sup>68</sup> Economic displacement implies the loss of land, assets, access to assets, income sources or means of livelihoods (Guidance Statement 13)

Question	Yes/No or N/A	Comments/explanation
26. Will the project activities include aquaculture and/or agriculture in newly introduced or intensively practised areas? Do project activities include conversion of wetlands and clearing of coastal vegetation, change in hydrology or introduction of exotic species? (GS4)	YES	Aquaculture will be introduced in new areas. Commercial farms engaged by the project may practice intensive aquaculture.
27. Do the project activities include natural resources-based value chain development? (GS1, 6, 12)	YES	The project will have a value chain approach to aquaculture development.
28. Does the project increase the need of fuelwood or fossil energy?	NO	
<b>Water</b>		
29. Do the project activities include watershed management or rehabilitation?	YES	The project will rehabilitate degraded ponds, and may also rehabilitate degraded reservoirs.
30. Does the project include large-scale soil and water conservation measures? (GS1 and 5)	NO	
<b>Infrastructure</b>		
31. Does the project include small-scale irrigation and drainage projects (GS7 and 8), and water impoundment including small dams (except in wetlands)?	NO	
32. Does the project include small and micro enterprise development sub-projects? (GS12 and 13)	YES	The project is a public private producer partnership (PPPP) and will therefore develop small and micro enterprise capacities of smallholder producers.
33. Does the project include development of agro-processing facilities? (GS2, 6, 12)	YES	The project will provide support through training and grants to small and medium scale agro processing units, to improve their levels of efficiency.
34. Will the construction or operation of the project cause an increase in traffic on rural roads? (GS10)	NO	
<b>Social</b>		
35. Would any of the project activities have minor adverse impacts on physical cultural resources? (GS9)	NO	
36. Would the project have low probability to have physical resettlement or economic displacement? (GS13)	NO	
37. Will the project require a migrant workforce during construction? (GS13)	NO	
38. Will the project require seasonal workers to plant and/or harvest produce? (GS13)	YES	Smallholder farmers, medium scale farmers involved in the project will hire labourers during peak seasons.

Question	Yes/No or N/A	Comments/explanation
39. Would the project result short term public health and safety concerns? (GS14)	YES	There is likelihood of malaria outbreak due to stagnated pond water. Disease outbreaks because of poor food safety and handling may also occur.
<b>Rural Finance</b>		
40. Does the project support any of the above (Q21 to 39) through the provision of a line of credit to Financial Service Providers? (GS12)	YES	The project will provide matching grants to financial service providers.

### Guidance for categorisation

"Yes" response to any questions between 1-20.	Environmental and social category is A.	ESIA or ESMF (full or specific) is required depending on availability of information.  Also some specific questions would require the below specific actions: <ul style="list-style-type: none"> <li>• Yes to Q16 - A RAP or RAF is required depending on availability of information.</li> <li>• Yes to Q17- A Physical Cultural Resources Management Plan is required that includes provisions for managing chance finds at implementation.</li> <li>• Yes to Q18 - FPIC should be obtained/ FPIC implementation plan is required depending on whether the affected communities are identifiable. In instances where indigenous people are affected an IPP is required. A Social Impact Assessment is required.</li> <li>• Yes to Q7 and Q19 - A Pest Management Plan is required.</li> </ul>
"No" response to 1-20 and "Yes" response to any questions between 21-40.	Environmental and social category is B.	An Environmental and Social Analysis to develop an ESMP is required.
"No" response to all questions between 1-40.	Environmental and social category is C.	No further analysis is required.

In case projects falls under both category A and B, the highest category will be taken as reference. The determination of the project category and classification will depend on the magnitude of impacts would depend on the scale of such activities, a cautious approach to the concern of cumulative impacts is considered essential. In such cases, the necessary environmental and social analysis and associated budget should be incorporated into project design. Such projects may be considered for Category B.

Determining the environmental and social category A, including the extent of assessments and studies to be conducted, will also take into account available information, (recent studies and assessments, including on other initiatives in the country), to the extent these are relevant to the proposed project.

Declassification (from A to B or from B to C) may also be possible in case negative externalities are being addressed by other projects or activities implemented by third parties.

## Appendix 12.1 Social, Environmental and Climate Review Note

### Annex B Guiding questions for climate risk screening

Question	Yes	No	Additional Explanation of 'Yes' response
Is the target group of the project dependent on climate-sensitive natural resources (such as drought-prone crops, rainwater-fed agricultural plots, migratory fish stocks)?	X		Most communities in the Programme areas are reliant on maize as a staple, while those around the lake are dependent on maize and fish for their staple food.
Has the project area been subject to extreme weather events in the past, such as flooding, drought, tropical storms or heat waves?	X		Drought and flooding are the primary extreme weather events in some Programme sites.
Could changes in temperature, rainfall or extreme weather affect the project impact, sustainability or cost over its lifetime?	X		If sustainable water management and availability approaches are not integrated into the Programme, the sustainability of the Programme could be threatened.
Will climate variability likely affect agricultural productivity within the project (crops/livestock/fisheries) or incidence of pests and diseases?	X		This would be in form of fish diseases in the lake or ponds and limited availability of water for fish in lakes and ponds. Unregulated abstraction of water sources could also limit water available for use in crop and livestock production.
Would weather-related risks or climatic extremes adversely impact upon key stages of identified value chains in the project (from production to markets)?	x		Limited water supply and extreme temperatures are likely to negatively affect fish production. Limited fish production is likely to affect all other components of the fish value chain negatively.
Does the project have potential to integrate climate resilience measures without extensive additional costs (such as applying improved building codes; expanding capacity building programmes; or including climate risk issues in policy processes)	X		Simple land and water management approaches will be used, as well as climate smart aquaculture approaches to promote climate resilience.
Would the project benefit from a more detailed climate risk and vulnerability analysis to identify the most vulnerable rural population, improve targeting and identify additional complementary investment actions to manage climate risks?	X		This is necessary before implementation commences.



## Appendix 13: Contents of the Programme Life File

- ✓ Programme Concept Note, January 2017.
- ✓ Working Papers.
  - WP1: Poverty, gender and targeting.
  - WP2: Fisheries subsector and aquaculture.
  - WP3: Aquaculture value chains and PPPPs.
  - WP4: Access to finance for aquaculture.
  - WP5: Financial management arrangements.
  - WP6: Procurement capacity assessment.
  - WP7: Institutions and implementation arrangements.
  - WP8: ABDP economic and financial analysis.
  - WP9: Water requirements for aquaculture in Kenya.
  - WP10: Aquaculture extension and advisory services.
  - WP11: Draft Programme Implementation Manual.
  - WP12 Mainstreaming nutrition
  - WP13: Aquaculture research and development
  - WP14: Programme costs and financing
- ✓ Result-based Country Strategic Opportunities Programme for Kenya (RB-COSOP), September 2013.
- ✓ IFAD PTA, How to do fisheries, aquaculture and climate change, November 2015.
- ✓ Country portfolio of loans and grants.
- ✓ IFAD - Kenya Aquaculture Scoping Study.

### A. Knowledge base not generated by the Programme.

- ✓ Ministry of Agriculture, Livestock and Fisheries Strategic Plan 2013-2017.
- ✓ Kenya fish farming enterprise productivity capacity assessment and gap analysis report, May 2016, State Department of Fisheries.
- ✓ ESP progress report and aqua suitability maps.
- ✓ Report on market study of the aquaculture market in Kenya – Kenya Market-Led Aquaculture Programme (KMAP), Lattice Consulting.
- ✓ Kenya Market Led Aquaculture Programme (FarmAfrica).
- ✓ Economic Stimulus Programme (GoK).