

Kenya County Climate Risk Profile Annex: Homa Bay County

Annex 1

Major Value Chain Commodities

The table below describes the quantity and value of production for some of the most important crop commodities in Homa Bay County.

Table 1. Quantity and value of production of crop products in Homa Bay County

Crop	Price/unit (KES/90kg)	Production (tons)	Value (KSh million)
Dry Maize	2,341	80,538	2,095
Beans	4,693	18,180	948
Sorghum	2,298	29,321	749
Millet	2,827	12,487	329
Total			4,121

Source: GoK (2014)

Annex 2

Quantity and value of livestock products in Homa Bay County

The table below describes the quantity and value of production for some of the most important livestock commodities in Homa Bay County.

Table 1. Quantity and value of production of livestock and animal products

Product	Unit	Quantity	Value (KSh million)
Milk	L	30,670,000	1,840.2
Beef	kg	2,901,610	783.4
Egg	no	1,944,333	583.3
Poultry meat	kg	1,841,666	388.3
Honey	kg	32,018	16.0

Source: GoK (2014)

Annex 3

Main sources of income from agriculture disaggregated by gender

Differences can be observed between the income earned from the prioritized value chains based upon both the gender and age of the head of the household: these differences are captured in the table below.

Table 2: Primary source of income by head of household

Source of Income	Head of Household							
	Men		Women		Youth		Total	
	%	KES	%	KES	%	KES	%	KES
Crop	36	40,167	44	30,434	59	45,132	40	39,434
Livestock	19	21,793	29	20,195	21	15,614	21	20,777
Woodlot	17	19,050	11	7,600	5	3,733	15	14,589
Renting out Pasture	3	3,000	5	3,633	-	-	4	3,475
Other*¹	25	27,957	11	7,300	15	11,480	21	20,221
Total	100	111,967	100	69,162	100	75,959	100	98,496

Source: GoK (2014)

¹ Other includes the sale of the value added products, vending of fruits, nurseries etc.

Annex 4

Crop productivity by gender

Differences can be observed between the productivity of the prioritized value chains based upon both the gender and age of the head of the household, as well as the growing season in consideration. These differences are captured in the table below.

Table 2. Productivity of main crops

Crop	Mean area (acres)		% of farmers growing crop						Productivity (Kg / acre)							
			Men		Women		Youth		Men		Women		Youth		All	
Season	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Maize	1.6	1.5	96	91	96	90	94		869.7	1,421	1,968	289.6	660.2	345.0	1,023	1,087
Beans	1.3	1.2	60	54	59	49	54	50	196.5	191.8	84.5	127.0	110.6	121.3	166.1	171.6

Source: GoK (2014)

Annex 5

Adaptation options in Homa Bay, as identified in the ASDSP

Various adaptation strategies were identified by stakeholders and residents of Homa Bay County in the Government of Kenya's "Agricultural Sector Development Support Programme (ASDSP)" of 2014. The table below compiles these results and disaggregates them by percentage of the population using each practice, as well as percentage based on the gender and age of the head of the household.

Table 3: Adaptation strategies as defined in the ASDSP

Adaptation strategies	Adoption Rate (% by Head of Household)				Indicators				
	M	F	Y	All	Value chain link	Technical implementation	Inputs	Results sought	Challenges or difficulties
Value addition	18.5	13.2	10	16.3	Post-harvest	Processing	Processors, transporters, packaging material, Cooler boxes for the fish	Product diversification such as peanut butter from groundnut, sorghum used in breweries, packed <i>omena</i> sold in supermarkets, ghee income generation,	Exploitation by middlemen Some of the inputs like the cooler boxes are not affordable to majority of the farmers.
Staggered cropping	17.6	22.6	18	18.5	Production	Training	Farm inputs (seeds, fertilizers, labour, land, etc.)	Improved yield	Prohibitive input prices
Food storage facilities	5.9	3.8	4	5.2	Post-harvest	Training on post harvest handling and storage by Caritas NCPB	Storage pesticides, traditional on farm granaries, NCPB, metal silos Cooler boxes	Food security	Inadequate food storage facilities; Weak and inadequate farmers cooperatives; Exploitation by middlemen. Rudimentary method of the food storage has led to the several cases of the Aflatoxin
Water harvesting	24.8	13.2	34	24.3	Production	Expertise, skills in water harvesting techniques	Water tanks, water pans, shallow wells, sub-surface dams	Improved, consistent yield	High price of water tanks. Installation of dam is expensive
Change crop type	44.1	28.3	40	40.9	Production	Advisories / sensitization from relevant depts.; early maturing varieties such DH04; drought resistant and tolerant	Cereal variety of sorghum, sweet potatoes, groundnuts use the 90-100 days early maturing variety, cassava varieties include the MM series, Minjera, Early-maturing	Income generation, stability	Early maturing varieties can be expensive to some farmers

						crops. Shorten fish growth period from 9 months to 6 months	beans (DH04) and maize (Simba)		
Increase Soil and water conservation	27.5	20.8	28	26.5	Production	Training: minimum/zero tillage, mulching, cover crops, crop rotation. Plant napier grass	Farm inputs (seeds, fertilizers, , water pans	Improved yield; conservation. Reduced soil erosion and runoffs to the rivers	Increased labour required in the sustainable land management practices.(e.g planting Napier grass)
Diversification of enterprises	3.6	5.7	10	4.9	Marketing	dairy goat, meat goat, poultry keeping, beekeeping, Aquaculture, rabbit keeping, horticulture	Capital, labour	Income generation Improved health to the HIV/AIDS patients from the dairy goat.	Starting capital
Seek off farm employment	12.6	13.2	16	13.2	Marketing	Skills and expertise in non-agricultural sectors; training	Experience in other sectors (mining, hospitality, industry, public sector); Youths engage in taxi services such as boda boda	Income generation	High illiteracy levels
Tree planting	36.5	20.8	28	32.6	Production	Sensitisation, encouragement from KFS,NEMA, Catholic Diocese of Homa Bay, LVEMP,LB DA	Nurseries for local/ indigenous trees; water	Sustainable natural resource management	Climate hazards; lack of community participation and involvement.
Change livestock type/breed	6.8	0.0	8	5.8	Production	Improved local breeds; such as local poultry. artificial insemination Vaccination.	Husbandry materials	Income generation	Improved local breeds are expensive and may not cope well or may replace the original specie; AI being a private good is expensive for most of the farmers, AI services provided for free by the County government not well known
Feed conservation and diversification	4.1	1.9	2	3.4	Production	Fodder as Mulato II by ICIPE	Drought and pest tolerant such as Mulato II	Less of household income used on external inputs Improved yield Increased income	These technologies are not readily available to majority of the farmers
Adopt/ increase Irrigation	5.4	0.0	4	4.3	Production	Licensing, Irrigation such as the	Irrigation infrastructure such as kits,	Improved vegetable production, nutrition Increase fodder	Bureaucracy and protocols in licensing.

activities						big project of Kimira Oluchi	pipes; water	supply	
Lease land	3.2	1.9	0	2.5	Production	Where one has more than on parcel of land.	Leaser, lessee	Increased household income	Not well known by most of the farmers
Buy Insurance	0.9	0.0	0	0.6	marketing	Training in the insurance dynamics.	Premiums payment Insurer,	Assurance in the agricultural production	Some farmers do not understand the dynamics of the insurance.

Source: GoK, 2014