



KENYA

food systems:

Summary of available data



FOOD PRODUCTION



FOOD PROCESSING AND DISTRIBUTION



FOOD LOSS AND INORGANIC WASTE



FOOD ACCESS AND CONSUMPTION



FOOD AND WATER SAFETY



NUTRITION



SOCIOPOLITICAL CONTEXT



ENVIRONMENTAL HEALTH

8 Domains of Sustainable Diets

BACKGROUND

Though economic growth in Kenya has wavered over the past three decades, incomes and living standards have improved for a majority of the population (World Bank, 2016). Improvements in living standards have been paralleled by overall population increases and an increase in the proportion of the population living in urban areas (projected to be 44% by 2050) (Owuor et al., 2017). These trends provide background context for numerous challenges faced by the Kenyan food system.

In recent years, the Kenyan government has put in place measures such as tax exemption of some agricultural inputs, subsidy programs, market reforms, and policies to enhance sustainable production and consumption. Nevertheless, production rarely meets domestic demand, and market reforms have not been successful at stabilizing food access. In 2017 and 2018, for example, the country experienced major maize and sugar crises mostly due to dysfunctional agricultural markets. At the same time, the country has seen the rapid spread of supermarkets over the last decade (Qaim et al., 2014), providing both new opportunities and challenges for access to safe, affordable, and healthy foods.

While gains have been made in reducing child stunting in the country, considerable progress remains to be achieved. An estimated 26% of children under five years are stunted, 11% underweight, and 4% wasted. Though just 4% of young children are overweight, one-third of women of reproductive age are either overweight or obese, and another 9% underweight (KNBS, 2015).

This data profile is one output of the *Entry points to Advance Transitions towards Sustainable diets* (EATS) project, the goal of which is to understand how existing data can be leveraged to inform decision making regarding how to intervene to effectively strengthen the sustainability of food systems in Kenya.

As an initial step towards this goal, the purpose of this profile is to communicate the results of our efforts to characterize available food systems data from Kenya. Our data characterization process was based on a review of existing datasets on food, agriculture, the environment, and nutrition at varying scales, from local to national. After characterizing recent data sources collected since 2000, we qualitatively categorized the data into eight domains through consultations with experts and sustainable diets conceptual

frameworks: (1) food production, (2) food processing and distribution, (3) food loss and inorganic waste, (4) food access and consumption, (5) food and water safety, (6) nutrition, (7) sociopolitical context, and (8) environmental health.

SUMMARY OF DATA CHARACTERIZATION

Identification of datasets

A total of 162 datasets were identified (Table 1). Forty-eight of these were primary datasets and 114 were secondary datasets (i.e., data were re-analyses of primary data sources). Twenty-two of the 48 primary datasets were collected through cross-sectional studies, while 26 were time series studies (i.e., studies that repeated use of the same measurement instrument). Government and project reports constituted nearly half (49%) of the secondary datasets identified. Nearly a quarter of the primary datasets (n=21), and numerous secondary datasets (n=47) were collected after 2011 (n=47) (Table 2).

A diversity of methodologies were used to collect these data (e.g., quantitative surveys, anthropometric assessments, focus group discussions, open-ended interviews). Interview-based datasets were based on a wide variety of food system stakeholders ranging from households (including from both farming and non-farming communities), farmer organizations, market vendors, and more. Nearly all of the time series data (23 out of 26 datasets) were nationally representative datasets, while just 3 focused on smaller regions; Nairobi, Central, and Northern Kenya. Sample sizes for the primary

Table 1. Number of primary and secondary datasets identified, by study design.

	Number identified
Primary datasets	
Cross-sectional	22
Repeated use of instrument (i.e., time series)	26
Secondary datasets	
Government and project reports	56
Research articles	33
Organization and government strategic plans	8
Manuals and guidelines (on elements of food system domains)	8
Websites (on elements of food system domains)	5
Policies and policy briefs	4
Total	162

datasets ranged from a minimum of 17 to a maximum of 40,300.

Across the 48 primary datasets, a variety of additional variables such as age, gender, education, ethnicity, occupation, and wealth, were also present. Studies associated with large-scale data collection collected a similar set of additional variables, while datasets obtained from small-scale studies collected more distinct variables (e.g., distance to market, type of market etc.), in addition to the general set of additional variables from larger studies.









We accessed raw data for 14 of the 48 primary datasets, and 102 of the 114 secondary datasets. The primary data were mostly obtained through online requests (this entailed filling out a request form), sending emails, and physical visits to the respective organizations. The protocols for accessing the remaining datasets varied greatly (i.e., e-mail request, memorandum of understanding, non-disclosure agreement, etc.), and was dependent on the data-producing institution.

CHARACTERIZATION OF FOOD SYSTEM DOMAINS

Domain mapping of the 162 datasets revealed that slightly more than half (52%) of the primary and secondary data sources were associated with the production domain (n=84) (Figure 1). The nutrition (n=22), and food and water safety (n=22) domains were the least represented domains in the datasets. The food processing and distribution (n=38), environmental health (n=39), and sociopolitical context (n=40) domains were all well represented among the datasets.

A total of 63 data-producing institutions (“data producers”) were involved in developing the 162 datasets analyzed. Most of these were research institutions (n=19) and the government (n=17) (Table 3). To better characterize the priorities of the data producers vis-à-vis the datasets and their domains, we extracted the institutional mandates of these organizations, using a similar strategy that was used to map datasets to their domains, and then mapped the text in the mandates to the eight domains.

Table 2. Timing of data collection for the identified datasets.

Date of data collection	Number of datasets	Food production	Food processing and distribution	Food loss and inorganic waste	Food access and consumption	Food and water safety	Nutrition	Sociopolitical context	Environmental health
									
Primary datasets									
Before 1990	7	7	0	0	0	1	1	1	1
1991-2000	12	10	1	0	0	2	1	1	3
2001-2010	21	12	3	3	4	2	3	2	3
2011-2018	39	21	3	4	6	2	4	4	5
Secondary datasets									
Before 1990	3	0	0	0	0	0	2	0	1
1991-2000	4	1	0	0	0	0	2	0	1
2001-2010	18	6	3	0	3	4	2	5	4
2011-2018	96	47	36	20	15	22	23	35	31

¹ The date of data collection for time series data is indicated as the earliest time point of the time series

² Number of datasets refers to the total number of primary and secondary datasets characterized.

Most data producers had institutional mandates associated with the production domain (n=35), while the food loss and inorganic waste domain was the least frequently mapped (n=2) (Figure 2).

CONCLUSION

The majority of the datasets we identified were reports, which were based on information from primary sources. This trend suggests the

dearth of available primary data Kenya. Accessing primary data was, not surprisingly, more difficult than accessing secondary data, which was commonly accessible online. The food production domain clearly dominates the food systems data landscape in Kenya. While this is a strength of the available data in Kenya, the paucity of data on nutrition and food safety, in particular, is problematic for food systems action.

The data we have identified so far is very fragmented, except for national statistics from the Kenya Demographic and Health Survey and national census data. While we have identified a variety of data sources, it is challenging to integrate them to offer a holistic view of food systems challenges given the diversity of collection methodologies and study purposes.

The results presented in this data profile present a strong case for the

Table 3. Number of data-producing institutions, by type.

	Government agencies	Development agencies			Private	Academia	UN agencies
		Development	Research	Humanitarian			
Number of institutions	16	13	19	2	4	6	3
Number of datasets	67	26	29	2	8	23	6

Figure 1. Domain mapping of identified datasets (includes primary and secondary datasets).

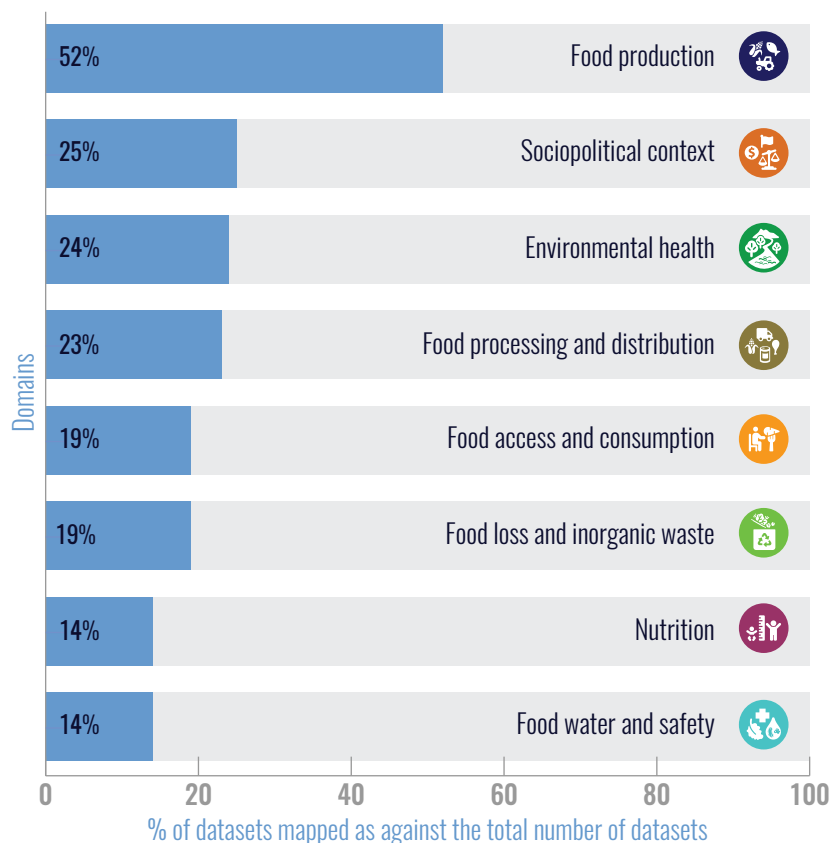
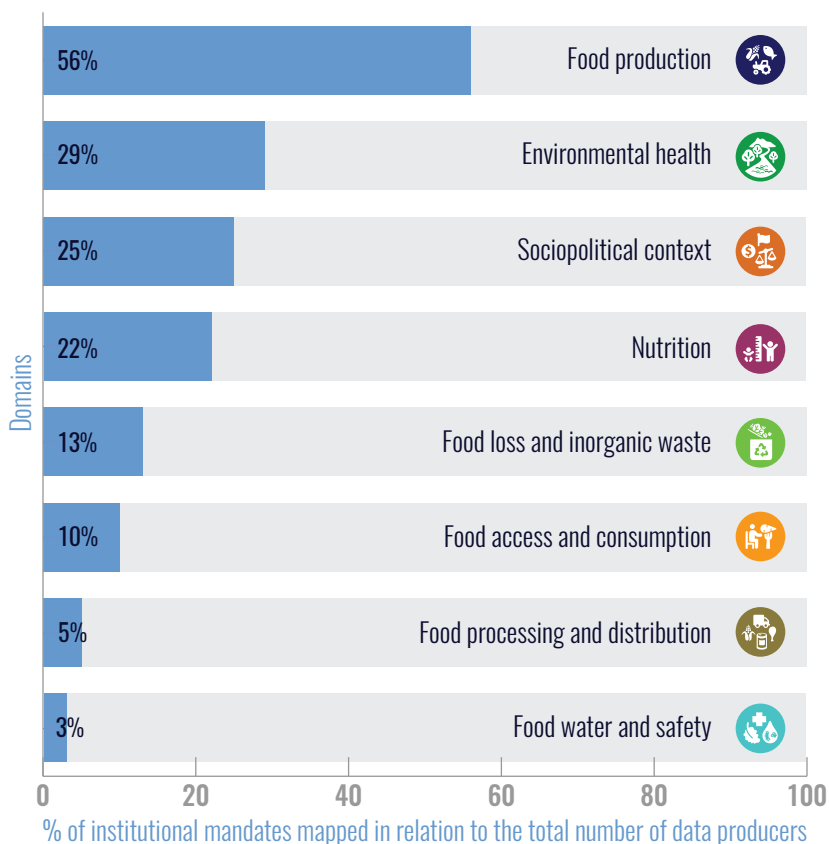


Figure 2. Domain mapping of institutional mandates of data producers.



centralization and harmonization of all agricultural, food and nutrition data, including the development of data sharing protocols and establishment of an inventory of all the available data. The Kenya National Bureau of Statistics (KNBS) is the custodian and disseminator of all data that is collected by government institutions, and may provide a starting point for initiating such a harmonization initiative.

REFERENCES

- Kenya National Bureau of Statistics, 2015. Kenya Demographic and Health Survey 2014. Retrieved from <https://www.dhsprogram.com>
- Owuor, S., Brown, A., Crush, J., Frayne, B., & Wagner, J., 2017. The Urban Food System of Nairobi, Kenya Hungry Cities Report No. 6. Hungry Cities Partnership. Retrieved from https://profiles.uonbi.ac.ke/samowuor/files/2017_urban_food_systems_of_nairobi.pdf
- Qaim, M., Andersson, C. I. M., Chege, C. G. K., Kimenju, S. C., Klasen, S., & Rischke, R., 2014. Nutrition Effects of the Supermarket Revolution on Urban Consumers and Smallholder Farmers in Kenya. Retrieved from <http://www.uni-goettingen.de/de/globalfood>
- World Bank, 2016. Kenya Urbanization Review. Retrieved from <http://documents.worldbank.org/curated/en/639231468043512906/Kenya-urbanization-review>
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- Researchers from the University of Michigan and the International Center for Tropical Agriculture (CIAT) collaborating through the Entry points to Advance Transitions towards Sustainable diets (EATS) project developed this data profile. Jamleck Osiemo and Dharani Burra with CIAT-Kenya and CIAT-Vietnam, respectively, were particularly instrumental in developing initial drafts of the profile, with further input and development by the entire EATS team.



data profile

KENYA

annex

PRIMARY DATA

REF	NAME	ORGANIZATION/SOURCE	DATE COLLECTED	DOMAIN
1	Cereal Production	WB	1961-2014	Food production
2	Chemicals and Fertilizers Use	Amiran	Annual	Food production
3	Climate, Shocks, Weather and Maize Intensification Decisions in Rural Kenya	AAEA	2016	Food loss and inorganic waste
4	Contemporary African Food Habits and Their Nutritional and Health Implications	Rural Outreach Program	2003	Food access and consumption
5	Crop Solutions Information	Sygenta	Annual	Food production
6	Crop, Livestock and Fisheries Production	MoALF	2013-2016	Food production
7	Crops Production	MoALF	2013-2016	Food production
8	Effect of Climate Variability on Output and Yields of Selected Crops in Kenya	KU	2016	Environmental health; Food production
9	Effects of Agricultural Biodiversity and Seasonal Rain on Dietary Adequacy and Household Food Security in Rural Areas of Kenya	BMC Public Health	2015	Food access and consumption
10	Enteric Pathogens and Factors Associated with Acute Bloody Diarrhoea, Kenya	BMC Infectious Diseases	2012	Food and water safety
11	Farmer Participation in Supermarket Channels, Production Technology and Technical Efficiency: The Case of Vegetables in Kenya	Georg-August-University of Goettingen, German	2010	Food processing and distribution
12	Fertilizer Consumption	ReSAKSS	2002-2014	Food production
13	Fertilizer Use	MEA	Annual	Food production
14	Fertilizer Use Optimization Approach: An Innovation to Increase Agricultural Profitability for African Farmers	AJAR	2016	Food production
15	Fertilizer Use Optimization in Sub-Saharan Africa	CABI	2017	Food production
16	Fisheries Production	MoALF	2013-2016	Food production
17	Food and Nutrition Scenario of Kenya	AJFN	2014	Nutrition; Food production
18	Food Consumption Patterns and Distributional Welfare Impact of Import Tariff Reduction on Cereals in Kenya	AJARE	2006	Food access and consumption
19	Food Consumption Patterns and Distributional Welfare Impact of Import Tariff Reduction on Cereals in Kenya	KNBS (Ageconsearch)	2005, 2006	Food access and consumption
20	Food Demand (40 Food Items)	TI	2003	Food access and consumption

PRIMARY DATA (CONTINUED)

REF	NAME	ORGANIZATION/SOURCE	DATE COLLECTED	DOMAIN
21	Food Processing and Preparation Technologies for Sustainable Utilization of African Indigenous Vegetables for Nutrition Security and Wealth Creation in Kenya	MU	2008	Food processing and distribution; Nutrition
22	Food Production and Consumption Trends in Sub-Saharan Africa: Prospects for the Transformation of the Agricultural Sector	UNDP	2012	Food production; Food access and consumption
23	Food Security Score for Kenya	KNBS/UON	2015	Food access and consumption
24	Food Security Trends for Kenya	LU	1960-2011	Food production
25	Horticultural Value Chains in Kenya	AFCAP	2014	Food processing and distribution
26	Hunger and Nutrition Commitment Index Africa (HANCI-Africa) - Key Data for Kenya	HANCI-Africa	2017	Nutrition
27	Kenya Agriculture Sheet	KNBS/FAOSTAT	2008-2013	Food production; Food access and consumption; Sociopolitical context
28	Kenya Cereals Production	KNBS/FAOSTAT	1961-2014	Food production; Food processing and distribution
29	Kenya Crop Land Change Map 2000-2015	RCMRD	2000-2015	Environmental health; Food production
30	Kenya Crop Mask	RCMRD	2000, 2015	Food production
31	Kenya Demographics and Health Survey	KNBS	1989, 1993, 2003, 2008, 2014	Nutrition
32	Kenya Maize Land Change Map	RCMRD	2000-2016	Environmental health; Food production
33	Land Use and Agricultural Inputs	KNBS/FAOSTAT	1990-2012	Food production; Environmental Health
34	Livestock Production	MoALF	2013-2016	Food production
35	Managing Storage Pests of Maize: Farmers' Knowledge, Perceptions and Practices in Western Kenya	ICIPE/KALRO	2016	Food loss and inorganic waste
36	Nutrition and Health in Informal Settlements in Nairobi	APHRC	2002-2015	Nutrition; Food access and consumption
37	Organic Farming	FiBL	2016-2017	Food production
38	Pest Control Products Registered for Use in Kenya	Pest Control Products Board	2018	Food production; Food loss and inorganic waste
39	Prevalence of Wasting, Stunting, Underweight, Undernourishment	ReSAKSS	1991-2016	Nutrition
40	Prices to Producers for Meat, Pork and Whole Milk	KNBS	2018	Food access and consumption; Sociopolitical context
41	Production Data (tons/ha) (Cassava, Maize, Yams, Meat)	ReSAKSS	1980-2014	Food production

PRIMARY DATA (CONTINUED)

REF	NAME	ORGANIZATION/SOURCE	DATE COLLECTED	DOMAIN
42	Production, Processing and Storage Techniques of African Nightshade (<i>Solanum spp.</i>) Seeds and Their Correlations with Farmers' Characteristics in Western Kenya	JKUAT	2018	Food production; Food processing and distribution
43	Renewable Internal Freshwater Resources per Capita	CEIC Data/WB	1962-2014	Food production
44	Sanitation by District	Kenya Open Data, KNBS	2016	Food and water safety
45	Sustainable Management of Urban Green Environments: Challenges and Opportunities	Springer Open/UON	2014	Food loss and inorganic waste; Environmental health
46	USAID Baseline and Midline Surveys for the Resilience and Economic Growth in the Arid Lands - Improving Resilience Project (REGAL-AG)	USAID	2013, 2015	Food production; Sociopolitical context
47	Value Chain Development to Reach the Nutritional Needs of the Urban Poor: The Role of Brokers and SMEs for the Commercialization of Common Beans in East Africa	CIAT	2017	Food processing and distribution
48	Water Resources and Irrigation & Agriculture Production and Trade	KNBS/FAOSTAT	1994-2013	Food production; Sociopolitical context

SECONDARY DATA

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
1	5th National Report to the Convention on Biological Diversity (CBD)	MoALF	2015	Environmental health	Report	2015
2	A Farm Gate-to-Consumer Value Chain Analysis of Kenya's Maize Marketing System	TI	2011	Food processing and distribution	Report	2011
3	A Manual on the Most Important Pests and Diseases of the Major Food Crops Grown by Smallholder Farmers in Africa	ASHC	2015	Food production; Food loss and inorganic waste	Report	2015
4	A Review of Kenya's National Policies Relevant to Climate Change Adaptation and Mitigation	KEFRI/CIFOR	2014	Sociopolitical context; Environmental health	Report	2014
5	A Survey of Pesticide Use and Application Patterns Among Farmers: A Case Study from Selected Horticultural Farms in Rift Valley and Central Provinces, Kenya	JKUAT	2009-2010	Food production; Food loss and inorganic waste	Research article	2009
6	Addressing Food Losses: Status and Way Forward for Postharvest Research and Innovations in Kenya	ICIPE	2013	Food loss and inorganic waste	Research article	2013

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
7	Agricultural Commodity Value Chains/ Publications	TI	2011	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Environmental health; Sociopolitical context	Reports	2011
8	Agricultural Sector Development Strategy (ASDS), 2010-2020	MoALF	2010	Food production; Food access and consumption; Food and water safety	Strategy	2010
9	Analysis of Economic Losses Along the Milk Value Chain	KALRO	2017	Food processing and distribution	Report	2017
10	Basic Report on Well-Being in Kenya - KIHBS	KNBS	2015-2016	Sociopolitical context	Report	2015
11	Biodiversity Conservation in Kenya	Institute of Economic Affairs	2011	Environmental health	Report	2011
12	Biomass Use Energy in Kenya	Practical Action, Eastern Africa	2010	Food production; Food processing and distribution; Environmental health	Report	2010
13	Capacity Building Strategy for Agriculture	MoALF	2017	Sociopolitical context	Strategy	2017
14	Chemical, Medicinal and Feed Inputs	KNBS	2018	Food production	Report	2018
15	Chicken Processing	NAFIS		Food processing and distribution; Sociopolitical context	Report	
16	Climate Change and Food Security in Kenya; Does Climate Change Affect Food Insecurity in Kenya?	EFD	2015	Food production; Environmental health	Research article	2015
17	Climate Change and the Agriculture Sector	KEPSA	2014	Environmental health; Food production	Report	2014
18	Climate Risk Profiles	CIAT/ KCSAP	2017	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Food and water safety; Environmental health	Report	2017
19	Climate Smart Agriculture - Kenya Country Profile	CIAT	2015	Food production; Environmental health; Sociopolitical context	Report	2015
20	Comprehensive Food Security and Vulnerability Survey: Summary Report Kenya 2016	WFP	2016	Food production; Nutrition; Food access and consumption; Sociopolitical context	Report	2016
21	Conservation and Sustainable Management of Soil Biodiversity for Agricultural Productivity	Springer Open	2014	Food production; Environmental health	Report	2014

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
22	Delivering Technologies to Farmers through Public-Private Partnerships	AATF	2017	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Food and water safety; Environmental health	Report	2017
23	Dietary Intake of Foods and Nutrients by Country	GNPC	1990-2010	Nutrition	Data	1990
24	Dissemination on Agricultural Information on Food Crops Varieties, Livestock Breeds, Mechanization, Biotechnology, Policy Beliefs, Technologies and Innovations	KALRO	2018	Food production; Food processing and distribution; Food loss and inorganic waste; Food and water safety; Environmental health; Sociopolitical context	Report	2018
25	East Africa Soil Carbon Workshop Science to Inform Policy	CIAT	2018	Environmental Health	Report	2018
26	East African Agricultural Productivity Project (EAAPP): Technology Generation Report 2016	KALRO	2016	Food production; Sociopolitical context	Report	2016
27	Economic Survey 2018	KNBS	2018	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Food and water safety; Sociopolitical context; Environmental health	Report	2018
28	Energy Sector Insights Kenya - Future Watch Report	Amatka (Pty) Ltd	2017	Food processing and distribution; Nutrition	Report	2017
29	Establishing the Status of Postharvest Losses and Storage Staple Crops in Eleven African Countries (Phase II)	AGRA	2014	Food loss and inorganic waste	Report	2014
30	Exploring Kenya's Inequality: Pulling Apart or Pooling Together?	KNBS/SID	2013	Sociopolitical context; Food production; Food and water safety; Food processing and distribution	Report	2013
31	Feeding a Productive Dairy Cow in Western Kenya: Environmental and Socio-economic Impacts	CIAT	2018	Food production; Sociopolitical context	Research article/book	2018
32	Fertilizer Consumption and Fertilizer Use by Crop (FUBC) in Kenya	Africafertilizer.Org	2015	Food production	Data	2015
33	Fertilizer Use Optimization in Sub-Saharan Africa	CABI	2017	Food production	Report	2017
34	Food Animals Welfare - Code of Practice	KEBS	2018	Sociopolitical context	Report	2018

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
35	Food Safety and Quality Management in Kenya: An Overview of the Roles Played by Various Stakeholders	AJFAND	2010	Food and water safety; Food processing and distribution	Research article	2010
36	Food Security and Nutrition in the Context of Climate Change: An Assessment of Households in Tea Producing Areas of Kenya	FAO	2013	Food access and consumption; Nutrition	Research article	2013
37	Food Security in Kenya	MoALF	2009	Food production; Food access and consumption; Sociopolitical context	Report	2009
38	From Farm to Market - Horticultural Value Chains	AFCAP	2018	Food processing and distribution; Sociopolitical context	Report	2018
39	Fully Registered Pest Control Products	PCPB	2018	Food production; Food loss and inorganic waste	Data	2018
40	GIEWS Country Brief - Kenya	FAO	2018	Food production	Report	2018
41	Green House Gas Emission for Kenya	CAIT	1990-2014	Environmental health	Report	1990
42	Gross Marketed Production at Constant 2008-2015	KNBS	2018	Food access and consumption; Sociopolitical context	Report	2018
43	Gross Marketed Production for Agriculture and Livestock	KNBS	2018	Food access and consumption; Sociopolitical context	Report	2018
44	Guidelines and Standards for Agricultural Extension and Advisory Services	MoALF	2017	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Environmental health; Sociopolitical context	Guidelines	2017
45	Guidelines on Water Quality and Effluent Monitoring	WASREB	2008	Food and water safety	Report	2008
46	Horticultural Value Chains in Kenya	AFCAP	2014	Food processing and distribution	Research article/Book	2014
47	Improving Food Safety on the Farm - Experimental Evidence from Kenya on Agricultural Incentives and Subsidies as Public Health Investments	IFPRI	2018	Food loss and inorganic waste	Research article	2018
48	Increasing Youth Participation in Livestock Production in Kenya - Policy Brief	IDS	2017	Sociopolitical context	Policy brief	2017

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
49	Infonet	Infonet Biovision	2018	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Food and water safety; Environmental health	Webpage	2018
50	Information on Soils, Fertilizer, Crop Pest and Diseases	CABI	2018	Food production; Environmental health; Food loss and inorganic waste	Reports	2018
51	Irrigation Schemes	KNBS	2018	Food production	Data	2018
52	KALRO Strategic Plan (2016–2020)	KALRO	2017	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Environmental health; Sociopolitical context	Strategy	2017
53	Kenya Agricultural Value Chains Market Research: Pilot Study of Mombasa County	ASDP	2016	Food processing and distribution	Research article	2016
54	Kenya Climate Smart Agriculture Implementation Framework, 2018-2027 (KCSAIF)	MoALF	2018	Food production; Food access and consumption; Nutrition; Environmental Health; Sociopolitical context	Framework	2018
55	Kenya Demographics and Health Survey: Raw Data	KNBS	1989, 1993, 2003, 2008-2009, 2014	Nutrition	Report	1989
56	Kenya Economic Report	KIPPRA	2017	Food processing and distribution; Sociopolitical context	Report	2017
57	Kenya Environmental Sanitation and Hygiene Policy 2016-2030	MoH	2016	Food and water safety	Policy	2016
58	Kenya Environmental Sanitation and Hygiene Strategic Framework (KESSF) 2016-2020	MoH	2016	Food and water safety	Framework	2016
59	Kenya Facts and Figures, 2015	KNBS	2015	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Food and water safety; Sociopolitical context; Environmental health	Data	2015
60	Kenya Fertilizer Assessment	IFDC	2012	Food production	Report	2012
61	Kenya Food Insecurity	USAID	2015	Nutrition; Sociopolitical context	Report	2015

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
62	Kenya Food Security Outlook	FEWSNET/USAID	2018	Food production; Environmental health; Sociopolitical context	Report	2018
63	Kenya Nutrition Profile	USAID	2018	Nutrition; Sociopolitical context	Report	2018
64	Kenya Veterinary Policy	MoALF	2015	Food processing and distribution; Sociopolitical context	Policy	2015
65	Leading Economic Indicators	KNBS	2018	Food production; Food processing and distribution	Report	2018
66	Leaping and Learning: Linking Smallholders to Markets in Africa	AI	2013	Food processing and distribution; Sociopolitical context	Report	2013
67	Livelihoods Zoning "Plus" Activity in Kenya	FEWSNET/USAID	2010	Food production; Environment health; Sociopolitical context; Food access and consumption	Report	2010
68	Mainstreaming Ecosystem Services and Biodiversity into Agricultural Production and Management in East Africa	FAO	2016	Food production; Environmental health; Food loss and inorganic waste; Sociopolitical context	Report	2016
69	Maize Diseases & Pests: A Reference Atlas for Western Kenya	CIAT/IPNI/CABI	2011	Food loss and inorganic waste	Report/Data	2011
70	Market-driven Value Chain for the Livestock Sector, Turkana County Report	EU/Oxfam	2016	Food processing and distribution; Sociopolitical context	Report	2016
71	Medium Term Plan 2018-2022 (Agriculture and Livestock Sector)	MoALF	2017	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Environmental health; Sociopolitical context	Plan	2017
72	Multi-sector Programming at the Sub-national Level: A Case Study in Homa Bay and Makueni Counties in Kenya	Scaling Up Nutrition	2018	Nutrition	Research article	2018
73	Multi-sectorial Nutritional Strategy - Global Learning and Evidence Exchange, East and Southern Africa Regional Meeting	FANTA Project	2016	Nutrition	Strategy	2016
74	National Environment Action Plan (NEAP)	NEMA	2009-2013	Environmental health	Plan	2009
75	National Environment Policy, 2013	MoENR	2013	Environmental health; Sociopolitical context	Policy	2013

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
76	National Guidelines for Healthy Diets and Physical Activity	MoH	2017	Nutrition; Food access and consumption	Guidelines	2017
77	National Livestock Policy	MLD	2008	Food processing and distribution; Sociopolitical context	Policy	2008
78	National Solid Waste Management Strategy	NEMA	2015	Food loss and inorganic waste	Report	2015
79	National Water Resources Situation in Kenya	WARMA	2015-2016	Food and water safety	Report	2015
80	Nutrition Reports	MoH	2011-2018	Nutrition; Food and water safety	Reports	2011
81	Nutrition Survey Conducted in the Slums of Nairobi County	APHRC	2017	Nutrition	Report	2017
82	Nutritional Country Profile - Kenya	Global Nutrition Report	2017	Nutrition	Report	2017
83	Pressure of Biodiversity	NEMA		Environmental health	Report	
84	Production	TI	2000, 2004, 2007, 2010	Food production	Research article	2000
85	Promoting the Development of Food Value Chains in Africa 2015 - Kenya	Promar Consulting	2016	Food processing and distribution	Report	2016
86	Public Health and Food Safety in the WHO African Region	BIOLINE	2012	Food and water safety	Report	2012
87	Renewable Energy Resources, Biomass and Biofuels in Africa; Opportunities and Risks	AJFAND	2012	Food and water safety	Research article	2012
88	Rural Transport and Agriculture Fact Sheet	JKUAT	2012	Food production; Food processing and distribution	Research article	2012
89	Smallholder Dairy Farmer Training Manual	ReCAP	2015	Food processing and distribution; Sociopolitical context	Data	2015
90	Social Economic Atlas of Kenya	ILRI	2016	Sociopolitical context; Food processing and distribution	Manual	2016
91	SOTER-based Soil Parameter Estimates (SOTWIS) for Kenya	KNBS/CETRAD	2014	Sociopolitical context; Food production; Environmental health	Report/Data	2014
92	Status of Biodiversity	ISRIC	2007	Environmental health	Report	2007
93	Status Report on the Kenya National Food Security	NEMA		Environmental health	Report	
94	Status, Challenges, and Prospects of Agricultural Mechanisation in Kenya: The Case of Rice and Banana Value Chains	KNBS/African Women's Studies Centre, University of Nairobi	2014	Food production; Food access and consumption; Sociopolitical context	Report	2014
95	Strategic Plan for Agricultural and Rural Statistics 2015-2022	KALRO/FARA	2017	Food production; Food processing and distribution	Research article	2017

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
96	Supporting Integrated Pest Management in Kenya	KNBS	2015	Food production; Food processing and distribution; Food loss and inorganic waste; Food access and consumption; Food and water safety; Sociopolitical context; Environmental health	Strategic plan	2015
97	Sustainable Management of Urban Green Environments: Challenges and Opportunities	WUR	2018	Food production	Report	2018
98	The Urban Food System of Nairobi, Kenya	Springer Open/ UON	2014	Food loss and inorganic waste; Environmental health	Research article/book	2014
99	The 2018 Global Hunger Index	Hungry Cities	2017	Food processing and distribution; Environmental Health; Sociopolitical Context	Report	2017
100	The Beans Value Chain in Kenya	Concern Worldwide/ Welthungerhilfe	2018	Nutrition; Environmental health	Data	2018
101	The East African Community (EAC) Strategy on Scaling-up Access to Modern Energy Services - Kenya Country Baseline Report and Workplan	SNV	2012	Food processing and distribution	Report	2012
102	The Economic Impact of Climate Change on Kenyan Crop Agriculture	Integral Advisory, Ltd./IT Power (EA), Ltd.	2008	Food production; Food processing and distribution; Sociopolitical context	Report	2008
103	The Horticultural Crops Directorate (HCD)	WB	2007	Sociopolitical context	Report	2007
104	The Organic Farmer	AFA	2015-2016	Food production	Data	2015
105	The Organic Farmer	Biovision	2018	Sociopolitical context; Food loss and inorganic waste	Magazine	2018
106	The Status of Mechanization in Kenya	Biovision	2017	Food production; Sociopolitical context; Food loss and inorganic waste; Nutrition	Magazine	2017
107	Towards Integrated Pest Management in East Africa	KALRO/KAFACI	2017	Food production; Food processing and distribution	Report	2017
108	Towards Integrated Pest Management in East Africa	WUR	2013	Food production	Research article	2013
109	Value of Agricultural Inputs	WUR	2013	Food production; Food loss and inorganic waste	Report	2013
110	Waste Management in Kenya	KNBS	2018	Food production		2018

SECONDARY DATA (CONTINUED)

REF	NAME	ORGANIZATION	DATE COLLECTED	DOMAIN	TYPE	YEAR
111	Water Quality Degradation Trends in Kenya over the Last Decade	KenyaCIC	2018	Food loss and inorganic waste	Report	2018
112	Water Quality Regulation	UoN	2018	Food and water safety	Report	2018
113	Working Paper 19 - Staple Food Consumption Patterns in Urban Kenya: Trends and Policy Implications	NEMA	2006	Food and water safety	Regulation	2006
114	Working paper 19 - Staple Food Consumption Patterns in Urban Kenya: Trends and Policy Implications	TI	2005	Food access and consumption	Research article	2005

ACRONYM

ACRONYM	ORGANIZATION
AAEA	Agricultural & Applied Economics Association
AATF	African Agricultural Technology Foundation
AFA	Agriculture and Food Authority
AFCAP	African Community Access Programme
AGRA	Alliance for a Green Revolution in Africa
AI	Agriculture for Impact
AJAR	African Journal of Agricultural Research
AJARE	African Journal of Agricultural and Resource Economics
AJFAND	African Journal of Food, Agriculture, Nutrition and Development
APHRC	African Population and Health Research Centre
ASDP	Agricultural Sector Development Programme
ASHC	The Africa Soil Health Consortium
AJFN	American Journal of Food and Nutrition
CABI	Centre for Agriculture and Bioscience International
CAIT	Center for the Application of Information Technologies
CIAT	International Centre for Tropical Agriculture
EFD	Environment for Development
EU	European Union
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agricultural Organization
FEWSNET	Famine Early Warning Systems Network
FIBL	Research Institute for Organic Agriculture
GNPC	Global Nutrition and Policy Consortium
HANCI-Africa	Hunger and Nutrition Commitment Index Africa

ACRONYM (CONTINUED)

ACRONYM	ORGANIZATION
Hungry Cities	Hungry Cities
ICIPE	International Centre for Insect Physiology and Ecology
IDS	Institute for Development Studies
IFDC	International Fertilizer Development Center
IFPRI	International Food Policy Research Institute
ILRI	International Livestock and Research Institute
ISRIC	International Soil Reference and Information Centre
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KALRO	Kenya Agricultural Livestock Research Organization
KEBS	Kenya Bureau of Standards
KEFRI/CIFOR	Kenya Forestry Research Institute
KenyaCIC	Kenya Climate Innovation Centre
KEPSA	Kenya Private Sector Alliance
KIPPRA	Kenya Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
KU	Kenyatta University
LU	Leiden University
MEA	Grow (in KiSwahili)
MoALF	Ministry of Agriculture, Livestock and Fisheries
MoENR	Ministry of Environmental and Natural Resources
MoH	Ministry of Health
MU	Maseno University
NAFIS	National Farmers Information Service
NEMA	National Environmental Management Authority
RCMRD	Regional Centre for Mapping Resources for Development
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SNV	SNV Netherlands Development Organization
TI	Tegemeo Institute
UKAid	United Kingdom Agency for International Development
UNDP	United Nations Development Programme
UoN	University of Nairobi
USAID	United States Agency for International Development
WARMA	Kenya Water Resources Management Authority
WASREB	Water Services Regulatory Board
WB	World Bank
WFP	World Food Programme
WUR	Wageningen University and Research