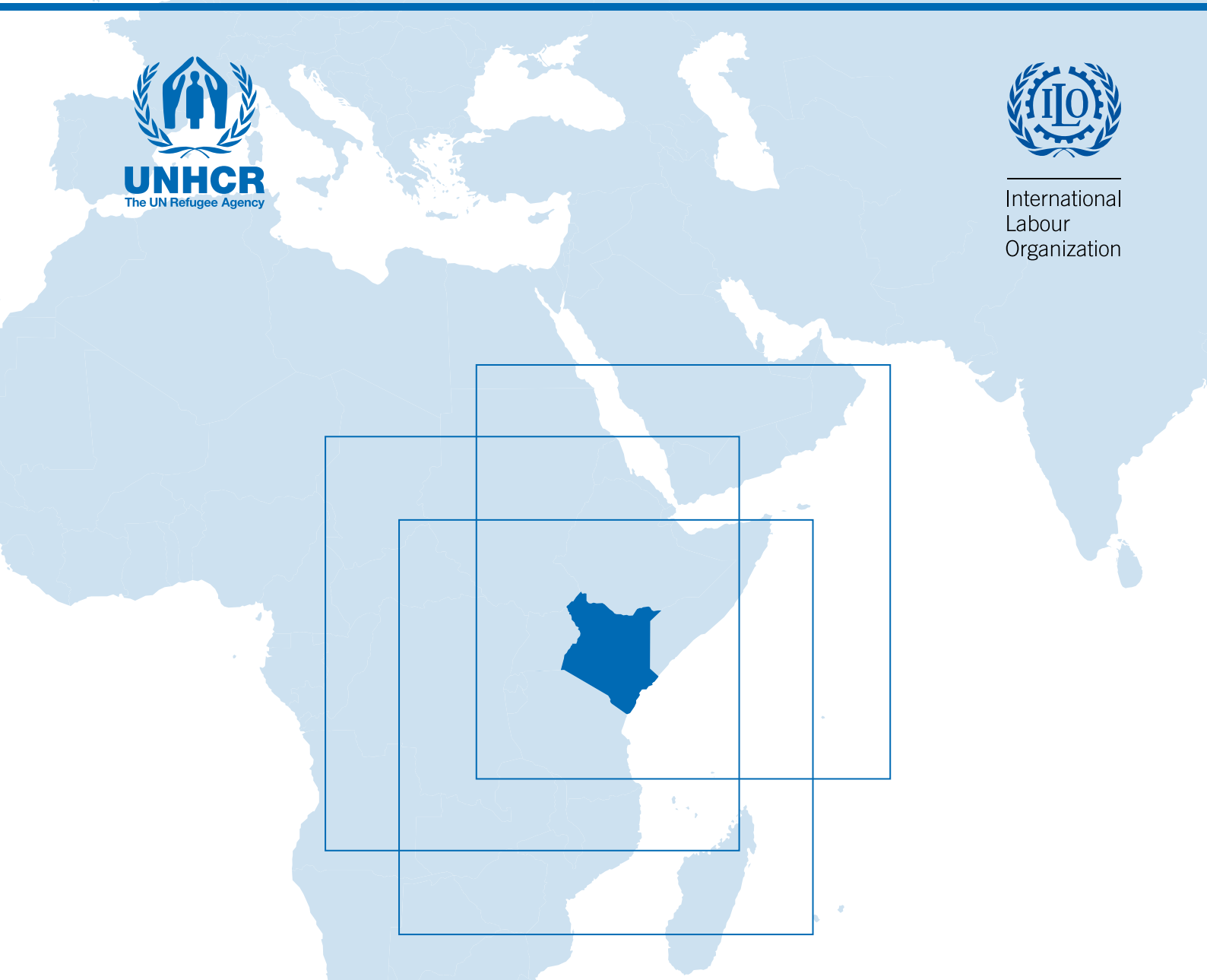
UNHCR
The UN Refugee Agency

International Labour Organization



DOING BUSINESS IN DADAAB

KENYA

Market Systems Analysis
for Local Economic Development in Dadaab, Kenya

Doing Business in Dadaab

January 2019

Acknowledgements

This Market System Analysis is the outcome of on-going global collaboration between ILO and UNHCR on designing and implementing market-based approaches to refugee and host community livelihoods.

The analysis was conducted by Samuel Hall Consulting and coordinated and backstopped by Marlen de la Chaux from ILO Geneva. The team would like to express their gratitude to Danya Kattan from UNHCR Kenya, UNHCR Kenya, and the UNHCR Sub-Office in Dadaab for their support, which made this assessment possible. We are also indebted to the many informants and stakeholders who offered their time, cooperation and valuable insights for the purposes of this assessment.

DOING BUSINESS IN DADAAB

KENYA

Market Systems Analysis for Local Economic Development in Dadaab, Kenya

Copyright © International Labour Organization 2019

First published (2019)

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Licensing), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: rights@ilo.org. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered with a reproduction rights organization may make copies in accordance with the licences issued to them for this purpose. Visit www.ifrro.org to find the reproduction rights organization in your country.

ISBN: 978-92-2-133332-6 (web pdf)

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

Information on ILO publications and digital products can be found at: www.ilo.org/publns.

EXECUTIVE SUMMARY

Background and approach

Kenya has been hosting refugees and asylum-seekers for nearly three decades. The Dadaab refugee complex is home to 44 per cent of the 471 000 refugees and asylum-seekers (situation at end 2018). In October 2017 and in December 2018, the Global Compact on Refugees (GCR), Kenya adopted the Comprehensive Refugee Response Framework (CRRF), signaling a future change in the refugee response characterized by encampment that has severely limited the movement of refugees and asylum seekers within the country. There is optimism about the potential of the CRRF/GCR process to contribute to a vibrant and economically strong "Dadaab city" which would benefit both refugees and host communities, linking Dadaab town and camp with Garissa county, Nairobi and other parts of the country. In parallel to these developments, the International Labour Organization (ILO) and the UN Refugee Agency (UNHCR) developed the Approach to Inclusive Market Systems (AIMS) to facilitate the development of market-based interventions for the economic inclusion of refugees and other forcibly displaced.

Focusing on Dadaab, this study provides a market system analysis for interventions aimed at enabling the self-reliance of refugees and host communities, and thereby contributing to a broader local economic development (LED) agenda. Two complementary pieces form the basis of this report:

1. A **socio-economic assessment** and context analysis that seeks to lay out the challenges and opportunities that Dadaab offers
2. A rapid **value chain analysis** that aims to identify sub-sectors and value chains that have the potential for inclusive growth.

Stakeholders recognize the importance of investing in local economic development and livelihood interventions in refugee

A **participatory and field based approach** was used throughout the data collection process with data collection in Nairobi and Dadaab in October - November 2018. Livelihood partners in Nairobi and Dadaab, as well as sub-county partners and market actors supported this research on the ground. Engagement with stakeholders of the market system were ensured through regular discussions and dialogue throughout the research process. Refugees participated in the data collection process in the three camps of Dadaab – namely Ifo, Dagahaley and Hagadera – to ensure their active participation in the research process and not only as respondents.

The **scope of work** focused on areas in and around Dadaab, to best inform livelihoods programming for the Dadaab operation. This focus allows the study to identify the potential within the Dadaab market to integrate refugees and hosts from surrounding communities. This study is not concerned at this stage with the links to employment potential in Garissa or Nairobi.

hosting settings, which are often the most marginalized, semi or semi-arid lands in Kenya where livelihoods are scarce for refugees and hosts alike. However, so far, key partnerships on local economic development for refugee and host communities in Kenya have primarily focused on Kakuma and Kalobeyei1[1]. In Dadaab, stakeholders report mostly a vulnerability-based approach to livelihood interventions. The starting point of this assessment is therefore to find sustainable market-based approaches to local economic development for refugees and host communities.

Market analysis and selection of two value chains for Dadaab

At its height, Dadaab was composed of five camps: Hagadera, Dagahaley, Ifo 1, Ifo 2, and Kambioos, looming large around Dadaab town, which acted as a center of operations for agencies and other implementing partners working in the area. In March 2017, in response to declining population numbers and funding cuts, Kambioos Camp was shut down; in 2018, Ifo 2 followed. In spite of these cuts, Dadaab remains a vibrant community. Resourceful host community members continue to make use of boreholes and infrastructure in the now ghost camps. Each of the Dadaab camps has its own market and market characteristics; together these form a vibrant and diverse market where both host and refugee community members provide and purchase a diversity of goods and services.

Refugees and host community members in Dadaab share a common language, religion, and culture, and there is a sense of kinship and homogeneity between the two groups. A symbiotic relationship exists between the two communities. Garissa has long been one of Kenya's marginalized counties. Coming on the heels of the 2010 constitution and the policy of devolution, which involved the decentralization of executive and legislative power in Kenya, the country's first marginalization policy sought to allocate over 11 billion KSH to provide basic services to marginalized counties under an equalization fund. The effects of this policy remain to be seen, and while a new marginalization policy was launched in 2018, it is the presence of refugees in Garissa that has largely had a significant impact on the economy and the development of the county.

Market exchanges between refugees and host communities are common, and some refugees are informally employed by host community members to look after their livestock, as restrictions on mobility severely limit refugees' ability to effectively run their own businesses in cost effective ways. In spite of these limitations, Dadaab community members have managed to build fledgling and established livelihood opportunities in a diversity of sub-sectors.

Initial sub-sectors for value chains to be supported and strengthened were identified through both desk review, initial KIIs, and empirical observations. Four essential value chains were initially identified as primary value chains in Dadaab. These consisted of:

- Waste management and recycling
- Livestock: small (sheep and goats) and large ruminant fattening and trade
- Commodity trade and services
- Vegetable and fruit production, including ten specific and varied crops.

1. World Bank (2016) *Yes in my backyard? The economics of refugees and their social dynamics in Kakuma*; IFC (2018) *Kakuma as a market place: a consumer and market study of a refugee camp and town in northwestern Kenya*; Samuel Hall (2016) *Rapid market assessment and value chain analysis in Kakuma, Kenya.*

Once these four initial and primary value chains were identified, the value chains were presented to livelihood partners and rated according to a series of indicators adapted from the ILO/UNHCR model. Based on the scoring presented in the report, the highest ratings led to the selection of two existing sub-sectors for further exploration, one low risk and one high risk:

1. The **Agriculture** sub-sector, with a focus on a diverse fruit and vegetable value chain; this sub-sector presents a strong potential in job creation across all demographic segments, a strong demand for multiple products, local stakeholder buy-in and the fact that land, water and soil are available locally. If implemented at scale, it has the potential to fulfill a real market demand and minimize reliance on imported greens as well as to create jobs for local farmers along with promoting a diverse and cooperative farming model.
2. The **Waste and Recycling** sub-sector, honing in on waste processing and transformation, with a positive impact on health and the environment, buy-in from local authorities, a strong need and demand confirmed by households and the private sector, and building on lessons learned from past experiences in Dadaab and elsewhere. Private actors in Nairobi have expressed interest in purchasing waste, in particular scrap metal and plastic, from Dadaab if circumstances are made amenable. While currently a basic waste collection and incineration two-step chain, the sub-sector has the potential to turn into a real transformational value chain.

Conclusions and recommendations

Contrary to popular narratives surrounding Dadaab, there exist strong opportunities for building on already existing growth, development, and fledgling value chains in the area. There are effective environmental conditions that have already begun to be exploited in Dadaab, and a generally positive relationship between host and refugee community members ensures that cooperation and sustainable partnerships within these communities is not only possible but already present.

There are limiting factors to some of this currently existing potential: the national encampment policy and ensuing limitations on mobility is a significant source of frustration for refugee entrepreneurs or business owners, and limitations on land access can impede attempts to further develop agricultural efforts. However, new initiatives and policy developments are emerging that can support and address some of these limitations.

The two value chains examined in the report are in fledgling stages, but are foundationally present in Dadaab: the first, a fruits and vegetables value chain which builds on the work of some refugees who have on their own begun small scale farming; the second, a recycling value chain which takes into account minimal but existing efforts to develop waste collection and processing in Dadaab, links to larger private sector demand.

The humanitarian community needs to be aware that market systems development works on multi-year time horizons and not on one-year cycles, as is the norm with humanitarian interventions. Therefore, planning and intervention horizons need to look toward how the value chains can be amplified in the medium-term (3-5) years rather than expecting short-term results (within a year).

A market systems approach can work in Dadaab assuming this longer-term scale, a multi-dimensional understanding of sustainability (financial, social,

environmental), coordination between all stakeholders (with governmental and development agencies) and an initial financial or technical support from development agencies. Development actors will have to play a supporting role (financially, technically, and as coordinators/guarantors) on the short-to-medium term.

Recommendations in this report build on the operational recommendations above, and are meant to drive forward the further development of these value chains, and to guide towards concrete and effective next steps (**Table A**).

Table A: Recommendations By Value Chain

Vegetable and Fruit Value Chain	Recycling Value Chain
1. **Upskilling of farmers and potential farmers:** Knowledge and capacity development is needed surrounding the following topics: • Effective water management and flood farming • Basic produce cultivation practices This can be done in partnership with Nairobi based research institutions. 2. **Set up of experience sharing community conversation groups:** Community experience sharing groups should be set up so that those who have embarked on farming can share lessons learned and outcomes with other community members. 3. **Enhance and amplify extant skills and improve access to finance for future entrepre- neurs:** This includes building on existing programming on the development of savings schemes and financial management skills and basic business development,. 4. **Set up support and strengthen approaches to irrigation systems:** Including allowing access for the commercial utilisation of boreholes and water resources of closed camps as well as capacity development. 5. **Coordinate approaches to inputs, fertilisers and pesticides.**	1. **Engage with communities through co-design processes and the creation of formal partnerships between private networks and camp actors,** including with existing initiatives such as MIT's D-Lab in Kenya, private actors, and refugee groups. 2. **Promote ownership and decentralization** of waste management, including adaptation of new waste management practices at the neighborhood level. 3. **Learn from existing waste management initiatives to target a list of plastic identified in Dadaab** and possible recycle products as a basis of engagement with communities. 4. **Support the development and expansion of Dadaab's waste processing plant with private sector and other actors.**

In addition to recommendations by value chain, longer term recommendations at the policy and coordination level seek to establish ways forward for establishing an environment where sustainable livelihoods can flourish and Dadaab can grow into an economic force for the region (**Table B**).

Table B: Long Term Recommendations

1. **Advocate for further implementation of the CRRF/GCR process at the Garissa county level:** Limited mobility and constraints in accessing land were highlighted as being major impediments to effective financial growth in the county. Advocating for policy reform in line with the Kenya's declared adoption of the CRRF/GCR addresses these limitations as well as ensur- ing local government buy in on CRRF/GCR initiatives.
2. **Strengthen linkages with actors and enterprises outside of Dadaab, including in Garissa and in Nairobi:** Organizations such as Ecopost, Rubikon, Taka Taka Solutions, and MIT have all expressed interest in linking with and supporting Dadaab value chains if financially viable conditions are met. Traditional actors can work to strengthen these part- nerships and include them in existing coordination mechanisms.
3. **Pursue and promote land and resource sharing:** Refugees and host communi- ties already share access to basic education and health services, as well as to water and infrastructure and markets. Further promoting land sharing will support refugee and host community's capacity to engage with each other in existing markets.

TABLE OF CONTENTS

EXECUTIVE SUMMARY v
ACRONYMS xii

SECTION 1:
INTRODUCTION AND CONTEXT 1
1.1 NATIONAL OVERVIEW OF KENYA'S REFUGEE SITUATION 2
1.2 POLICY CONTEXT IN DADAAB 3
1.3 DATA ON SOMALI REFUGEES IN DADAAB AND KENYA 4

SECTION 2:
RATIONALE AND APPROACH FOR THE ASSESSMENT 7
2.1 GENERAL APPROACH 7

SECTION 3:
SOCIO-ECONOMIC PROFILE 11
3.1 TARGET AREA AND POPULATION 11
3.2 RULES AND REGULATIONS AFFECTING REFUGEES IN DADAAB 17
3.3 DOING BUSINESS IN DADAAB 19

SECTION 4:
SELECTION AND ANALYSIS OF VALUE CHAINS FOR COMMUNITIES IN DADAAB . . 29
4.1 SUPPORTING FUNCTIONS: ENABLERS AND FACILITATORS 32
4.2 SUB-SECTOR 1: FRUIT AND VEGETABLE PRODUCTION 35
4.3 SUB-SECTOR 2: WASTE MANAGEMENT AND RECYCLING VALUE CHAIN . . 43

SECTION 5:
CONCLUSIONS AND RECOMMENDATIONS 59
5.1 GENERAL CONCLUSIONS 59
5.2 RECOMMENDATIONS 60

ANNEX:
DATA SUMMARY SHEET 63
SOCIO-ECONOMIC ASSESSMENT DATA COLLECTION 63
MARKET-SYSTEMS AND VALUE CHAINS ANALYSIS DATA COLLECTION 64
SOURCES COLLECTED AND USED 67

ACRONYMS

AIMS	Approach to Inclusive Market Systems
AGPO	Access to Government Procurement Opportunities
AKF	Aga Khan Foundation
AMIS	Agricultural Marketing Information System
CBO	Community Based Organisation
CIDP	County Integrated Development Plan
CRRF	Comprehensive Refugee Response Framework
DRC	Danish Refugee Council
FAIDA	Fafi Integrated Development Agency
FGD	Focus Group Discussion
GCR	Global Compact on Refugees
ICT	Information and Communication Technology
ID	Identity Document
IGAs	Income Generating Activities
ILO	International Labour Organization
INGO	International Non-Governmental Organisation
IT	Information Technology
ITC	International Trade Center
KCB	Kenya Commercial Bank
KRCS	Kenya Red Cross Society
KII	Key Informant Interview
KIRDI	Kenya Industrial Research and Development Institute
KNCCI	Kenya National Chamber of Commerce and Industry
LED	Local Economic Development
LWF	Lutheran World Federation
NGO	Non-governmental Organisation
NRC	Norwegian Refugee Council
PLWD	People Living with Disabilities
RAS	Refugee Affairs Secretariat
RCK	Refugee Consortium of Kenya
SACCO	Savings and Credit Cooperative
SME	Small and Medium Sized Enterprise
TVET	Technical Vocational Education and Training
VAT	Value Added Tax
VC	Value Chain
VCA	Value Chain Analysis
VolRep	Voluntary Repatriation
VSLA	Village Savings and Lending Association
UNHCR	United Nations High Commissioner for Refugees
WB	World Bank
WFP	World Food Programme
WV	World Vision
YEP	Youth Education Pack

SECTION 1

INTRODUCTION AND CONTEXT

The International Labour Organization (ILO) and the United Nations High Commissioner for Refugees (UNHCR) developed the Approach to Inclusive Market Systems (AIMS) to facilitate the development of market-based interventions for the economic inclusion of refugees and other forcibly displaced. Focusing on Dadaab, this study provides a market system analysis on the basis of which interventions can be developed that enable the self-reliance of refugees and contribute to a broader local economic development (LED) agenda integrating host communities. The assessment contains two separate but interlinked analyses:

- *First, a socio-economic assessment and context analysis*, that looks at the profile, characteristics and background of refugee and host populations as well as the overall environment or "market system" that they are embedded in, including a review of the policy context, rules and regulations that determine the access to livelihood opportunities, support functions and services (whether trainings, loans, etc.) for refugees.
- *Second, a sector selection and value chain (VC) analysis* through selected VCs with the potential for employment creation for refugee and host community members in Dadaab. This Value Chain Analysis can inform how target groups can be included in the labour market, and suggest future value chain development strategies that can support the area.

Data. This research was conducted by Samuel Hall, with data collection in Dadaab in October and November 2018. Livelihood partners in Nairobi and Dadaab, as well as sub-county partners and market actors supported this research on the ground. Engagement with stakeholders of the market system were ensured through regular discussions and dialogue throughout the research process. Refugees participated in the data collection process in the three camps of Dadaab – namely Ifo, Dagahaley and Hagadera – to ensure their active participation in the research process and not only as respondents. Altogether:

- Two (2) livelihood partner meetings were held in Nairobi and Dadaab
- 50 key informant interviews with livelihood partners, youth representatives, government, as well as market sector actors and traders, and
- 25 focus group discussions (FGDs) with men and women from both host and refugee communities, including youth groups in Ifo, Dagahaley and Hagadera, as well as traders, consumers, and VSLAs.
- Additional quantitative components were introduced through
  - A survey on market prices of 16 commodities
  - A household waste survey to determine the potential demand and breakeven point for waste recycling.

Scope. The scope of work focuses on areas in and around Dadaab, to best inform livelihoods programming for the Dadaab operation. This focus allows the study to identify the potential within the Dadaab market to integrate refugees and hosts from surrounding communities. This study is not concerned at this stage with the links to employment potential in Garissa or Nairobi. At the time of this study, a parallel research conducted by the Norwegian Refugee Council (NRC) and the International Trade Center (ITC) addresses the links with Garissa county. This report provides a frame for livelihood actors to engage in market-based livelihood creation – it does not list all of the possible VCs in Dadaab but provides criteria, variables, and a logic to define a particular VC and its adaptability to the Dadaab context and both refugee and host profiles.

1.1 National overview of Kenya's refugee situation

Kenya has been hosting refugees and asylum-seekers for nearly three decades. Currently host to over 471,000 refugees in three locations,[2] the largest numbers still live in Dadaab refugee camps in the East near the Somali border, home to 44% of the total refugee population of Kenya. The country's legislative climate has developed over the years as political changes have shifted attitudes towards refugees. While in the western counties of Turkana, a new approach to refugee and host integration is being piloted, under the Kalobeyei Integrated Socio-Economic Development Progamme (KISEDP), the northeastern county of Garissa, which hosts the second largest refugee camp in the world, has not benefited from the same level of development-minded investment. The past few years have seen refugees in Dadaab viewed as a threat to national security. In 2016, the government called for a closure of the refugee Dadaab complex. The Kenyan High Court later ruled against the legality of this request, as refugees themselves were not consulted on their willingness to return, and when the Kenyan government's responsibility under international law is to provide a space of protection. To date, although refugees can theoretically access work permits, they require a movement pass issued by the Refugee Affairs Secretariat (RAS) to travel outside of any pre-approved zones, which means that they experience barriers to their de facto ability to apply for work permits. Despite the strict encampment policy, there are refugees living illegally in urban areas, as well as host populations passing for refugees to benefit from aid in what remain marginalized counties and arid and semi-arid lands of Kenya.

Kenya's encampment policy has been maintained across the years although global discussions are signaling a change. In 2017, Kenya adopted the Comprehensive Refugee Response Framework (CRRF) as one of the pilot countries in addition to endorsing the Global Compact on Refugees (GCR) in December 2018, signaling the possibility that the encampment policy that severely limits the move- ment of refugees

Under the CRRF the Kenyan government has committed to:

- Enhance refugee self-reliance and inclusion in Kenya;
- Facilitate legal status for refugees with legitimate claims to citizenship or residency in Kenya through marriage or parentage;
- Implement the "Guidelines on Admission of Non-Citizens to institutions of Basic Education and Training in Kenya," which will facilitate school enrollment of non-citizens, including refugees, in Kenyan schools.

2. Over 208,000 refugees in the Dadaab refugee camps, primarily from Somalia; over 187,000 refugees in Kakuma and Kalobeyei refugee camps, mainly from South Sudan with substantial populations from Somalia, Eritrea, the DRC and Ethiopia; and roughly 75,000 urban refugees in Nairobi, pre-dominantly from the DRC and from Somalia.

and asylum-seekers within the country could change. The persistent legislative uncertain- ties make the situation of refugees in Dadaab unknown but also highlight the promises that investments in refugee hosting locations could bring to hosts and refugees alike.

The 2006 Refugee Bill and its 2009 regulations are the current main legislative reference point for treatment of refugees and asylum-seekers in Kenya. This document is currently undergoing review, and a revised document aims to address current gaps concerning refugee reception, residence, and possibilities for durable solutions. The revisions to the Refugee Bill fall under the greater umbrella of the CRRF/GCR adopted in 2017 and 2018 respectively, following the New York Declaration for Refugees and Migrants.

Action steps focus on fully integrating refugees and asylum seekers into development planning, including at the county level within CIDP drafts and planning processes in Garissa and Turkana.

1.2 Policy context in Dadaab

"If CRRF is properly integrated, we will have a very vibrant economy. We are speaking of 200,000 people. If we really soak in CRRF and invest the money to develop Dadaab city, and if this is paired with the regulations on movement, we will have a host community-refugee integration" (NGO representative, Dadaab, October 2018)

There is a high level of optimism about the potential of the CRRF/GCR process to contribute to a vibrant and economically strong "Dadaab city" which would benefit both refugees and host communities, linking Dadaab with Garissa county, Nairobi and other parts of the country. This is evidenced by the acknowledgement that this framework ushers in new ways of thinking and conceiving of funding in Dadaab. The drastic reduction of humanitarian aid in Dadaab in recent years can be balanced by a growing presence of development actors, as guided by the CRRF process. The gradual reduction of UNHCR's presence in Dadaab in terms of budget and staff is envisioned to be supplanted by both development actors, private sector actors and a growing ownership of the county government over programming and services in Dadaab, including the provision of county funds to the area. There exists therefore an opportunity for UNHCR's role to shift under CRRF, moving more towards an advocacy and support to local government in managing this shift. This will require flexible management approaches and leadership in bringing disparate stakeholders together, and to operationalise CRRF at the county level. In addition, bridging the gaps between the County Integrated Development Plan (CIDP) and the CRRF will be essential to a smooth transition. UNHCR has been involved in CIDP planning, working to ensure that the county takes refugee-hosting areas into consideration, and to advocate for the allocation relevant resources (cf. the Kalobeyei Integrated Socio-Economic Development Program as a good practice).

Several obstacles remain in the Dadaab policy context. First, although the Garissa CIDP includes for the first time refugees, actors working in Dadaab highlight the negative angle to this inclusion, associating refugees with environmental destruction without taking into account the fact that the Garissa economy is positively impacted by refugee operations in Dadaab. The CIDP has not yet integrated a mindshift and language change on the role of refugees as economic actors. Second, there is a gap between rights in practice and in reality. The government states in Dadaab that "refugees are free like a Kenyan citizen to start and run any legal business. The only businesses that

we cannot allow are businesses that deal with illegal goods. The issue with refugees is that some of them are not experienced in doing business (…) there are also too many businesses at the same time."[3]

While Dadaab refugee camp complex was previously composed of five camps (Dadaab, Ifo 1 and 2, Kambioos; Dagahaley and Hagadera), Kambioos and Ifo 2 were consolidated in March 2017 and May 2018 respectively, with three camps remaining in two different sub counties. Within these camps, and in line with global commitments, RAS will have to move beyond "camp management" to ensure protection and rights. According to RAS, this has started as the government is now providing refugees with an opportunity to register self-help groups that bring together members around an economic goal. The registration requires the group to have a memorandum of association, a resolution and registration as an organization. Through the Refugee ID and proof of registration of these groups, refugees can then access financial systems and a bank account. These are steps that can enhance a market- based approach to livelihoods in Dadaab.

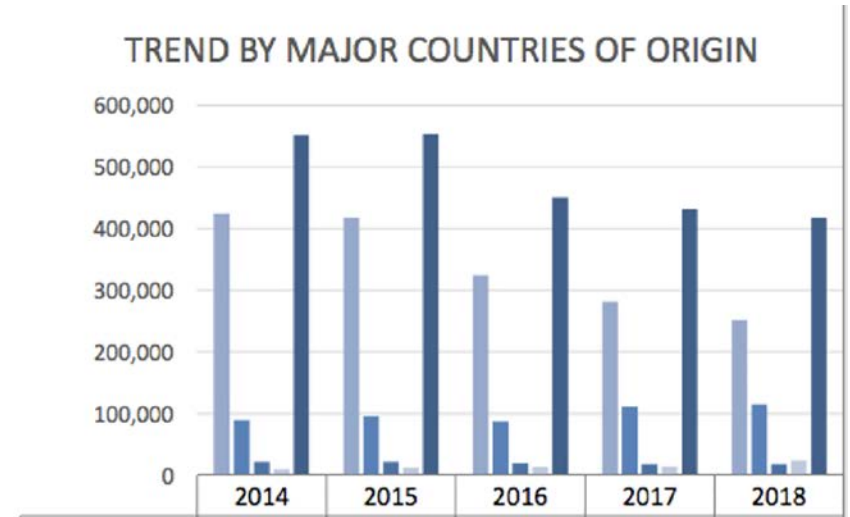
1.3 Data on Somali Refugees in Dadaab and Kenya

The lack of socio-economic data on the population in Dadaab is a critical issue and obstacle to a development-led approach to livelihoods. Partners on the ground note the lack of a socio-economic survey or database with information on the skills and potential of the local and refugee population. Current available data is not sufficient for sustainable livelihoods programming: UNHCR holds the proGRes[4] database with micro data including basic demographic information on the refugee population but no information on skills or training received. The Kenya Integrated Household Budget Survey (KIHBS) provides macro data. However, livelihood partners do not have one common data system to ensure against duplicate targeting or to build a strategic livelihood approach that can assist refugees, and hosts, towards a model whereby they can build on their skills to integrate local market systems. Data is urgently needed to identify, select and target livelihood interventions in Dadaab.

UNHCR publishes a statistical summary availably publicly on refugees and asylum-seekers in Kenya. The September 2018 data[5] shows a decrease in the number of Somali refugees living in Kenya (**Figure 1**). Between 2014 and 2018, the numbers have decreased overall from approximately 427,311 to 256,300 (**Figure 2**), largely due to the start of a voluntary repatriation (VolRep) program in 2015. However, the voluntary repatriation trends are now reversed, with a sharp decline from 2017 onwards (**Figure 3**). It is expected therefore that the population of Somali refugees living in Dadaab will remain constant, given the drop in VolRep and changing opportunities for durable solutions, unless there will be other pull and push factors.

3. RAS interview, Daddab, 18 october 2018
4. ProGRes is UNHCR's online population database of individual registration data of population of concern. It is not a public database but used by the organisation as one of its data sources for the publication of statistics worldwide. It is currently being reviewed to make it more effective for operational needs.
5. https://www.unhcr.org/ke/wp-content/uploads/sites/2/2018/10/Kenya-Statistics-Package-September-2018.pdf

Figure 1

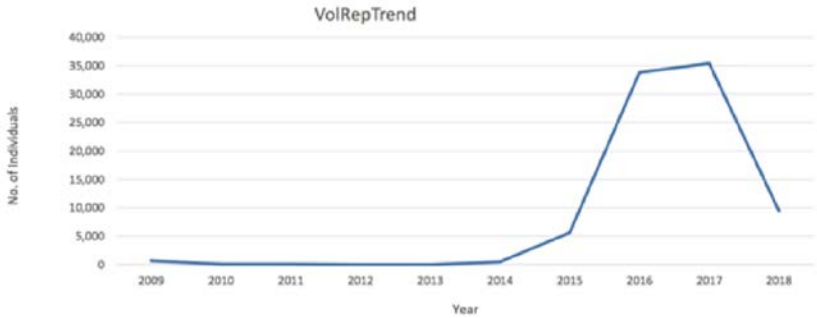


	2014	2015	2016	2017	2018
Somalia	424,691	417,920	324,448	281,714	251,972
South Sudan	89,226	95,671	87,141	111,524	114,771
Ethiopia	21,250	21,229	19,064	17,872	17,912
DR Congo	9,324	12,046	13,328	13,961	23,494
Total	551,352	553,912	451,099	431,992	417,758

Figure 2

	2014	2015	2016	2017	2018
Dadaab	227,242	221,938	176,785	238,152	208,595
Kakuma	178,079	184,550	154,947	185,154	186,384
Alinjugur	128,772	126,042	95,979		
Nairobi	51,270	61,351	67,152	65,109	73,282
Total	585,363	593,881	494,863	488,415	468,261

Figure 3



SECTION 2

RATIONALE AND APPROACH FOR THE ASSESSMENT

Stakeholders, including local actors, recognize the importance of investing in local economic development and livelihood interventions in refugee hosting settings, which are often the most marginalized, semi or semi-arid lands in Kenya where livelihoods are scarce for refugees and hosts alike. While key partnerships in Kenya have primarily led livelihoods interventions in Kakuma and Kalobeyei6[6] , in Dadaab, stakeholders report mostly a vulnerability-based approach. The starting point of this assessment is therefore to identify opportunities for market-based interventions for local economic development that benefits refugees and host communities in Dadaab alike.

"We only know of capacities created through programming, we do not know about those coming with capacities" (DRC Oscar Muriuki, 16 October 2018)

2.1 General approach

To conduct a market systems analysis, this study builds on the following ILO-UNHCR resource – the "Guide to market-based livelihood interventions for refugees" – to identify opportunities for sustainable growth for communities in Dadaab. This was done through two complementary pieces:

3. A **socio-economic assessment** and context analysis that seeks to lay out the challenges and opportunities that Dadaab offers; and on the other hand,
4. A rapid **value chain analysis** that aims to identify sub-sectors and value chains that have the potential for inclusive growth. Value chain analyses aim to uncover constraints as well as opportunities in the chain in order to design targeted interventions that aim to increase the quantity and quality of job opportunities available and to better integrate refugees into the chain.

This identification takes into account the ecosystem of Dadaab (**Figure 4**) defined by four key dimensions that inform the selection of value chains: *economic*, *social*, *environmental*, and *societal*.

6. World Bank (2016) Yes in my backyard? The economics of refugees and their social dynamics in Kakuma; IFC (2018) Kakuma as a market place: a consumer and market study of a refugee camp and town in northwestern Kenya; Samuel Hall (2016) Rapid market assessment and value chain analysis in Kakuma, Kenya.

Figure 4. Dadaab ecosystem

ENVIRONMENTAL	• Impact on soil, water, deforestation • Waste management
SOCIETAL	• Relationship with host communities • Political voice and inclusion (Garissa, national)
ECONOMIC	• Income generation • Job creation (quantity and diversified skills)
SOCIAL	• Gender, youth, elderly, minorities, clans, ethnicities • Possible unintended consequences on health, education, etc.

The **economic dimension** deals with the economic environment in Dadaab, including effects on financial inclusion, the increased or decreased ability community members to purchase goods or to build savings as a result of an event, and increased or decreased economic exchanges between various community groups (including but not limited to exchanges between refugees and host community members), as well as impact on the economy of the greater county as a whole.

The **social dimension** relates to linkages within and between communities. This includes taking into account the impact of a program on immediate relationships between various categories (host community/ refugee; men/ women; youth/elderly), as well as the existing relationships and hierarchies that are present.

The **environmental dimension** brings into relief the physical impact of a project or activity on a place or broader area. This includes ecological considerations, but also long term questions of physical sustainability and environmental and climate health.

The **societal dimension** refers to the social system of society as a whole: in the long term, what are the combined effects of the economic, social, and environmental dimensions on the overall structure of a community: what systematic changes can or might occur as the result of an activity or program?

These four dimensions, which feed into and relate to each other in indirect and overarching ways, inform key considerations in the selection of a value chain, and should be used to evaluate the potential or real impact of an activity in a community.

These dimensions inform the basic selection criteria of **relevance**, **potential**, and **feasibility**.

Relevance to the target group includes considerations of capacity of community members, safety and cultural as well as environmental considerations.

Potential highlights the capacity of the selected sector or value chain to impact communities in Dadaab, including employment creation potential of an intervention due to demand.

Feasibility measures how possible and practical an intervention is in the context of Dadaab. Feasibility takes into account national and local laws and policies, as well as costs of interventions.

When all of these dimensions and criteria are taken into account when selecting value chain interventions, they allow for the *responsible enabling* of community members: that is, an enabling that takes into account existing realities and contexts, but that also supports a self-sufficient and sustainable movement into the future. In order to do this, we have been pragmatic in our approach – this report does not provide a comprehensive assessment of every single value chain present in Dadaab, but rather relied on a thorough desk review and initial key informant interviews to reveal assumptions that need to be put to the test and areas to focus on. KIIs and livelihood partners in Dadaab all emphasised favouring an approach that would hone in on one traditional and one non-traditional value chain. This guidance, associated with initial field steps of desk research and interviews, allowed the research team to rapidly focus the assessment on a few possible value chains.

This focus on a small number of potential key value chain allows for two consecutive things:

1. **Avoid the error of seeking a singular solution** to livelihoods interventions, of searching for a magical monoculture that does not provide for diversity or adaptability in changing contexts. Rather than examining many singular value chain options (i.e. tomatoes, plastic), the team sought to **identify diversity of possible value chains *within* a sub-sector** (i.e. fruit and vegetable production, recycling) to provide for greater adaptability and avoid the problem of market saturation.

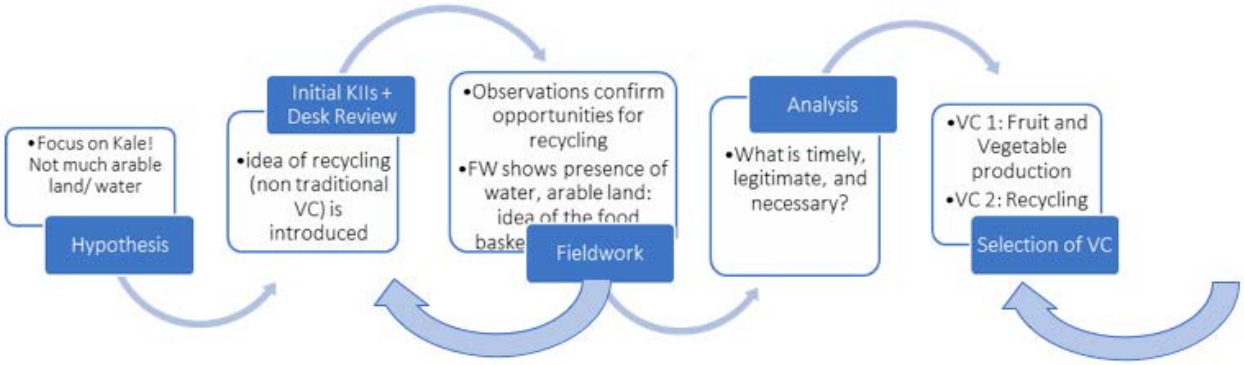
2. As a result of this attention to diversity *within* sub-sectors, in addition to presenting concrete ideas for realistic market chains and livelihood possibilities that can be implemented in Dadaab, this report **establishes a *systematic* analysis of the value chain and sub-sector**, a categorical methodology that can be used and adapted to frame and support a diverse market in a streamlined and coordinated manner.

The research team used the following tools to examine, build on, and question existing assumptions and test market hypotheses.

- Comprehensive **desk review**
- **Initial KIIs** with stakeholders
- **Focus Group Discussions** with value chain actors
- A **market survey** examining the prices of 15 market items in Garissa, Dadaab, and Nairobi
- Follow up **KIIs and consultative workshops** with local and national stakeholders.

The fieldwork was conducted in phases to allow for feedback, adjustments and to build on the guidance of livelihood partners, county actors, trader, consumers, refugees and hosts. As illustrated, these tools supported a circular approach to the analysis, which while grounding itself in initial in **Figure 5**, the research team started with hypotheses and assumptions based on the initial KIIs and desk review which were later confirmed and disproved. Testing these assumptions through fieldwork led to an analysis around the questions of timeliness, relevance and feasibility, which led to the selection of two value chains, one traditional (fruit and vegetable production) and one non-traditional (recycling). This logic and research process follows the DfID's Learn/Adapt methodology.

Figure 5. Approach to selecting the value chains



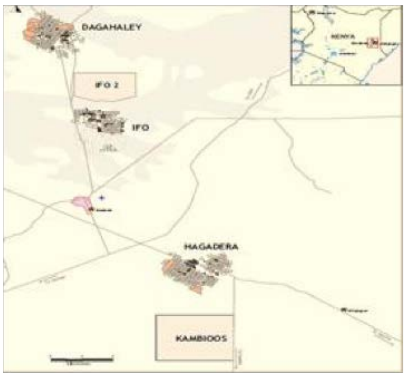
SECTION 3

SOCIO-ECONOMIC PROFILE

3.1 Target area and population

3.1.1 A marginalised county but an area of opportunity

Nestled in beds of green leaves dotted across the length of the small farms that are scattered sporadically across the area, the melons of Dadaab stand as a testament to the possibilities of a land that benefits from available water, as well as infrastructure. The infrastructure in Dadaab has benefited from over two decades of investment. Solarized boreholes mean that water is available and that partners are able to give more than the recommended liters per capita. On the human resources, the connectivity is strong in Dadaab with a majority owning smartphones, with a link to be made between the role of connectivity and phones in the markets in Dadaab.



Map 1: Map of Dadaab Camp Complex

The challenges are now one of how to achieve sustainability with well-placed funding. Dadaab has been humanitarian-funded, but is new to development partners. The government will have to outline its plans for the next two decades, both administratively and in terms of design and urban planning, for a handover to be done. Garissa has long been one of Kenya's marginalized counties. Coming on the heels of the 2010 constitution and the policy of devolution, which involved the decentralization of executive and legislative power in Kenya, the country's first marginalization policy sought to allocate over 11 billion KSH to provide basic services to marginalized counties under an equalization fund. The effects of this policy remain to be seen, and while a new marginalization policy was launched in 2018, it is the presence of refugees in Garissa that has largely had a significant impact on the economy and the development of the county.

Ninety kilometers from Somalia, an hour down the dusty road from the Liboi border checkpoint, the Dadaab camp complex was once considered the third largest city in Kenya. Somali refugees began stepping over the border seeking safety in Dadaab in the early 1990's, and the area eventually grew to host what was at one point the largest refugee camp in the world. Around

what was a rural unknown town in Garissa grew an ecosystem that would bring infrastructure, economic activity, and previously non-existent services to the area. The presence of refugees brought humanitarian actors to the area, and with humanitarian actors came roads, a proper town center, the massive and expansive infrastructure of the camps, which could with the years be considered an effectively functioning urban center. Funding for education, health, and water infrastructure and services was made available, and a host community that was mainly pastoralist began to crop up and in some cases establish businesses near the camps.

At its height, Dadaab was composed of five camps: Hagadera, Dagahaley, Ifo 1, Ifo 2, and Kambioos, looming large around Dadaab town, which acted as a center of operations for agencies and other implementing partners working in the area. In March 2017, in response to declining population numbers and funding cuts, Kambioos Camp was shut down; in May 2018, Ifo 2 followed. In spite of these cuts, Dadaab remains a vibrant community. Focus group discussions revealed that resourceful host community members continue to make use of boreholes and infrastructure in the now ghost camps; local business owners supply a diversity of goods and services in the animated and varied markets of Dadaab.

3.1.2 Dadaab statistics, population numbers and movement trends

Recent statistics available on the Dadaab host population are extremely limited. While UNHCR tracks population numbers in camps, most recent host community data available dates from the 2009 census, and little socio-economic data beyond this is available for the host community: a 2012 study examined food security issues for the Dadaab host community, and the Ministry of Health in Garissa followed up on this with a smart nutrition report in 2017. Both of these reports rely on population data from the 2009 census. Beyond this data on host communities is scarce.

Slightly more data on refugee populations is available, although this still remains meager. UNHCR tracks population numbers and flows in and out of camps regularly, including repatriation, resettlement and return trends. Recent comprehensive or disaggregated socio-economic data on access to services and refugee dynamics is however not publicly available.

96% of refugees in Dadaab are Somali. These refugees originate from various regions in Somalia, ranging from urban populations hailing from Mogadishu to more traditionally pastoralist populations.[7] The majority of these populations are in protracted situations, and many have been in Dadaab for more than a decade. Currently the majority of these refugees reside in Hagadera camp, the oldest and largest camp in the complex. (See **Table 1**).

Table 1: Dadaab Population Breakdown per camp

Hagadera	Dagahaley	Ifo	Total
73,852	69,287	65,494	208,633

Source: UNHCR (2018), ProGRes database

In addition to these formally registered camp populations, 11,648 undocumented new arrivals[8] are present in the camp. This has led to questions of

7. UNHCR (2018), Daily Update of Refugees and Asylum-Seekers Statistics Summary.
8. By end 2018, 11,280 individuals are from Somalia while 368 are from other nationalities. UNHCR (2018), Daily Update of Refugees and Asylum Seekers Statistics Summary.

funding and management, and while donors generally agree that undocumented populations should be covered, further data on these populations broken down by camp is needed.

Key informants indicate that there may be fluidity in the above numbers as there have been cases of Kenyans registering as refugees and refugees registering as Kenyans.[9] In response to this, UNHCR ran a Population Fixing Exercise in 2016 (**Table 2**) in order to provide a snapshot of double registration within Dadaab. Key informants indicate that these numbers have likely risen since 2016, although no data since then exists. This double registration indicates a certain level of fluidity when it comes to refugee population numbers, as well as a level of ambiguity when it comes to defined host and refugee populations.

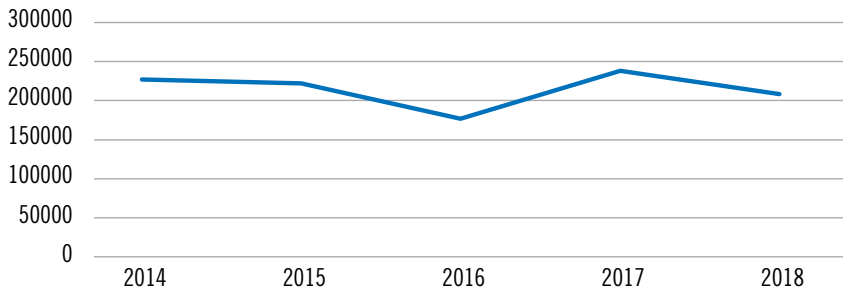
Table 2: Double Registration (2016)

Type	Households	Individuals
Refugees who applied for or have obtained a Kenyan ID	3,355	15,799
Kenyans registered as refugees	5,843	24655
Total	9,198	40,454

Repatriation numbers have also played a role in camp population movement numbers, although the impact of this is less drastic in Dadaab than is commonly thought.

By end 2018, 82,846 Somali refugees have been repatriated since 2014,[10] with the majority from Dadaab. In addition, there were some returns from Somalia among those who repatriated before: in 2018 alone 1 992 returns from Somalia were reported.[11] While population numbers have fluc- tuated since 2014, movement trends in Dadaab remain in fact more stable than public opinion lets on. UNHCR data reveals that Dadaab had a camp population of 356 014 in 201412[12] – four years later, 60 per cent of the original population remain (208 633 persons by end 2018) in spite of the closure of Kam-bioos and Ifo 2 camp (see **Figure 6**).

Figure 6: Population Numbers in Dadaab, 2014-2018



Source: UNHCR, 2018

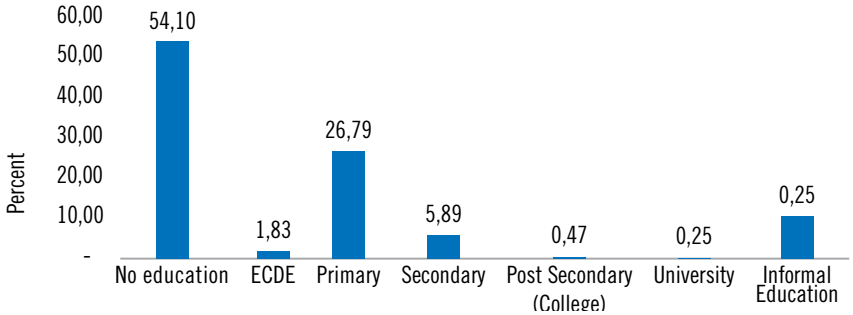
9. Key informant interview with UNHCR Assistant Protection Officer on 23.10.18 at UNHCR, Dadaab.
10. Ibid.
11. Ibid.
12. UNHCR, Statistical Summary, October 2018.

Overall the population of Dadaab has only decreased by 8% since 2014, indicating that recent funding cuts are significantly disproportional to the needs of the camp.

3.1.3 Refugee and host profiles: education, demographics, clans

The information recorded in UNHCR's proGres database needs updating but indicates basic demographic information. The majority of refugees registered do not have formal education, with 54% having no education at all and 11% benefiting from informal education only.

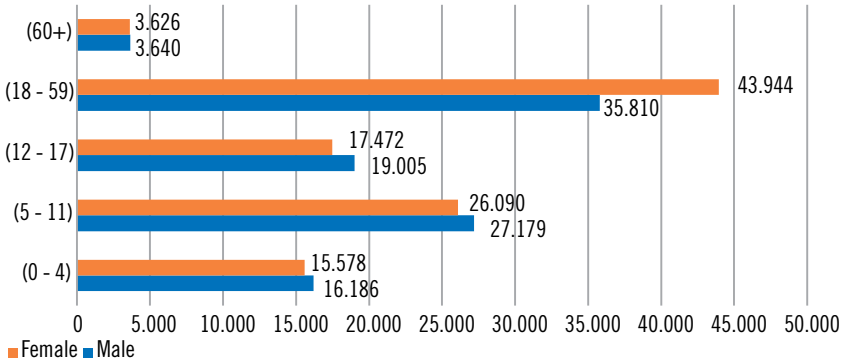
Figure 7: Education attainments (highest level achieved per household)



Over one fourth of refugees in the progress database are registered as actively studying (27,8%) while over half does not have an occupation (50.7%). The main occupations reported relate to domestic work (13.4%), farming (1.7%), transportation (1/6%) and livestock production (1.3%).

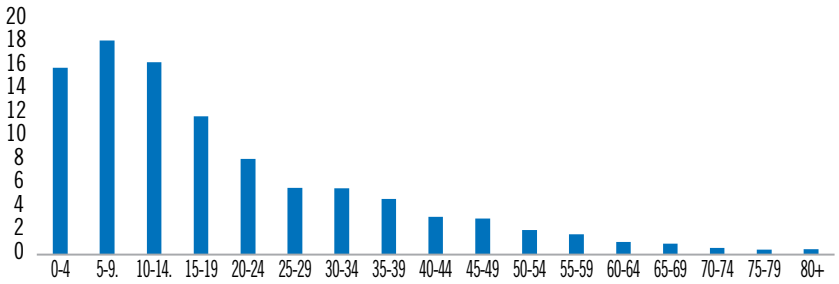
The populations of these camps are primarily young, and slightly more female (**Figure 7**). According to the data in the proGres database, 20% of the Dadaab population is within the youth (15-24) age bracket (**Figure 8**). Many refugees have been born in or have grown up in the camp since their arrival, reaching adulthood, raising families, having children of their own all within the confines of Dadaab.

Figure 8: Dadaab Population Gender Per Age Group



Source: UNHCR (2018), Daily Update of Refugees and Asylum-Seekers Statistics Summary

Figure 9: Age breakdown



Source: UNHCR (2018), proGres database

On the side of the hosts, the sub-county office in Dadaab regularly updates information on the host population living in Dadaab through the 2009 census and other projections made by the economic planning office of the Kenya National Bureau of Statistics (KNBS). The County has six constituencies namely Fafi, Garissa Township, Balambala, Lagdera, Dadaab and Ijara. In addition, there are thirty county electoral wards. **Table 3** shows the constituencies and the number of electoral wards.

Current data concerning host community populations is severely lacking. The most recent data dates from the 2009 census, which included projections for 2018 (**Table 4**). No data since 2009 exists, although anecdotal evidence suggests that the actual camp populations remain slightly larger than the refugee populations.

Table 3: Population Projections by Urban Centre

Urban Centre	2009 (Census)			2017 (Projections)			2020 (Projections)			2022 (Projections)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Dadaab	31,726	28,664	60,390	44,416	40,130	84,546	48,541	43,856	92,397	52,665	47,582	100,247
Total	31,726	28,664	60,390	44,416	40,130	84,546	48,541	43,856	92,397	52,665	47,582	100,247

Source: KNBS, Economic Planning Office 2017

Table 4: Population Projections by Sub County

Constituency	2009 (Census)			2017 (Projections)			2020 (Projections)			2022 (Projections)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Dadaab	81,388	71,099	152,487	115,571	100,961	216,532	124,524	108,781	233,305	135,104	118,024	253,128
Total	81,388	71,099	152,487	115,571	100,961	216,532	124,524	108,781	233,305	135,104	118,024	253,128

Source: KNBS, County Development Planning Office

Clan Dynamics and Areas Of Origin

The progress dataset shows that the ethnic breakdown in Dadaab is skewed towards three groups specifically the Darods (32,3%), Ogadens (24,1%), and Somali Bantus (10,3%). Within each of these, further groups can be found: according to a 2013 study by DRC, Ogadens are made up of three sub-clans: the Ailuhan, the Abdwak, and the Magarbul. UNHCR data from 2013 highlights that area of origin differs by camp as well: populations in Hagadera tend to be from Mogadishu and urban areas of Somalia, whereas Dagahaley and Ifo are more representative of pastoralist or agricultural and pastoralist clans, including minority Bantu Somalis, who express more of an interest in agricultural initiatives.

Discrimination against minority clan members exists. Bantu Somalis in particular have been historically marginalized, and although this was highlighted in some KIIs this was not a pervasive or significant finding – more research would be needed in order to establish the current state of clan relations or tensions in Dadaab.

Host community members are more representative of traditionally pastoralist clans, although given environmental limitations and livestock depletion in recent years they have turned to more entrepreneurial forms of livelihood, establishing businesses and selling goods at market.

3.1.4 Host community and refugee relationships

FGDs with both refugee and host communities reveal a symbiotic relationship. *"They are the ones who bring the livestock, we buy from them. We also have some goods in the market and they also buy from us" explains a refugee man living in Dagahaley (R2). "We depend on the host community because they are the ones who come to the market, they buy all our goods and we also buy from them the camels and the livestock they have, cattle, goats and all." (Refugee man, R3 Dagahaley)*

Market exchanges between refugees and host communities are common, and some refugees are informally employed by host community members to look after their livestock. In addition there are reports of businesses in camps being owned by host community members. From an economic standpoint, refugees' definition of the hosts expands beyond neighbouring communities to include Kenyans from the rest of the country, inviting them to *"bring their business to Dadaab and help us export to the rest of the country" (Refugee man, R3 Dagahaley).* Focus group participants describe a dynamic trading activity happening in the Dadaab markets *"people from Garissa bring bananas, carrots, all fruits are from Garissa. We really depend on them. They are the owners of the business, so they bring the products to us, we sell for them and send the money. We really depend on one another" (Refugee man, R2 Dagahaley).* The small profit made in these exchanges represent a small source of income for host families as well. In a FGD with hosts, one woman reported an estimated 5,000 monthly income from the trade in Dadaab (e.g. tomatoes and vegetables).

Refugees and host community members share a common language, religion, and culture, and there is a sense of kinship and homogeneity between the two groups. The concept of *brotherhood* emerges in FGDs with both groups. Refugees report intermarriages between groups. *"We marry their daughters and they marry our daughters. There is a great relationship." (Refugee man, R6 Dagahaley)* Marriages occur between host community members and refugees, and FGDs highlight that this can happen on the part of either gender of either community, and these marriages are celebrated in the community. According to the Kenya Citizenship and Immigration Act, refugees married to Kenyan nationals are eligible for citizenship after having been a legal citizen for seven years.[13] No general resentment of refugees as such emerges from these conversations: rather, refugees and host community members enjoy social and economic interactions on a regular basis.

13. UNHCR "Kenya Comprehensive Refugee Programme" 2015 https://www.unhcr.org/ke/wp-content/uploads/sites/2/2016/08/KCRP-2015.pdf

Overall, both hosts and refugees spoke of the negative effect of repatriation, cuts in food aid and staffing cuts on the local economy. "Before refugees were so many and the local community was benefiting. Now with the budget cuts, some contracts have been terminated. Some of our brothers and sisters were working with organisations but now the population of refugees has gone down and the number of staff as well. This has seriously affected the income of the local community" (Host community male representative, R3) The decrease in food distribution to refugees has even been reported to have hurt the host population, as host community members were buying the food from refugees at a lower price than on the market. *"The refugees were taking the food, we were buying from them in little amounts. Now that it has reduced drastically, the refugees themselves are not getting enough food, the price of food for us will go up too." (Host community male representative, R2).*

The environmental impact of refugees around Dadaab emerges as the only significant source of tension between refugees and host communities – in particular when it comes to firewood and grazing areas for livestock. Refugees are seen as depleting resources and damaging the environment.

3.2 Rules and regulations affecting refugees in Dadaab

3.2.1 Limitations on movement and mobility

"You want refugees to be self-sufficient, but they cannot be self-sufficient if their movement is restricted. "(KII Nicholas Midiwo UNHCR)

Restrictions on movement are one of the primary issues limiting refugees' self-reliance : beyond feeling "like a prison,"[14] refugees are unable to take advantage of employment and livelihood opportunities that would otherwise be available to them through their social networks in Kenya. There is a practical business challenge that results from these limitations on mobility: because business owners must pay intermediaries to obtain goods, these goods are more expensive and buyers have no way to ensure the quality and safe movement of their product. This has an impact on market exchanges, not only amongst refugees but also between refugees and host communities, whose market and social exchanges as well as socio-economic inclusion would be enriched by greater freedom of movement according to some KIIs.

A representative of CARE explains that "If the permits were a lot more, if the movement was laxed, it would be so conducive to exchanges between refugees and hosts. The structures are not so tense. There are new refugees, but the majority, as soon as the tents come in, will investigate a semi- permanent set up. This is not a fluid place. It really is a vibrant place. One refugee made me tear up: 'show me one refugee actually involved in bombing' [he said]. They feel that level of discrimination."[15]

RAS's views on refugee mobility differ from those of refugees and other stakeholders. KIIs with RAS staff highlight that relaxation of these laws is unlikely, due mainly to security considerations. Other KIIs with camp stakeholders also note a concern that if movement permissions were to be less strict, that there would be an influx of refugees moving to Nairobi. RAS provides travel permits to refugees in specific circumstances: for those who have medical needs that cannot be treated in Dadaab as well as for those who receive

14. FGD, Dagahaley, Youth Male Refugees, October 2018
15. KII, CARE, October 2018

educational scholarships to attend schools outside of Dadaab. Theoretically traders movement permits also exist, and RAS evaluates whether the cost of travel, accommodation, and lodging according to their calculation is made up for by availability of cheaper goods. Often they find that this is not the case, and traders movement permits are rare. A UNHCR representative estimated that 5000 movement permits are issued every year, many for refugees attending school.[16]

Refugees caught travelling outside designated areas – that is, outside of the camps or of Dadaab town, which they can freely access – without the proper documents are subject to a fine of 20 000 KSH or six month in prison. At the same time, refugees are concerned that if these rules are not relaxed, corruption will only increase. Not only do they see travel restrictions as hampering the growth of micro-enterprises, there are notable issues of bribes: *"We also face travel restrictions and the officers demand money (bribe) to give travel documents. We send somebody who cannot be trusted to buy goods for them in Nairobi who can lose your money or even steal. Still we continue because even if you cry kids are waiting for the daily bread." (VSLA focus group participant, female from Ethiopia).* RAS does however recognize the need for bringing in necessary goods at reasonable prices to Dadaab. One way to address this is through a partnership with WFP, which has contracted six refugee traders to procure goods. These refugee traders are able to bypass the extensive vetting process thanks to these contracts, and RAS provides them with the necessary movement permits. This agreement was initiated by the government and could serve as a potential model for how future movement permissions and policies might be constructed, as the initiative to address movement and mobility limitations must come from government rather than other institutions.

3.2.2 County government attitudes to refugees

"Refugees have added value to us as a nation and as a county" (Samuel Hall/ReDSS 2014)

In spite of the lack of positive refugee inclusion in the CIDP, interviews with county government officials in 2018 reiterate a positive view of refugees' contribution to the local economy. One official from UNHCR further reinforced this view, sharing that the fact that the county government is more inclusive of refugees than the national government, viewing refugees as a resource for the county. During this research, the county Ministry of Vocational Education emphasized the support that UNHCR, NRC and other humanitarian actors provides to local communities, to make services accessible to all. KIIs with other stakeholders reveal the opportunity that the county sees in CRRF, and the opportunities that this framework offers for the county as a whole: *"If we integrate CRRF then we can have a vibrant economy. CRRF therefore presents market development opportunities for both Dadaab and Garissa county. There are a 150,000 people in Dadaab. The number could triple if the existing rules and regulations were strong and efficient. Can CRRF trickle down to the county level? The county is ready, they can see themselves becoming one of the richest counties in the world. It's already a million-dollar industry. Imagine the infrastructure that can be step up – there is an amazing Nairobi-Garissa road. Imagine the kind of infrastructure that could show up. We had a meeting where the sub county representatives and the ministers said exactly what is in the devolution report (SH/ReDSS 2014). Integration for sure is an opportunity." (CARE Representative)* Refugees' presence is viewed as positive in part because it

16. KII UNCHR, October 2018

allows the county to channel money towards host communities without having to be responsible for the welfare of refugees. Interviews highlight some of the difficulties that may appear with eventual handover to the government under CRRF/GCR, including corruption, frequent staff turnover, and lack of effective management. This will need diplomatic and flexible leadership and discussion as CRRF is implemented.

3.2.3 Impact of the security narrative in dadaab

The refugee securitization discourse negatively impacts livelihoods in Dadaab. The 2015 Garissa University massacre committed by Al-Shabaab was a particular turning point that has affected business and the perception of investment opportunities in the county, as well as slowing down certain USAID and other donor activities concerned with business development and support. Other, smaller, security incidents in and around camps since 2011 have reinforced this view. This attitude towards and fear of Garissa and Dadaab as an insecure area has a triple impact on livelihood opportunities in camps and with refugees:

The **private sector is hesitant to involve themselves in the area**, due in part to these security and risk concerns. This has an impact on the development of value chains: a recycling program that was attempted in the past, for instance, was unable to be maintained due to high transport costs that resulted in part from the absence of private sector actors willing to set up themselves in the county.

Security concerns are used to justify the enforcement of **strict limitations on mobility** for refugees. An RAS official highlighted this justification, noting the pushback that has come with it: "[Refugee movement] is a sensitive issue, when we started this policy [of restricted movement] we got a lot of backlash and we are not relaxing the laws on this. We have been exposed before and we have to guarantee the security of the nation."[17]

There is a **Catch-22 of security and livelihoods** in Dadaab: because security context and narrative have discouraged private actors and potential customers from outside of the camp, limiting the opportunities for refugees within the camp, this has reportedly led to some refugees being conscripted into militia groups. As a representative of the Lutheran World Foundation (LWF) puts it: *"if the youth are not able to be constructively occupied, then many of these youths find their way into such militia groups. That is also how security ties into the issues of youth and unemployment within the camp."*[18] Research studies verify the anecdotal claims above.[19]

3.3 Doing Business in Dadaab

3.3.1 General overview

the three main Dadaab markets each have their own distinctive characteristics (see **Table 4**), related to the size, accessibility, and populations of the camps around which they are located.

- Located at the crossroads of the Wajir and Madera roads, **Hagadera** has the most developed of these markets, resembling a town center more than either of the other two markets. More advanced shops and market

17. KII, RAS Jeremiah Ng'ang'a (former camp manager), October 2018
18. KII George Omondi, LWF, October 2018
19. Research corroborating these findings include de la Chaux et al. (2018) https://journals.aom.org/doi/10.5465/amd.2017.0040

infrastructure are present, thanks in part to linkages to transport mechanisms: buses to Eastleigh, Nairobi leave from Hagadera, and this has made a relative abundance of goods available, including cars and electronics. Many shopkeepers in Hagadera are owned by host community members or refugees originating from Mogadishu or other urban areas, who maintain strong links to their social networks in these cities or in Nairobi. Hagadera is also home to the largest livestock market in the area, and competition for selling goats or camels can be fierce. Melons and other produce are farmed and sold around Hagadera, visible signs of the water and arable land that exists in the area.

- In spite of this cultivation, **Dagahaley** has the stronger farming community. In part due to the fact that the population has a more rural origin, including Somali Bantus who have recognized agricultural work and other forms of manual labour as an effective way of building a livelihood and financial capital. Dagahaley lies at the intersection between Wajir and Garissa, with host communities making their way south from Wajir towards Garissa cross through Dagahaley. This has resulted in exchanges between communities, such as trade of firewood and charcoal, and trade activities led by host community members. In part thanks to these movements, Dagahaley, while smaller than Hagadera, also provides a diversity of goods and services, often at cheaper prices than the more urban Hagadera market.
- The **Ifo** market is smaller and less established than the other two Dadaab markets. While food items and clothing are available in the market, the rest of goods available is less diverse, and the market, closer to Dadaab town, is mainly accessed by refugees. The population of Ifo has a reputation for being closed off, and when security incidents have occurred in Dadaab in the past they were allegedly traced back to Ifo.

The varied profile and vibrancy of these markets, which offer a diversity of goods and services and opportunities for various communities to interact with each other and connect with other parts of Kenya and Somalia, are assets to various value chains. This heterogeneity also holds the potential to increase inequalities – it is crucial to think equitably when developing these areas. Access to business permits is available to refugees, although these depend on the size and nature of the business and must usually be accessed from the Garissa County Offices. Registration fees range from 7000 to 10 000 KSH, which FGD participants deemed expensive. FGDs further revealed that there is a lack of knowledge surrounding process and documentation needed to obtain these permits although refugee entrepreneurs are generally willing to ocmply with regulations and obtain the necessary permits. As a result, many refugee owned businesses operate without permits, facing fines when they are discovered.

Table 5: Dadaab Market Descriptions

Camp Market	Brief Description	Market Goods	Origin of Goods	Sellers	Customers
Hagadera	Hagadera is the most vibrant of the Dadaab markets. More items are available in Hagadera than elsewhere in Dadaab. Hagadera sits on the road to Wajir and Mandera, which is a transport corridor to the rest of the country. Most refugee business owners here come from Mogadishu or other urban areas, and have access to strong social and business networks. Hagadera is also more expensive than other markets, in part due to the urban origin of these goods.	• Largest livestock market (due to the presence of host communities) with camels and goats. • Butchers and slaughter houses. • Milk trade • Tailoring and dressmaking • Tie and dye • Soap and detergent making • Food and retail items such as clothes and materials • Electronics	Mogadishu, Garissa, Nairobi	**Host communities** are the main business owners in Hagadera. • Livestock trade and slaughterhouses is dominated by HC men • Retail trade sellars are both HC men and women • Fruits, vegetable, and milk sellers are mainly HC women	Both host communities and refugees by commodities from Hagadera.
Ifo	Ifo has more limited goods. It is a less developed market. Smaller presence of host community in Ifo market due to lack of facilities and infrastructure. Clothing and food items are the main goods sold.	• Food items - fruits and vegetables • Clothing • Electronics shops • Butcheries	Nairobi, Mombasa	**Refugees** are the main business owners in Ifo. These sellers are mostly male.	Refugees are the main customers, although a smaller proportion of host community members also are present.
Dagahaley	As with Hagadera, many goods and services are available in Dagahaley. Dagahaley goods are however known to be cheaper. Most common businesses are electronics, food items and clothing.	• Livestock markets - camels, goats and sheep. • Food items • Electronics • Butchers • Soap making and detergents • Tailoring and dressmaking	Nairobi, Mombasa	As in Hagadera, the **host community** are the main sellers.	Both host communities and refugees by commodities from Dagahaley.

3.3.2 Availability and access to supporting functions in dadaab

Tvet and livelihood support services

Vocational skills trainings and TVET are a central element of livelihood support services currently offered in all camps in Dadaab, and are offered by a variety of actors (**Table 6**). There is a significant overlap and duplication of efforts, although CRRF/GCR coordination and conversations have begun to manage this challenge. Focus group discussions with refugees illustrate this point: *"I have been in several trainings. The trainings I got were all just like the first one" (Refugee male R4).* Yet host communities speak of the diversity of skills that refugees have come to Dadaab with. *"Most of them have come with skills for business, us locals propose to learn from them" (Host community member, R2, Dagahaley).*

Table 6: Main Livelihood Activities in Dadaab

Activity	Actor
Skills training: • **Tailoring and dressmaking** • **Tie and dye** • **Soap making** • **ICT courses** • **Weaving and carpentry** • **Plumbing** • **Electrical training** • **Hairdressing**	DRC, NRC, CARE, LWF
Provision of start-up kits	DRC, NRC, CARE, LWF
VSLA Programme	DRC, LWF
Tertiary education support (scholarship programme)	DRC, NRC, CARE, LWF
YEP Center	NRC
Primary Education	CARE
Media training	FilmAid International
IT Skills (see Box 2)	ITC/NRC

KIIs with service providers and focus groups with refugees highlight the dependency on aid and lack of self-reliance of refugees. *"I came here as a refugee in 2011, I was being given shelter and other support, but now we do not have anything because of lower budgets available. We are told "be patient with us. Just take your food, be patient please." Everyday we come to the UNHCR office, we ask them, do you have a budget for us? Do you have any information?" (Refugee male R4).* The same refugees respond that they cannot be self-reliant because of the discrimination in accessing jobs, as they are told that, as refugees, they can only do certain types of work. Several respondents had arranged for their own small shops, investing 40-70,000 KSH towards a shop that either went bankrupt or was burned down. They point to the fact that the demand for goods is very localized, and that the decrease in half of the Somali population has had an immediate effect on the capacity of shops to continue selling and generating an income.

Frustrations are also heard on the side of host populations. While livelihoods trainings and opportunities are nominally open to both refugees and host community members, the latter have expressed frustration that in practice vocational training opportunities are mainly for refugees, with host community members only rarely accessing these. Incentive worker programs in the camp in particular are seen as not equitable. Male youth are targeted for these opportunities, and there is a prevailing sense that these are skills that will be useful to refugee populations once they are repatriated. Less common is the perception of skills training as a pathway towards local integration as a durable solution – stakeholders tend towards emphasizing that these skills will support smooth and successful return to Somalia over application in Dadaab. FGD participants, both refugee and host community, emphasize the desire for business development skills and start up support in addition to the development of technical skills.

Another livelihood and income generating opportunities that has yet to be explored more in depth are the possibilities offered by agricultural activity. Dadaab has water and arable land, and the produce produced in Dadaab is said to be of particularly high quality.

"The community itself saw that agriculture was the way to go. From 2011 to now, many people have started up doing agriculture. Around Kulan there are big farms, it shows how Somalis have really changed their livelihood. The majority of the refugees there were doing farming. There are good farms in Hagadera. They are small, but they are getting livelihood. Water is not an issue." CARE Representative

Box 1 : NRC/ ITC Livelihoods Partnership

International Trade Centre (ITC) is implementing a pilot project (with NRC) to harness the IT skills of refugees, upgrade their skill sets, and generate incomes through the Refugee Employment Skills Initiative (RESI). RESI aims to equip refugees and host communities with meaningful skills while promoting youth employment and entrepreneurship. As the program is on-going, evidence on the potential and scalability of the approach is forthcoming.

Although participants in some KIIs highlight the desire for more entrepreneurial or "white collar" positions the possibilities of agricultural activity have already successfully persuaded some community members, and by all accounts could be persuasive to others.

Financial support services

Refugees are not permitted to avail themselves of loan services under Kenyan law since many refugees are not fomally employed but work as incentive workers and thus cannot meet the repayment conditions of a loan. Islamic practice does not allow for the charging of interest rates on loans, so the bank has created an Islamic account which is sharia compliant for host community members to avail themselves of these services.

Popular among the Somali community globally, *Dahaabshiil*, a sharia compliant money transfer service, is also available in Dadaab, acting mainly as a remittance platform. Access to remittances in Dadaab was impacted following the 2015 Garissa attack, when a number of remittance firms found their licenses revoked.[20]

Box 2: Bamba Chakula Initiative

Bamba Chakula is a WFP electronic cash transfer initiative to provide refugees with food. The cash/money is sent through a mobile phone and can be used to buy food in **selected shops** increasing food options and choices for refugees. In Dadaab, the programme was started in January 2016. Since then, there has been an increase in the vibrancy of local markets, and it has been reported that over Ksh 100 million has been injected into the local economy.

As of February 2016, a household size of one was being provided with Ksh 500, for household size of two, it was Ksh 300 per person, while for household sizes of three or more, it was Ksh 200 per person. The initiative works in close collaboration with Safaricom (local mobile telecom company) using a system called SurePay that permits WFP to make payments to beneficiaries and puts tight restrictions on where the money can be spent. This service is open to both refugees and host community traders and retailers whereby both can become WFP vendors by application.

20. IRIN, "Somali Refugees feel remittance pain after Kenya attack." April 2015.

Mobile banking via Safaricom's MPESA is also available, although this has strict parameters. Safaricom only registers refugees up to the point of their current registration: the moment registration expires, so does the SIM card. This has proven to be an issue for international organizations such as CARE wanting to pay their incentive workers, as SIM card renewal is put on hold by verification/renewal of documentation, and there are government restrictions on paying refugees directly in cash. Safaricom has also been involved in WFP electronic cash transfer through the Bamba Chakula program (see **Box 2**).

MPESA is mainly used by refugee business owners to pay middlemen and suppliers in Nairobi in order to obtain goods, although withdrawal charges constitute an additional cost. In the camps business owners prefer cash to mobile payments in order to avoid these charges, as well as to avoid any accidental misuse of money via MPESA. In spite of the presence of these services, it is still common for both refugee and host community members to keep their income on hand in cash.

Informal lines of credit and community based savings and credit schemes, including Village Savings and Loan Associations (VSLA), are common amongst refugees and are being promoted by UNHCR. VSLAs are community groups whose members participate in a savings pot that is then deposited into a bank account. When someone in the group wants to borrow, the money is withdrawn, and it is paid back to the group. As refugees cannot by law borrow from banks, VSLAs have become go-to finance mechanisms as a means for them accumulate savings which can be used as capital for business startup. Several focus group discussions were led with VSLA representatives in Ifo. In some of these groups, single mothers with no financial support are assisted so that they can support their children's education (purchase of food, uniform, books), and provision of micro credit funds. They have organized themselves to set up revolving funds, based on savings from their domestic work. "We have decided to join these groups because the life of a refugee is very difficult now, we have decided to make savings from our small incomes" (Refuge woman in Ifo camp R2). Several advantages – from the ability to plan financially, save money and spend it on essential needs, and accessing loan facilities – were seen as supporting women and their families' agency.

At an institutional level, financial service actors are rare. *Equity Bank* has been operational in Dadaab since 2012, and is the only commercial bank present in the area. Catering to service providers, host communities, and refugees, the bank offers savings and deposit services, lending options, and money transfer services, as well as services tailored to supporting small and micro enterprises (SME), flexible financial products for groups, and financial literacy trainings for youth. The bank also offers payroll services to international and national actors present in the area, including to UN agencies.

Services are offered on site, online, or via digital alternative business channels, such as mobile wallets, mobile applications, ATM services, and other mobile banking options. With the exception of lending services, refugees are eligible to access Equity Bank services as long as they meet the following criteria:

- They are registered asylum-seekers who have been in Kenya for longer than three months
- They are in possession of an alien card proof of registration provided by RAS.

Access to basic services

Infrastructure in Dadaab is reportedly better than elsewhere in Garissa: access to latrines and prevalence of solarized boreholes are examples of the investment that has occurred on the ground due to this presence. Most services in Dadaab are available to all community members, be they host community or refugee: *"We do not have a borehole where we say refugees come here to get water and the host community cannot get water. We do not have a school where we say refugees can come and host community cannot come. We do not have a health post, or hospital just for refugees that host communities cannot access. They have access to all services, and if they are free for refugees, they are free for the host community, so it is just a free service." UNHCR Representative.*

Water

Thanks in part to these integrated services, as well as to the fact that the environment in Dadaab is capable of retaining moisture, water is largely available. Refugees, with some exceptions, generally report receiving enough water for their need, and more than half of community members have easy access to a water point. Compared to other camps in Kenya, IPs have been able to provide more than the recommended liters of water per capita in Dadaab, and, as focus group discussions revealed, in the camps that have been closed remaining boreholes are still used by host community members. Some host community members complain that water is insufficient for their livestock, and many former pastoralists have had to revert to new forms of livelihoods due to this. This includes taking advantage of water available and irrigable land to grow and nurture an abundance of vegetables and fruits, for consumption and sale at market, and there exists the capacity to scale this up. Water is also a source of income for some host community members, who have received support from CARE to provide water at low cost for other members of their communities (see **Box 1**).

Box 3: FIDSAN Water and Youth Initiative

FIDSAN is a group comprised of host community youth who supply water at a low cost to other host community members. Supported by CARE, they have free access to a water tap and distribute this water to the host community at the cost of KSH5 per jerry can. This access to water becomes an income generating activity that provides a service to the community and an opportunity for youth to build a small amount of financial capital.

Education

Education is a critical concern for both refugee and host community populations, who have access to educational services led by UNHCR. Primary schools and secondary schools follow the Kenyan curriculum, and some have argued that quality of education in camps is better and more accessible than that outside of camps, making this an attractive service for host community families,[21] who would otherwise not have had access to educational services. For those refugees who qualify, support and scholarships for attending tertiary education is available, albeit limited, through UNHCR-funded and other donor-funded scholarships. E-learning initiatives through partners such as Windle Trust have also worked to deliver higher level university on location in Dadaab, which have provided learning experiences to over 600 learners in the camp complex since 2013. Education however still remains an unmet need, and funding cuts have had an impact on both quality and access to education, limiting the number of classrooms available in relation to the demands of camp populations, which remain young.

21. ReDSS/Samuel Hall. "Devolution in Kenya." 2015

Food access

Refugees recognize the availability of a variety of food items at the market, but evince frustration at the expense. Families are often large and rations limited: *"My family is 9 people and gets Bamba Chakula voucher of Ksh 4,500. It is not enough. Everything is available in the market but money is the problem to buy things for the family sufficient for the month. Half a bag of rice or wheat equivalent to 25kg is Ksh 2,500. By that time you haven't bought sugar, milk, meat , greens, porridge other foods. Where will money for medicine and school uniform come from?" (FGD Refugee IFO)* Refugees desire a varied and nutritious diet, and refugees state a willingness to work to achieve this: "Provide us with land and capital for farming food" says one FGD participant. Other refugees, however, state that they would prefer to be involved in business opportunities and buy food with income gained. Prices of vegetables fluctuate drastically during different seasons, rising when the rains come, and meat in particular is singled out as being particularly desirable but particularly expensive.

In addition, there is suspicion and dissatisfaction concerning food rations provided by WFP, which is deemed to be difficult to cook, difficult to eat, not tasty, and suitable only to feed livestock.

> *"Children cry for meat, rice and pasta but we cannot afford all that. The food we get from WFP is not suitable for human consumption so we feed it to donkeys. The kind of rice distributed is too tough takes hours to cook and does not cool down easily. We suspect it is plastic rice from China." (FGD Refugee Dagahaley)*

Refugee food rations have also decreased, which has had an impact not only on refugee households but also on host communities: when rations were higher and more frequent, host communities were able to buy food from refugees at cheaper prices – reductions in rations have led to cost of food going up for host community members as well as for refugees, and host community FGD participants highlight that some community members have resorted to stealing in order to make up for this deficiency.

3.3.3 Opportunities for moving forward

"The host community is even more exposed without the refugees because the refugee operations have characterized their lifestyle. They are survivors and have a high level of interdependency." UNHCR Representative

There are challenges to turning Dadaab into a vibrant and self-sustaining economic marketplace, but opportunities exist (**Table 7**). Small investments can have large ripple effects for the future well-being and affluence of the county as a whole. Given the interdependency that exists between refugees and host communities, and the resources that the presence of the refugees has brought to the area, the potential is there, with the right investment, management, and choices to turn Dadaab into a model of what is possible when positive environmental conditions, strong links between communities, and conducive frameworks merge.

Table 7: Opportunities in Dadaab

Challenge	Opportunities
Mobility of refugees is limited ***CIDP does not address refugees in a positive way***	**Opportunity 1:** CRRF/GCR initiatives and leadership of government have the potential to provide stronger socio-economic inclusion and integrated livelihood options for all communities in Dadaab **Opportunity 2:** County government recognizes the economic resources that the presence of refugees has brought
Agricultural activity is not a first choice for community members, who evince a preference for business, "white collar," and entrepreneurial activities and not all community members may have interest in agricultural livelihoods	**Opportunity 1:** There is water in Dadaab, available as a result of underground water reserves. and is amenable to agricultural production **Opportunity 2:** Some Somali community members have begun to embrace small scale agricultural production, and to reap benefits from it
Security narrative limits the possibility of private sector involvement	**Opportunity 1:** More research is needed on the actual commercial security risks present in Dadaab **Opportunity 2:** Advocacy for the county, on the part of government officials and international stakeholders, including UNHCR. Reframing the security narrative is possible (albeit being mindful of the latest attack on 15 January 2019).

SECTION 4

SELECTION AND ANALYSIS OF VALUE CHAINS FOR COMMUNITIES IN DADAAB

Initial sub-sectors for value chains were identified through both desk review and empirical observations. Four essential value chains were identified as primary value chains in Dadaab. These consisted of:

- Waste management and recycling
- Livestock: small (sheep and goats) and large ruminant fattening and trade
- Commodity trade and services
- Vegetable and fruit production, including ten different crops listed in **Table 6**.

1. **Waste management and recycling industry:** The streets of Dadaab are littered with trash. It is among the first features any visitor notices: plastic and paper, the odd scrap piece of metal, strewn across the roads, impossible to avoid. Host community members complain that it is a blight on the land. There are several early-stage attempts at commercial waste management yet a social stigma exists around participation in waste management and disposal activities. The Global Waste Management Outlook of the United Nations Environment Programme (UNEP) 2015 estimates that the overall costs (health, environment) associated with the pollution of wild-litter or open-air waste range from US $ 20 to US $ 50 / person / year, while the cost of wise management would be US $ 5-7 / person / year.[22] Considering the health and environmental risks that this waste presents in the sites (Hagadera, Dagahaley and Ifo), developing the waste management and recycling value chain may not only have a positive economic impact, but could be a game changer in terms of environment, health, and social cohesion. Recent experiments conducted by NRC, CARE and the Kenyan Red Cross aggregate lessons learned and develop partnerships. In the context of a growing waste conversion industry in Nairobi, there seems to be market potential for the sale of pre-processed waste from Dadaab to Nairobi.

2. **Livestock:** A rapid analysis of large and small ruminants (cows, sheep, goats, donkeys) shows that it is probably too early, at this stage, to focus on this specific value chain. Supporting the livestock value chain seems to make sense considering that pastoralist activities are traditionally valued by most nomadic-pastoralist Somali clans present in Dadaab. Meat is also a food item that is in demand amongst both refugees and host community members. However, there are major regulatory obstacles that limit the development of this value chain, as: 1) refugees are legally restricted in ownership of livestock and as: 2) it would probably antagonize host communities, whose

22. Wilson, DC, Rodic, L, Modak, P et al. (2015) *Global Waste Management Outlook*. Report. UNEP

income is highly dependent on livestock. What is more, environmental conditions have had an impact on the viability of livestock, as mentioned by focus group participants, farmers, and NGOs operating in Dadaab: *"The 2011 drought was terrible for our livestock. A lot of cows, sheep, goats, chickens died, were sick, and were only sold at a very low price. It affected everyone and especially the owners in the host community and the family of herders here. (…) So after that, some people – especially the Bantu – decided to grow vegetables and shift to agriculture" (Interview with farmers, Hagadera).*

3. **Commodity trade and services:** In the context of Dadaab, commodity traders exchange goods as diverse as flour, cereals, sugar, oil, gas or precious metals. The industry also comprises a complex network of companies and middlemen, with commercial ties with both Somalia (Kismayo port) and Nairobi or Garissa, that offer related services – shipping, logistics, trade, and finance. While there is a level of demand for these types of service, as they are essential to the development of a robust marketplace in Dadaab and provide access to goods that would not be otherwise accesible, the high level of informality and the complexity of the existing trade and services systems, in an outside the camp, make it difficult to focus on this specific subsector of the local economy, as highlighted by key informants: *'The main problem in Dadaab is the absence of production and transformation. Refugees and host communities do not produce anything at scale and there is no transformation industry. So, before focusing on the trade and services sectors, it is essential to first enhance local production and transformation capacity. In particular in the agriculture, livestock, manufacture, etc. sectors' (Interview with CARE).*

4. **Vegetable and fruit production:** Food distributions to refugees do not include fresh produce, and the demand for a variety of produce emerged in FGDs. This is a potential market of over 200 000 consumers who are willing to pay for a varied and fresh diet. While the initial as- sumption of the research team was to focus on specific crops that meet the local demand, generate jobs and income, and positively impact the societal and environmental context – through produce items such as kale and tomatoes – three weeks spent in Dadaab with farmers, consumers, and producers, as well as other socio-economic actors, proved that hypothesis partially inaccurate. During a workshop with livelihood actors operating in Dadaab, this was synthesized by DRC: *"Dadaab has enough water, if we create boreholes; good soil, if we know where to grow fruits and vegetables; and enough land, if we manage to set up participatory meetings with local communities and authorities. So the problem is not to select one variety over another – shall we select pumpkins or tomatoes?– as all fruit and vegetable varieties from the food basket can be grown in Dadaab and its surrounding."* (DRC, November 2018) The question then becomes: what are the main enablers and drivers that can help develop agriculture in Dadaab from a general and systemic standpoint and which agricultural techniques are most sustainable given available water and soil resources?

Drawing on these findings as well as further fieldwork and available data, these value chains were rated according to a series of indicators adapted from the ILO/UNHCR model (**Table 8**). The sub-sectors selected for further exploration came down to a low-risk and a high-risk value chains: Agriculture (") and Recycling. These two value chains – recycling and fruit and vegetable production – are limited and supported by similar supporting functions as well as rules and frameworks (**Figure 4**), outlined in the Socio Economic Profile in part 1 of this report. These functions and frameworks form the ecosystem within which the value chains within each sub-sector will struggle or thrive, as will be seen in each section below.

Pictures 1 and 2: Hagadera's bazaar and acacias at FAIDA's base

Table 8: Scoring of Dadaab sub-sectors containing relevant value chains

	Waste & Recycling			Livestock Trade			Trade & Services			Fruit and Vegetable production		
IMPACT LEVEL	Weight	Note	Final	Weight	Note	Final	Weight	Note	Final	Weight	Note	Final
Economic Potential	**5**		**32**	**5**		**25**	**5**		**27**	**5**		**35**
Existing Market Demand	1.5	7	10.5	1.5	5	7.5	1.5	5	7.5	1.5	8	12
Employment Intensity of Sector	1	5	5	1	6	6	1	6	6	1	7	7
Employment creation potential women + youth	1	6	6	1	4	4	1	6	6	1	7	7
Added value – income generation	1.5	7	10.5	1.5	5	7.5	1.5	5	7.5	1.5	6	9
Social Relevance	**4**		**30.5**	**4**		**21**	**4**		**24.5**	**4**		**29**
Improved cohesion refugees / host	1.5	8	12	1.5	4	6	1.5	8	12	1.5	8	12
Impact on community health and wellbeing	1.5	9	13.5	1.5	4	6	1.5	5	7.5	1.5	8	12
Skillset (refugees / host) relevant to sector	1	5	5	1	9	9	1	5	5	1	5	5
Feasibility	**6**		**49**	**6**		**27**	**6**		**30.5**	**6**		**40**
Factors of production (land, water, raw material)	2	8	16	2	5	7.5	2	5	7.5	2	8	12
Environmental impact	1.5	10	15	1.5	6	9	1.5	5	7.5	1.5	7	10.5
Sustainability	1	9	9	1	6	6	1	5	5	1	7	7
Technical and regulatory ease of intervention	1.5	6	9	1.5	3	4.5	1.5	7	10.5	1.5	7	10.5
Result (Total Weighted Note)	**111.5**			**73**			**82**			**104**		
Comments and key findings	• Strong need and demand, confirmed by the HH survey and complementary KIIs (private sector) • Positive impact on health and environment • Theoretical buy-in from local authorities • Lessons learned from past experiences (in Dadaab and elsewhere)			• Poor job creation • Possible conflicts with local communities over ownership and trade • Traditional Somali pastoralism, as a strong asset • Uncertain regulatory environment (formal and informal)			• Existing demand difficult to quantify, given the informality of trade and services in Dadaab • Positive impact on the societal cohesion with local communities • Difficult needs assessment of the required skillset			• Strong demand for multiple products (vs. price volatility and imports) • Strong potential in job creation across all demographic segments • Land, water, and soil "are not an issue" (CARE). • Local buy-in (authorities)		

4.1 Supporting functions: enablers and facilitators

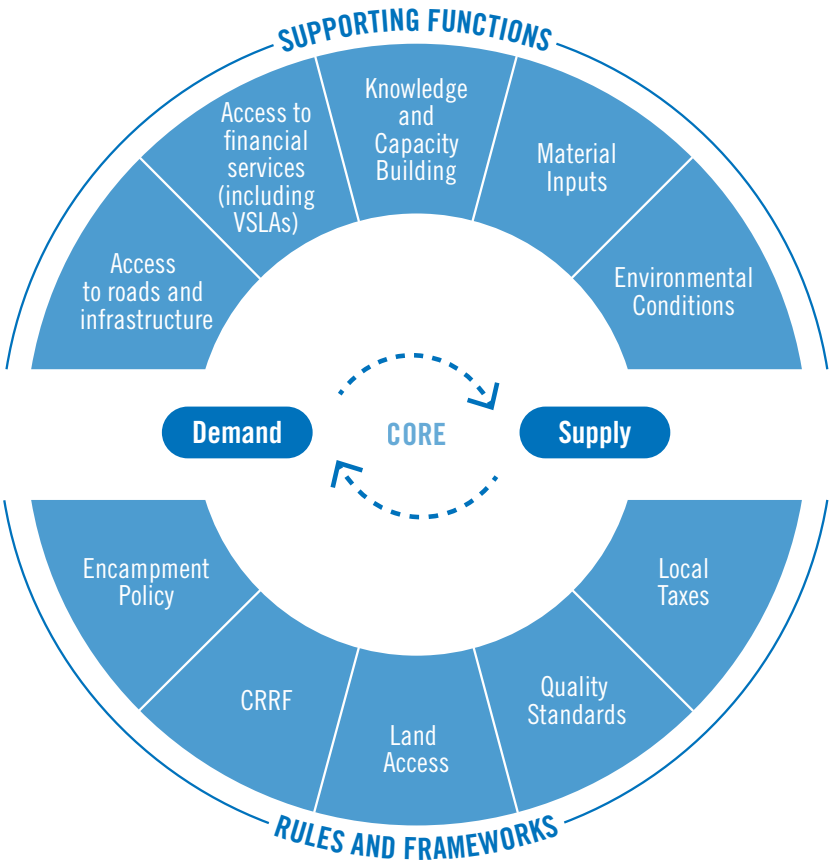
Assessment of general supporting functions highlights services that are already supporting market actors but require further development (including informal supporting functions, such as VSLAs), as well as an evolving legal context in which rules and frameworks may bring about positive change when it comes to national and regional attitudes towards livelihood development in refugee-hosting areas: this includes the roll out of the CRRF/GCR in Dadaab, as well as renewed donor(s).

While some gaps remain, essential requirements for market systems in Dadaab are present: access to roads and infrastructure can be facilitated, water and land are available to support value chain development, and host – refugee socio-economic interactions are already well established.

This section serves as an overview of supporting functions for each of these value chains, as well as areas where it is possible to develop further engagement.

4.1.1 Specific supporting functions and frameworks for produce value chain

Figure 10: Supporting Functions, Rules, and Frameworks for Produce Value Chain



The presence of water and arable land is an essential element to supporting the cultivation of fruits and vegetables – the fact that, as described in more detail below, the **environmental conditions** in Dadaab are in place to facilitate this cultivation and is an essential element to developing this value chain further.

Access to land is an equally crucial element to further supporting the on-going development of this value chain. The legal and policy framework managing refugees in Kenya does not currently allow for refugees to access land for farming; at the regional level however there is an openness to allowing for

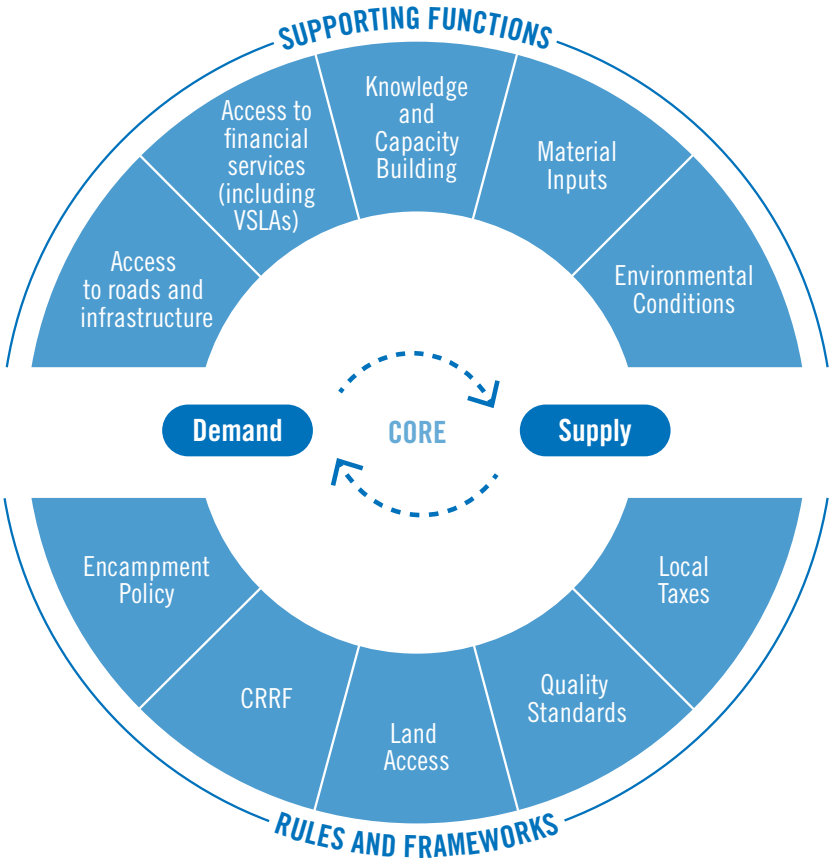
this, and FGDs with host community members reveal a willingness to share land for cultivation with refugees if they are benefiting equally from this cultivation. As land that is communally owned can be shared with refugees upon consent to the host community, refugees would be able to access land through joint refugee-host community ventures.

The provision of initial **material inputs**, such as seeds or fertilizer, is necessary. This provision can take several different forms, including through partnerships with private sector actors, as well as the support and promotion of networks between existing community members and service providers: livestock host traders, for instance, may be interested in selling livestock manure as eco-friendly, soil enriching fertilizer: this may be combined with knowledge building surrounding composting with scraps in order to promote effective cultivation of fruits and vegetables.

Capacity and knowledge building for farmers and potential farmers is necessary: one of the reasons the value chain has not been further developed beyond its existing stage is the lack of knowledge and skills in agricultural on the part of a community that has not historically been a farming community. This may be addressed through partnerships with research institutions based in Nairobi (such as CIRAD) that is dedicated to agricultural research and specializes in agro-ecology and a focus on sustainable crops in arid lands.

4.1.2 Specific supporting functions and frameworks for recycling value chain

Figure 11: Supporting Functions, Rules, and Frameworks for Recycling Value Chain



At the national level, KIIs reveal that waste management is a Kenyan government priority, enabling a favorable and supportive **national policy environment** surrounding waste collection and management in line with

country objectives. National regulations and laws surrounding waste management will also have an impact on the value chain.

The **environmental and social conditions** surrounding waste at the camp can greatly impact the ability to access the supply side of the value chain. Attitudes towards waste collection – for example support for this due to environmental and health factors or disdain for the activity of waste collection due to social pressures have an effect on the accessibility of the supply.

Building **knowledge and capacity** surrounding the management of this supply is necessary, both at the attitudinal level (in some quarters, waste collection is still viewed as an undesirable occupation and substantive work on changing norms as well as social and gender considerations will be integral) as well as the practical level: effective and hygenic means to collect and dispose of waste, as well as building connection, knowledge, and partnerships between relevant actors, including private sector buyers. This knowledge and capacity gap can in part be fulfilled or supported by MIT's D-lab, working already on supporting recycling sector actors across Kenya.

4.1.3 Commonalities to both value chains

As can be seen from the figures above, there are also certain common supporting functions and policy frameworks that have an impact on both value chains. Both **informal and formal supporting structures** have been playing a crucial role in both of these value chains in Dadaab.

A central supporting function is **access to financial services**. Where formal structures such as banks are inaccessible, or theoretically accessible but not adapted to cultural, legal, or practical needs of refugees, VSLAs serve as effective informal financial service models. The capital available to self-help groups and associations remains small and is preferably managed at this VSLA-level, rather than by relying on financial institutions, which allow for saving but not for borrowing.

VSLAs have more flexible features and provide, in addition to lending mechanisms, as element of welfare support for emergencies or shocks that may households. As described above, Dadaab has seen its population fluctuate in recent years. VSLAs are a safety net for those attempting to set up more sustainable businesses in an ever-changing context. *"Sometimes someone will come and order three pieces of cake and bring the money the next day. The same week that person will go to Somalia. The shop needs the money despite the customer having gone for repatriation. Being part of a group makes us less vulnerable to these changes" (Female FGD participant).*

VSLAs in Dadaab are asking for more agency support to increase the capital base of these associations, to operate their businesses more effectively, buying inputs outside of Dadaab, and extending their reach beyond the local market. VSLA members are confident about their capacity to attract customers for the crops that they want to trade (tomato, kale, spinach, chili), but they identify **missing inputs** such as equipment, seeds, land, generators and access to water as constraining factors.

Among the formal functions that support the further development of these value chains is the **well-developed infrastructure in Dadaab**: roads, water, or land are available for hosts and refugees alike. Refugee and host community members in Dadaab can access closed camps (such as Ifo 2) and currently un-used water boreholes to expand their economic activity in the camps that have remained opened. The demand for agricultural products, for instance, remains expansive. Agricultural activities can be furthered if

water is redirected from boreholes that were built in Ifo 2, are currently functional, but are simply not being used to their full extent. Using these existing infrastructural mechanisms ensures sustainability and continuity of the value chains.

These rules and frameworks support the movement towards a more positive outlook on local economic development in Dadaab. Kenya has joined the **CRRF** and endorsed the GCR with work that has already begun in Kakuma and Kalobeyei. Livelihood actors in Dadaab recognize the role of the CRRF in supporting the local governance obstacles, notably around refugee mobility, encampment policy, and access to property. Finally, previous research has pointed out to the willingness of refugee businesses to pay **taxes** that can be further invested in value chain support. These are questions to be further included and analyzed with different counterparts, including the Government at national and county levels.

The next sections delve further into each of these value chains, examining how these functions can serve to support their further development.

4.2 Sub-sector 1: Fruit and vegetable production

Although the climate of Dadaab is semi-arid, during the rainy season water collects at low points in and around the area. The land drinks these pools of water up, leaving behind moist soil that remains even once the sun returns, and, if this water is harnessed properly, cultivation of the land can be effective and productive – this process is called flood recession agriculture (see **Box 4**). If managed well, if made available at accessible points, this water has the possibility to provide the foundation for sustainable and potentially scalable agricultural production.

Demand for a diversity of fresh produce in Dadaab is strong on the part of both host and refugee community members. Both refugee and host community members seek to maintain varied and nutritious diets. There is a shortage of vegetables in Dadaab compared to other food items: kale, cabbage, onions, and tomatoes are particularly in demand, largely because they are often imported from Garissa or Nairobi and come with a high cost. They are in fact considered so precious that they can serve as trading currency within the consumer fruit and vegetable production – only one farmer in Hagadera sells his vegetables commercially, and the rest of this produce comes from outside Dadaab county.

Voices from the field: On Wanting Vegetables

"I buy vegetables instead of meat which is more expensive, but vegetables can also be hard to find. During the rainy seasons vegetables become more expensive since there is poor transport in and out of the camp."

"Pregnant mothers are advised to eat kale for their health. Our land is suitable for cultivating especially vegetables."

"Excuse me, we use tomatoes for lunch. Actually tomatoes are used for soup, rice and beans are used for supper. Tomatoes are expensive. We want them but we cannot afford to use them for breakfast, lunch and supper."

The produce value chain, if implemented at scale, therefore has the potential to fulfill a real market demand and minimize reliance on imported greens as well as to create jobs for local farmers along with promoting a diverse and cooperative farming model.

4.2.1 Rationale for a *vegetable and fruit production* value chain

Given the possibilities for agriculture (available land and water, and fertile soil) there are two options that emerge when looking at the potential for value chains within the fruit and vegetable production value chain:

- The *singular* (monoculture) option, which is more commonly looked at. This is, however, a limited option, which does not lead to diversification and runs the risk of leading to saturation of the market
- The *multi-crop* option: this offers a diversified market that follows the same basic value chain model, but offers the possibility of linking producers together, avoiding saturation and over-competition, leading towards the possibility of a *cooperative model*.

While the multi-crop model requires more coordination and communication than the single crop, in the long term it offers more sustainable and flexible opportunities for producers, and answers to consumer demand in a more comprehensive manner: Focusing on tomatoes or a single agricultural value chain makes sense in Kakuma, given the more complex access to water, land and considering the quality of the soil; in Dadaab, by contrast, the challenge is different. How can we remove socio-cultural, regulatory, or technical barriers to promote agricultural value chains in a systemic manner? The benefits – from a dietary, nutritional, but also commercial and economic perspective – are explained in the following subsections.

Box 4: Flood Recession Agriculture

Flood recession agriculture, or flood based farming, is the process of farming using the residual moisture of seasonally flooded land after a flood or large body of water recedes. This process can have a significant impact in arid areas, where it allows for subsistence farming, and, with proper management, can allow for larger scale cultivation.

Produce can be considered a precious commodity in Dadaab – only one farmer in Hagadera sells his vegetables commercially, and the rest of this produce comes from outside Dadaab county, either from Garissa or from Nairobi. This is due both to land regulations that restrict access to land for refugees, due to both national regulations and local regulations related to the fact that Dadaab straddles the line between Garissa and Wajir Counties. In addition to this, most refugees do not currently have the. knowledge or skills required for effective agricultural production. Although some refugees have started to teach themselves how to do this due to the perceived potential of farming, the lack of formalized capacity building and knowledge building around effective farming techniques has been an obstacle local production of produce up to now.

As shown in the table and graph below, the observations made by the research team in the three markets are corroborated by a rapid market price survey (24 traders in Dadaab, 4 in Garissa and 4 in Nairobi): at the time of the data collection, for instance the average retail prices for fruits and vegetables were significantly higher in Dadaab compared to Nairobi: +98% for okra, +115% for tomatoes and cabbage, +176% for onions, and up to +335% for maize. By contrast, crops that were grown in Dadaab were cheaper – pumpkins, in particular, even if its consumption remains marginal in Dadaab. While a more representative price market survey would probably be required, it is worth noting that developing locally produced fruit and vegetable production would be a game changer for refugee (and host community) households, as highlighted by a Kenyan farmer who works between Garissa and Dadaab: *'Refugees pay twice or fifty-percent more for onions and tomatoes than in Garissa or Nairobi. Everyone knows that. At the same time, families spend all their money on food and often borrow money to get*

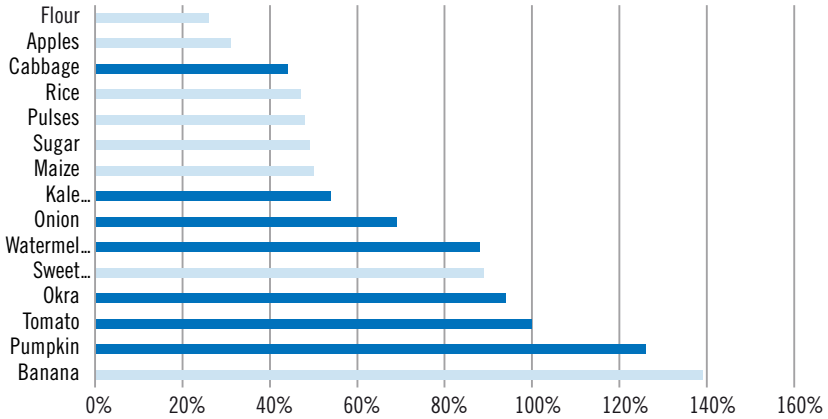
some. So, if we increase local productions, in volume and varieties, and if we work on productivity, we can change people's life here' (Farmer, Host community, October 2018)

Table 9: Average Prices of 15 Food Items by Market location, Gross Profit Margins and Cross-Market Price Differences

FOOD ITEM	UNIT	AVERAGE PRICE (KSH)				
		Nairobi	Garissa	Dadaab	Dadb/NBO	Dadb/GAR
Sugar	1 kg	108	110	140	**30%**	27%
Rice	1 kg	97	107	129	**33%**	21%
Pulses	1 kg	60	78	109	**82%**	40%
Flour	1 kg	75	60	82	**9%**	37%
Banana	1 pc	6	7	10	**67%**	43%
Apples	1 pc	25	40	42	**68%**	5%
Sukuma	1 bundle	33	30	55	**67%**	83%
Watermelon	1 pc	150	187	222	**48%**	19%
Maize	1 kg	23	62	100	**335%**	61%
Sweet potatoes	1 kg	33	63	56	**70%**	-11%
Okra	1 kg	46	64	91	**98%**	42%
Onions	1 kg	37	73	102	**176%**	40%
Tomatoes	1 kg	47	83	101	**115%**	22%
Pumpkins	1 pc	350	300	220	**-37%**	-27%
Cabbage	1 pc	68	117	146	**115%**	25%

Another positive impact of the fruit and vegetable production approach is to reduce the extreme volatility observed and reported by local traders, as shown in the graph below: annually, price volatility for vegetables and fruits can reach values from 30% (apples) to 100-140% (tomatoes, pumpkins, banana). According to the traders interviewed on the market, while seasonality is of course a key *contextual* determinant (e.g. bananas), the main *structural* reason is the high cost associated with transportation, especially during the rainy reason. Producing locally and at scale by increasing the volumes and productivity of selected value chains in the 'fruit and vegetable production' could contribute to mitigating high prices and volatility altogether.

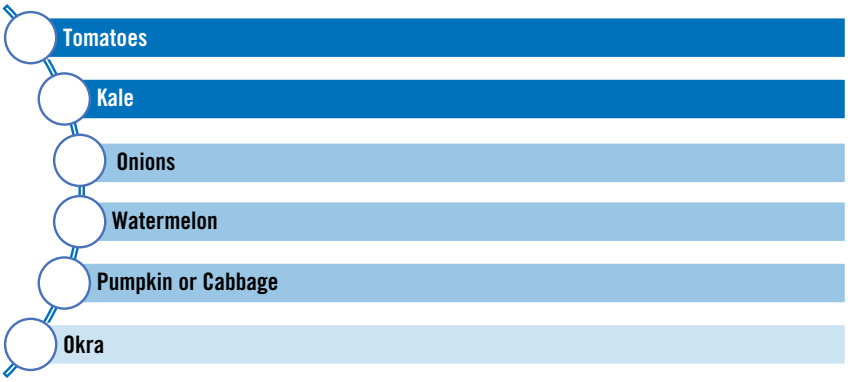
Figure 11: Market price volatility in Dadaab for (15 articles 22 traders) - highest and lowest prices throughout the year



4.2.2 Composition of the fruit and vegetable value chain

The vegetable basket model, if implemented at scale, has the potential to minimize reliance on imported greens and other vegetables and to create jobs for local farmers through the promotion of a diverse and cooperative farming model. To further develop this model and identify which crops would be more conducive to produce at scale, a market survey of fifteen different food items – vegetable and non-vegetable – was conducted, comparing prices of each item in Nairobi, Garissa, and Dadaab (**Table 9**). These results were then triangulated with FGD findings, and each item was given a score (see **Table 10**). Once scored, the seven most viable food items that would make the most sense to produce at scale and include in a fruit and vegetable production VC, in order from highest ranked to lowest ranked, are:

Figure 12: Market price volatility in Dadaab for (15 articles 24 traders)



The pictures below were taken in three different locations in Dadaab: a farm run by Somali refugees (okra), the Kenyan Red Cross farm (watermelon) and the FAIDA horticulture, fruit and vegetable pilot farm (manure). This diversity of actors shows that technical coordination and learning activities can be developed in Dadaab; likewise, both KRC and FAIDA approaches confirm that almost all fruits and vegetables can be grown in a eco-responsible way in Dadaab.

Pictures 3, 4, and 5: Local okra production in Hagadera, watermelon at the Kenyan Red Cross (Dadaab), manure at the FAIDA horticulturegarden (Hagadera)

Table 10: Scoring of Dadaab sub-sectors containing relevant value chains

IMPACT LEVEL	Apple	Kale	Water-melon	Maize	Sweet potatoes	Okra	Onions	Tomatoes	Pumpkin	Cabbage
Economic Potential	27.5	34.5	33.5	23	27.5	30	35	39.5	31.5	31.5
Existing Market Demand	9	13.5	10.5	6	9	9	12	13.5	10.5	10.5
Employment Intensity of Sector	6	6	7	4	6	6	7	7	6	6
Employment creation potential women + youth	5	6	7	4	5	6	7	7	6	6
Added value – income generation	7.5	9	9	9	7.5	9	9	12	9	9
Social Relevance	21.5	30	28.5	20	20	25	25.5	30	28.5	28.5
Improved cohesion refugees / host	7.5	10.5	10.5	7.5	7.5	7.5	9	10.5	10.5	10.5
Impact on community health and welbeing	9	13.5	12	7.5	7.5	10.5	10.5	13.5	12	12
Relevant skillset (refugees / host)	5	6	6	5	5	7	6	6	6	6
Feasibility	20	43.5	35	23.5	33	39.5	39.5	38.5	35	37.5
Factors of production (land, water, raw material)	4	14	12	6	10	14	14	14	12	12
Environmental impact	9	12	9	9	9	9	9	9	9	10,5
Sustainability	4	7	5	4	5	6	6	5	5	6
Technical and regulatory ease of intervention	3	10.5	9	4.5	9	10.5	10.5	10.5	9	9
Result (Total Weighted Note)	69	108	97	66.5	80.5	94.5	100	108	96	97.5

4.2.3 Possible options for a *fruit and vegetable* production value chain in Dadaab

Together, these seven items form the contents of the fruit and vegetable production value chain. This is not a fixed list, but serves as a model and template for a vegetable value chain that provides multiple and complementary pathways to opportunity, each requiring differing timelines and resources. These can be divided into three overarching options when it comes to the value chains within the fruit and vegetable value chain:

SHORT-TERM

Option 1: Vegetables **are sold directly in Dadaab markets as soon as they are harvested**, while they are fresh. Both refugees and host community members are producers and consumers, and work together to provide a diversity of vegetables following a cooperative model. This can also include partnering with host community traders to sell or exchange produce in Garissa.

Time to implementation: This option is relatively straightforward and quick to implement: beyond the initial material (seeds, fertilizer) and knowledge (capacity training on flood farming, de-stigmatization conversations of farming as a means of livelihood) inputs. Coordination amongst producers, to avoid market saturation and promote an effective cooperative model is a potential challenge that will require time and management.

Resource Needs: Medium – Low: Initial inputs, upskilling on farming techniques, access to inputs, capacity training facilitators (including technical agricultural experts), access to land.

Payoff: Medium- High: community members will have access to more nutritious diets, increased coordination and partnership between host and refugee community members, increased economic earning potential

MEDIUM-TERM

Option 2: Linking sellers of **adequate refrigeration products or other conservation methods to refugee and host community farmers in order to allow them to conserve and sell vegetables in times of price fluctuation or scarcity**, for instance during the rainy season, offering produce at a standard price in spite of climate fluctuations.

Time to implementation: Same as option 1.

Resource Needs: Medium - Provision of effective refrigeration tools or capacity building on effective conservation methods (pickling, canning, salting...)

Payoff: Medium-High Same as option 1, with the added value of being able to provide a varied diet at reasonable rates throughout the year, and communities experiencing less dependency on climate fluctuations.

LONG-TERM

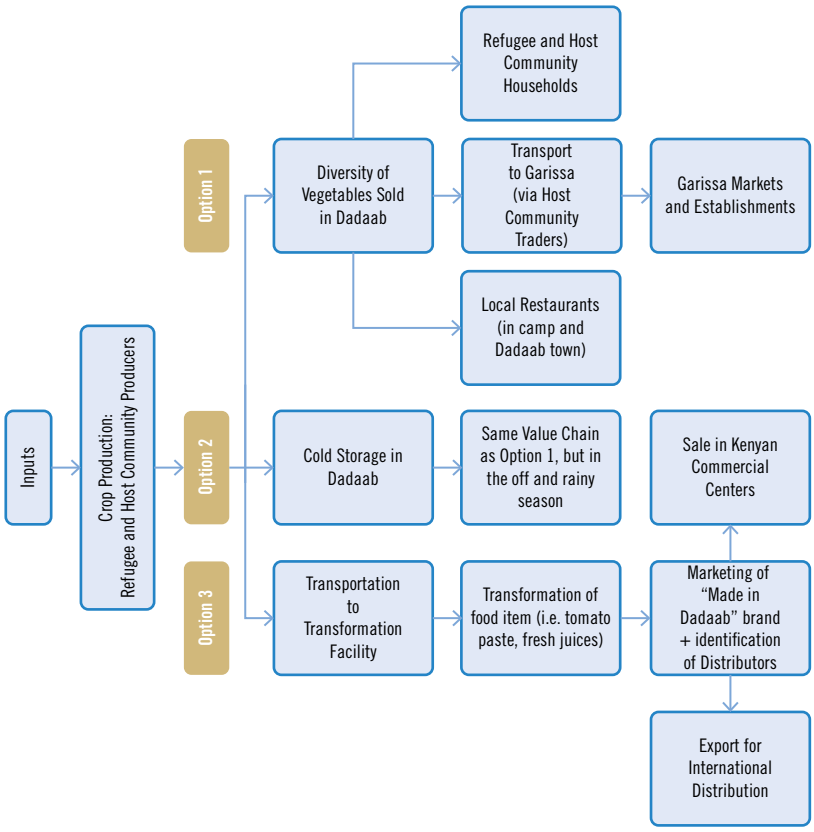
Option 3: Food is transformed into *artisanal or mass* items for export, sold under a Dadaab brand both within Kenya and abroad – for instance tomatoes transformed into tomato paste or sauce, watermelon bottled into juice, cabbage into sauerkraut, okra into pickles, onions into jam, pumpkins into puree...

Time to implementation: The time to implementation is much longer for Option 3 than for Options 1 and 2: building a brand takes time, as does building partnerships with private actors, building appropriate facilities in Dadaab (or partnering with an actor willing to provide appropriate facilities, ensuring international level quality checks, and establishing an export chain that would effectively become a new value chain. Any payoff would take at least 3-5 years.

Resource Needs: High –access to transformation facilities, brand marketing, capacity building of Dadaab community members (both host and refugee).

Payoff: If successful, high.

Figure 13: Possible non-mutually exclusive options for developing the fruit and vegetable production value chain in Dadaab



4.2.4 Operational recommendations for the fruit and vegetable production value chain

A multiplicity of options within the value chain does not necessarily entail an exclusive either/or scenario. Rather these possibilities can be seen as complementary: it would be possible to set Option 1 in motion with interested stakeholders, for instance, while laying the foundation for the longer, more difficult, and more expensive work of putting an Option 3 in place. However, while options are not mutually exclusive and may be determined ex post (as the fruit and vegetable production value chains takes on socio-economic importance), a number of supporting functions must be created, supported or strengthened in order to fully develop any of the value chain options within the specific fruit and vegetable production value chain. Beyond the environmental conditions and access to water discussed above support services include:

While the fruit and vegetable production value chain responds to an existing market demand, some of these opportunities are prefaced by prejudice and socio-cultural challenges that can be addressed through community and context based dialogues, as suggested in the box below.

Table 11: Socio-cultural challenges and solutions

Challenge Facing the Fruit and vegetable production Value Chain	Learning Opportunity
Host community members and some refugees, in particular youth	• Experience sharing with refugees and other community members who have successfully turned to agriculture as a means of subsistence or livelihood • Presentation of existing programs, such as the FAIDA initiative and DRC and KRC agriculture initiatives – presentation of positive results that have already occurred • Visit to existing farms and with current farmers: 'Day in the Life" discussions, market visits • Discussion of climate change, opportunities that exist in a changing environment

If managed adequately, in a manner that is flexible and receptive to context specificities, the fruit and vegetable production value chain has the potential not only to provide a model and framework that can be adapted to many contexts, but to provide holistic development in Dadaab and potentially the greater county, economically, socially, environmentally, and societally.

Holistic Benefits of the Fruit and Vegetable Production Value Chain

Economic: Increased access to livelihoods and economic self-sustenance, cheaper access to produce
Food security related: Increased access to a nutritious and varied diet
Environmental: Access to local produce and naturally fertilized land
Societal: increased cooperation between host and refugee communities

This sub-sector therefore:

- has the **potential** to create employment opportunities, through the development of an agricultural cooperative model where farmers complement each other in the market;
- is **relevant** to the target group, *first* because the environmental conditions are in place to support this work, and *second*, because although this is a relatively new sector for community members in Dadaab, smallholder farming has begun to take hold, and there is growing recognition of the value this can provide.

Table 12: Fruit and Vegetable production VC : Recommendations

OBJECTIVE	ACTOR	DESCRIPTION	AGENDA
PRIMARY RECOMMENDATIONS			
1. Advocating for land access by developing participatory dialogue and engaging with host communities	UNHCR, RAS local authorities	Fostering a positive dialogue between local authorities, local communities, and refugee communities towards: • access to land for refugees (lease or right of use) – either through the allocation of new lands or the reallocation (preferred option) of closed camps (Kambioos or Ifo) already equipped with irrigation systems and boreholes;the procurement of manure by host community livestock owner in a rational and predictable way; • a common understanding of the positive economic, social and environmental impact of agriculture in Dadaab (e.g. awareness raising and participatory discussions with pastoralist clans/groups reluctant to shift – even partially – to agriculture);	**Immediate action, long-term impact**
2. Promoting access to finance, skills, and information (capacity-building on farming techniques and sales)	MFI (Microfinance Institutions), traditional banking institutions + BDS, TVET centers, private sector actors, research and development organisations	Many farmers are unable to start farming due to a lack of access to credit or information. Interventions should offer: • financing to future entrepreneurs through the provision of microcredit, the development of saving schemes, etc. • information provision regarding prices and production methods. It can be done by generalising information networks such as the government-run AMIS (Agricultural Marketing Information System) or the privately run M-Farm, and use these platforms for wider-scale dissemination of pricing information and sales opportunities outside Dadaab. • technical training modules focusing on: i) basic technical skills to the local workforce (both local and refugees) in coordination with county authorities; ii) advanced vocational skills (packaging, sorting, grading, etc.); iii) administrative, logistical, marketing skills, etc. for the educated local workforce.	**Immediate action and mid-/long-term impact**
FURTHER RECOMMENDATIONS			
Building capacity to manage and harness existing water resources Nt; private-sector expert institutions	Local authorities, government	Ensuring an environmentally responsible and technically robust large scale irrigation system as well as a regular access to market infrastructure: • Allowing access to commercially utilise the boreholes and water resources of closed camps (Kambioos or Ifo 2), in agreement with local communities and Kenyan authorities and under UNHCR's responsibility; • Improving knowledge and capacity to use flood-based water irrigation techniques • Creating a proper access to market infrastructure, including conservation infrastructure (refrigeration, canning facilities) and processing facilities.	**Immediate action, long-term impact**
Linking the Dadaab VC to other areas	Private sector, agribusinessmen cooperatives	In the longer run (3-5 years), enhancing the economic sustainability and autonomy of the fruit and vegetable production value chain through: • the eventual creation of additional segments: production, processing, packaging, marketing, etc. to produce tomato paste, soups, juices, etc. This may apply to the entire fruit and vegetable production value chain or to a few products only. • a brand « made in Dadaab », with the objective of following international standards and obtaining quality labels, and securing export routes (nationally, regionally, and internationally).	**Long-term action, long-term impact**
Ensuring Decent Work in the VC	Local farmer associations, local business associations	• fair profit sharing, with robust cooperatives with a strong bargaining power and quality labels ensuring the standardization of the transformed/processed products. • the establishment of cooperatives to ensure that producers/farmers are fairly paid and legally protected; • the Socio-economic, demographic, and environmental inclusion to assist the most vulnerable segments of the refugee population.	

4.3 Sub-sector 2: waste management and recycling value chain

4.3.1 Rapid assessment of today's supply and demand

Both host and refugee community members recognize the health and environmental risks that this waste presents. The research team conducted a rapid household survey, targeting 100 households in Hagadera and Dagahaley to inquire household waste production and management practices. This survey sheds light on the attitudes and practice in solid waste segregation and recycling at the household and community levels; it also provides an estimation of the amount and kind of waste produced on a daily basis in these camps. There is an interest in purchasing waste material from Dadaab by private sector actors in Nairobi, who would be willing to invest and support the development of this value chain under certain conditions.

I. Demand for Waste Material

Private actors in Nairobi express interest in purchasing waste from Dadaab if circumstances are made amenable. KIIs with waste management actors such as Ecopost, AWEMAC, and Rubikon highlight this interest, as well as the ongoing need and demand for waste at both the national and international levels.

Interest and Demand – Purchasing Waste Material

"Would you be interested in purchasing waste material from Dadaab?" **"Definitely, why not?"** (KII Rubikon)

On International Demand: *"You know the demand in China is higher than of course here in Kenya because China has a global market, so they get these materials from all over the world, they process and export them, and they also have the capacity, the industrial processing capacity."* (KII AWEMAC)

"Yes, we would advise clients to purchase waste material from Dadaab." (KII Ecopost)

The interest and need for waste material is therefore present, and there is a willingness to consider Dadaab as a source of supply for this demand. However, these private sector actors evince some concern that the material conditions are not yet in place to make this financially viable. In particular, the cost of transporting raw material from Dadaab to Nairobi was highlighted as a key current concern that would need to be addressed before these private sector figures act on their willingness and interest in purchasing waste from Dadaab. "The whole issue would be the viability in terms of the costs of delivering these materials to Nairobi," says one Ecopost representative. Increasing the volume of waste to be purchased in Dadaab is crucial to mitigating this, although KIIs interviewed for this study were unable to give exact figures in terms of volume and pricing.

> *Look at where Dadaab is. Its far away, which means that if you have to transport waste from there to here, that transportation cost is mostly going to eat into your budget. You would rather produce from that point, rather than getting the raw materials from Dadaab and bringing it here to Nairobi. So there are factors that are to be considered in terms of quantity. You see if the waste material is in a large quantity, then in that case...there is enough quantity of waste to sustain that business from that other end. (KII Rubikon)*

In order to do this, a common recommendation that emerged in KIIs is to initiate processing of waste in Dadaab.

> *What I can advise is you do some bit of processing in Dadaab, preliminary processing so that you can be able to reduce the cost of transportation, but not getting raw materials all the way to Nairobi. You try to do a bit of basic processing at Dadaab. (Ecopost)*

This would allow for bulk purchasing of waste at volumes that would offset the cost of transport and make Dadaab a financially viable place from where to purchase waste. This is already happening at a minimal level in Dadaab, through a small processing plant that has been set up and run by KRC and ICRC, which compresses limited amounts of plastic before being brought to Nairobi. Currently this is being run entirely through those two organizations – however, KIIs revealed that, is appropriate support were to be provided, in the form, for instance, of grants or subsidies, they would be willing to support the further development and expansion of this processing plant.

Ecopost highlighted, for instance, that land and some material support would allow for this development: "If we got land, like space and maybe some money to facilitate the process like maybe to purchase a shredding machine or something like that, it is possible for us to support this processing facility" (KII Ecopost). In addition to this material facilitation, private sector actors expressed a willingness to contribute their technical expertise and support capacity development in the expansion and development of these processing plants. This could be financed through a variety of ways, including loans or grants, in addition to private sector support.

> *Maybe [a processing plant] can be financed in loans but also technically in terms of equipment. The equipment that is required for processing, basic equipment that is required for basic processing. For example, if it is plastics, they would need a machine which needs shredding of plastics. Maybe a more ready machine that is just an example. (KII AWEMAC)*

It was highlighted that funding might also come in part from national donors: Rubikon work currently with the Danish government on issues of sustainability and environmental waste management, and international interest in purchasing waste, for instance on the part of the Chinese government, might be a source of funds as well. Further study on this is beyond the scope of this report, but is required in order to establish diverse sources of funding for the expansion of this value chain.

Priority Waste Material: Scrap Metal and Plastic

There is use for a variety of waste materials, including plastic, scrap metal, paper, and glass. These are used by different types of processing plants and private sector actors: "We have a premier industry which recycles plastics, so all these plastics, polyethene papers, we recycle them, and they make water tanks. We have Chandari industries which recycles papers to produce tissue papers. We have central glass, right now known as console. With them they recycle glass and they are all members. We also have East African Foundry, which recycles metal, they melt and produce other materials as a result of the same." (KII Rubikon).

However, across the board those interviewed for this report agreed that scrap metal and plastic in particular are the most in demand materials.

> *[Waste materials] are all in demand, but if you look at metal it is in demand, metal is so much in demand. Plastic also, right now with the plastic ban, so you know these companies rely on plastics. (KII Rubikon)*

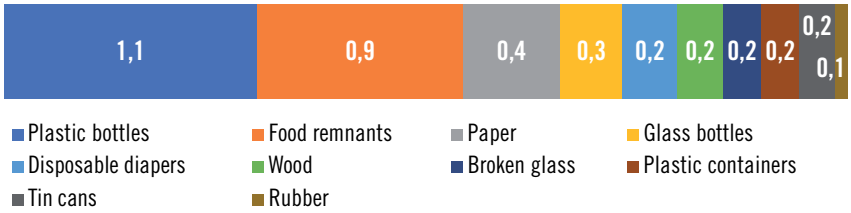
The highest demand is of course for scrap metals. The demand is so huge, followed by plastics, it is number two. (KII AWEMAC)

The following section examines the composition of waste in Dadaab, which fulfills the need for these two materials.

II. Waste composition at the household level

Plastic bottles and food waste were the most common forms of daily waste, followed by paper and glass bottles. When disaggregating these key categories, empirical observations at the household level and at two dumping sites show that: i) plastics mainly include polythene packaging, PET bottles, UPVC/PVC materials and LDPE/HDPE materials; ii) metals include ferrous scrap such as household appliances, cans and i.e. iron/steel products and non-ferrous scrap including aluminum, copper, lead, tin and semi-precious metals; iii) paper includes newsprint, white office paper, mill scrap, corrugated cupboard and paperboard; and finally iv) waste electrical and electronic equipment (WEEE), waste oils, batteries, as well as composite packaging were also identified by the research team. These observations and figures corroborate – proportionally – the 2018 World Bank assessment of waste production and management in Sub-Saharan Africa.[23]

Figure 14: Waste composition at the household level in Dadaab (3.8kg/Hh/day, n=100)



III. Waste generation at the household and community levels

There are caveats and limitations to the rapid household survey as it was conducted in November (possible seasonality bias) and with 100 households only (important margin of error). However, it can provide *some indicative trends and figures* on the actual production of waste in the camp, as highlighted in the table below. To better capture the actual demand for waste management in Dadaab, three important information should be highlighted here:

- The exact number of households and individuals can vary significantly – and their subsequent waste production. The household survey conducted for the purpose of this assessment is the first of its kind in Dadaab and provides a snapshot of waste production (and therefore the potential for waste management) in Dadaab. However, a survey with a larger household sample would be required to develop a solid business model for interventions.
- The *average individual waste production* (0.63kg/capita/day) is coherent with recent estimates from the World Bank and UNEP in Sub-Saharan

23. See in particular: Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata, and Frank Van Woerden. 2018. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050.* Urban Development Series. Washington, DC: World Bank.

African countries[24] indicating an average production rate of 0.46 kg/capita/day for the sub-region and 0.39 kg/capita/day for Kenya. Considering the range – between 0,1 for remote rural areas and 3kg/individual/day for active urban areas – and given the specificities of encamped environments, the volume and type of waste suggests that Dadaab has developed some similarities with deprived peri-urban areas.

Table 13: Waste generation and composition at the household and community level in Dadaab

As of October 2018 – indicative household survey with 100 respondents	
Registered refugees and asylum-seekers in Dadaab[25]	208,550 individuals
Estimated undocumented[26]	30,000 individuals
Population of concern	238,550 individuals
Average household size[27]	6.0 individuals
Average household waste production[28]	3,8 kg/day
Average individual waste production	0,63 kg/capita/day
Average daily waste production in Dadaab	149,165 kg/day
Average annual waste production in Dadaab, including:	54,445 tons/year
• ***Plastic (bottles and containers)***	18,785 tons/year
• ***Food remnants and green***	13,221 tons/year
• ***Paper and cardboard***	6,296 tons/year
• ***Glass (bottles and other)***	6,506 tons/year
• ***Metal (in cans and other)***	2,329 tons/year

4.3.2 Knowledge, attitudes and practices at the household and community levels

The top priority participant concerns surrounding the accumulation of waste include two distinct series: i) *direct effects on health* (including a particular concern for children's health), as well as the *tangible* aesthetic blight of litter in the streets ("littering looks bad"); ii) *indirect and longer-term impact* on pollution of air, soil, and water – which are highlighted in green in the figure below. While respondents tend to favour immediate and tangible symptoms or causes in the quantitative survey, it should however be noted that a lot of focus group discussion participants have expressed some concerns on longer-term environmental and health issues.

It is finally important to stress that NGOs present in Dadaab all agree that waste management – despite promising initiatives from NRC, CARE, and more recently the Kenyan Red Cross – remains a central issue in the camp:

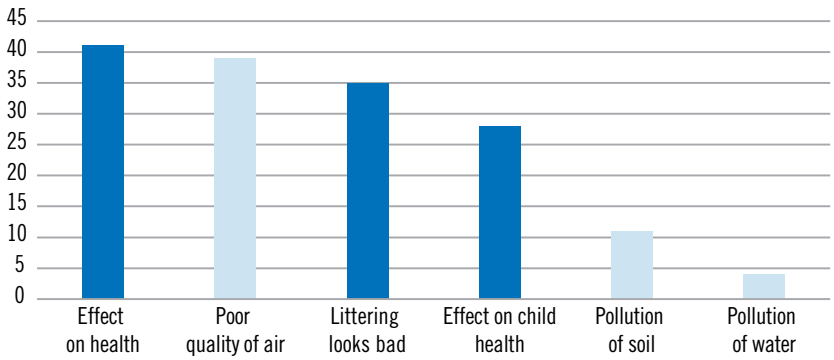
24. See Wilson, DC, Rodic, L, Modak, P et al. (2015) *Global Waste Management Outlook*. Report UNEP, and Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata, and Frank Van Woerden. 2018. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*. Urban Development Series. Washington, DC: World Bank. Note that the first World Bank What a Waste report (2012) indicates an average individual waste generation significantly higher (0.65 kg/capita/day) - http://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resources/336387-1334852610766/Chap3.pdf
25. https://www.unhcr.org/ke/wp-content/uploads/sites/2/2018/11/Kenya-Infographics_October-2018.pdf
26. According to ECHO and local NGOs operating in the camp – November 2018.
27. Based on the indicative quantitative household survey.
28. Based on the indicative quantitative household survey.

'People talk about health and sometimes environment, but it also has some political and economic consequences. Political, because it creates some antagonisms with host communities; economic, because there is money to make with such huge amounts of waste, plastic, paper, wood, glass, etc. as evidenced by the Kenyan Red Cross (…) but the existing initiatives are only a drop in the ocean. The demand is massive and even the ban on plastic bags will not change things. With 250,000 people who generate all sorts of waste and garbage every day, you need more than a factory that recycles 10 tons a year.' (Ministry of Environment and Forestry, November 2018)

'The problem in Hagadera is mostly sanitary. We do not receive funds anymore and have no other technical solution. So we fill the dumping site - a hole about 60 meters in diameter and 10 to 12 meters deep - with all kinds of waste (...) There is plastic, metal, bottles, garbage, without real sorting (...) And then, twice a week we burn it. So the smoke is not good for the neighbourhood and especially for kids. (...) When there is flood, the hole often overflows and dirty water pours into the houses of the neighbourhood. It happens often and it's another big health problem, with diarrhoea, malaria, cholera, and so on.'

Hagadera, dumping site, Operations Manager

Figure 15: Priority concerns over the absence of waste management in the camp



These concerns are justified. Beyond the diseases brought by the perpetual presence of trash in the camps, in particular during periods of rains when floods bring cesspools of waste to the threshold of the households of Dadaab, the main method of disposing of trash remains incineration. Beyond the air pollution wrought by smoke, incineration of electronics ("e-waste") releases carbon monoxide, sulphur dioxide, and other toxic substances into the air, contributing to significant health risks for both those who manage this task and anyone within vicinity. There is therefore an obvious and pressing need to implement more effective waste management methods – the recycling value chain responds to this need, while simultaneously fulfilling an economic demand. A rapid analysis of waste storage and disposal at the household level confirms this initial assessment. It is, however, important to note that the household survey does not include waste generated by the UN and NGO compound and therefore constitutes a conservative estimate of the economic potential of commercial waste management in Dadaab.

Waste storage: Most surveyed households report using rubbish pits and dust bins to store their waste. However, only a few mentions of composting or sorting of waste were made during focus group discussions. It shows that

'there is no real awareness at the family level. Generalizing the gesture of waste sorting and making it widespread in Dadaab would save a lot of time, money, and energy.' (UNHCR, Dadaab) In this regard, carrying out outreach efforts at the community level, to encourage waste prevention and to educate the public on the health issues associated with and hazards of open waste burning should be a priority, as mentioned by several stakeholders in Dadaab and Nairobi and acknowledged by the government, locally and nationally. At the moment, however, there is a dual system in which waste is first collected door-to-door (without any sorting) and later from a centralized point at which collected waste is aggregated. Some neighbourhoods in Dadaab have specific dumpsters in which people can deposit their waste. However, despite the existence of bins or dumpsters, it is common to see waste disposed of haphazardly. Efforts are led by UNHCR and nongovernmental organizations (CARE in particular, in charge of the waste management in the camp) at both household and commercial levels, but some areas of the camps still receive poor or no collection services because of complex accessibility and difficult fee collection.

Figure 16: How do you store the waste generated in your household?

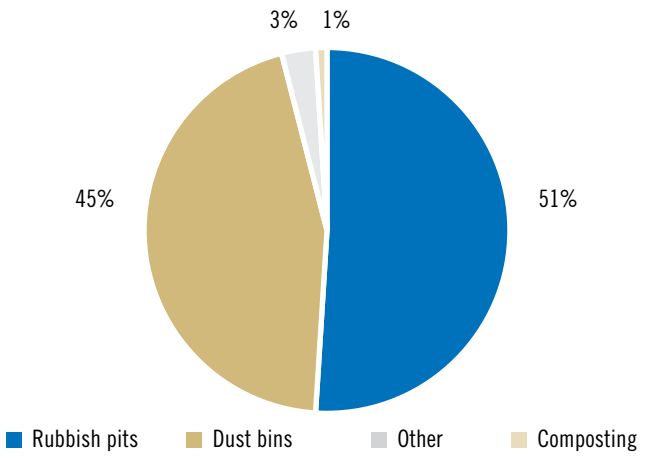
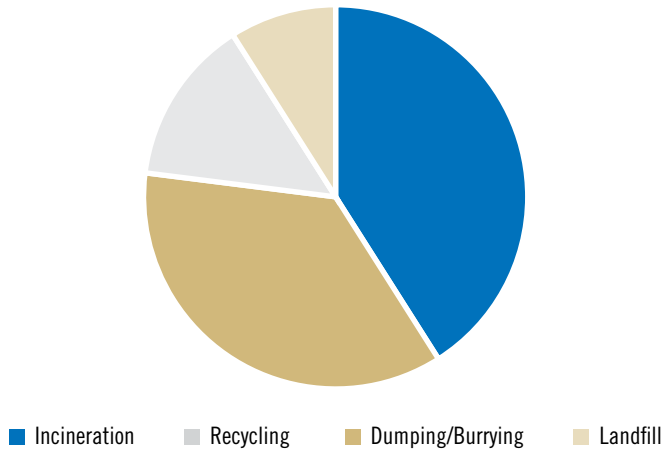


Photo 6: Dumping site in Hagadera

Waste disposal: In Dadaab, waste collection and transportation often occur in two steps, with donkeys, handcarts or tricycles collecting waste for transportation to a primary aggregation site. From the primary site, small trucks are then used to bring waste to the final dumping site. However, in some areas and depending on their respective location, households either dump their waste on empty land or transport it directly to the final disposal site. When asked how they manage or dispose at the household level,

respondents generally confirm what other stakeholders (NGOs, dumping site managers) had told the research team. Incineration and dumping or burying are the most common techniques used to eliminate waste. Considering that dumping sites in Dadaab incinerate their waste to free up space, it appears that open burning is by far most common technique, which releases dangerous carcinogens like dioxins and furans, black carbon. In uncontrolled landfills and dump sites, waste can also spontaneously combust, due to the emissions of flammable methane gas from biodegrading waste.

Figure 17: How does your household dispose of or manage waste?



Willingness to sort: Given the initial empirical observations on the absence of any sorting at the household level and the generalization of open waste burning in the camp – in dumpsites that are not separated from refugees' houses – the research team tested respondents' willingness to sort their waste. While the unanimous positive answer (61 out of 62 respondents) can be seen as a good sign for future awareness raising campaigns and training sessions, the actual decision may depend on the cost (time and/or money) of a sound waste management for refugee household.

Table 14: Actual waste management practices and willingness to sort waste in the future

Do you separate different type of waste at your home?	**Yes**	**27**
	No	47
Would you do so if you are told by your collection service provider?	Yes	61
	No	1

4.3.3 The current waste management and recycling value chain in Dadaab

KIIs with key stakeholders and waste management specialists highlight the possibilities of the recycling value chain (see **Box 6**), while cautioning the necessity of striking a balance between environmental protection and economic growth.

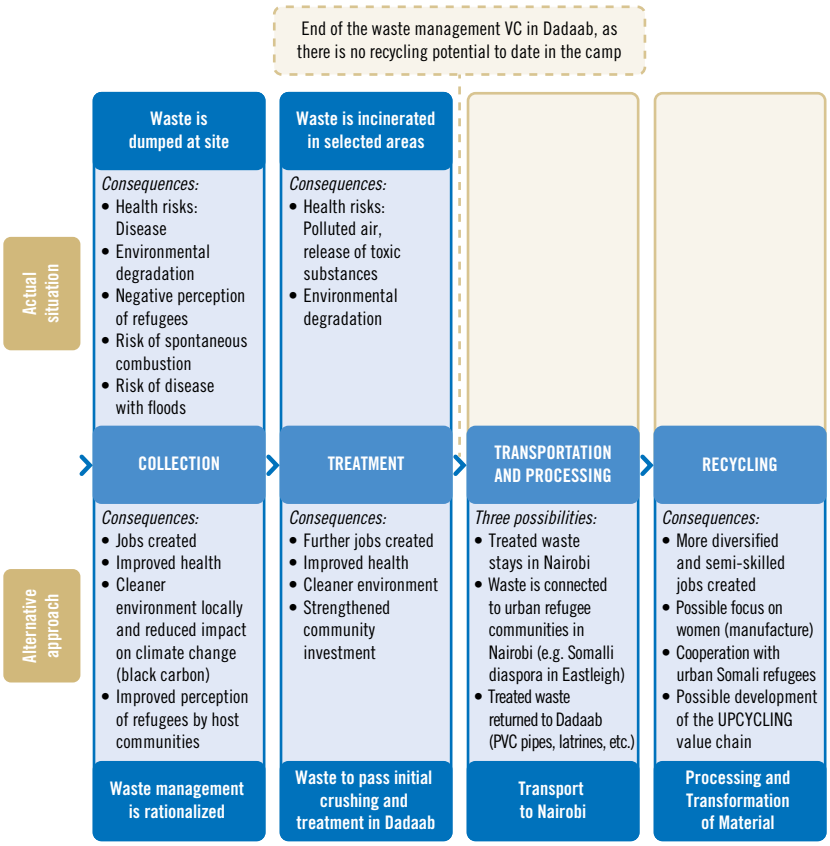
In Dadaab, ICRC and the Kenyan Red Cross (KRC) are currently the main actors who have attempted to tackle recycling. KRC runs a small processing plant in Dadaab in partnership with ICRC – the plant serves as a pilot project

for a community based plastic recycling initiative, aiming to safeguard the environment and health of the community. The Red Cross facility is currently relatively limited, shredding and compressing plastic in Dadaab before it is transported to Nairobi for further processing. As described above, private sector actors have expressed a willingness to support the expansion of this processing plant, which would need to be scaled up in order to offset transportation costs of purchasing waste in Dadaab.

Although the program does provide some small income generating opportunities for those who collect the plastic and work in the facility, the facility would need to scale up in order to become a financially viable enterprise. This is not for lack of raw material – as seen above, plastic and other litter abounds, and the waste management and recycling value chain has real potential for providing a full range of benefits to the community as evidenced in the figure below where the alternative approach (at the bottom) suggests:

- A wide range of social, societal, economic and environmental benefits, in the first two segments of the value chain (*waste management*);
- And different scenarios, which will need to be vetted technically and financially, for the *recycling* component of the value chain.

Figure 18: Existing and potential waste management and recycling value chain in Dadaab



As with the fruit and vegetable production value chain, the recycling value chain, which currently stands as a basic waste collection and incineration two-step chain, has the potential to turn into a real transformational value chain that can take different but complementary paths. The key point where this crossroads occurs at the 3rd stage in the initial value chain, after initial processing (see **Figure 19**).

Option 1: Materials are collected and sold from Dadaab to be processed and transformed in Nairobi. There is no further connection to Dadaab.

- ***Time to implementation:*** Rapid – this is what currently happens with KRCs material.
- ***Resource Needs:*** Low - Transport to Nairobi, agreement with processing plant
- ***Impact:*** Significant – trash is removed from the Dadaab community, where it is currently a health hazard for refugees and host communities. Tensions between refugee and host community members of the growing waste problems are reduced.

Option 2: Materials are initially processed in Dadaab, through expansion and development of processing plants supported by private sector actors. These materials may be transformed with the support and the partnership of the Somali community in Nairobi and waste management and transformation plants in Nairobi. Linkages back to Dadaab may be made through social or business networks.

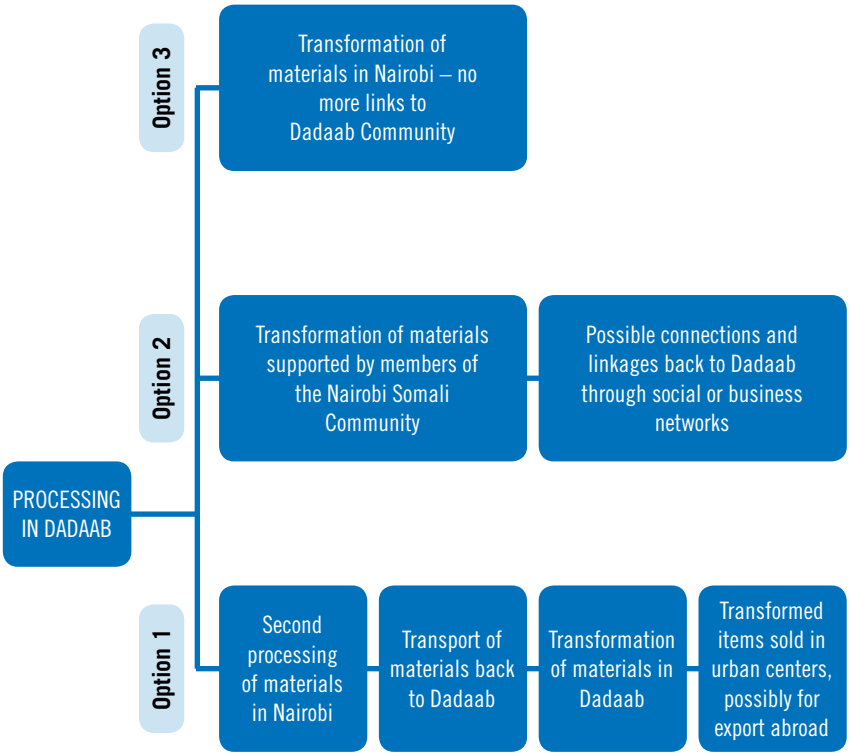
- ***Time to implementation:*** Relatively rapid – partnerships with existing Somali communities to be made. Some capacity development may be needed depending on the transformation of the material
- ***Resource Needs:*** Medium High – expansion and material development of existing processing facility
- ***Impact:*** Very significant: In addition to the impact from option 1 (above), this option includes the additional benefit of the transformed material being returned to Dadaab for productive use. In addition, the establishment of market linkages between Nairobi and Dadaab in the waste and recycling VC could lead to spill-overs of such linkages to other value chains.

Option 3: Materials are initially processed in Dadaab, cleaned in Nairobi, and returned to Dadaab for transformation. This can be utilitarian or promote a specific brand through the creation of accessories (bracelets, shoes, etc.) or less utilitarian items.

- ***Time to implementation:*** Slow—it takes time to build a brand, and high levels of capacity training, as well as construction of transformation facilities would be necessary
- ***Resource Needs:*** High
- ***Impact:*** Significant as this option includes the benefits of options 1 and 2. In addition, the creation of a brand could increase revenues. However, as brand building is volatile and challenging, such investment would hold substantial risk.

Photo 7: Shredded plastics at the KRC factory (Dadaab) – November 2018

Figure 19: Second Stage Recycling Value Chain Possible Scenarios



4.3.4 Operational recommendations for the waste management and recycling value chain

The following recommendations are general and should serve as an analytical framework for the future development of a recycling value chain that is both area-based and takes into account the broader policy framework. The recycling value chain has the potential to drastically change the landscape and makeup of Dadaab and serve as an example to the greater county of what is possible when chains of partnership, assisted by conducive policy framework, are built. Value chains within the recycling sub-sector have the **potential** to create employment opportunities at various stages of the value chain for refugees and host communities, from waste collection to transformation of material; are **relevant** to the context and population of Dadaab, where waste is a vital health, environmental, and social issue recognized by community members; and are **feasible** to implement, with various possibilities dependent on resources and time available, supported by buy in on the part of local and national authorities.

Developing an economic rationale: the complex but necessary inclusion of 'avoided costs'

Perceptions of the feasibility of these different options are split, and KIIs with waste management experts varied regarding the utility and feasibility of transporting waste to Nairobi vs establishing a recycling plant in Dadaab, as highlighted in the box below. As seen above when examining demand, the necessity of processing waste initially in Dadaab in order to offset transport costs and ensure financial viable is made apparent.

Differing views on transporting waste to Nairobi among stakeholders

"It doesn't make economic sense to transport waste from Dadaab to Nairobi unless it is not possible to establish a recycling plant in Dadaab." ***Co-operative University of Nairobi Representative***

"Transporting waste from Dadaab is a good idea but it should be well thought-out and establish strong links with actors along the value chain like crushing and bailing can be done in Dadaab to minimize transport costs. It is expensive to collect waste in Nairobi. Nowadays it costs upto 30 shillings per kilogramme of waste." ***Ecopost Representative***

"There is need for more actors as Red Cross and ICRC only do shredding and bailing then transport the collected waste to Nairobi." ***KRC Representative***

"Transportation is not an issue as we are paying for it. Some companies also go for the wastes from Dadaab. It needs proper planning and coordination to succeed in such a venture. You need to know where the wastes will be coming from, collection points, sorting and packaging, transportation to Nairobi and the market for recycled products." ***KRC Representative***

"Transportation is viable depending on the level of organization. The only challenge is within the collection points where waste has to be moved from one point to another." ***ICRC Representative***

Beyond the issue of transportation, the development of a specific waste management value chain needs to be financially viable in the long-run, so that communities (or local private sector actors) can take full operational and economic ownership of these initiatives. Experience shows that processing costs significantly increase – explode – as a community moves from an uncontrolled landfill or incineration to a regulated landfill. The financial support of local and national authorities as well as international partners will thus still be necessary initially in order to jump-start market linkages between Dadaab waste collectors and pre-processors and Nairobi-based waste processing and transforming plants.

Another perspective is to include the "avoided costs" for the community in sustainability calculations.[29] In the case of the waste management *and* recycling value chain, several types of avoided costs can be considered, namely (i) the significant savings generated on the short- and long-term by the general improvement of health; (ii) the diminution of collection and transport; (iii) the savings generated by the reduction of landfills (operation and amortization of storage centres); (iv) the global improvement of social cohesion (with host communities) leading to increased economic and commercial dividends. To these avoided costs are added two other positive externalities of composting: (i) the reduction of greenhouse gases (GHGs) emitted by organic waste when they are composted instead of being landfilled (possibly carbon credits), and (ii) the social impact of creating jobs for multiple segments of the population that are generally marginalized (women, youth, mentally disabled), etc. As synthesized in the conclusions of a 2018 AFD research piece on the costs of waste:

Factoring the systemic benefits of the Recycling Value Chain

- **Economic:** Provision of livelihoods opportunities
- **Social:** Improved health
- **Environmental:** Cleaner streets, sustainable management and transformation of waste
- **Societal:** Improved refugee and host community relations, shift in perception towards material goods

> *To the extent that a recycling or composting system saves transportation and landfill costs, does it necessarily have to be profitable? Are there financial mechanisms capable of remedying this budget*

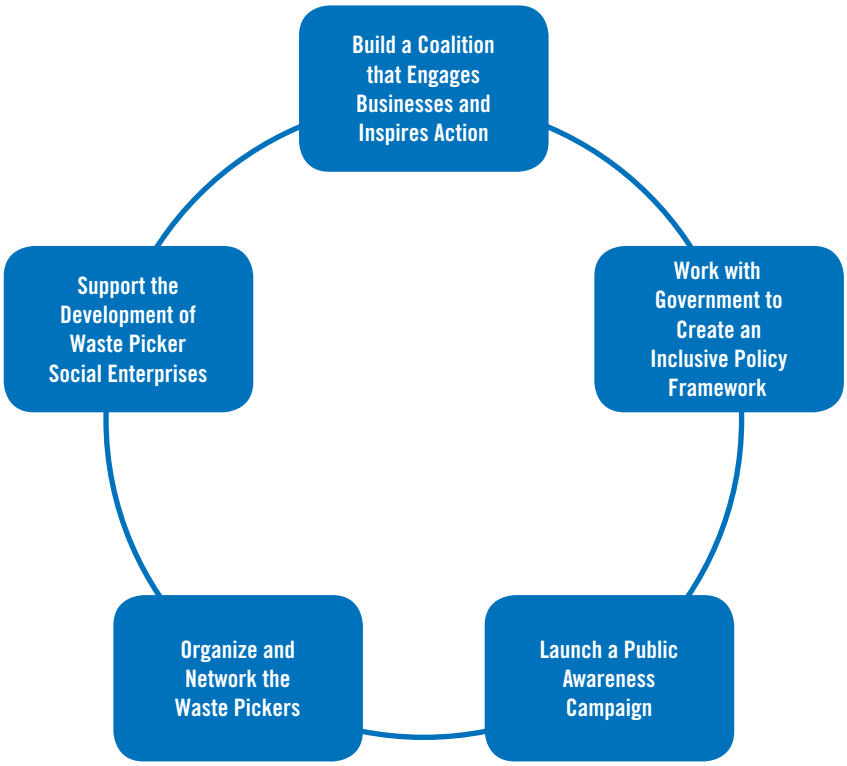
29. The calculation of avoided costs was originally applied mainly in order to compute the costs of alternative sources of electricity and to define the market values of electricity generated by various sources. In context of project financing, the capital and expense that would have to be spent if the project did not proceed.

imbalance? (…) The argument of "avoided costs" appears as a new approach towards considering waste management costs, making it possible to reconsider the financial aspects of the recovery procedures.[30]

Engaging with communities: participatory consultations and co-design

All stakeholders agree that community consultations are key in Dadaab, which offers a unique opportunity for implementing a recycling value chain with holistic benefits. In addition to the implementing partners present in the camp, one entity that provides an additional perspective on the recycling value chain is MIT's D-Lab, who is currently working towards establishing a means of independence and self-reliance for Kibera community members through the development of inclusive recycling business centers. Likewise, a similar approach contextualised to Dadaab may put community members "*at the center of developing and creating technologies, tools and business solutions to produce an inclusive waste and recycling system.*"[31] MIT has established five key building blocks for developing an effective and sustainable recycling system, which build on the necessity of flexibility, contextual specificity, and the involvement of greater community actors, including private stakeholders. These building blocks echo the concerns and recommendations of key stakeholders, in particular the emphasis on engaging with private sector actors – often highlighted as a necessity when pursuing a sustainable recycling value chain – as well as developing awareness and receptivity to using recycled goods, which are too often still sometimes seen as unclean across communities.

Figure 20: MIT D-Lab's "Five Key Building Blocks for Developing an Inclusive Recycling System[32]



30. Cavé, J., Delarue, J., Durand, M., Le Bozec, A., and Salenson, I. (2018), Waste, how much does it cost? In *A Question of Development*, Agence Française de Développement (AFD)

31. MIT, "Concept Note: Dadaab Recycling." 2018

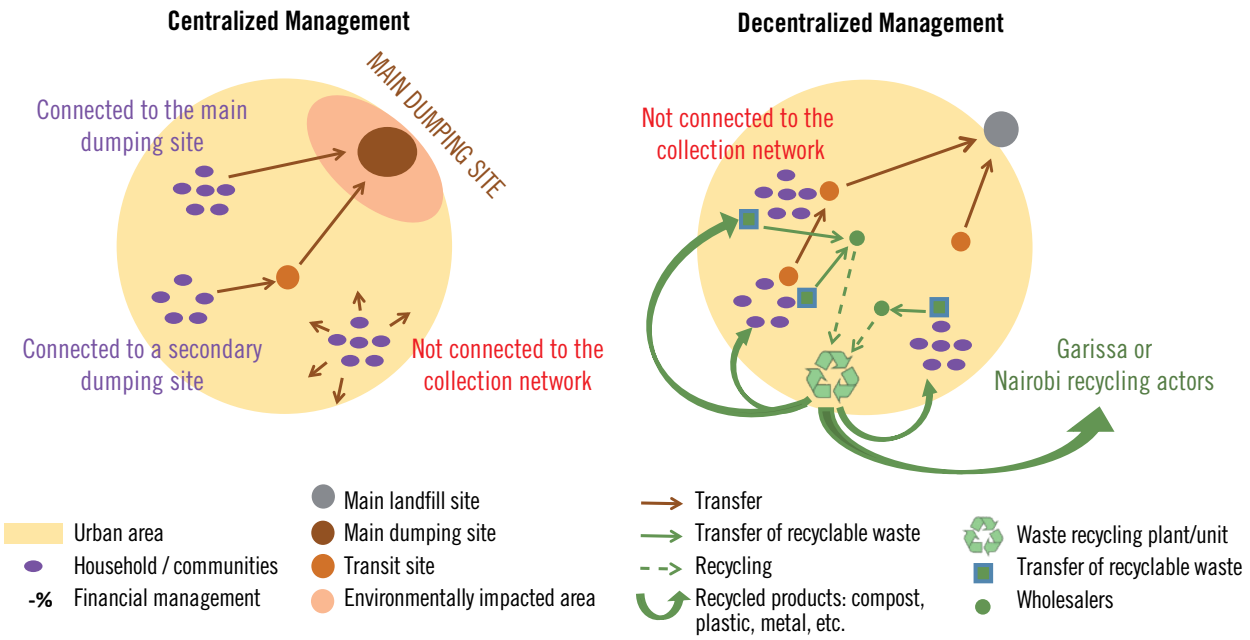
32. MIT Practical Impact Alliance. "Inclusive Recycling: Five building blocks for implementing sustainable systems in low and middle income countries."

Picture 8: View of the KRC factory in Dadaab

Promoting ownership and decentralization

In the context of Dadaab improving the quality and rate of coverage of waste collection and management, requires a social and territorial complexification more than a technological upgrade of waste treatment methods. As shown in the graph below, the neighborhood level seems to be adapted to the development of new waste management practices, giving a more collective sense to the provision of a basic service, and bringing these practices closer to "common" approaches, in which inhabitants lead to the definition of collective management rules.

Figure 21: From a centralized waste management approach to a decentralized and sustainable model



(source AFD – adapted from the ORVA2D project)

Popular and (micro) local re-appropriation of residues is taking place, reducing the burden to be managed by INGOs (CARE, KRC), public authorities and informal private operators. The scope of the centralized public waste management service is decreasing. It is increasingly complemented by source-based collection and localized recycling initiatives – hence turning the waste deposit into a *"common pool of resources"*, in Elinor Ostrom's sense, that communities value by sharing profits.

Learning from existing waste management and recycling initiatives and coordinating with the private sector

Inclusive recycling initiatives involve all stakeholders in the waste management cycle (waste pickers, multinational corporations, municipal governments, NGOs, recycling companies, residents, etc.) to create shared value for each actor, leading to broader economic, environmental and social positive impact. Over the past decade, Kenya has benefited from innovations such as business-to-business recycling models, technology for creating second-life products from inorganic waste, and means of production. The two examples listed below show that successful and profitable inclusive models and actors can exploit the waste management and recycling value chain while generating economic, social, societal and environmental dividends.

- **EcoPost – converting shredded plastics into durable lumber to save the Kenyan forest:** In Kenya, EcoPost uses 100% recycled plastics collected from the streets and landfills of Nairobi to make aesthetic, durable and environmentally friendly plastic lumber for use in applications ranging from fencing to landscaping. A simple manufacturing technique known as injection moulding converts shredded and melted plastic into posts that represent an excellent alternative to timber. EcoPost, generates enough revenue to cover its production costs and overheads and is currently profitable: it spends about $0.50 to produce one kg and then sells it twice the price on the market.
- **TakaTaka Solutions – educating local farmers to the benefits of compost:** TakaTaka Solutions (based in Nairobi) has faced difficulty gaining buy-in on material segregation among residents, so it has focused its awareness efforts on a different part of the value chain. In addition to processing and selling recyclables, 60% of the waste that TakaTaka Solutions now collects and processes is organic material, which it processes and sells to local farmers as compost. Local farmers, the primary customers, were skeptical about the quality of compost produced from household waste. TakaTaka Solutions has therefore educated local farmers not only about the quality of their compost, but also how to use it most effectively in local conditions. In addition to using local media, the company operates a demonstration farm at its composting site located on the edge of the city.

Table 15: Types of plastic identified in Dadaab and possible recycle products

Type of plastic	Examples of non-recycled primary products	Possible recycled products
PETE – Polyethylene Terephthalate	Textile fibres, fruit juice bottles, sleeping bags	Beverage bottles, clothing, laminated sheets, carpet fibres
HDPE – High Density Polyethylene	Shopping bags, milk bottles, buckets, rigid agricultural pipes	Film, blow moulded containers, agricultural pipes, pallets, bins for compost, household bags, oil containers
PVC – Polyvinyl Chloride	Electrical conduit, plumbing pipes, blister packs, fruit juice bottles, garden hose, shoe soles.	Pipe and hose fittings, flooring, electrical conduit, shoes, drainage pipes, detergent and oil bottles
LDPE – Low Density Polyethylene	Garbage bags, squeeze bottles, black irrigation tube, garbage bins	Films, builders, concrete lining, agricultural pipe
PP – Polypropylene	Film, carpet fibre, toys, automotive, appliances, housewares, furniture, rigid packaging	Crates, boxes, plant pots, compost bins, garden edging, irrigation fittings, building panels
PS – Polystyrene	Medical disposables, stationery accessories, yoghurt and dairy containers, vending and drinking cups, meat trays, protective packaging	Industrial packaging, concrete reinforcing chairs, moulded products, office accessories, rulers, printer cartridges, synthetic timber
Other: nylon, polyurethane, laminates, acrylic, polycarbonates, etc.	Furniture, electrical and medical parts, automotive, etc.	Agricultural piping, furniture fittings, wheels, fence posts, pallets, outdoor furniture

Source: Information from Plastics Identification Code Brochure (CLAW Environmental, REPSA, PACIA)

SECTION 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 General conclusions

Market systems approaches address the causes that explain why, in a given context, local markets fail to meet the needs of poor people. This type of analysis focuses on interventions that modify the incentives and behaviour of key market players to ensure durable and large-scale beneficial change to the community. In practice, it also means that, for the ILO, UNHCR and their partners, there cannot be a 'one-size-fits-all' strategy, as each context requires different types of partnerships, coordination, funding mechanisms, technical support, and so forth. In this regard while ILO's approach to market systems is *"to work with the private sector to build a financially sustainable system"*,[33] it is also essential to consider the existing context in Dadaab but also more broadly – considering the national or regional market. It is at this stage idealistic to promote processing or transformation segments of the value chain and expect short-term market interventions and financial incentives, as Dadaab is an artificial and volatile economic bubble. Nonetheless, despite the tremendously difficult circumstances, refugee and host community entrepreneurs have continued to demonstrate that it is possible to build profitable businesses and value chains in Dadaab. The bustling markets in each of the camps evidence this as much as studies that have estimated the annual turn-over from the businesses in the Dadaab camps to amount to $25 million per year.[34] Despite the severe resource and structural constraints that prevail, refugees and host community members have therefore created an impressively active micro-economy in the region. A key focus for market-based refugee livelihoods interventions should therefore be on using the ample evidence of business and market activity in Dadaab to motivate further private sector engagement:

- **Fruit and vegetable production value chain:** there is substantial demand at the local level for fresh fruit and vegetable and in response to this demand, refugees and host communities have begun to grow high-demand produce themselves. Our research has found that there exists significant potential to amplify farming activities by refugees and host community members as local production would cut out the transport costs, that currently make up a significant portion of the (imported) produces' prices. Enhancing local fruit and vegetable production value chains able to compete

33. KII with the ILO, December 2018.

34. Okoth, 2012. https://www.theguardian.com/global-development/2012/jul/04/entrepreneurs-kenya-dadaab-refugee-camps

with imported products (Somalia, Garissa or Nairobi) and attracting private sector actors to scale up programs and make them entirely sustainable will require linking refugee and host community members to agricultural capacity-building programs by agricultural research institutes and BDS as well as to micro-finance providers who can provide the necessary access to capital. In this specific value chain, there are also socio-cultural dimensions to consider (although decreasing, remnant stigmatization of agricultural activities among Somali pastoralist clans), as well as regulatory aspects (access to land, which development agencies can help unlock, situation by situation).

- **Waste management and recycling value chain:** there is both a need at the local level (households and communities) and a demand at the national level (private sector actors or NGOs), however the unanimous answer from the private sector actors interviewed in Nairobi was around transportation costs. In other words, they will need some technical and financial support to get things rolling. Particularly the questions of how to develop market linkages that overcome the high transport costs between Dadaab and Nairobi will need to be addressed through market-based interventions.

5.2 Recommendations

Contrary to popular narratives surrounding Dadaab, there exist strong opportunities for building on already existing growth, development, and value chains in the area. There are effective environmental conditions that have already begun to be exploited in Dadaab, and a generally positive relationship between host and refugee community members ensures that cooperation and sustainable partnerships within these communities is not only possible but already present.

There are limiting factors to some of this currently existing potential: the national encampment policy and ensuing limitations on mobility is a significant source of frustration for refugee entrepreneurs or business owners, and limitations on land access can impede attempts to further develop agricultural efforts. In addition, the negative prevailing security narrative surrounding Dadaab dissuades some private and national actors from investing further in Dadaab initiatives.

However, new initiatives and policy developments are emerging that can support and address some of these limitations. At the national level, there is optimism surrounding the launch of the CRRF/GCR process and its ability to support an economically strong Dadaab which would benefit both refugees and host communities, linking Dadaab with the greater Garissa county, Nairobi and other parts of the country.

Although some tensions and ambivalence towards refugees do exist, in terms of both security and concerns about resource limitations, at the county level, local government representatives have recognized the economic benefits that they have seen brought about by the presence of refugees in their region.

The two value chains examined in this report are in early stages, but are foundationally present in Dadaab: the first, a fruits and vegetables value chain which builds on the work of some refugees who have on their own begun small scale farming; the second, a recycling value chain which takes into account early-stage existing efforts to develop waste collection and processing in Dadaab, links to larger private sector demand.

The following recommendations build on the operational recommendations above, and are intended to drive forward the further development of these value chains, and to guide towards concrete and effective next steps.

Immediate Recommendations by Value Chain

Operational recommendations for each value chain are provided at the end of each chain's respective section. Concretely, the following next steps can be taken in the short term in order to pave the way for the development and expansion of these value chains.

Vegetable and Fruit Value Chain

6. **Upskill farmers and potential farmers:** One of the impediments to small scale farming in Dadaab has been the lack of agricultural knowledge of farmers and potential farmers. Knowledge and capacity development is needed surrounding the following topics:
   - Effective water management and flood farming
   - Basic produce cultivation practices

   Nairobi based research institutions such as CIRAD (Agriculture Research Centre for International Development) may partner with more traditional humanitarian actors in order to provide these trainings

7. **Advocate for access to farming land with local government agencies.** Modalities could ensure joint land use and farming of refugee and host community members, thereby further promoting social cohesion.

8. **Set up of experience sharing community conversation groups, fostering a positive dialogue:** Some refugees have begun farming on their own, and have observed positive impacts. Community experience sharing groups should be set up so that those who have embarked on farming can share lessons learned and outcomes with other community members. This can be organized by camp refugee groups as well as with the support of humanitarian actors on the ground where necessary. Access to land and establishment of cooperatives should further support the influence of these groups to turn learnings into reality.

9. **Enhance and amplify extant skills and improve access to finance for future entrepreneurs** under existing livelihoods programming, including the development of savings schemes and financial management skills, basic business development, and, in conjunction with refugee associations such as VSLA, the creation of a cooperative network of vegetable and produce sellers in order to avoid market saturation and better support a diverse produce value chain. Information on prices and production methods can be strengthened through existing information networks and technical training modules in Dadaab.

10. **Support and strengthen approaches to irrigation systems:** among the recommendations presented in this report are the necessary reallocation of the boreholes and water resources of closed camps, support to improvements to the capacity to use flood-based water irrigation techniques, and the creation of conservation infrastructure and processing facilities.

11. **Coordinate approaches to inputs, fertilisers and pesticides** by relying on ecofriendly fertilizers, environmentally neutral pesticides, and pest control shops and cooperatives, preferably led by the private sector. 12.

12. **Support the development of farmers associations and inclusive cooperatives for refugee and host community farmers** to strengthen procuders' organizing and bargaining power within the value chain

Recycling Value Chain

1. **Engage with communities through co-design processes and the creation of market linkages between private networks and camp actors**, including between with existing existing waste collection and processing companies that are interested to take up operations in Dadaab.
2. **Promote ownership and decentralization** with adaptation of new waste management practices the neighborhood level, aiming for a common approach to be adopted by inhabitants to lead the definition of collective management rules and waste collections systems that facilitate linking camp- and town-level waste management to private waste collecting and processing companies.
3. **Learn from existing waste management initiatives to target a list of plastic identified in Dadaab** that has potential to be recycled and upcycled. Develop linkages to Nairobi-based upcycling companies.
4. With the help and expertise of private actors, such as Ecopost and Rubikon **support the development and expansion of Dadaab's waste processing plants**. This includes material expansion and some construction as well as capacity building and technical training for staff working in the plant, which can be provided by these private actors.
5. **Foster awareness of environmental responsibility** through information campaigns that explain the importance of waste recycling and waste collection.

Long Term Recommendations

4. **Advocate for further implementation of the CRRF/GCR process at the Garissa county level:** Limited mobility and constraints in accessing land were highlighted as being major impediments to effective financial growth for refugees as well as for host community members, who find themselves impacted by refugees' economic limitations. Advocating for policy reform in line with the Kenya's declared adoption of the CRRF/endorsement of the GCR is crucial to addressing these limitations in the long term as well as to ensuring local government buy in on CRRF/GCR initiatives.
6. **Strengthen linkages with actors and enterprises outside of Dadaab, including in Garissa and in Nairobi:** Organizations such as Ecopost, Rubikon, Taka Taka Solutions, and MIT have all expressed interest in linking with and supporting Dadaab recycling value chains if financially viable conditions are met. Traditional actors can work to reach out to and strengthen these partnerships, including these actors in ongoing coordination structures as well as inviting new and non-traditional actors to contribute as well.
7. **Pursue and promote land and resource sharing:** Refugees and host communities already share access to basic education and health services, as well as to water and infrastructure and markets. Further promoting land sharing will support refugee and host community's capacity to engage with each other in existing markets, as well as establishing sustainable cooperation and trust between these communities.

ANNEX:
DATA SUMMARY SHEET

Qualitative interviews and discussions conducted in Nairobi, Garissa and Dadaab in October - November 2018 on socio-economic and market systems and quantitative surveys on market and household waste trends in October and November 2018. Additional interviews and focus group discussions were conducted in December – January 2018/19 to collect information on the recycling value chain.

Socio-economic Assessment Data Collection

- 2 livelihood partner meetings organised jointly with UNHCR Nairobi and Dadaab offices
  - 1 in Nairobi on October 9, 2018
  - 1 in Dadaab on October 30, 2018
- 6 FGDs with women and men from both host and refugee communities including the youth from both host and refugee communities from Dagahaley, Ifo and Hagadera) as well as 2 FGDs conducted with youth groups at Ifo and Hagadera.

Completed 21 KIIs with UNHCR, livelihood partners, youth representatives, government and private actors (both in Dadaab, Garissa and Nairobi).

KII – Aurthur Mutambikwa (UNHCR) – Dadaab
KII – Christine Ruguru (CARE) – Nairobi
KII – George Omondi (LWF) – Dadaab
KII – Harun (WV) Socio-economic Assessment – Dadaab
KII – Margaret (RCK) – Dadaab
KII – Nelson (UNHCR) – Dadaab
KII – Nicholas Midiwo (UNHCR) – Dadaab
KII – Oscar Muriuki (DRC) – Nairobi
KII – Bishar (CARE) – Dadaab
KII – Noor Tawane (Hormud Youth Group) – Hagadera
KII – Kenya Industrial Research Institute KIRDI – Garissa
KII – Refugee Affairs Secretariat RAS – Dadaab
KII – Dr. John Burton (UNHCR) Nairobi
KII – Dagahaley community meeting notes – Dadaab
KII – Hassan Shukuri (LWF) – Dadaab
KII – Omar Gabe (KNCCI) – Garissa

KII – Garissa County Youth Director – Garissa
KII – Samuel Kyalo (KCB Bank)
KII – Hassan Aress Yarrow (Ministry of Vocational Training)
KII – Thomas Ongogo (DRC) – Nairobi/Dadaab
KII – Zenaida Said (Aga Khan Foundation, Garissa Team)
FGD Women and Men (Refugees) – Dagahaley
FGD Women and Men (Refugees) – Ifo
FGD Youth (Hosts) – Dagahaley
FGD Youth (Refugees) – Dagahaley
FGD Women and Men (Hosts) – Dagahaley
FGD Women and men (Refugees) – Hagadera
FGD Youth group (Ifo refugees)
FGD Youth group (Hagadera refugees)

(All transcripts for the above are available for the KIIs and FGDs conducted)

Type of Data Collected

- Skills and income generating activities
- Access to supportive functions
- Rules and regulations
- Economic Interactions between host and refugee communities
- Quantitative data of repatriation figures as of 2018 and refugee occupation/skills as of 2018

Market-systems and value chains analysis Data Collection

Completed 29 KIIs with government, non-government, private and market actors in **Dadaab**, 9 FGDs with market actors and market survey conducted in Ifo, Hagadera and Dagahaley on October and November 2018.

KII - Mohamed Idris – Dadaab Sub-County Social and Culture Officer
KII- Adan Omar Hassan – Dadaab Sub-County Revenue Officer
KII- Abdirahman Mohamed – Chair Business Community (Dadaab)
KII- Abdi Salaam Mohamed – Chief Education Officer (Dadaab)
KII- Ahmed M. Haji – Teachers Service Commission (Dadaab)
KII- Jehu Abdi – Early Childhood Development Officer (Dadaab)
KII – Jacob (Environmental specialist) (Dadaab)
KII – MIT (Nairobi)
Telephone KII - Alice Omwancha SIYB Trainer (Dadaab/Nairobi)
Telephone KII - Pius Nganga SIYB Trainer (Dadaab/Nairobi)
KII - Michael Mbai (PWJ) (Dadaab)
KII - Dakane Bare (NRC) (Dadaab)
KII - Anthony Murathe (DRC) (Dadaab)
KII with 9 traders (Hagadera)
KII - Khadiju Mahat Muhumed (Goat Trader) (Dadaab)
KII- Kelvin Orie, Equity Bank Branch Manager (Dadaab)
KII - Janet Mwikali, Environment Officer, Kenya Red Cross (Dadaab)
KII with farmer (Dadaab)
KII - Kelvin Khisa - KIRDI (Nairobi)
KII - Brian Njue - NEMA (Nairobi)
KI - Augustine K. Kenduiwo - Green Growth Program (Nairobi)
KII - James Kanga, Coordinator - RUBICOM (Nairobi)

KII - Laban Ngeno - ECO-Post (Nairobi)
KII - Benson Ouma - Cooperative University of Kenya (Nairobi)
KII - Dr. Simion Dulo - University of Nairobi (UoN) (Nairobi)
KII - Laban Ngeno (Nairobi)
KII - Eva Wanjiku (Red Cross) (Nairobi)
KII - Paul Oumo (ICRC) (Nairobi)
FGD with Goat Traders (Dadaab)
FGD with Camel Butchers (Dadaab)
FGD with Consumers (largely youth) (Dadaab)
FGD with Host Community (Dadaab)
FGD with Elders Refugees (Dadaab)
FGD with Traders (Dadaab)
FGD with VSLA group representatives (Dadaab)
FGD with Traders and Consumers (Dadaab)
FGD with Traders (Dadaab)

Value Chains Identified

- Fruit and Vegetable Production value chain
- Waste/Recycling value chain

Key issues

- **Fruit and Vegetable VC:** The initial assumption was kale but afterwards it has changed it is not specific green product we should focus on it is more on the value chain enablers. Focus on inputs, fertilizers, manure and pesticides, access to water, advocacy around land with host communities and soil, access to transformation and access of the value chain. Lastly, selected value chains are interdependent and should have a social and environmental dimension.

- **Waste Management / Recycling VC:** Survey with 100 households on household waste consumption, knowledge, attitude, practice – potential demand and breakeven point. Complementary KIIs in Dadaab and Nairobi – technical potential, interest for partnerships for the recycling value chain. Is there a demand from a technical and financial perspective?

Type of Data Collected

- **Fruit and Vegetable VC:** Qualitative interviews with government and non-government actors through KIIs and FGDs. A quantitative survey of Dadaab, Garissa and Nairobi on market trends looking at specific market prices, origins and trends of 16 commodities completed on November 11 (24 forms, vegetable and fruit sellers in Dadaab, Garissa, Nairobi).

- **Waste Management / Recycling VC:** Indicative household survey in Dadaab (3 locations) with 100 respondents. KIIs with key actors of the waste management and recycling industry (November 19th – November 21) along with three follow-up KIIs with private actors of the waste management and recycling industry (January 8th - 9th 2019) after ILO's initial comments. Information and data were collected on the following:
  - Priority of waste/recycling in Kenya
  - Level of awareness and public sensitization
  - Waste management and recycling as a political agenda in decision making
  - Impact of Waste regulations
  - Markets and profitability of waste management value chain
  - Main waste materials and recycled products

- Actors along the value chain
- Opportunities for market expansion from local to national/international
- Viability of waste transportation from Dadaab to Nairobi
- Key factors of success for waste management and recycling value chain

Transcripts Available (on demand) on the market systems and value chains analysis

KII - Mohamed Idris – Dadaab Sub-County Social and Culture Officer
KII- Adan Omar Hassan – Dadaab Sub-County Revenue Officer
KII- Abdirahman Mohamed – Chair Business Community (Dadaab)
KII- Abdi Salaam Mohamed – Chief Education Officer (Dadaab)
KII- Ahmed M. Haji – Teachers Service Commission (Dadaab)
KII- Jehu Abdi – Early Childhood Development Officer (Dadaab)
KII – Jacob (Environmental specialist) (Dadaab)
KII – MIT (Nairobi)
Telephone KII - Alice Omwancha SIYB Trainer (Dadaab/Nairobi)
Telephone KII - Pius Nganga SIYB Trainer (Dadaab/Nairobi)
KII - Michael Mbai (PWJ) (Dadaab)
KII - Dakane Bare (NRC) (Dadaab)
KII - Anthony Murathe (DRC) (Dadaab)
KII with 9 traders (Hagadera)
KII - Khadiju Mahat Muhumed (Goat Trader) (Dadaab)
KII- Kelvin Orie, Equity Bank Branch Manager (Dadaab)
KII - Janet Mwikali, Environment Officer, Kenya Red Cross (Dadaab)
KII with farmer (Dadaab)
KII - Laban Ngeno - ECO-Post (Nairobi)
KII - Benson Ouma - Cooperative University of Kenya (Nairobi)
KII - Dr. Simion Dulo - University of Nairobi (UoN) (Nairobi)
KII - Laban Ngeno (Nairobi)
KII - Eva Wanjiku (Red Cross) (Nairobi)
KII - Paul Oumo (ICRC) (Nairobi)
KII - Kelvin Khisa - KIRDI (Nairobi)
KII - Brian Njue - NEMA (Nairobi)
KI - Augustine K. Kenduiwo - Green Growth Program (Nairobi)
KII - James Kanga, Coordinator - RUBICOM (Nairobi)
FGD with Goat Traders (Dadaab)
FGD with Camel Butchers (Dadaab)
FGD with Consumers (largely youth) (Dadaab)
FGD with Host Community (Dadaab)
FGD with Elders Refugees (Dadaab)
FGD with Traders (Dadaab)
FGD with VSLA group representatives (Dadaab)
FGD with Traders and Consumers (Dadaab)
FGD with Traders (Dadaab)

Sources collected and used

Betts, A., Omata, N., & Sterck, O. (2018). *Refugee Economies in Kenya*. University of Oxford.

Cavé, J., Delarue, J., Durand, M., Le Bozec, A., and Salenson, I. (2018), Waste, how much does it cost? In A Question of Development, Agence Française de Développement (AFD).

County Government of Garissa. (2018). *Second Garissa County Integrated Development Plan (CIDP) (2018 - 2022)*.

De la Chaux, M., Haugh, H., & Greenwood, R. (2018). *Organizing Refugee Camps: Respected Space and Listening Posts*. Academy of Management Discoveries 4(2). Available at: https://journals.aom.org/doi/10.5465/amd.2017.0040

DRC. (2018). *DRC Urban Programme Self - Reliance Interventions*. DRC.

Elmi, K., & Horst, C. (2007). *Participation in Sustainable Livelihoods: An Assessment of Socio-Economic Conditions in Dadaab and the Impact of DRC-CARE Interventions*. DRC and CARE.

Fratzke, S., & Jacobsen, K. (2016). *Building Livelihood Opportunities For Refugee Populations: Lessons From Past Practice*. Washington DC: Migration Policy Institute.

GoK. (2017). *Garissa County Survey Report*. GoK.

Government of Kenya. (2018). *Kenya Development Response to Displacement Impacts Project (KDRDIP) Additional Financing*. Government of Kenya.

Gonzalez, A. (2016). Building hope, skills and incomes for refugees through trade. *International Trade Forum*, pp. 3 - 37.

ILO. (2018). *Market Systems Analysis for Refugee Livelihoods in Jigjiga* - Ethiopia. ILO.

Kamau, C., & Fox, J. (2013). *The Dadaab Dilemma: A Study on Livelihood Activities and Opportunities for Dadaab Refugees*. Nairobi: DRC and UNHCR.

Lahn , G., & Grafham, O. (2015). *Heat, Light and Power for Refugees, Saving Lives and Reducing Costs*. Chatham House: The Royal Institute of International Affairs.

Norwegian Refugee Council (NRC), & International Human Rights Clinic (IHRC). (2018). *Supporting Kakuma's Refugee Traders: The Importance of Business Documentation in an Informal Economy*.

Norwegian Refugee Council (NRC), & International Human Rights Clinic (IHRC). (2018). *Supporting Kakuma's Refugees: The Importance of Freedom of Movement*. NRC and IHRC.

NRC. (n.d.). *Protracted Situation of Displacement: Options Beyond Camp Assistance, Kenya*. NRC.

Nutz, N. (2017). *A Guide to Market-Based Livelihood Interventions For Refugees*. ILO.

Republic of Kenya. (2014, December 2). Garissa County Gazette Supplement. pp. 1 - 49.

Sikuku, M. (2016). CAMEL MILK VALUE CHAIN ANALYSIS IN DADAAB SUBCOUNTY GARISSA, KENYA. pp. 1 - 4.

UNDP (2012) *Priority Value Chain Analysis Study in Selected Districts Kenya.*

http://www.undp.org/content/dam/kenya/docs/UNDP%20Reports/Priority_Value_Chain_Analysis_Study_in_Kenya.pdf UNHCR (2018), Daily Update of Refugees and Asylum Seekers Statistics Summary.

UNHCR. (2018). *Refugee Livelihoods and Economic Inclusion*. UNHCR.

UNHCR. (2018). *Safe Access to Fuel and Energy*. UNHCR.

UNHCR. (2016). *Population Fixing Exercise Dadaab Refugee Camps*. UNHCR.

UNHCR. (2016). *Kenya Comprehensive Refugee Programme*. Nairobi: UNHCR.

UNHCR & FAO. (2018). *Using Prosopis as an energy source for refugees and host communities in Djibouti, and controlling its rapid spread*. FAO.

UNHCR & DRC. (2017). *The Case of Vocational Skills Training and Professional Education Beneficiaries from Dadaab Refugee Camp, Kenya*. UNHCR and DRC.

UNHCR, & DRC. (2015). *Comprehensive Market Assessment in Nairobi and Dadaab Refugee Camp*. Leads and Associated Consulting Limited.

Vianello, M. (2016). *A Review of Cooking Systems for Humanitarian Settings*. Chatham House.

World Bank (2016) Y*es in my backyard? The economics of refugees and their social dynamics in Kakuma; IFC (2018) Kakuma as a market place: a consumer and market study of a refugee camp and town in northwestern Kenya; Samuel Hall (2016) Rapid market assessment and value chain analysis in Kakuma, Kenya*.

WFP (2018) *From farm to fork faster: Bringing fresh produce to refugees in arid northern Kenya.*

https://insight.wfp.org/from-farm-to-fork-faster-4013c3da8a6b

WFP (2016). *Refugee Household Vulnerability Study: Kakuma Refugee Camp (Kimetrica).*

WFP. (2014). *Dadaab and Kakuma Refugee Camps Market Assessment*. WFP.

Complementary information on Market Systems and Value Chain Analysis

Analysis of the Networks and Traceability Systems of Organic Value Chains in Nairobi, Kenya

http://www.icrof.org/progrov/pdf/posters%202nd%20workshop/Josphat%20Njenga.pdf

Comparative analysis of tomato value chain competitiveness in selected areas of Malawi and Mozambique

https://www.tandfonline.com/doi/abs/10.1080/23322039.2015.1088429

Framework for Inclusive Market System Development

https://www.enterprise-development.org/wp-content/uploads/Market_Systems_Framework.pdf

Horticultural Value Chains in Kenya

http://www.kendat.org/wp-content/uploads/2015/01/illustrated-booklet-final.pdf

Market-system analysis

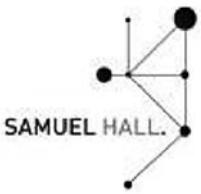
https://www.emma-toolkit.org/sites/default/files/bundle/Step8.pdf

Value Chain Analysis of Traditional Vegetables from Malawi and Mozambique

https://ageconsearch.umn.edu/bitstream/188710/2/201400443.pdf

Value Chain and Market Analysis of Bananas, Tomatoes and Mangoes In Garissa County, Kenya

http://www.kendat.org/wp-content/uploads/2015/01/illustrated-booklet-final.pdf



Samuel Hall is a social enterprise providing research, expert analyses, tailored counsel and access to local knowledge for a diverse array of actors operating in the world's most challenging environments. We specialise in socio-economic surveys, private and public sector studies, and impact assessments for a range of humanitarian and development actors. With a rigorous approach and the inclusion of academic experts, field practitioners, and a vast network of national researchers, we access complex settings and gather accurate data. We bring innovative insights and practical solutions to addressing the most pressing social, economic, and political issues of our time.

Samuel Hall has offices in Afghanistan, Kenya and Somalia, and a presence in France, Germany, Tunisia, Turkey and the United Arab Emirates. For more information, please visit www.samuelhall.org

ISBN 9789221333326