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CANALLS

AGROECOLOGICAL PRACTICES FOR SUSTAINABLE TRANSITION

D2.4 Services for enhancing demand for agroecological products- initial version

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Executive Summary

The overall objective of CANALLS is to drive agroecological transitions in the humid tropics of Central and Eastern Africa via multi-actor transdisciplinary Agroecology Living Labs (ALLs). We start with 8 ALLs set up in the Democratic Republic of Congo (DRC), Burundi (BR), Cameroon (CR) and Rwanda (RW), enabling over 20,000 farmers to co-create and benefit from tailored blends of agroecological practices. Objective 3 of the project is to co-design services and marketing tools to enhance demand for agroecological food products as well as fair value propositions and business models to ensure financial viability and facilitate access to markets. To achieve this objective, it is imperative that different approaches to enhance demand for products from agroecological practices are explored. This will lead to the co-design of services and marketing tools that harness the potential of digital technologies to help farmers enhance their understanding of agroecological produce, target markets for products emanating from agroecology practices while improving their chances of accessing new markets. Towards this end, the project team, led by AATF implemented activities under Task 2.4 “Design of support services to enhance demand for agroecological food products”. The task was implemented through (a) a literature review to identify the marketing channels through which agroecology products move from producers (farmers) to the consumers, the consumer segments and the existing demand creation services/strategies ideal for the agroecology products (b) stakeholder engagement in co-creation workshops to validate and recommend local context specific actions to boost these demand creation services. These co-creation workshops were organized in each of the ALL, attended by 15 participants on average per ALL. The participants were drawn from critical stakeholders including farmers, extension service providers, produce aggregators, processors and policy decision makers. This report presents outcomes of these processes. In the current version of the deliverable, validation results are presented from two ALLs where co-creation workshops have already been implemented: the Ntui ALL in Cameroon and the Giheta ALL in Burundi. Results from the other ALLs will be presented the subsequent version of the deliverable.

In the Ntui ALL, where the target product was cocoa, eight demand creation services that are relevant for agroecological cocoa were identified: (i) consistency in quality; (ii) packaging the product in eco-friendly and unique materials; (iii) product promotion/advertising using traditional media; (iv) consistency in quantity produced and supplied to the market; (v) tailor made products for international markets availed at e.g. duty-free shops; (vi) partnerships with renowned global brands publicized through marketing campaigns; (vii) implementation of certification services and (viii) local branding with health-conscious messaging.

In the Giheta ALL, coffee was the target produce. The participants ranked health-centric messaging in advertising and packaging, transparency and traceability as the most important strategies for demand creation for organic coffee. These are critical aspects when considering that organic produce consumers are critically conscious of the health aspects of the produce and would need assurance that the products are indeed sourced from organic systems. Four factors were ranked moderately: store experience/sampling, lifestyle branding, taste and affordability balance and environmental sustainability. Organic consumers would not be very concerned on the cost because their willingness to pay for premium attributes is relatively high. Finally, premium offerings, community engagement through coffee farming initiatives and subscription models for premium and limited-edition coffee were ranked least. For both ALLs, the report presents actions for improving consumer experiences and enhance demand creation services in the local context.

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1. Introduction

The Africa continent is home to more than 1.5 billion people[1], with the growth expected to hit 2.5 billion by 2050[2]. To cope for the growing food needs in the future African, food systems need to be positioned to drive enhanced food and nutritional security while steering inclusive and sustainable rural development. Agroecology practices offer solutions towards more sustainable farming practices, suitable for humid tropics and able to deliver good nutrition and income for communities, while conserving and restoring their ecosystems and the services provided by them. The Central and Eastern Africa Transdisciplinary Agroecology Living Labs (CANALLS) is a four-year project designed with the overall objective of driving agroecological transitions in the humid tropics of Central and Eastern Africa through a multi-actor collaboration approach. This approach brings together rural communities, advisory services, and governments to co-develop and implement agroecological tools tailored to the unique conditions of the humid tropics. These tools will be evaluated for socio-economic and environmental performance, fostering the sharing of best practices and the delivery of fair, inclusive, and sustainable business models which will facilitate market access and enhance demand for agroecological products. CANALLS is implemented across eight Agroecological Living Labs (ALLs) located in the Democratic Republic of Congo (DRC), Burundi, Cameroon, and Rwanda, focusing on key crops vital for both subsistence and economic development: cocoa, coffee, cassava, rice, and maize. The products are presented in Table 1. The project focuses on promoting well-tested agroecological practices tailored to the humid tropics of Central and Eastern Africa and gather evidence on their performance to inform decision and policy making in the focus areas as presented in Table 1.

Table 2: List of the Agroecology Products per Living labs in the CANALLS project

Country	Living Lab	Product	Product category
Burundi	Giheta	Coffee (organic)	Agroforestry
Burundi	Bujumbura	Maize	Food and cash crops
DRC	Uvira	Cassava, rice	Food and cash crops
Rwanda	Kamonyi	Cassava	Food crops
Cameroon	Ntui	Cocoa	Agroforestry
DRC	Bunia	Cocoa (organic)	Agroforestry
DRC	Biega	Coffee (organic)	Agroforestry
DRC	Kabare	Coffee	Agroforestry

Among the specific objective of CANALLS is to co-design services and marketing tools to enhance demand for agroecological food products, along with fair value propositions and sustainable business models to ensure financial viability and facilitate market access. This involves co-designing services and marketing tools to enhance demand for agroecological food products as well as fair value propositions and business models to ensure financial viability and facilitate access to markets. To achieve this objective, it is imperative that different approaches to enhance demand for products from agroecological practices are explored. This will lead to the co-design of services and marketing

[1] https://www.worldometers.info/world-population/africa-population/

[2] https://www.statista.com/statistics/1224205/forecast-of-the-total-population-of-africa/

tools that harness the potential of digital technologies to help farmers enhance their understanding of agroecological produce, target markets for products emanating from agroecological practices while improving their chances of accessing new markets. Achieving this will need a clear understanding of agroecologically-produced food products. One of the critical factors to consider in this definition is that agroecology fosters sustainable food systems by integrating ecological principles into farming practices, enhancing biodiversity, soil health, and food resilience for a healthier future. In this report, agroecological products are those that emanate from the agroecology production systems in the ALLs.

2. Methodology

The task was achieved through a coordinated approach that blended literature review, document review and co-creation workshops to address the objectives.

2.1 Literature review

A comprehensive review of existing literature was undertaken to identify suitable marketing channels for the distribution of agroecological products in the target Agroecological Living Labs (ALLs). We focused on studies that employ the Structure-Conduct-Performance (SCP) framework to analyse marketing channels for the selected crops. Emphasis was placed on understanding how these channels operate and perform in similar contexts to inform the development of effective distribution strategies.

2.2 Actor identification and characterization

The key actors involved in each marketing channel were identified and characterized. This process examines their roles, relationships, and specific needs. The insights gained will inform the design of tailored support services aimed at enhancing demand creation for agroecological products.

2.3 Co-creation workshops

Co-creation workshops are organized in each ALL to allow participants to validate the demand creation services/strategies identified during the literature review process. Validation was followed by the prioritization of the strategies and identification of actions that should be implemented to boost the services at the local level. The validation tool that was used during the co-creation workshops is presented in Annex1.
The participants in each workshop were strategically identified to represent the different types of stakeholders (Table 2).

Table 2: Description of Participants in the Co-creation workshops

ALL	No. of Participants	Groups represented
Ntui Giheta	13 15	Small-scale farmers who are also members of cooperatives, local traders/intermediaries, representatives of processing companies, exporters, researchers, policy makers and government representatives and training and extension service providers

2.4 Final determination of demand creation strategies/services

The outputs from the literature review and the co-creation workshops formed the basis for developing marketing strategies tailored to each identified consumer segment. These strategies will be promoted to enhance demand, address the unique characteristics of each segment, and promote sustainable business models.

3. Results: Marketing channels and consumer segmentation

Marketing channels are the pathways through which agroecological food products reach consumers. These channels determine the accessibility, affordability, and visibility of products, directly influencing demand.

3.1 Cocoa marketing channel

The ALLs where cocoa is produced within the CANNALS project are Ntui in Cameroon and Bunia in DRC. Cocoa in both countries is mainly produced for the export market. The main export destinations for Cameroon cocoa are the Netherlands, France, Malaysia, Indonesia and Germany while the main international destinations for Congolese cocoa are Malaysia, Indonesia, India, the Netherlands and Belgium (FAOSTAT). The various marketing channels for cocoa in DRC and Cameroon are represented in the figures below, adapted from USAID (2023) and Lenou Nkouedjo et al. (2020), respectively.

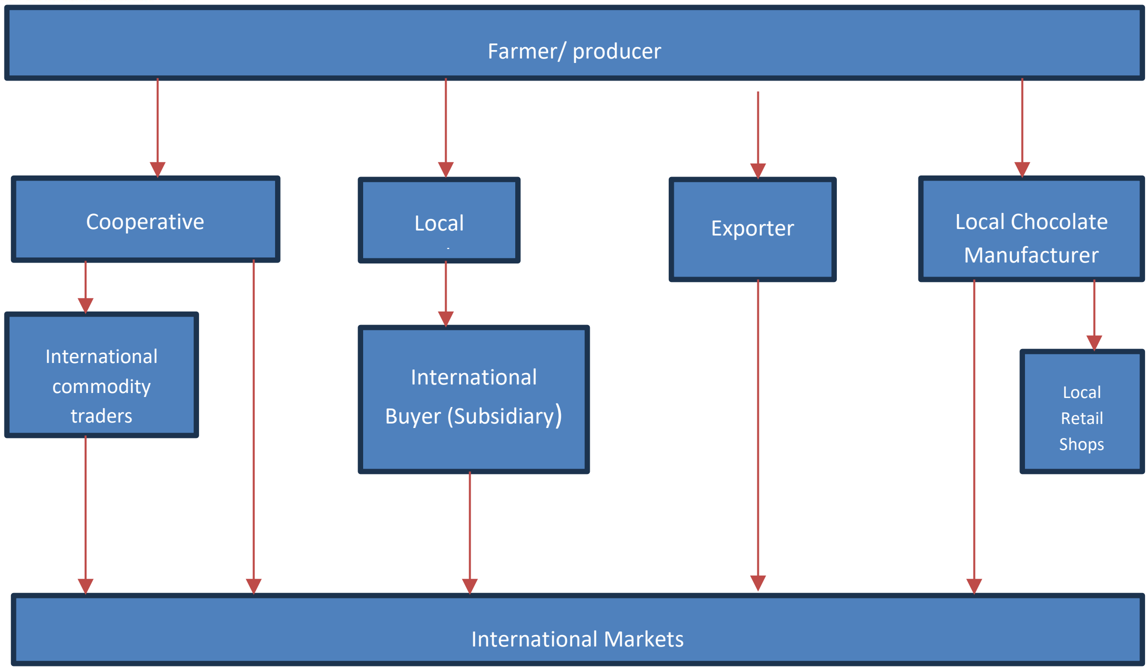

Figure 1 : Cocoa marketing channels in DRC

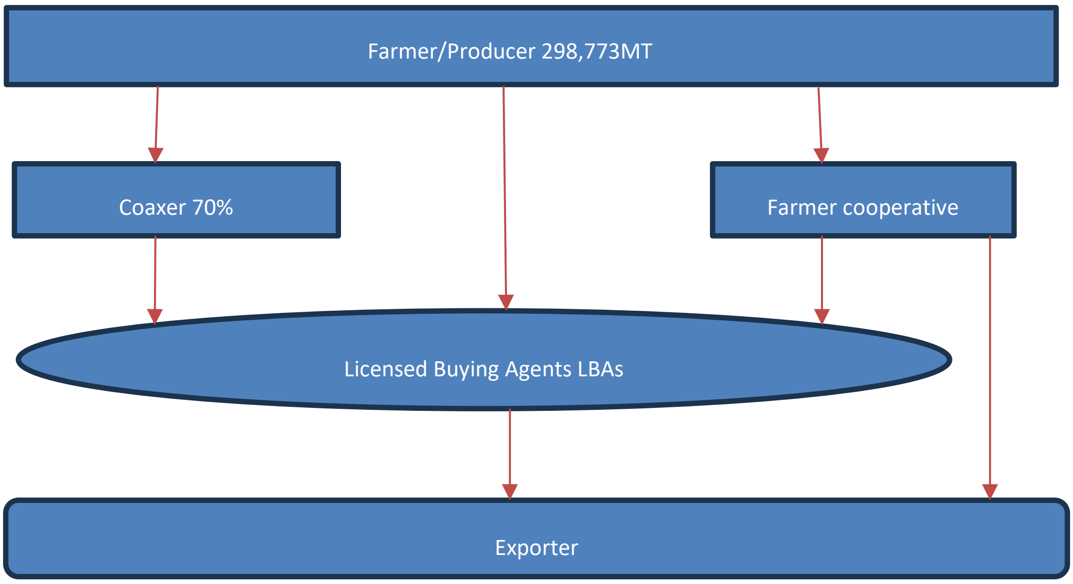

Figure 2: Cocoa marketing channels in Cameroon

3.2 Cocoa consumer segments in DRC and Cameroon

Consumer segmentation is the process of dividing a broad market into smaller, more manageable groups of consumers with similar characteristics, preferences, or behaviours. These segments are typically based on criteria such as demographics (age, gender, income), psychographics (lifestyle, values, interests), geography (location, climate), or behavioural traits (purchase habits, brand loyalty, product usage) (Yazdi and Karbasi, 2024). This is a great marketing strategy for demand creation and enhancement as it can enable the cocoa producers and processors to tailor their marketing efforts to the specific needs and the distinct consumer segments. It can help in designing effective distribution channels which create a personalized feel for the consumers therefore enhancing their experience.

Most studies analysing the chocolate consumer segments have noted that there's a growing interest in reduced-sugar and organic chocolates in mature markets, where certifications (e.g., organic, fair trade) and ethical practices are becoming critical factors, particularly among European consumers (Sondhi 2016; Yazdi and Karbasi, 2024; García-Vidal et al., 2019). Chocolate consumers can be divided in two three basic groups based on psychographic segmentation as identified by Sondhi (2016).

- *Innovative National* - who is health conscious, is adventurous and open to new experiences and prefers local brands. They are frequent chocolate consumers and often buy it as a treat or self-reward and are highly responsive to advertising, in-store displays, and impulse purchase opportunities.
- *Conservative Patriot* – is also health conscious who is cautious and tradition-oriented and does not like to explore. They buy chocolate as gifts, favours national brands, and are influenced by traditional media like television, valuing products that evoke nostalgia or have familiar qualities.
- *Global Seeker***-** this consumer is not very health conscious but **is** status-conscious, globally oriented, and indulgent, with a preference for international brands. This segment consumes larger quantities of chocolate, often buying it as a luxury snack or during travels and is influenced by peer recommendations and brand displays in high-end or duty-free shops.

3.3 Tailored strategies for demand enhancement for ALL cocoa products

The demand enhancement services for agroecological markets may not differ significantly from that of conventional cocoa. However, these services may drive improvements in the way farmers produce and handle the produce to enhance the customer experiences especially for the segment of consumers that is increasingly conscious of how their food products are produced.

Strategies include:

- **Collective action:** Organizing farmers into cooperatives, which will enable them to meet quality and quantity requirements, helping to keep the product consistent and familiar for local markets.
- **Capacity strengthening**: Training farmers in Good Agricultural Practices (GAP) and certification programs to meet the requirements of their international clients who demand for agroecological and organic products.
- **Packaging:** Offering eco-friendly and unique packaging that resonates with health-conscious consumers looking for sustainable options as well as packaging that is differentiated
- **Branding and promotion**: Focus on local branding, health-conscious messaging, highlighting certifications that reflect quality and tradition, such as fair trade or single-origin labels.
- **International distribution**: Expand into international markets with a strong presence in duty-free shops, high-end stores, and premium online platforms.
- **Collaborations with global brands**: Partner with renowned international chocolate brands to increase exposure in foreign markets, focusing on the product's exotic origins and premium quality.

- **Advertising:** Use traditional media like television and radio, focusing on familiar, national flavours and qualities that evoke a sense of nostalgia.

3.4 Rice marketing channel

Rice is a focus crop in the Uvira ALL in DRC, where 55% of households focus on paddy rice farming. DRC is a net importer of rice with the domestic production serving 50% of consumption (Poisson et al., 2023) with the shortage being met through imports from countries such as Thailand, India, China, Pakistan, Uganda, South Africa, Zambia, Kenya, and Tanzania (ITC, 2024). Rice is distributed through four main marketing channels that connect producers to consumers, involving local breweries such as the Bralima Brewery outlets in Kinshasa, Lubumbashi, Kisangani and Bukavu, wholesalers, retailers, and supermarkets. These channels play a critical role in meeting the demand for rice within the local market, as noted by Poisson et al. (2023).

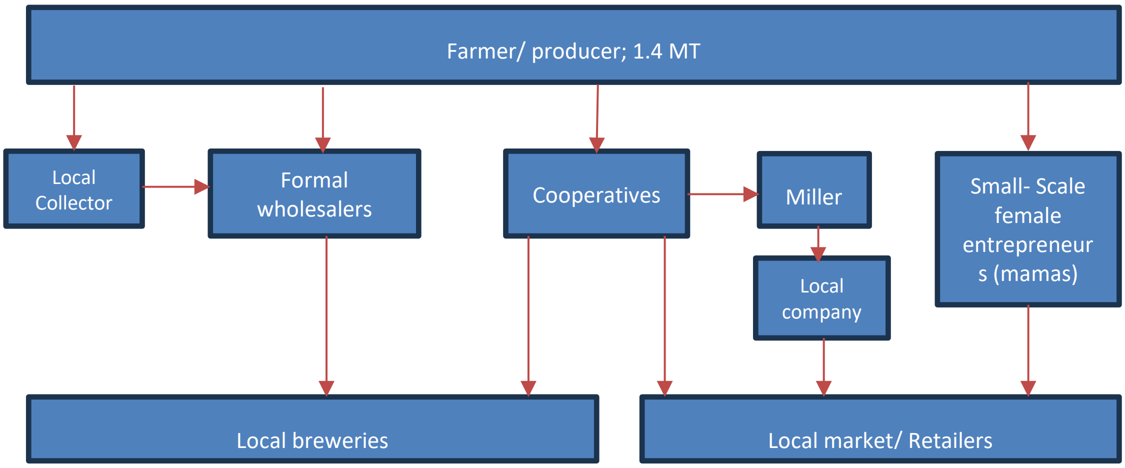

Figure 3: Rice marketing channel in Uvira

3.5 Rice consumer segmentation

The DRC rice market can be categorized into four main consumer groups based on psychographic segmentation as found by Mgendi et al (2019).

- Consumers who want convenience and affordability. They are price-sensitive, prioritizing affordability over other quality attributes.
- Consumers who received quality cues from the origin. They perceive the quality of rice based on the origin. The challenge with this segment is lack of traceability where all rice varieties from a particular place are branded the same, making it difficult for the consumer to choose their preferred rice.
- Consumers who explored all quality aspects. They are concerned about attributes of cleanness of the rice, its aroma and the absence of broken rice. This segment is prepared to pay a premium for rice that meets their quality expectations.
- Consumers who pursue aroma as the prime quality attribute. These consumers are more concerned with the rice aroma and are willing to pay a premium for it. They are mostly young people in urban areas, with low level of education and do not have much information on quality.

3.6 Tailored strategies for demand enhancement for ALL rice products

Strategies include the following:

- **Branding and certification**: Developing clear branding for rice varieties, including certified names, to improve traceability and help consumers identify their preferred types. This builds trust in quality and origin, especially for the "origin as a quality cue" segment.
- **Post-harvest practices**: Investing in proper post-harvest handling, such as using advanced machinery to minimize impurities and breakage. This satisfies quality-conscious consumers, especially those exploring all quality aspects.
- **Research and development of aromatic varieties**: Encouraging collaboration between research institutions and rice farmers to develop high-yielding aromatic rice varieties. This captures the aroma-focused segment, particularly younger urban consumers willing to pay a premium for aromatic rice.
- **Affordable options for price-sensitive consumers**: Implementing cost-effective production methods to maintain affordability while ensuring acceptable quality. This retains the price-sensitive consumer base without diluting product value.

3.7 Cassava marketing channel

The CANALLs project sites focusing on cassava are the Kamonyi ALL in Rwanda and the Uvira ALL in DRC. In both countries, cassava is primarily destined for local markets, with the main traded products being fresh cassava roots, cassava leaves, and processed products such as micro-flakes, fermented fufu flour, unfermented flour, and starch. Cassava production in majority of the sites is mainly produced in conventional systems but with limited use of external inputs. DRC has however been driving a cassava transformation agenda that is transitioning cassava production, marketing and processing from traditional subsistence systems to industrial systems. The CANNALs project has been promoting the integration of agroecology practices that would therefore yield agroecological products.

3.7.1 Cassava marketing in DRC

The DRC, a leading global cassava producer, has prioritized cassava as a key value chain in its agricultural development agenda (World Bank, 2023). Cassava in the DRC is distributed through four main channels to reach rural and urban markets. These markets operate during main market days and also involve retailers such as supermarkets, restaurants, canteens, and bakeries (Humpal et al., 2011).

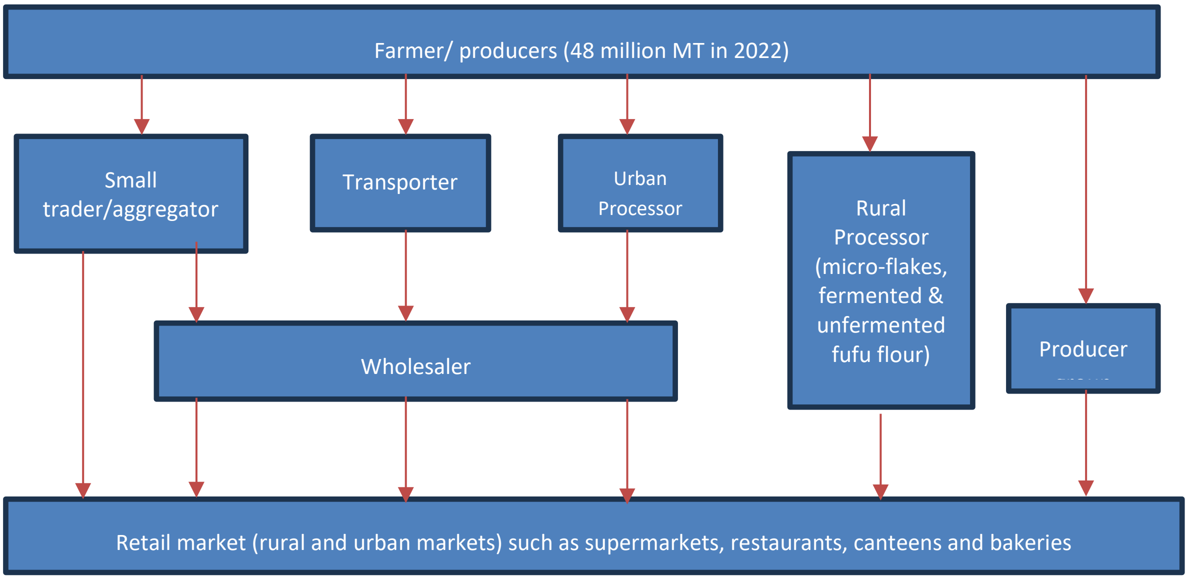

Figure 4: Cassava marketing channel in Uvira

3.7.2 Cassava marketing in Rwanda

In Rwanda, cassava is one of the priority crops within the Crop Intensification Program (CIP) aiming at improving its productivity (Ndushabandi et al., 2018). Cassava trading is not very complex in Rwanda as it is mainly for the local market and with some traded across the country's borders. The main actors in the marketing channels include farmers, rural vendors, cooperatives, traders and processors. Cassava is marketed in various forms, including fresh roots, dried products, and processed flour (USAID, 2009).

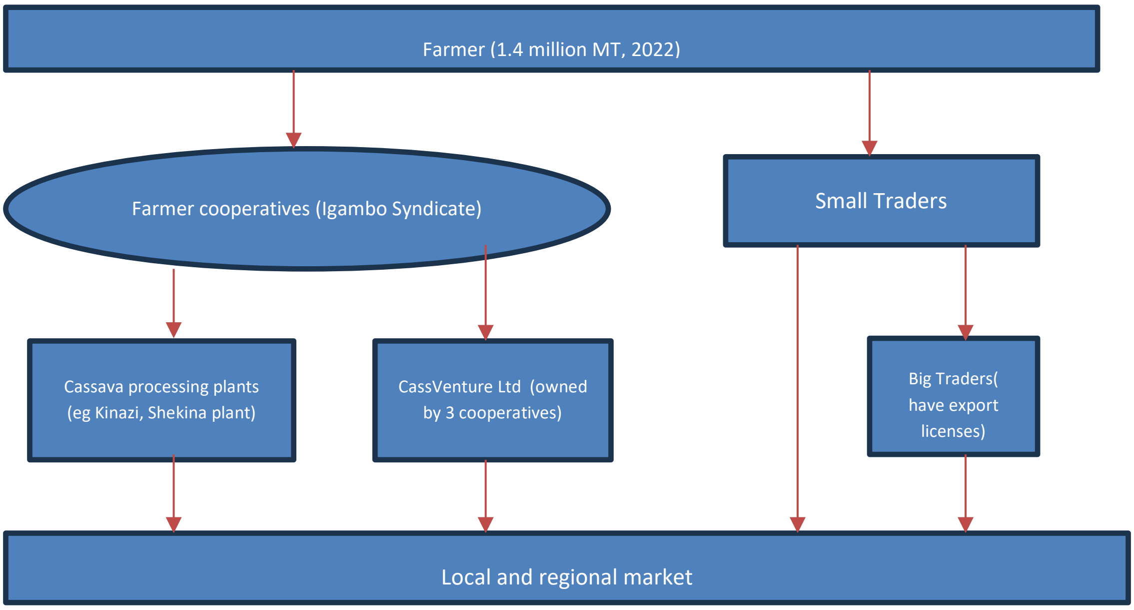

Figure 5: Cassava marketing channel in Kamonyi

3.8 Cassava consumer segmentation

Cassava consumer segments vary by product preferences—such as gari, eba, boiled roots, or snacks—and the key attributes they value in these products. These attributes can be leveraged by cassava players within the value chain to enhance product demand.

- Gari consumers- They prefer gari that is dry, bright/shiny, white, sweet, dense, fine, with a cooked aroma. The preferred cassava attributes are: non-woody, non-decaying roots with white flesh, low moisture, minimal chaff, and high dry matter content (Osunbade et al, 2023).
- Eba consumers- They prioritize textural properties such as smoothness, firmness, stickiness, elasticity, and mouldability (Ndjouenkeu et al., 2021).
- Boiled cassava root consumers- The preferred attributes are softness of boiled roots, in-ground storability, and non-bitter taste (Iragaba et al., 2020).
- Cassava snack consumers- Products considered are: cassava chips, crackers, opak, and twui rice. Price and flavour are the most important factors influencing purchase decisions, while convenience and packaging are important for supermarket purchases (Unteawati et al., 2018).

3.9 Tailored strategies for demand enhancement for ALL cassava products

Strategies include the following:

- **Proper processing** of Gari to attain desired attributes (white color, dry, sweet taste and aroma)
- **Choice of the right varieties** (with low moisture content, non-woody texture, and white flesh for optimal processing quality)
- **Consistent supply** through varieties with long in-ground storability, offering flexibility in harvesting schedules.
- **Taste considerations** (prioritize fresh cassava roots with a non-bitter taste for direct consumption and processing)
- **Competitive pricing** (targeting low income rural and urban consumers)
- **Appealing flavours**
- **Attractive packaging especially for urban consumers**
- **Diversified and convenient formats,** especially snacks targeting supermarket consumers

3.10 Maize marketing channel

Maize is a key crop under the CANNALS project, particularly in the Bujumbura ALL in Burundi. Most of the maize produced is for domestic consumption, with approximately 70% used as food and only about 10% processed into animal feed (Nijimbere & Suprunov, 2021). Maize is commonly marketed in two forms: as fresh maize or processed into flour. In Burundi, there are three primary maize marketing channels, as illustrated in the figure below, adapted from USAID (2010).

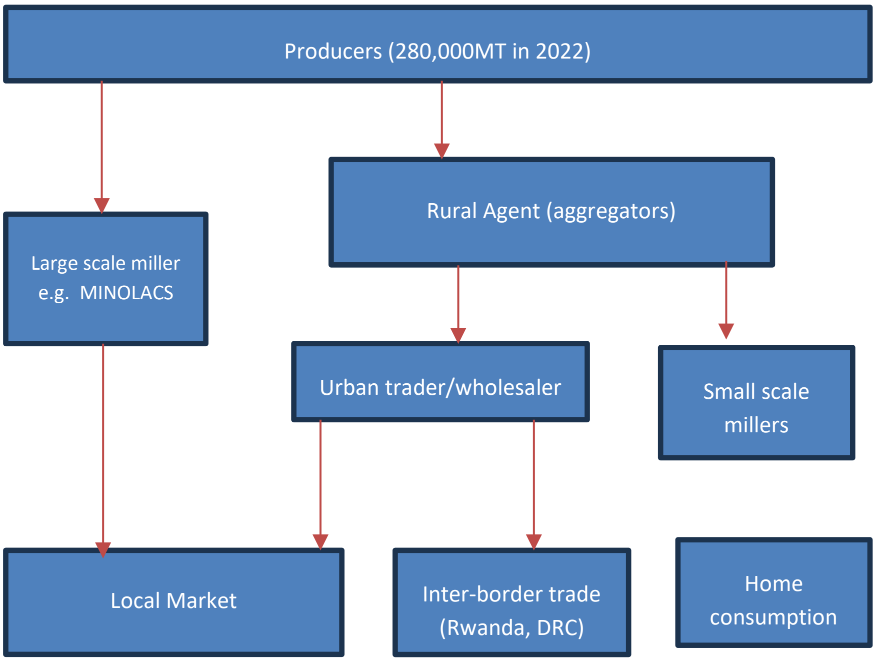

Figure 6: Maize marketing channel in Bujumbura, Burundi

3.11 Maize consumer segmentation

Maize consumers are classified according to the outlets in which they access the maize and maize products such as flour as follows (De Groote & Kimenju, 2012).

- Posho mill consumers- these are mostly in the third marketing channel who buy maize through the open-air markets and process it to flour in the small-scale millers. This group are not interested in brand and packaging. They prefer ordinary, whole meal maize product mainly due to nutrient quantity and price. Their most preferred traits for maize products are freshness, nutritional value, taste, and smell.
- Supermarket consumers- situated mostly in the first marketing channel. They tend to be higher income, formally employed, and university graduates. This group prefers industrial maize flour, both plain (62%) and fortified (17%), valuing convenience (time saving), brand, and packaging more than price and nutrient quality. Just like the posho mill consumers, their preferred maize products traits are freshness, nutritional value, taste, and smell.
- Kiosks consumers- They represent a mix of demographics, typically skewing towards lower-to middle-income individuals who primarily buy industrial maize flour (66%) but also purchase grain and grain for milling in smaller amounts. They focus on convenience, price, and cleanliness, particularly among those with lower education.

3.12 Tailored strategies for demand enhancement for ALL maize products

Strategies include:

- **Consumer awareness campaigns**- Highlighting the unique qualities of ALL maize products, focusing on traits like freshness, nutritional value, and taste.
- **Quality assurance**- Ensuring consistent product quality to build and maintain consumer trust across all segments.
- **Innovative distribution**- Using digital platforms or mobile apps for product ordering and delivery to enhance convenience and accessibility.
- **Affordable options**- Providing small, affordable packaging sizes for industrial maize flour to cater to lower-income buyers.
- **Brand development**- Creating and promoting a strong, recognizable brand for ALL maize flour products, focusing on premium quality and consistent taste.
- **Packaging innovations**- Using attractive, convenient, and resealable packaging to appeal to busy, higher-income consumers.
- **Quality improvement through fortification:** Expanding options for fortified maize flour to cater to health-conscious consumers. Important is to highlight these benefits on packaging and through supermarket promotions.

3.13 Coffee Marketing Channel

3.13.1 DRC coffee marketing channel

In the DRC, coffee is categorized as either organic or conventional, with distinct marketing channels due to certification requirements and varying consumer demand. Organic-certified coffee is predominantly sold to premium international markets in the U.S. and Europe, where the demand for certified organic products is high. Conventional coffee, on the other hand, is marketed through standard channels, targeting domestic, regional, and some international markets (Wilkins and RDC, 2019).

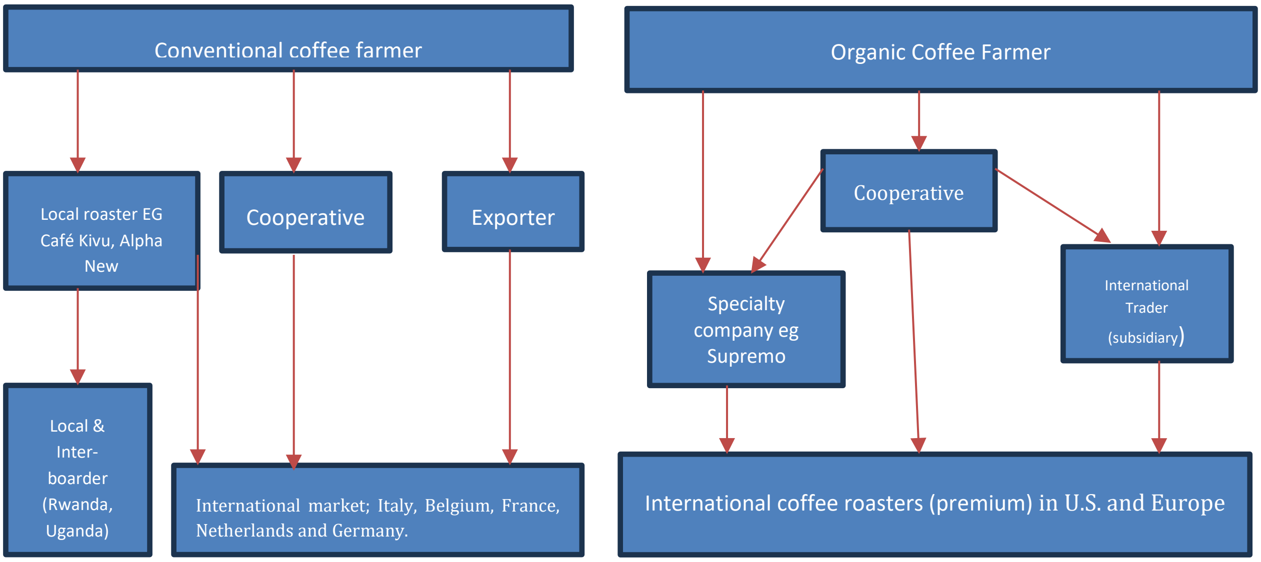

Figure 7: Coffee marketing channel in Rwanda

3.13.2 Burundi coffee marketing Channel

In Burundi, coffee plays a crucial role as a major foreign exchange earner, contributing approximately 80% of the country's foreign exchange revenue (Lenaghan and Clay, 2018). Coffee in Burundi is marketed through three primary channels, catering to both local and international markets. For the local market, it is typically sold as roasted coffee, while green coffee is primarily exported to international markets (USAID, 2010, Bamber et al., 2014).

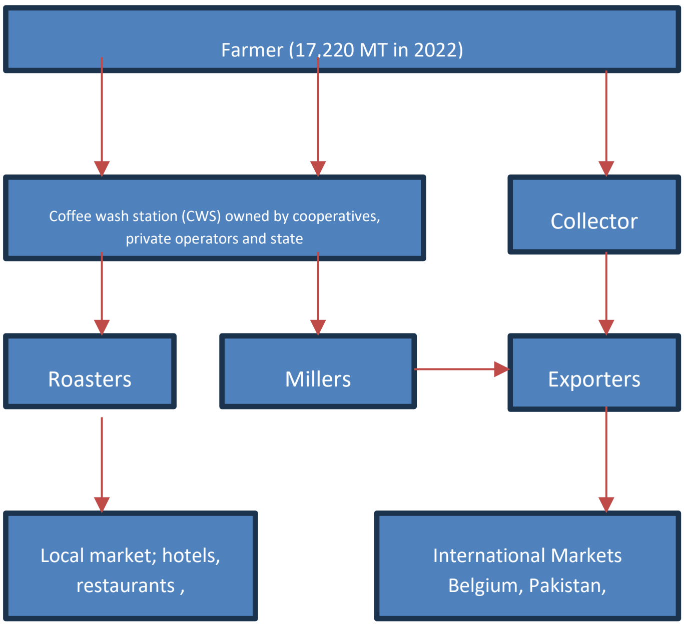

Figure 8: Coffee marketing channel in Burundi

3.14 Coffee consumer segmentation

Coffee consumers in local, regional, and international markets are increasingly prioritizing sustainability, emphasizing values such as environmental protection, fair trade practices, and ethical production (Maciejewski et al., 2019). These preferences provide an effective basis for segmenting consumers and enable players along the ALL-coffee marketing channel to tailor their products and strategies to meet specific needs. A study by Maciejewski et al. (2019) utilized cluster analysis to identify six distinct coffee consumer segments based on sustainable consumer values.

- **Responsible, aspiring connoisseurs**: This segment has a balanced gender distribution, with primarily individuals under 35 from smaller towns, with a lower household income. They value sustainability and eco-friendly practices, favouring fair-trade-certified coffee and reusable or economical packaging. They prioritize freshly roasted coffee and often check producer details before purchasing.
- **Loyal coffee enthusiasts**: - These are primarily older women aged 45+ with moderate incomes. They value quality coffee and prefer whole beans for home grinding to ensure freshness. They are less concerned about sustainability but are loyal to specific brands and experts.
- **Pragmatic users**: They are often rural males under 35 years with a relatively lower household income. They are royal to their brand and indifferent about sustainable values mostly preferring ground or instant coffee. They prioritize accessibility over brand or sustainability, and they form the largest coffee consumer segment.
- **Coffee laypersons**: They consists of older people with over 45 years and are royal to their coffee brands but have limited knowledge about coffee markets. They prefer convenient coffee options like quick to prepare hence their choice for instant coffee. They are not so much into sustainable values but they prioritize environmentally friendly and economical packaging.
- **Sophisticated connoisseurs**: - This segment is constituted of younger women from urban areas, with higher household incomes. This segment values the coffee taste and presentation and are keen on how it was prepared. They highly aligned to sustainable values and prioritize freshly roasted coffee.
- **Consumerists, connoisseurs, but not at any price**: These consumers are not loyal to any brand and are guided by cost effectiveness hence buying the brand that is currently on offer. They are not willing to pay more for sustainability like fair trade certification and re-usable packaging. They prefer ground or instant coffee and are more price-sensitive, prioritizing value over brand loyalty. This segment has slightly more men, many aged 35-44, living in urban areas with moderate incomes.

Organic coffee consumers are often more health-conscious, which influences their preferences and trade-offs. These consumers can be segmented into three distinct groups (Daraboina et al., 2024).

- ***Health-conscious consumers (Benefit-Oriented):*** This segment prioritizes the health benefits of coffee, seeking options that are organic, natural, and free from additives. Key attributes include natural content, health benefits, and environmental sustainability, with secondary importance given to packaging, taste, and price. These consumers may also favour sustainably sourced coffee produced using environmentally friendly methods.
- ***Taste and value-conscious consumers***: Consumers in this group prioritize taste and packaging, followed closely by price. While they recognize the health benefits of organic coffee, taste is the most influential factor in their purchasing decisions. They seek a balance between quality and affordability, often switching brands if prices increase significantly. This segment values coffee with a strong flavour profile but is not particularly brand loyal.

- ***Image-oriented consumers:*** This segment values the social prestige and brand image associated with organic coffee. Price is less of a concern, as these consumers are drawn to coffee that reflects a particular lifestyle or status. Premium and specialty coffees are especially appealing, as exclusivity and luxury are key motivators for this group. Health and environmental considerations are secondary to the image and prestige associated with their choice.

3.15 Tailored Strategies for Demand Enhancement in ALL Coffee Products

3.15.1 Conventional coffee

Strategies include:

- **Diversity** through provision of **products in various formats** (e.g., instant, ground, whole beans) to suit consumer preferences and preparation habits.
- Availability of products in **diverse retail channels**, including supermarkets, kiosks, and online stores
- **Offering a range of price points** to cater to various income levels availing affordable options
- **Availing premium products**
- **Offering discounts and loyalty** programs to encourage repeat purchases across segments.
- **Quality** assurance across all products, ensuring freshness, appealing taste, and consistent standards.
- **Highlight freshness** through "roast date" labels and transparent production practices.
- **Ensure attractive, informative, and practical packaging** and that aligns with the preferences of various consumer segments.

3.15.2 Organic Coffee

Strategies include:

- **Health-centric messaging in advertising and packaging** emphasizing on the organic and natural aspects of the coffee, such as being additive-free, pesticide-free, and rich in antioxidants to appeal to health-conscious consumers
- **Environmental sustainability**: Promoting eco-friendly farming practices, such as water conservation and biodiversity protection and invest in sustainable packaging (e.g., biodegradable) to attract environmentally conscious consumers.
- **Transparency and traceability**: Providing detailed information about the coffee's origin, production methods, and certifications (e.g., USDA Organic, Fairtrade). E.g. using QR codes or online platforms to allow consumers to trace the product's journey from farm to cup.
- **Premium offerings**: Creating limited-edition or specialty organic coffee lines to appeal to image-oriented consumers
- **Taste and affordability balance**: Ensuring that organic coffee products have a strong flavour profile, balancing taste with health benefits and offer different price points, from premium options to more affordable, entry-level organic coffees.
- **Lifestyle branding**: Partnering with health-focused influencers or wellness events to create brand visibility.

4. Validation of demand creation services

In line with the objective of co-designing the services and marketing tools to enhance demand for agroecological food products, the outcomes of the literature review presented in Chapter 3 were subjected to stakeholder validation during the co-creation workshops. The validation workshops aimed at refining the proposed strategies and ensure they meet local needs effectively. This section presents the outcomes of the validation exercise as implemented in two ALLs.

4.1 Validation results for Ntui Agroecological Living Lab in Cameroon

In the Ntui ALL, seven demand creation services (as presented in Section 3.1) were presented to the participants in the co-creation workshops. One additional demand creation service was suggested by the participants, namely, Feedback to Customers on the cocoa by-products consumed. The factors ranked as the most important were **Consistency in quality**, ensuring that consumers are always availed with high quality products, **Packaging the product** in eco-friendly and unique materials and **advertising** using traditional media like television and radio, focusing on familiar, national flavours and qualities that evoke a sense of nostalgia. These three factors relate to strong product development and solidifying consumer experiences through better packaging and promotion. The factors that were granted moderate ranking included: **Consistency in quantity** ensuring that consumer demand is always satisfied; **Tailor made products for international markets availed at** duty-free shops, high end stores and premium online platforms and **Partnerships with renowned global brands** publicized through marketing campaigns or special product lines. Lastly the least ranked factors included: **Certification services** to ensure products are organically produced; **Local branding with health-conscious messaging** highlighting certifications that reflect quality and tradition, such as fair trade or single-origin labels and feedback of customer on the cocoa by-products consumed. The less preferred aspects relate to product certification and preference on health benefit communication that mostly relate to consumer consciousness on the nature of products that they purchase.

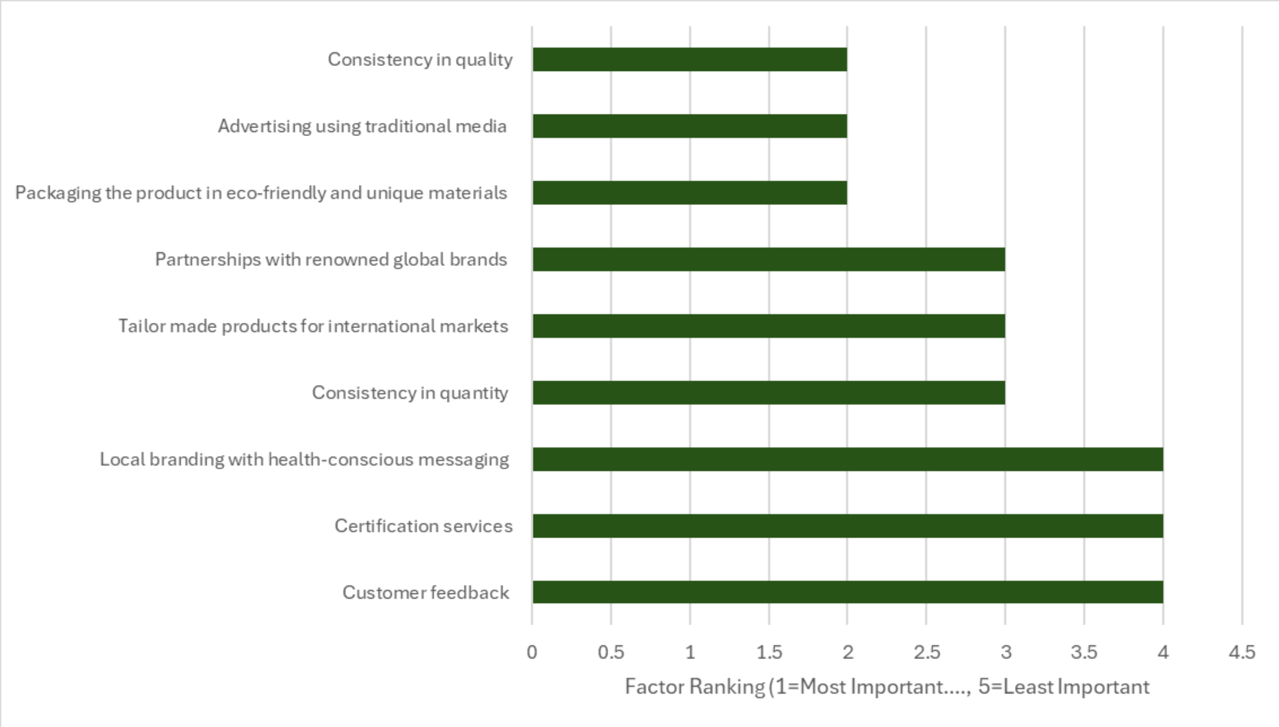

Figure 9: Validation and prioritization of demand creation services for cocoa in the Ntui ALL

Towards improving consumer experiences and enhance demand creation services in the local context, the participants proposed the following actions:

1. To ensure consistency quality of products, it was suggested that the dedication to agroecological production should be enhanced. Further, the deployment and promotion of hybrid varieties with enhanced quality traits should be intensified for widespread adoption by farmers.
2. The collaboration with ANOR (Normalization and certification services in Cameroon) can help having a specific agroecological label for various products especially cocoa beans and byproducts (butter, powder, chocolate).
3. The government should facilitate the importation of eco-friendly and unique packaging materials. To further complement the importation, local research institutes and innovation hubs should develop prototypes for the use of local materials to manufacture eco-friendly packaging materials.
4. The certification of products should be supported and facilitated through private-public partnerships (PPPs), including the recognition of local products.
5. The government should create appropriate shops for “made in Cameroon” products at all ports of entry. The project should create an online marketplace for agroecological food products (cocoa)
6. Create a platform where cocoa buyers and farmers can meet to discuss about the quality and the price of cocoa quality.

During the workshop, participants noted that the cocoa market in Ntui is well organized locally with the coordination by local authorities. For example, all cooperative societies and cocoa buyer companies must send their price offers to the authorities for validation at least 5 days before marketing. Farmers are free to sell their cocoa beans to the companies of their choice. This strategy protects the farmers from market intermediaries and exploitation. Through this method, farmers have control over the prices they sell their produce. To improve farmers' experiences, there is need for market linkages, particularly with chocolate compagnies to buy directly from farmers or through cocoa buyers/exporters. Data collection tools for farmers will help to boost accountability. A training on digital marketing tools will be also appreciated by cooperative societies dealing with organic cocoa. Currently, branding services are not accessible to farmers and other stakeholders in Ntui, but only in distant cities such as Yaoundé and Douala. The only communication done around the products is during limited occasions such at some fairs like the bio agricultural fair, agroecological fair, or agropastoral shows organised annually by the government. Importantly, it was also revealed that, chocolate compagnies have no difference of price on organic cocoa compared to cocoa beans produced within the conventional systems, because it is difficult to differentiate the beans by mere appearance. Finally, limited access was reported to organic inputs and material.

4.2 Validation results for Giheta Agroecological Living Lab (ALL), Burundi

The co-creation workshop was attended by stakeholders representing small-scale farmers who are also members of cooperatives, local traders/ intermediaries, representatives of processing companies, exporters, researchers, policy makers and government representatives and training and extension service providers. The participants ranked **health-centric messaging** in advertising and packaging, **transparency and traceability,** as the most important strategies for demand creation for organic coffee. These are critical aspects when considering that organic produce consumers are critically conscious of the health aspects of the produce and would need assurance that the products are indeed sourced from organic systems. Four factors were ranked moderately: **store experience/sampling**, **lifestyle branding**, **taste and affordability balance** and **environmental sustainability**. Organic coffee consumers would not be very concerned on the cost because their willingness to pay for premium attributes is relatively high. Finally, premium offerings, community engagement through coffee farming initiatives and subscription models for premium and limited-edition coffee were ranked least.

Figure 10: Validation and prioritization of demand creation services for Coffee in the Giheta ALL

Towards boosting these strategies in the local context, the following suggestions were provided by the participants:

1. Invest in targeted campaigns through digital and physical platforms (e.g., social media, health magazines, fitness events).
2. Provide consumer education on the health benefits and certifications (organic, fair trade).
3. Increase the use of sustainable packaging and highlight the environmental impact of farming methods. Collaborate with environmental NGOs for stronger certification and promotion on sustainability platforms.
4. Enhance traceability by integrating innovative technologies (e.g., blockchain) and improving the user experience with easy-to-access online portals on packaging for deeper consumer engagement.
5. Develop exclusive, single-origin or limited-time coffee offerings with storytelling that highlights unique flavours and the ethical practices of Giheta. Collaborate with high-end coffee shops and specialty retailers.
6. Conduct taste tests to refine and develop a diverse range of flavour profiles.
7. Offer coffee in different packaging sizes and price points to accommodate a wider range of consumers, from premium to budget-conscious buyers.
8. Identify and partner with influencers in the health and wellness space, particularly those focused on sustainable living. Participate in wellness events, expos, and local organic product markets to increase visibility.

9. Launch programs that invite consumers to engage with the coffee production process via virtual farm tours, or visits, offering educational workshops on agroecological farming. Highlight community efforts in marketing via social media and online marketing
10. Organize tasting events or pop-up stands at local coffee shops, markets, or eco-friendly events to create direct experiences with the coffee. Educate consumers on the product's quality and ethical production practices.

In addition to the validation of the services, the participants noted that it is crucial to communicate sustainability in a way that resonates with both ethical and eco-conscious consumers. The coffee's environmental impact, from cultivation to packaging, needs to be a central part of the brand story. The certifications (e.g., organic, fair trade) should not only be highlighted on packaging but also through educational content across various platforms. Many consumers still do not fully understand the significance of these certifications. In the current market, where consumers are increasingly looking for transparency and deeper connections with the brands they support, digital platforms (website, social media, and apps) should be leveraged for traceability and storytelling. Finally, marketers should consider offering coffee in smaller, more affordable packages that can cater to a wider range of incomes. This will help attract entry-level customers without compromising the premium appeal of the product.

5. Conclusions

This report is a first version of D2.4. It provides a foundation for designing support services to enhance demand for agroecological food products. By addressing marketing channels, consumer segmentation, and tailored strategies, the recommendations align with the goals of ALLs to foster sustainable food systems. Next steps involve engaging stakeholders in other ALLs of the project, through new co-creation workshops to refine the proposed strategies and ensure they meet local needs effectively. These activities will contribute to building robust value propositions and fair, demand-driven agroecological markets.

Furthermore, we are conducting research to define what constitutes an “agroecological” product. This challenging due to several interrelated factors. Agroecology is a holistic concept that integrates ecological, social, and economic dimensions of agriculture, but there is no single globally accepted definition of an "agroecological product." Different stakeholders (farmers, policymakers, consumers, researchers) may emphasize different aspects (e.g., ecological sustainability, fair trade, local food systems). Unlike organic certification, which has clear, codified standards, agroecological practices are context-specific and often adapted to local conditions. Some certification initiatives (e.g., Participatory Guarantee Systems, PGS) exist but are often localized and not universally recognized.

References

Burundi Milling Assessment | Digital Logistics Capacity Assessments. (2024). Logcluster.org. https://lca.logcluster.org/26-burundi-milling-assessment

Bamber, P., Guinn, A., & Gereffi, G. (2014, February 28). Burundi in the Coffee Global Value Chain: Skills for Private Sector Development. https://doi.org/10.13140/RG.2.1.1097.4808

Daraboina, R., Cooper b, O., & Amini b, M. (2024). Segmentation of organic food consumers: A revelation of purchase factors in organic food markets. online at https://doi. org/10.1016/j.jretconser.2024.103710.

De Groote, H., & Kimenju, S. C. (2012). Consumer Preferences for Maize Products in Urban Kenya. Food and Nutrition Bulletin, 33(2), 99–110. https://doi.org/10.1177/156482651203300203

Downie, R. (2018a). Assessing the Growth Potential of Eastern Congo's Coffee and Cocoa Sectors. Www.csis.org. https://www.csis.org/analysis/assessing-growth-potential-eastern-congos-coffee-and-cocoa-sectors

Downie, R. (2018b). Assessing the growth potential of the Eastern Congo's coffee and cocoa sectors . Center for Strategic & International Studies.

Extract Coffee Roasters | Coopade Coffee Cooperative | Democratic Republic of Congo. (n.d.). Extractcoffee.co.uk. Retrieved October 23, 2024, from https://extractcoffee.co.uk/ethical-coffee-sourcing/coopade-coffee-cooperative/

FAOSTAT. (2024). Www.fao.org. https://www.fao.org/faostat/en/#data/FBS

FO4ACP programme (2019- 2023). smallholder cassava farmers in Rwanda get better value for produce partnering with the private sector. fo4acp Successtory.https://www.ifad.org/documents/38714174/42262402/INGABO+SYNDICATE

Food and Agriculture Organization of the United Nations (FAO). (2009). Cocoa and Coffee Value Chains in West and Central Africa: Constraints and Options for Revenue-Raising Diversification.Fao.org.https://www.fao.org/sustainable-food-value chains/library/details/en/c/262879/

García-Vidal, G., Sánchez-Rodríguez, A., Pérez-Campdesuñer, R., & Martínez-Vivar, R. (2019). Consumer Preferences for Local Chocolate Consumption. Implications from Market Segmentation at Ecuador. International Journal of Business and Social Research (IJBSR), Volume 09, Issue 04, 2019: 01-12(ISSN 2164-2540 (Print), ISSN 2164-2559 (Online)), 1. https://doi.org/10.18533/ijbsr.v9i4.1209

Gloria Boakyewaa Adu, Baffour Badu-Apraku, Akromah, R., Isaac Kodzo Amegbor, Desmond Sunday Adogoba, Alidu Haruna, Kulai Amadu Manigben, Paulina Abanpoka Aboyadana, & Alexander Nimo Wiredu. (2021). Trait profile of maize varieties preferred by farmers and value chain actors in northern Ghana. Agronomy for Sustainable Development, 41(4). https://doi.org/10.1007/s13593-021-00708-w

Poisson, G., Raimondi, C., Moktar, J., and Shaw,M. (2023). rice in the democratic republic of Congo-a market systems analysis feed the future market systems and partnerships activity march 2023 photo credit: axel fassio/cifor-icraf rice in the DRC-a market systems analysis i acknowledgements.

Kinazi Cassava Plant – farmers and consumers. Kcp.rw. Retrieved October 23, 2024, from https://kcp.rw/

Lenaghan, T., & Clay, D. C. (2018, July 12). Burundi Coffee Sector Diagnostic Study. https://www.researchgate.net/publication/329130289

Lenou Nkouedjo, L., Mathe, S., Fon, D. E., Geitzenauer, M., & Awah Manga, A. (2020). Cocoa marketing chain in developing countries: How do formal-informal linkages ensure its sustainability in Cameroon? Geoforum. https://doi.org/10.1016/j.geoforum.2020.09.005

Maciejewski , G., Mokrysz, S., & Wróblewski, Ł. (2019). Segmentation of Coffee Consumers Using Sustainable Values: Cluster Analysis on the Polish Coffee Market. Sustainability 2019, 11, 613; doi:10.3390/su11030613. www.mdpi.com/journal/sustainability

Mgendi, G., Gaudiose Mujawamariya, & Isinika, A. C. (2019). Consumers' preference and market segmentation in developing countries: Rice marketing in Tanzania. ResearchGate, 14(2), 1–15. https://www.researchgate.net/publication/330650872_Consumers

National Institute of Statistics of Rwanda (NISR). (2024). Seasonal Agricultural Survey (Season A, 2024) | National Institute of Statistics Rwanda. Statistics.gov.rw. https://statistics.gov.rw/publication/2139

Nijimbere, G., & Suprunov, A. I. (2021). maize cropping system among small farmers in the agroecological zone in central Burundi and its advantages. Polythematic Online Scientific Journal of Kuban State Agrarian University, 174, 70–78. https://doi.org/10.21515/1990-4665-174-008

Ns, E., Ndushabandi, R., Mwangi, V., & Bizimana. (2018). crop intensification program (cip) citizen's satisfaction survey -2018. Institute of Research and Dialogue for Peace (info@irdp.rw). https://www.irdp.rw/wp-content/uploads/2019/02/Final-printed-CIP-report.pdf

Post, T. P. (2024, August 12). Rwandan Cassava Farmers Secure Better Market Access Through Innovative Public-Private Partnerships - The PPP Post. The PPP Post. https://theppppost.com/rwanda-cassava-farmers-public-private-partnerships/

ProFound Advisers in Development, Organics & Development, & Arbenz, M. (2020). Boosting Organic Trade in Africa, IFOAM – Organics International, Bonn / Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn / Eschborn.

Shekina Enterprise | Agrinnovators. (2023, October 16). Agrinnovators. https://agrinnovators.org/business-profile/shekina-enterprise/

SOPROCOPIV – Kampani. (n.d.). Kampani.org. Retrieved October 23, 2024, from https://www.kampani.org/soprocopiv/

The Technical Centre for Agricultural and Rural Cooperation (CTA). (2017). Mapping Study of Food-Grain Value Chains in Eastern Africa. https://publications.cta.int/media/publications/downloads/2013_PDF_Slsfpeb.pdf

The United States Agency for International Development (USAID). (2009). staple foods value chain analysis country report -rwanda. https://pdf.usaid.gov/pdf_docs/pnadw638.pdf

Trade statistics. (2024). ITC. https://www.intracen.org/resources/data-and-analysis/trade-statistics

United States Agency for International Development (USAID). (2010). staple foods value chain analysis country report -Burundi. https://pdf.usaid.gov/pdf_docs/pa00jxxb.pdf

United States Agency for International Development (USAID). (2022). usaid's investment facilitation activity in the drc (usaid invest) an introductory guide to the coffee sector in the DRC. https://chemonics.com/wp-content/uploads/2023/09/USAID-Invest_DRC-Coffee-Sector-Guide.pdf

United States Agency for International Development. (USAID). (2023). usaid's investment facilitation activity in the DRC (usaid invest); an introductory guide to the cocoa sector in the drc. https://chemonics.com/wp-content/uploads/2023/09/USAID-Invest_DRC-Cocoa-Sector-Guide.pdf

USAID. (2010). East Africa Trade Hub burundi coffee industry value chain analysis profiling the actors, their interaction, costs constraints and opportunities. https://pdf.usaid.gov/pdf_docs/PA00HZ9Q.pdf

Wilkins, k., & Rdc, é. (2019). the cocoa and coffee opportunity in the democratic republic of the congo. https://thecocoapost.com/wp-content/uploads/2021/06/DRC-Cocoa-and-Coffee-Opportunities.pdf

Wilkinson, J. (2022, August 8). Democratic Republic of the Congo (DRC) Coffee Production & Sourcing Guide. Omwani. https://www.omwani.com/post/drc-coffee-production-sourcing-guide

Iita.org. New project to strengthen and modernize DRC's cassava sector. Retrieved October 23, 2024, from https://www.iita.org/news-item/new-project-to-strengthen-and-modernize-drcs-cassava-sector/

Annex 1: Sample Tool used in the Co-creation workshop

Driving agroecological transitions in the humid tropics of Central and Eastern Africa through traNsdisciplinary Agroecology Living LabS (CANNALS)

Co-creation Workshop/ Validation tool

for

Task 2.4: Design of support services to enhance demand for agroecological food products

Agroecological Living Lab (ALL)	**Ntui in Cameroon**
Product/Value chain	**Cocoa**

Background

One of the objectives of CANALLS project is to co-design services and marketing tools to enhance demand for agroecological food products. This will be achieved through analysis and segmentation of consumer segments for food products produced using agroecological practices and then developing the demand enhancement services for each consumer segment. This exercise is aimed at engaging stakeholders through co-creation workshops to refine the proposed strategies and ensure they meet local needs effectively. These segments are typically based on criteria such as demographics (age, gender, income), psychographics (lifestyle, values, interests), geography (location, climate), or behavioural traits (purchase habits, brand loyalty, product usage). This consumer segments is based on psychographics (lifestyle, values, interests) criteria. Through this Focus Group discussion, participants are expected to validate the services identified from the literature.

The Following services have been identified as important in supporting demand creation for varied cassava products, namely: Gari, Eba, Boiled roots and Cassava Snacks. Please evaluate each of these services guided by the specific questions.

	Demand creation services[3] *Please suggest any other 2-3 additional services that you feel may be missing*	On a scale of 1-5 how important is this service? **(1=Most important; 5=Least Important)**	To what extent has this service have already been implemented in creating **demand** for this product? 1=Low 2=Moderate 3=High	What **further actions** do you recommend for implementation to enhance the effectiveness of this service?
	Target: Innovative nationals (health conscious, adventurous, open to new experiences and prefers local brands)			
1	**Consistency** in quality, ensuring that consumers are always availed with high quality products			
	Consistency in quantity ensuring that consumer demand is always satisfied			
2	**Certification services** to ensure products are organically produced			
3	**Packaging the product** in eco-friendly and unique materials			
4	**Local branding with health-conscious messaging** highlighting certifications that reflect quality and tradition, such as fair trade or single-origin labels.			
5	**Tailor made products for international markets availed at** duty-free shops, high end stores and premium online platforms			
6	**Advertising using** traditional media like television and radio, focusing on familiar, national flavors and qualities that evoke a sense of nostalgia.			
7	**Partnerships with renowned global brands** publicized through marketing campaigns or special product lines			
	Other strategy (Specify)			

Additional observations/Notes

[3] Demand creation services refer to targeted actions designed to align with the specific preferences and needs of different consumer segments, aiming to stimulate interest and increase demand for agroecological food products.