



International Journal of Development and Sustainability

ISSN: 2186-8662 – www.isdsnet.com/ijds

Volume 13 Number 6 (2024): Pages 498-514

ISDS Article ID: IJDS24060601



Small-scale cross-border trade and sustainable development in the African Great Lakes sub-region

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Abstract

Some studies conducted under the World Bank project on facilitating cross-border trade in the African Great Lakes sub-region highlight the role of small-scale cross-border trade in poverty reduction. Other research suggests a connection between this trade and food security, but they often fail to clearly explain how this link is established. This study aims to bridge that gap by explicitly and concisely demonstrating the relationship between small-scale cross-border trade, poverty alleviation, and food security. Furthermore, it argues that such trade serves as a catalyst for the integration of African populations and provides a platform for reconciliation and peacebuilding in the sub-region. Additionally, the study explores how this trade impacts the conservation of fauna and flora in Virunga National Park.

Keywords: Small-Scale Cross-Border Trade; Sustainable Development; Africa; Great Lakes

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Cite this article as: Matata, G.P. (2024), "Small-scale cross-border trade and sustainable development in the African Great Lakes sub-region", *International Journal of Development and Sustainability*, Vol. 13 No. 6, pp. 498-514.

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1. Introduction

In the sub-region under study, as is common across sub-Saharan Africa, small-scale cross-border trade plays a crucial role in maintaining economic and social stability. It is a dominant component of the informal sector, which accounts for 30% to 90% of non-agricultural employment in the region (FAO, 2017). This sector also contributes between 25% and 65% to the GDP of sub-Saharan African countries (Mansour, 2017). According to the United Nations Conference on Trade and Development (UNCTAD) report on the "Potential of the Free Trade Area in Africa" (2021), small-scale cross-border trade can constitute up to 90% of official trade flows in some African nations; it contributes approximately 40% of all trade within the Common Market for Eastern and Southern Africa.

If some studies estimate that small-scale cross-border trade contributes, approximately, 43% to sub-Saharan States' GDP (Afrika and Ajumbo, 2012), others suggests that this contribution could be higher. For example, the FAO report (2017) on "The Formalization of Informal Trade in Sub-Saharan Africa" indicates that small-scale cross-border trade may account for up to 70% of non-agricultural employment in the region. It also highlights that this trade provides access to domestic goods and services not available through the formal economy and offers significant socioeconomic benefits to small traders.

Brenton et al. (2011) point out that, in 2011, small-scale cross-border trade was vital for linking farmers to markets in the sub-region. Many farmers, at that time, lived in landlocked areas with limited infrastructure. The situation is almost the same today since numerous farmers still live in the countryside zones lacking basic infrastructure. Yet, they (farmers) represent up to 70% of the sub-region working population (FAO, 2024). Since small-scale cross-border trade remains the primary way for these farmers to reach markets, sell their products, and earn income, its contribution to the GDP of the DRC, Rwanda, and Burundi is likely higher than the previously estimated 43%. Based on these estimates, Afrika and Ajumbo (2012) argue that small-scale cross-border trade has significant positive economic impacts in Africa. If effectively harnessed, it has the potential to enhance efforts to alleviate poverty and food insecurity on the continent.

Kalinda and Ingonde (2018) argue that the impact of small-scale cross-border trade is more than economic. They assert that this trade fosters connections among people from different States, cultures, and ethnicities within the sub-region. Small-scale cross-border trade interconnects local communities and creates interdependence between them. As soon as they feel interdependent, populations of the sub-region free themselves from conflicts between their States and intensify contact between them. This phenomenon is viewed, by the FAO report (2017), as "furthering integration of Africa's people at a time when formal integration efforts are still fraught with many constraints" such as political conflicts. Regarding to that, Kalinda and Ingonde think that small-scale cross-border trade serves as a valuable framework for reconciliation and peacebuilding, particularly in a region that has been affected by conflict since 1990.

Field data from interviews with leaders of small-scale cross-border traders associations in East DRC reveal that this trade impacts Virunga National Park. The last is a protected area known for its rich biodiversity and species. Its boundaries are close to official border posts between DRC and Uganda, such as Kasindi and Bunagana. Many traders come from communities near the park. According to these leaders, when traders abandon their activities, some turn to poaching as a means of survival. This illegal activity harms biodiversity and progressively damages the park's ecosystems.

2. Research question

Several studies such as the ones of Afrika and Ajumbo, (2012), Brenton (2011) and the FAO report (2017) note, without giving comprehensive details, that there is a link between small-scale cross-border trade and Sustainable Development Goals (SDG) n°1, 2, 16 in the sub-region under study. Some ideas such as the ones of Kalinda and Igonde (2018) support that SDG n°15 is also concerned by the link. How is that link established?

3. Research materials and methods

3.1. Mapping of research area

This research focuses on the exercise of small-scale cross-border trade at different border posts between DRC, Uganda, Rwanda, and Burundi. These countries form the African Great Lakes sub-region. A particular focus is placed on the Kasindi official border post because of its close proximity to the Virunga National Park. This park contains a rich biodiversity to sustainably protect.

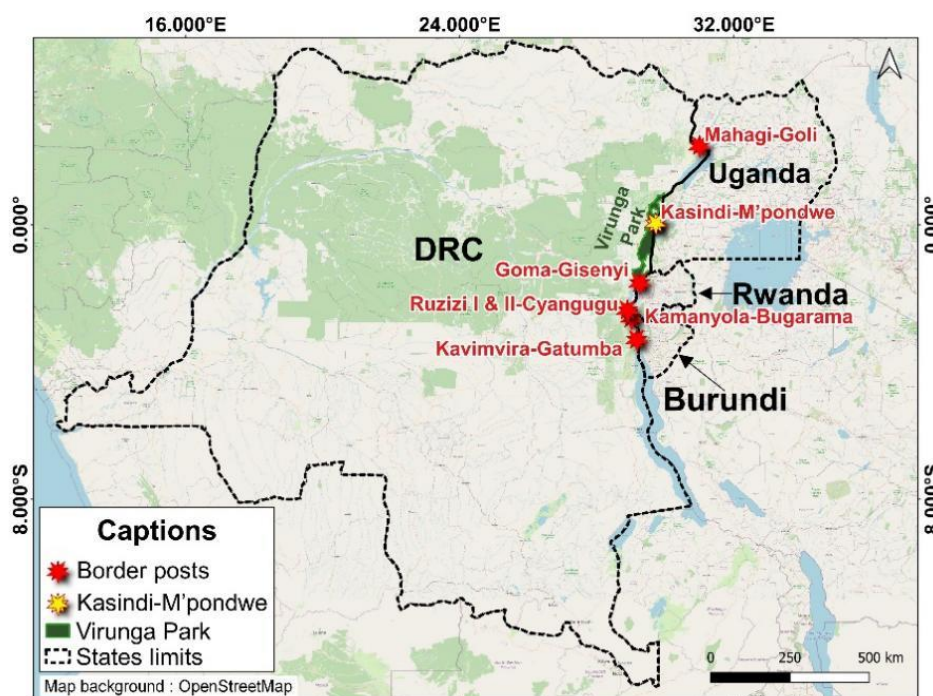


Figure 1. Great Lakes sub-region and border posts concerned by the study

3.2. Methods

This study is a result of two methods. The first focuses on a systematic analysis of previous studies relating to the small-scale cross-border trade in the Great Lakes sub-region. The second is made of a series of semi-structured interviews with small-scale cross-border traders of the sub-region. We proceeded by focus group

(6) made, each, of 25 small cross-border traders. Field activities took 6 months (a focus group per month, per border post).

4. Results and discussion

The present study tries to give deep details, in four points, on the way the small-scale cross-border trade impacts the sub-region above-mentioned. The first point shows how small-scale cross-border traders contribute to the fight against poverty and food insecurity. The second presents the small-scale cross-border trade contribution to economic integration and peace building in the sub-region under study. The third shows that, despite its well-acknowledged relevance, small-scale cross-border trade has drawbacks. Some of them (drawbacks) harm the protection of the environment. The fourth point shows that the exercise of the small-scale cross-border trade, somehow, contributes to the conservation of fauna and flora in the Virunga Park.

4.1. Small-scale cross-border trade, poverty reduction and fight against food insecurity

Poverty alleviation as well as the guarantee of food security are both positively impacted by the exercise of the small-scale cross-border trade in the sub-region under study. Since hunger cannot be dissociated from other characteristics of a poor person's life, as De Schutter (2023) and Lallau (2011) think, it is appropriate to write that small cross-border trade contributes to poverty alleviation (Section 4.1.1) as much as it fights food insecurity (Section 4.1.2).

4.1.1. Small cross-border trade and poverty alleviation

If the fight against poverty is based on increasing precarious persons' income and reducing inequalities as indicated in the World Bank report (2021), the small cross-border trade is an essential tool in this fight in the sub-region under study. In fact, it increases the income of more than 70% of the active population in the sub-region. It is through its exercise that more than 45,000 small cross-border traders earn income (Kimanuka and Titeca, 2012).

Economically speaking, by increasing the income of more than half of the working populations of the sub-region, small-scale cross-border trade increases the GDP of States and, therefore, stimulates economic growth (Brenton et al., 2011). The latter is, according to the aforementioned UNCTAD report (2021), a universal tool in the fight against poverty. It generates several employment opportunities and allows precarious populations to improve their standard of living (De Schutter, 2023).

Olivier De Schutter (2023) calls into question this universality. He believes that economic growth reduces poverty only in low-income countries. The latter "must further increase their GDP in order to allow their populations to improve their standard of living, to satisfy their essential needs". In rich countries, economic growth measured by GDP has reached the peak of its usefulness. It no longer contributes to improving well-being, and is difficult to reconcile with the United Nations' sustainable development goals. It has become counterproductive; it allows the rich to get richer and makes low-income households unable to keep up with the general increase in consumption levels and meet the resulting social expectations. According to this author, in rich countries, economic growth modernizes poverty rather than reducing it; it reinforces social exclusion.

Therefore, “rich countries must move towards ecological transformation by giving themselves the means to promote justice. To achieve this, they will have to adopt ‘triple dividend’ measures, fight against income and wealth inequalities, and reduce the population’s working hours” (De Schutter, 2023). Concluding his thoughts, Olivier De Schutter thinks that in order to prevent economic growth from producing perverse effects (modernization of poverty) in low-income countries (as in rich ones), its realization must first manifest itself in sectors employing a large number of precarious people.

In the sub-region under study, after (small-scale) agriculture, small-scale cross-border trade is the sector employing a large number of poor people. Moreover, its exercise allows small traders to interact with farmers. The majority of small-scale cross-border traders and small-scale farmers are women. The latter are generally precarious and victims of inequalities caused by local customary stereotypes. The latter are unjust and abject limits imposed on women by local custom in terms of access to land, bank financing, justice, etc. They place women in a situation of subordination, of lack of power over their lives; in short, of social exclusion.

In a discussion paper on gender equality, the OECD Development Assistance Committee Network (2011) demonstrates that one of the effective methods of combating social exclusion and inequalities is the economic empowerment of women. It is essential for the elimination of inequalities, the good resilience of the economy and the achievement of all the Millennium Development Goals (MDGs). Promoting women's economic empowerment in poor countries favours the survival of several households, because “women generally devote a larger share of their earnings than men to their family and community” (OECD, 2011). Small-scale cross border-trade empowers several women in the sub-region. It provides them with income allowing to have a certain economic independence from men, to satisfy essential needs of their families and to bounce back from the social inequalities. (Kimanuka and Titeca, 2012).

Ideas above-mentioned demonstrates that the small-scale cross-border trade promotes the survival of populations in the Great Lakes sub-region. It is qualified, by several studies, notably the International Alert report written by Kimanuka and Titeca (2012), as a survival economic activity. According to Anne-Marie Crétiéneau (2005), a survival activity is identified by three dimensions, namely local, socio-cultural and informal.

The local dimension assumes two relevant elements. On the one hand, it must be a production and an exchange activity carried out within a limited spatial radius. On the other hand, this activity must aim to connect the satisfaction of fundamental needs and all local means (including extra-economic) likely to be mobilized for this purpose. Local means above mentioned refer to resources of all kinds that the environment offers.

The small cross-border trade in the sub-region is based on cross-border exchanges of foodstuffs between populations. The spatial radius of its exercise is well limited to border areas between the DRC and Uganda, Burundi as well as Rwanda. It connects the survival imperatives satisfaction (escaping extreme poverty) and the border. The latter is, for small traders, a resource. It is a resource whose exploitation generates income allowing small traders to satisfy essential needs of their families living in extreme poverty. The socio-cultural dimension involves taking into account the links of community and traditional solidarity in the exercise of a survival activity.

Small cross-border traders in the sub-region constitute a merchant network whose cohesion is based on community ties, trust, and solidarity. They all come from local communities within which solidarity and collective well-being are essential values (Msila, 2015).

The informal dimension involves “very diverse activities, which have in common that they escape state’s formalities. These activities respect or not market rules. It is a whole spectrum of activities which provide, in addition to material resources, a certain recognition and dignity that the formal economy with its pure economic logic does not provide to precarious populations (...)” (Crétiéneau, 2005).

As previously indicated, the small cross-border trade is largely carried out outside legal channels. Because of tariff and/or non-tariff barriers, small traders avoid official routes of access to the territories of the sub-region States. Many of them cross through unofficial border points and hide their goods from official state statistics. However, the income they obtain allows them to survive. They grant them the possibility of protecting their family members from hunger and leading a dignified life that the formal economy has struggled to offer them for more than 3 decades because of the war.

4.1.2. Small-scale cross-border trade and food security

Several studies notably the one of Breton mentioned above demonstrate that small-scale cross-border trade contributes to the fight against food insecurity in the sub-region. In fact, “(...) it facilitates the connection of surplus areas to those of food deficit. If these poor entrepreneurs did not practice their profession, food prices would be higher” and the food security of the populations of the sub-region would suffer”.

Defined as “a situation in which all human beings have, at all times, physical and economic access to sufficient, safe and nutritious food to meet their energy needs and dietary preferences for a healthy and active life”, food security is based on 4 pillars. These are availability (3.2.1), accessibility (3.2.2), stability (3.2.3), and suitability of food (3.2.4). The small-scale cross-border trade promotes and strengthens the implementation of each of these pillars in the sub-region under study.

4.1.2.1. Food availability

If food availability refers to “obtaining food either from local or national agricultural production or by benefiting from distribution systems that transport foods to persons in need” as indicated in the FAO report (2017), the small cross-border trade is one of the main tools for its implementation in the sub-region under study in general and especially in the provinces of North and South Kivu (East of DRC).

In these provinces, despite ecological conditions favourable to many crops, local agricultural production is far from meeting the food needs of the populations. Several factors, both endogenous and exogenous, were identified by Vwima, Mastaki and Lebailly (2013) as being at the root of the inability of local agricultural production to ensure food availability for the population of South Kivu in general and more specifically for populations of Bukavu city.

Among the exogenous factors, these authors cite the predominance of mining activities to the detriment of the agricultural sector, the growth of food aid (increasing food dependence) for a poor population, political and macroeconomic instability, as well as the non-compliance with legislation (specifically relating to land ownership rights). Endogenous factors are those linked to the absence of supervision and support for local farmers in terms of access to seeds and to the local, national, regional and international markets.

The province of North Kivu, which considerably contributed to feeding Bukavu city population until 2012, has also reduced its agricultural production (Vwima, Mastaki and Lebailly, 2013). Due to armed conflicts resurgence (M23 in 2012 and 2023) as well as the strengthening of rebels presence (terrorists) in numerous

rural agricultural areas such as Beni (the ADF-MTM terrorists), Lubero, Oicha, Eringeti, Kibumba, Masisi, etc., several farmers fled their homes and left their crops.

Faced with this general decline of agricultural production in both North and South Kivu, Congolese populations of Bukavu and Goma, especially, resort to foodstuffs imported from Rwanda, Uganda, and Burundi. Since foodstuffs transport is, mainly, assured by small-scale cross-border traders (Brenton et al., 2011), it is possible to support that there is a close link between small-scale cross-border traders' mobility and food availability in North and South Kivu.

As much as it strengthens food availability for populations living in food deficit areas of the sub-region and for small-scale cross-border traders themselves, the small-scale cross-border trade allows farmers (Rwandan, Ugandan, and Burundian) to sell part of their production and to stock up on other types of foods useful for a balanced diet.

For example, farmers at Bwera (a ugandan town near the Kasindi border post) produce bananas. They need to sell part of their production to stock up on beans, vegetables, milk, chocolate, oils imported from abroad or produced by Rwandan, Burundian, and even some resilient Congolese farmers. This demonstrates that small-scale cross-border trade contributes significantly to the implementation of food availability in the sub-region.

4.1.2.2. Food accessibility

The Committee on Economic, Social, and Cultural Rights (1999) distinguishes between economic and physical accessibility. Economic accessibility assumes that “the expenses allocated by an individual or a household in foodstuffs supply ensuring an adequate diet are such that they do not hinder the enjoyment of other human rights (health, housing, education, etc.)”

Two out of 5 small-scale cross-border traders interviewed at *Kasindi* indicated that incomes gained from agricultural product sales (through the small cross-border trade) allow some small-scale farmers to provide housing, healthcare, and schooling for their children without necessarily being deprived of a balanced diet. This seems true since the aforementioned FAO report (2017) indicates “profits generated from such informal trade are often employed to sustain families, providing for their healthcare and education”.

The situation is a bit more complex for populations living in food-deficit areas, including a large number of small cross-border traders themselves. The latter are generally faced with an extreme urgency to satisfy physiological needs. They engage in small cross-border trade in order to survive. Many of them are unable to provide themselves with decent housing or send their children to school, while being protected from hunger. This results, therefore, in a situation such that small traders spend all their monetary availability on food supply without having economic accessibility to food.

Physical accessibility means that “foodstuffs must be physically accessible to all, including physically vulnerable people such as children, the sick, the disabled or old persons, who may find it difficult to leave their homes to supply with food” (Golay, 2011). It also implies that people living in isolated regions and/or shaken by armed conflicts or natural disasters have material access to food (Ibid.).

As previously mentioned, War has created isolation between several regions of North and South Kivu provinces (in the DRC). It (war) has destroyed basic infrastructures which facilitated the connection between agricultural production areas and urban markets. Small traders are the ones who take risks and join rural areas

besieged by rebels. By bringing some foodstuffs in such areas, small traders allow, somehow, people of isolated areas to have physical access to food.

4.1.2.3. Food stability

To assure food stability in region, Olivier De Schutter (2023), thinks that two elements are essential. The first one is food regularity. The second is the sufficiency of food quality and quantity. According to Christophe Golay (2011), these elements have, as prerequisites, foodstuffs diversification, the opening up of production areas as well as markets development. In the sub-region under study, small cross-border trade plays a pivotal role in guaranteeing food stability since it promotes the implementation of the aforementioned prerequisites.

In fact, small traders reach various rural agricultural areas on a daily basis. The latter rural areas practice varied crops depending on the ecological conditions (the season) and the quality (fertility) of the soil. If in *Bwera*, farmers produce bananas, cereals and vegetables, in *Gisenyi*, dairy products dominate agricultural activities. In Burundi, as in certain East DRC areas, cereals and vegetables predominate agricultural production.

By bringing daily, in food deficit areas markets, various products, small traders promote dietary diversity. The latter is, according to the FAO (2017), one of the basic principles of a balanced, quality diet.

Our survey results demonstrate that out of 10 agricultural zones in the sub-region (especially in the DRC and Burundi), 7 are rural and practice small-scale farming. They lack basic infrastructure that could open the way to the market in urban centers (where foodstuffs demand is very high). State initiatives to build infrastructure to open up rural areas exist (for example, in the DRC with the 145 territories project). However, some studies estimate that to open up an area, "building communication routes is not always enough; it even happens that it is counterproductive and leads to the opposite effect. States must also facilitate the movement of people and goods (Géo-confluences, 2013).

While, at the institutional level, States of the sub-region under study remain too formalist and attached to their sovereignty in migration-related matters, the exercise of the small cross-border trade favours a considerable movement of people and goods. Unofficial border points created by small traders have become channels through which several people (including non-traders) cross. Even if these forms of border crossing remain irregular and perilous, they facilitate the movement of goods and people and, therefore, contribute to the opening up of rural areas in the sub-region.

As previously indicated, the meeting between small traders and agricultural producers in rural areas creates and develops local and cross-border markets (meeting of food supply and demand). Since these markets are regular and are essentially based on the exchange of considerable quantities of agricultural products (Vwima, Mastaki and Lebailly, 2013) of different varieties (quality), it should be noted that small trade contributes to food stability in the sub-region (even if the sufficiency remains questionable).

4.1.2.4. Food suitability

De Schutter (2023) writes that food adequacy requires that the diet be healthy and culturally acceptable to a population. It must satisfy "dietetic needs taking into account individuals' age, their living conditions, health, work, sex, etc. It must also be safe for humans and free from harmful substances, such as pollutants from industrial or agricultural processes, including pesticides residues, hormones or veterinary drugs. On a cultural level, food must conform to the traditions, habits and beliefs of the population.

Small-scale cross-border trade, in the sub-region under study, generally concerns the exchange of agricultural products. The latter are, generally, known by local border communities. Field data reveal that these products are diversified in markets supplied by small-scale cross-border traders. Even people with specific dietary needs regularly buy from these cross-border markets.

In addition to being places of food supply, the aforesaid cross-border markets favour regular contact between people of the sub-region under study. Regular contacts promote social mixing and meeting of different cultures (Kalinda and Igonde, 2018). These two elements create interconnections between populations (of the African Great Lakes sub-region) who distrust each other because of conflicts between their States (Ibid). According to some studies, social mixing and meeting of different cultures are vectors of the integration of African's populations (FAO, 2017). They reconcile people in conflict and promotes peace building in the sub-region (Kalinda and Igonde, 2018).

4.2. Small-scale cross-border trade, integration and peace building

4.2.1. Integration of African's populations

If some studies note that social mixing favoured by the small-scale cross-border trade interconnects people, others demonstrate that it creates (or proves that there is) economic interdependence between populations of the sub-region (Kalinda and Igonde, 2018). According to neoliberal theories, interdependence promotes communication and contacts between private and public actors in different countries; these contacts, in turn, would facilitate the establishment of economic cooperative relations between nations (Mureha and Ouedraogo, 2017).

The European experience teaches us that one of the ways to make more effective economic cooperation between several States is integration. The latter is briefly presented as a process by which States network and unify their economic systems and policies in order to "promote accelerated, harmonious and balanced development as well as a sustainable expansion of economic activities whose benefits will be shared equitably between them" (Holden, 2005). In Europe, economic integration was achieved through 4 main stages, namely the free trade zone, the customs union, the common market as well as the monetary union.

The customs union, as a stage of formal integration, generally follows the free trade agreement or the preferential trade agreement (ACP) (Mancel, 1949). The latter, considered by some authors as a less perfect form of the customs union or a form adapted to less developed economies, supposes "the elimination of tariffs and import quotas between States parties. It can be limited to a few sectors or target all trade. It can also provide for official dispute resolution mechanisms, as is the case with the North American Free Trade Agreement (NAFTA)" (Ibid.).

Materially, the customs union requires that States harmonize their external trade policies. This involves "the imposition of a common external tariff and import quotas on products from third countries, as well as the possibility of agreeing on trade remedies, such as anti-dumping measures and countervailing duties." (ibid.). The customs union may also prohibit the use of trade remedies within the zone. In general, members of a customs union conduct their multilateral trade negotiations (e.g. at the World Trade Organization) as a single

bloc. Countries that are part of an established customs union no longer need rules of origin as any product entering the area is subject to the same tariffs or import quotas, regardless of its point of entry. (Holden, 2005).

The common market is a somewhat more important advancement than the customs union in economic integration; it removes obstacles to the movement of people, capital, and other resources within the area. It also involves the elimination of non-tariff barriers to trade, for example, the regulatory treatment of product standards (Ibid.).

In general, the establishment of a common market requires great harmonization of policies in several areas. It requires States to agree on a significant part of the policies and regulations for the benefit of the common market. For example, the free movement of labour “requires agreements on the skills and certifications of workers. Usually, the common market is also associated – intentionally or as a consequence – with an extensive convergence of tax and monetary policies, due to the growing economic interdependence within the region and the effect that the policies of one member country may have over those of others. This necessarily results in more serious restrictions on the ability of countries to pursue their economic policies independently” (Ibid.).

Monetary union is the most advanced form of economic integration. It presupposes a common market to which is added the harmonization of a certain number of key areas for economic integration (Barthe, 2017). More specifically, “the economic union includes official coordination of monetary and budgetary policies as well as policies relating to the labour market, regional development, transport, and industry. Since all countries must essentially share the same economic space, it would be illogical for them to apply divergent policies in these areas.

Generally speaking, monetary union is accompanied by a common currency and a unified monetary policy. These two elements promote the elimination of uncertainties linked to exchange rates and improve the functioning of the union since they allow commercial exchanges to take place in an economically efficient manner without being affected by currency fluctuations. This stage of integration requires “supranational institutions that adopt trade laws to ensure uniform application of rules within the union. Member countries renounce their legislative capacity in this area, but continue to ensure compliance with these laws at the national level” (Holden, *supra*).

Inspired by European integration, three states (former Belgian colonies) of the sub-region, namely the DRC, Rwanda, and Burundi, created, in 1976, the Economic Community of the Great Lakes Countries (hereinafter “ECCGL”). The latter is an intergovernmental organization whose objectives underpin economic integration. Although it has not been implemented in different stages (as described above for European integration), this community is based on principles similar to the fundamentals of the European Union. They include, in particular, the free movement of people, goods, capital and services.

If, within the EU, the free movement of people has reached a high level of effectiveness, it faces practical challenges in the Great Lakes sub-region. These challenges include the complexity and plurality of formalities to be carried out when crossing borders, the abuse of power by border agents, etc.

Since their survival depends on human mobility in the sub-region, small cross-border traders have developed mechanisms to circumvent the challenges above mentioned. They avoid official border crossing routes and travel informally. The growing number of people who move through the migration trajectories of small-cross-border traders proves that small-scale cross-border trade is a real engine of human mobility in the sub-region.

Table 1. Statistics of daily small traders' mobility in the sub-region in 2023.

Border posts	Number of small-scale cross-border traders crossing the post per day
Goma (DRC)/Gisenyi (Rwanda): big and small border posts	10 000 to 15 000 (big post "Grande barrière") 10 000 to 20 000 (small post "petite barrière")
Kasindi (DRC)/M'pondwe (Uganda)	3 000 to 5 000
Mahagi (DRC)/Goli (Uganda)	5 00 to 2 000
Kavimvira (DRC)/Gatumba (Burundi)	1 000 to 5 000
Ruzizi I&II (DRC)/Cyangugu (Rwanda)	2 000 to 5 000
Kamanyola (DRC)/Bugarama (Rwanda)	1 000 to 3 000
Many other small-scale cross-border traders move through informal border points. Their number is not officially known.	

Data collected from immigration services (DGM) of DRC at each border post cited above.

Established on a daily basis, these statistics show that populations of the sub-region under study are interdependent. People move for a reason; and in the sub-region under study, local populations move across countries to assure their survival. Congolese citizens of Goma need to daily travel to Gisenyi to buy milk, tomatoes, and other foodstuffs. Rwandese citizens of Bugarama need to daily travel to Kamanyola to buy fruits, beans, cereals, etc. Ugandan citizens of M'pondwe need to daily travel to Kasindi to sell their foodstuffs, especially fish, bananas, etc.

Considering the increasing human mobility favoured by the small-scale cross-border trade in the sub-region under study and in other parts of sub-Saharan Africa, the FAO report (2017) indicates that small cross-border traders are perpetually progressing what others have come to regard as the 'real' but 'invisible' integration of Africa's economies.

4.2.2. Reconciliation of people and peace building in the sub-region

Neoliberal theories link economic interdependence (integration) to peace. They are based on the idea that interdependence (created by international trade) generates mutual interests that it would be costly to interrupt by choosing to resort to conflict strategies (Mureha and Ouedraogo, 2017). Realists refute this thesis by arguing that "international trade and other forms of economic interdependence actually increase the likelihood of interstate conflict rather than reducing it; conflicts of commercial (economic) origin are likely to degenerate into armed conflicts, which means that interdependence is synonymous with insecurity and potential conflict" (Ibid.).

Without alluding to one or the other theory, Kalinda and Igonde (2018) opine that by strengthening the integration of populations, small-scale cross-border trade establishes itself as an ideal framework for cross-

border dialogue and reconciliation between populations of the sub-region. Cross-border dialogue is a dynamic likely to have a positive impact on peace building strategies in the sub-region.

Some researchers, including Mureha and Ouedraogo, think that the classic form of economic integration (integration from up) has shown its limits in peace building in the African Great Lakes. According to them, the existence of economic integration organizations in the sub-region (such as the ECCGL and the East African Community) had not prevented the outbreak of the genocide in Rwanda, the AFDL war in the DRC, and other political crises in the sub-region. These organizations have not dissuaded populations to overcome identity conflicts. For Mureha and Ouedraogo, there is a need to rethink an integration model adapted to African realities.

Several authors including Njifen (2014) write that African realities are dominated by the informality of a large part of activities. According to this author, informality constitutes a discreet but potentially powerful reaction to African integration.

Faced with mitigated results of integration from "the top/up" initiated in Africa several decades ago, there is currently a "will of subordinate social groups who go beyond the frameworks and structures imposed to aspire to an ideal integration: integration from 'down/bottom', which takes place on the margins of institutions thanks to social and cultural solidarity and cross-border commercial networks" (Ibid).

According to Monique Calon (2017), small-scale cross-border trade is a web of interconnected cross-border merchant networks that connects people and products at the regional level. It is seen as a resilient and persistent phenomenon, because its cohesion is based on community ties (social solidarity), kinship and trust (cultural solidarity). It networks the economies of the States of the sub-region and promotes the development of cross-border solidarity between populations of different nationalities.

Despite its economic and socio-cultural relevance, small-scale cross-border trade has setbacks. Its exercise can negatively impact states' revenues, local producers, the environment, etc.

4.3. Drawbacks of small-scale cross-border trade in the Great Lakes sub-region

4.3.1. States' revenues

In the sub-region under study, small-scale cross-border trade develops, generally, outside of legal frameworks. Several small-scale cross-border traders operate through informal routes. They try to avoid formal customs procedures. Some of them who pass through official border posts underreport the value of their goods for the sake of reducing or evading tax liabilities. A daily tax evasion by more than 50. 000 small cross-border traders leads to significant losses of revenue for States.

4.3.2. Local producers

Markets created by small-scale cross-border traders are informal and less regulated. The under-regulation produces different consequences such as price volatility (harmful to producers and consumers), entering into the food supply chain of sub-standard or illegal products, etc. The circumvention of custom duties allows small cross-border traders to import products at a cheaper price. Unfortunately, goods illegally cheaper distort markets and prevent local producers (who regularly pay tax) to compete on price.

4.3.3. Environment

Due to the complexity and plurality of customs formalities at Kasindi, several small-scale cross-border traders circumvent official border posts. Some Congolese small cross-border traders use unofficial routes to get access to Ugandan markets of M'ponwe. These routes sometimes facilitate the crossing of rare woods illegally exploited in the park. The more they (routes) persist and grow, the uncontrolled overexploitation of the park's resources intensifies.

A few of them provide direct access to Semuliki River which is part of the Virunga Park. Unfortunately, while crossing through unofficial routes above-mentioned, small-scale cross-border traders throw away plastic waste in Semuliki River. As the number of small-scale cross-border traders using the aforesaid routes increase day by day, the risk of plastic waste accumulation in the Virunga Park gets high. This is a danger to wildlife in the Park and it constitutes a serious threat to the biodiversity conservation.

If, in this perspective, the small-scale cross-border trade can have negative impacts on the environment, it is also possible to show that its exercise contributes, somehow, to the conservation of fauna and flora of the Virunga Park.

4.4. Small-scale cross-border trade and conservation of Virunga Park fauna and flora

Results of our surveys carried out at the Kasindi border post show that out of 10 small-scale cross-border traders who abandon their activities because of migration and customs harassment especially, 6 are women who resort to agriculture on the park lands to survive. 3 are men who resort to poaching of the park's fauna and flora to satisfy their basic needs. According to the president of the association of small-scale cross-border traders of Kasindi, since 2022, 600 out of 5,000 of their members officially registered have abandoned their activities.

While combining these statistics given by the president of the aforesaid association with results of our surveys, it turns out that out of 600 small cross-border traders who have abandoned their activities at Kasindi since 2022, 360 women practice illegal agriculture in the park and 180 men join the poaching of fauna and flora. This illegal exploitation of the park by people quitting small-scale cross-border trade at Kasindi represents a serious threat to the environment.

In fact, to practice agriculture in the park, women above-mentioned need to cut trees and clear savannahs. A continuous and uncontrolled cutting of trees in the Park causes deforestation. Likewise, clearing savannahs without limits degrades the quality of the forest in the park. Several environment-related research demonstrates that deforestation is one of the phenomena responsible for global warming (La redaction de l'empreinte carbone, 2023). In fact, forests are carbon sinks. Through photosynthesis, trees absorb CO₂ and release O₂, and oxygen (Walter, Baltzer and Cumming, 2019). When they are felled, this positive effect is lost and the carbon stored in the trees is released into the atmosphere, worsening the greenhouse effect (Ibid).

Deforestation increases the risk of flooding. Trees are fantastic soil protectors. Well anchored with strong roots, they drink water to grow (La redaction de l'empreinte carbone, 2023). And when people practice agriculture in the park deforest, there is no longer any element to act as a water barrier. It then runs without guardrails and causes floods at Kasindi and in surrounding zones. Floods are catastrophic for local populations. They destroy not only their places of residence but also food crops (Ibid).

To poach the fauna and flora of the park, those 180 abandonments (men) from small-scale cross-border trade kill animals and cut rare plant species. These acts are harmful to the environment since they intensify the impoverishment of the biodiversity already initiated by rebel groups who have been besieging a large part of the park for more than two decades.

Without confirming or contesting the link between the abandonment of small-scale cross-border trade at Kasindi and the deforestation of the Virunga Park, several studies indicate that the Virunga National Park is, nowadays, subject to strong anthropogenic pressure (International Union for Conservation of Nature, 2020). The number of people who illicitly use park resources has increased since 2017. According to these studies, because of a lack of means, local parkside populations are increasingly using park resources (Ibid).

Most of Kasindi small cross-border traders come from parkside communities. When they are no longer able to provide for the needs of their families through small cross-border trade, they resort more frequently to Park resources. Their involvement in poaching increases the number of poachers in the park. The more poachers there are in the park, the risk of illegal exploitation and extinction of certain animal and plant species becomes high. Over time, it (high risk of illegal exploitation of the park) unbalances the ecosystems of the sub-region and causes serious environmental consequences.



Figure 2. Kasindi border post and the Virunga National Park limits (Captions Black line: border line between DRC (left) and Uganda (right) Green space on DRC's side: part of Virunga Park Red sign: Kasindi official border post. Yellow lines: Roads) (Source: Google Maps)

The risk, for members of parkside communities to poach the fauna and flora, was recognised by the colonial administration just after creating the park in 1925. Having in mind that local communities were expropriated from their lands to create the park, the colonial administration decided to allocate part of the park's tourist revenue to support the survival activities of indigenous populations. The aim was to manage the park in such a way that its economic benefits should help local populations to undertake a certain number of economic and

social survival activities; this would prevent them from taking any initiative likely to compromise the protection of the park (Nzangi, 2018).

In this perspective, three studies carried out between 1934 and 1943 at the initiative of the colonial administration, had formulated recommendations. The latter led to the creation, in 1949, of two indigenous fisheries at Vitsumbi (in Rutshuru territory, south of Edward Lake) and Kyavinyonge (in Beni territory, north of Edward Lake). The management of these fisheries was entrusted to the indigenous populations grouped in the Edward Lake Indigenous Fisheries Cooperative "COPILE". Roads and trails were also created alongside Virunga Park in order to facilitate the movement of persons and promote their activities. In early 1990, these fisheries gradually lost their capacity to feed local communities. Two facts are cited to be at the origin of this situation. On the one hand, a failing management of the fisheries by indigenous populations. On the other hand, the demographic explosion within the parkside communities.

The bankruptcy of these fisheries obliged several members of parkside communities to resume farming in the park (Ndanezerewe, 2017); they (members of parkside communities) felt deprived of means of survival. They resort to the nearest resource which is, unfortunately, the parkland.

The illegal resumption of agriculture in the park always triggers clashes between the local populations and the eco-guards. It is for the sake of avoiding clashes that some members of parkside communities have resorted to other survival activities, notably small-scale cross-border trade.

Considering empirical data presented above, it appears that the first victim of abandonment of small-scale cross-border trade in Kasindi town is the Virunga Park. The more there is abandonment of small-scale cross-border trade by members of parkside communities (Kasindi), the more they resort to agriculture on park land and to poaching of fauna and flora intensifies. Otherwise, while members of communities referred to are busy with small-scale cross-border trade, agriculture on park lands diminishes in scale.

Thus, a sustainable conservation of the fauna and flora of Virunga Park requires that the local populations have sustainable economic activities able to ensure their survival (such as small cross-border trade). Likewise, the sustainability of activities of small-scale cross-border traders requires the stability of the ecosystems of the sub-region. In fact, small-scale cross-border traders in Kasindi import a good quantity of food from Uganda. For Ugandan farmers to continue producing large quantities, there must be no disruption of ecological conditions. Deforestation of the Virunga Park can unbalance the ecosystem and cause climate change harmful to crops in Uganda and throughout the sub-region.

5. Conclusion

The small-scale cross-border trade plays a pivotal role in achieving Sustainable Development Goals n° 1, 2, 15, and 16 in the African Great Lakes sub-region. States of the sub-region must increase their efforts to fight obstacles to its exercise (small cross-border trade). Efforts realized so far are essentially customs-related, particularly with the implementation of the simplified trade regime between the States of the sub-region. This regime facilitates the movement of goods for small-scale cross-border traders. Obstacles to the free movement of small-scale cross-border traders (as individuals) remain numerous. Their total eradication must be a priority in state policies to combat poverty, guarantee food security, consolidate peace, and protect the environment in the sub-region.

Acknowledgement

This paper was financially supported by the Catholic University of Louvain through its doctoral scholarship system. The author thanks his promoters, professors Sylvie Sarolea and Stéphanie Francq for their generous and highly academic supervision.

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