CLIMATE RELATED SECURITY RISKS IN EASTERN DRC

Local perspectives from North and South Kivu provinces









Editorial note

The findings from this report result from a two-day exploratory workshop. As such the report does not claim to be exhaustive but rather aims to capture the contributions of the participants, based on their expertise and experience.

© FBA, Réseau CREF, Strong Roots Congo

October 2023

Compiled and edited by Jenny Andersson, FBA

Photo: Jonny Hogg & Réseau CREF

TABLE OF CONTENTS

Introduction4
Towards more localized approaches4
Climate change, environment and human security4
The co-organizers6
Climate change, insecurity and conflict in eastern DRC8
The impacts of climate change in North and South Kivu on ecosystems, agriculture and community livelihoods8
Security risks related to natural resource scarcity due to climate change10
Security risks associated with the management of extractive resources and forests
Carbonisation and conservation policies11
Development of alternative energy sources14
The artisanal mining sector – at the heart of the climate question $\ldots 14$
The land issue – Towards sustainable solutions?16
Land reform from a conflict and environmental perspective16
Community forestry as a peacebuilding tool
THE Situation of defenders of environmental, land and natural resources rights – a cross-cutting issue
Outlook
Cited Works24
Articles and Reports
Presentations

"This initiative was born out of a growing recognition of the DRC's role in climate change mitigation efforts on the one hand, and the vulnerability of its population in the face of climate change and armed conflict on the other."

INTRODUCTION

TOWARDS MORE LOCALIZED APPROACHES

This report reflects the content of a multidisciplinary workshop covering the theme of climate related security risks in eastern Democratic Republic of Congo, held in Bukavu on March 28-29, 2023. The workshop represented a unique opportunity to bring together experts from the relevant fields of domestic institutions for an initial assessment of how climate change interacts with security and conflict dynamics in the Congolese provinces of North and South Kivu. The overall objective of this workshop was to promote collective reflection in the search for integrated and context-adapted solutions to jointly identified challenges within the nexus of climate change and environment, peace and security. The participants represented the main research bodies in the region, relevant state and customary authorities, non-state actors involved in peace-building, environmental and human rights protection, and some actors from the international community present in the region, with a mandate in the areas of peace and security and sustainable development. The aim was to allow a broad representation of perspectives, areas of expertise and sectors in presentations and debates.

The two days of work contained a mix of presentations and debates on the latest research results and practitioners' experiences relating to the impact of climate change on natural and human systems, the associated security risks, and the relevance of public policies in the sectors concerned. The presentations were followed by discussions and group work aimed at deepening analysis of the problems and initiating a joint reflection on potential solutions, a number of major conclusions were drawn, and possible areas of future work identified, targeting all actors involved in the nexus between climate change, peace and security.

This report addresses the main themes that emerged during the workshop, namely: the impacts of climate change on ecosystems, agriculture, and community livelihoods; security risks related to the effect of climate stress on land and water resources; security risks associated with the management of extractive resources and forests; land issues and community forestry as solution vectors, and finally the situation of environmental rights defenders in the region. The content is based on the data presented, as well as the debates, joint analyses and recommendations made by the workshop participants. Where applicable, sources referenced in the presentations are indicated in the text.

CLIMATE CHANGE, ENVIRONMENT AND HUMAN SECURITY

This initiative was born out of a growing recognition of the DRC's role in global climate change mitigation and the green transition on the one hand, and the vulnerability of its population in the face of climate change and armed conflict on the other. The DRC is home to much of the Congo Basin forest - extraordinarily rich in biodiversity and the largest carbon sink in the world, yet at the same time threatened by deforestation with a loss of more than one million hectares per year between 2010 and 2020. The impact of climate change on rainfall patterns could also be felt well beyond DRC's borders, the country being the source of a quarter of the continent's total water resources.

Furthermore, the Notre Dame Global Adaptation Initiative (ND-GAIN) indicates that the DRC itself is the 11th most vulnerable country to climate change in the world, and the 4th least prepared. Instability and armed conflict in the eastern part of the country, and the associated mass displacement of millions of people, contribute to this vulnerability.

It is widely recognised that climate change can act as a threat multiplier which, by interacting with existing social, economic and political vulnerabilities, could lead to an increased conflict risk. Climate change, although not the sole cause of conflict, can thus aggravate and extend the scope of current conflicts, or contribute to the outbreak of conflict through its impact on livelihoods, migration flows, inequalities, etc.

The potential impact of climate change on armed conflict is closely linked to the governance and management of renewable natural resources (land, water, etc.) since climate change impact directly on the quantity and quality of natural resources in a given setting, and many existing conflicts take place within the realm of natural resource management and the distribution of these resources. The lack of accountability, capacity, and legitimacy of institu-





tions to collaborate effectively and to fairly enforce rights and legal frameworks can contribute to existing problems.¹ The functioning of governance systems determines the outcome of climate change mitigation and adaptation policies, risking on the one hand accentuating existing inequalities or creating new ones whilst on the other hand having the potential to contribute to conflict prevention.²

It is against this background that the governance of natural resources received particular attention during the work-shop.

Beyond armed conflict, the workshop included discussions relating to some aspects of human security; notably environmental security (including issues around water pollution, deforestation, natural hazards etc.) and the protection of fundamental human rights. This is because the climate threat and environmental destruction pose serious risks to the daily lives of individuals and communities, especially in contexts characterised by fragility and weak adaptive capacity, exacerbated by armed conflict and a weak rule of law.

Finally, recognition in the global debate of the impacts of climate change on different aspects of security has led to the articulation of demands for more holistic approaches to peace-building, which take into account environmental and climate change dimension both in analyses and at the operational level. Needless to say, this requires a thorough knowledge of complex correlations and dynamics from the local level upwards.³ This report and the workshop it is based on aim to contribute to this end.

The co-organizers

The FBA is a state agency mandated by the Swedish government to support the implementation of the women, peace and security agenda and, more recently, the youth, peace and security agenda, as well as the promotion of rule of law and human rights principles in eastern DRC.

Strong Roots Congo is a conservation and sustainable development organisation based in South Kivu. Through its programme, the organisation contributes to securing an ecological corridor to connect the Kahuzi-Biega National Park to the Itombwe Nature Reserve. It also provides advisory support to community forestry processes, participatory demarcation of parks and reserves, and the development of conservation plans. The organisation has also conducted research projects in the field of biological inventories and vegetation dynamics monitoring.

Réseau CREF (Network for the Conservation and Restoration of Forest Ecosystems) is a multi-actor network for consultation, lobbying and advocacy, aiming at strengthening the capacities of its member organisations and other professionals in the field of conservation and rehabilitation of ecosystems, as well as the protection of the rights of local communities in the context of natural resource exploitation.

¹ Funder et al. 2012

² FriedrichEbert-Stiftung, NUPI, SIPRI 2023

³ Vervisch et al. 2020



"Local communities are already observing the impact of climate change in their traditional cultivation areas"

CLIMATE CHANGE, INSECURITY AND CONFLICT IN EASTERN DRC

The following sections are based on the content of the different sessions of the workshop. The first section presents the latest evidence of the effects of climate change on natural and human systems in the provinces of North and South Kivu. The following one is an account of the various security risks related to climate change and environmental degradation faced by this region. This section is then followed by an account of the ongoing process of land reform, from a perspective of climate change and security. The issue of land was included due to its centrality to many armed conflicts in the region relating to the access, control, and management of natural resources. Finally, comes a discussion on the situation of human rights defenders (HRDs) in the area of environmental rights and the right to land and other natural resources. This category of HRDs is often harassed, persecuted, arbitrarily imprisoned, and even killed for defending the rights of their communities, constituting the second most vulnerable group of HRDs globally.⁴ This discussion is even more relevant in the DRC as the government and investors are planning for the exploitation of oil and peat deposits, and the problem of militarisation and conflict in the mining sector prevails.

THE IMPACTS OF CLIMATE CHANGE IN NORTH AND SOUTH KIVU ON ECOSYSTEMS, AGRICULTURE AND COMMUNITY LIVELIHOODS

In eastern DRC, one of the most densely populated regions of the country, a large part of the population depends on ecosystem goods and services, primarily through rain-fed agriculture, for their basic needs, income generation and employment. Multiple empirical studies in this region have already documented the impacts of climate change on meteorological, biophysical, and social systems. In their respective presentations, Prof. Gerard Imani, Prof. Fabrice Muvundja and Prof. Wivine Munyahali accounted for trends and impacts observed at the local level, based on the latest research from the region. The workshop went on to identify a number of current and prospective adaptive measures to address the challenges arising from climate change.

With regard to climate change, statistics compiled in the region show an increase in annual average temperatures of 0.3 to 0.5°C over the last 30 years. It is expected that temperatures will continue to rise over the period 2020-2050.⁵ Concerning rainfall patterns, there are signs of great variation, with both torrential rains and periods of drought outside the dry season.⁶ Longer-term, a 12% increase in

6 Ibid.

⁴ Suárez 2015

⁵ Batumike et al. 2022



precipitation has been noted in the Lake Kivu basin for the period 1971-1993 compared to 1928-1970.⁷

These changing weather conditions will result in multiple risks at several levels. River floods will become more frequent, sweeping away homes, and displacing populations. Erosion already contributes to siltation of rivers and the deltas of Lake Kivu, resulting in a deterioration of water quality (higher turbidity), soil leaching and loss of fertility, as well as increased nutrient flows into the lake.⁸

Local communities are already observing the impact of climate change in their traditional cultivation areas. Farmers of the Tembo ethnic group as well the Twa, who are forest-dwelling hunter-gatherers, have observed flooding, increased river flows, landslides and soil erosion during the rainy season. More specifically, the Tembo have reported a decline in agricultural yields while the Twa, on their part, have noticed a decline in the abundance of forest products.⁹

Heavy rains in swamp areas cause floodings and sediment accumulation, with negative impacts on seed quality and proliferation of diseases and pests that are harmful not only to animals but also to humans. In a longer perspective, this can have negative impacts on agricultural production in the region. A recent study from South Kivu shows that farmers (without any significant difference between men and women) are already observing multiple and complex impacts of climate change, including:

- The emergence of new pests in the environment resulting in significantly reduced harvests,
- Loss of soil fertility associated with reduced crop yields,
- Delays in the start of agricultural activities, as a result of flooding.¹⁰

Communities are already using adaptation strategies that vary depending on the situation and conditions experienced by different groups. According to the research presented in the workshop, frequent migration of people is one of these strategies. This raises questions regarding issues such as social cohesion and inter-community relations in a context characterised by fragility caused by longstanding and multi-layered conflict. Another adaptation strategy cited in the research was the rearing of animals to compensate for low agricultural yields. Recourse to the mining sector has also been documented, some motivated by poor harvests and others by higher social aspirations. Determinants in the choice of strategies include sources of livelihood, socio-economic status, living environment and market access of individuals and affected groups.¹¹

Farmers rely on several sources of knowledge to make decisions and projections. Women farmers in particular rely heavily on traditional knowledge in their daily work, such as observation of the sky, colours of the clouds, intensity of sunshine, the flowering of certain trees, the arrival of migratory birds and the appearance of rainbows, among other things.¹² These results highlight the importance of understanding situations and strategies adopted by

- 8 Ibid.
- 9 Batumike et al. 2022
- 10 Balasha et al. 2022
- 11 Presentation: Gérard Imani
- 12 Balasha et al. 2022

⁷ Muvundja et al. 2014

different segments of communities to inform the formulation of policies and programmes.

The workshop participants identified a number of adaptation strategies that could be put in place to strengthen community level response to the effects of climate change:

- The creation or revitalisation of agro-pastoral cooperatives, including for women and young people;
- Identification of nature-based solutions to ameliorate adaptation measures to climate change;
- Strengthening of female and youth leadership in different areas of public life;
- Greater use, through increased availability, of improved seeds among farmers;
- Availability of extension services (agronomists, veterinaries, lawyers, etc.) with expertise in different agro-pastoral and conservation techniques and methods to increase resilience to climate change;
- Erosion control: integrated catchment area management, protection of river and ravine banks, regulation of land use, etc.;
- Collection of rainwater from houses for domestic and other purposes;
- Regular cleaning of gutters and drainage systems in urban areas, to increase resilience within riparian communities.

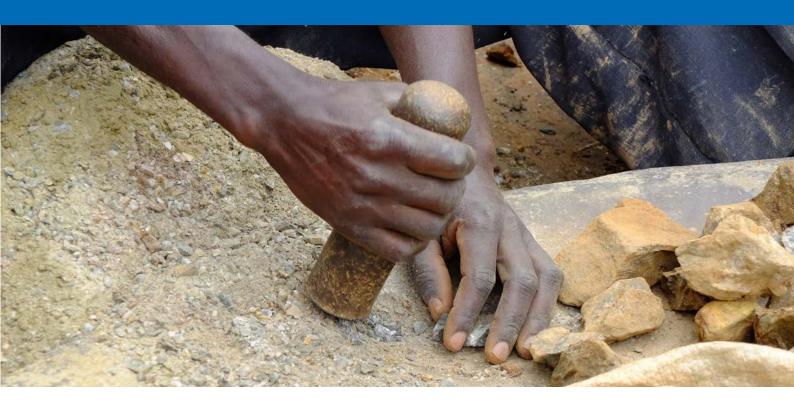
SECURITY RISKS RELATED TO NATURAL RESOURCE SCARCITY DUE TO CLIMATE CHANGE

The workshop found that systematic research on the impact of climate change on conflict in eastern DRC is still scarce. However, a forthcoming study by Emery Mudinga, Godefroid Muzalia, Tomas Van Acker and Josaphat Musamba,¹³ highlights the link between climate change and conflict in the Ruzizi plain in South Kivu. By focusing on the perspectives of rural communities, the study seeks to situate climate-related security risks in a broader historical, socio-economic and political context. The presentation by Prof. Emery Mudinga and subsequent exchanges highlighted a number of themes summarized below.

The Ruzizi plain is currently affected by several levels of conflict: between crop growing farmers and pastoralists, ethnic tensions and intra-community conflicts. In terms of climatic conditions, the plain exhibits all the patterns mentioned in the section above, with rising temperatures, erratic rainfall, unusual periods of drought, extreme weather events and associated natural disasters, deteriorating agricultural conditions and reduced vegetation cover for livestock. In particular, an increase in the water level of Lake Tanganyika recently caused the destruction of more than 10,000 homes and a significant reduction in arable land around the lake.

These new conditions have led to an increase in conflicts between farmers and pastoralists, resulting in livestock theft and violence provoked by altered movement patterns of livestock across the plain, in search of fresh pastures. Conversely, historical conflict can contribute significantly to environmental degradation and make an area more vulnerable to the effects of climate change (refugees, man-made deforestation and urbanisation processes), while environmental degradation linked to climate change contributes significantly to the vulnerability of communities.

The above-mentioned study highlights the importance of local governance systems and processes for managing climate stresses, including the important, although ambivalent, role of traditional authorities. The "customary capital" that they possess could be leveraged when dealing with the challenges induced by climate change, including security impacts. According to prevailing perceptions within communities, changes in rainfall patterns are due to the anger of ancestors provoked by neglect of local practices and knowledge. This highlights the importance of involving traditional authorities in the planning and implementation of programmes.



The weak capacity of decentralised government authorities to be able to manage climate-related natural disasters, a lack of ownership of these issues by the Congolese state, and an absence of natural disaster early warning systems are other related challenges identified by workshop participants. In this context, the need to put in place disaster prevention and risk reduction plans at all levels was highlighted, as well as conflict management plans. Coupled with the weak support system for local adaptation initiatives, current shortcomings in these areas were found to prevent the development of community resilience.

SECURITY RISKS ASSOCIATED WITH THE MANAGEMENT OF EXTRACTIVE RESOURCES AND FORESTS

Competition for extractive resources is a major source of conflict in eastern DRC, especially at the local level, and is often linked to land and territorial claims. The rainforests of the Congo Basin are the largest "carbon sink" on the planet and yet this crucial front line against climate change is threatened by logging, mining, oil and gas concessions and ongoing armed conflicts in the east of the country. In their presentations, Prof. Ndemo Mbasa Elu and Prof. Marie-Rose Bashwira highlighted different aspects of natural resource extraction, its consequences in terms of human security and environmental degradation, hence contributory factors to climate change. Researcher Lionel Bisimwa, for his part, addressed the situation of indigenous peoples from an environmental justice perspective, in the context of conservation and exclusion.

Carbonisation and conservation policies

National parks play a key role in providing ecosystem services as a source of food, medical products and wood energy, at the same time fulfilling other ecological and cultural functions. Over the past four decades, forest systems in the provinces of North and South Kivu have declined at an alarming rate, as a result of pressures on national parks and riparian areas, exacerbated by the influx of refugees from the Congolese wars beginning in 1996, the presence of armed groups and Congolese security forces in the parks, and the expansion of the mining sector. For example, more than 10,000 artisan diggers settled in Kahuzi-Biega National Park (PNKB) over the period 2000-2004.¹⁴

The charcoal industry, fuelled by the needs of a growing population and developed largely without state intervention, is a major factor contributing to deforestation and the financing of armed groups in the region.¹⁵

¹⁴ Mushagalusa et al. 2013

¹⁵ Marijnen & Verweijen 2019

In his presentation, Prof. Mbasa Elu analysed an important dimension of this carbonisation, namely the illegal cutting of firewood and the manufacture of charcoal for economic purposes. Referring to studies conducted in 2012, he concluded that more than 200,000 bags of charcoal were brought into the city of Goma each month.¹⁶ The sources of Goma's charcoal supply are the provinces of North Kivu (71%) and South Kivu (29%). 39% of the charcoal is produced from trees grown in plantations and the rest (61%) from trees cut in forests, out of which 86% from within Virunga National Park.¹⁷

In this context, conflicts sometimes emerge between riparian populations and representatives of the authorities in charge of the national parks in eastern DRC. Hostilities are often linked to the management, access and use of forest resources. At the heart of this problem lies the relocation, initiated by the Congolese state, of indigenous peoples from their ancestral lands in favour of the creation of natural reserves or protected areas.¹⁸ According to Prof. Mbasa Elu ongoing tensions stem from a multitude of factors including the low involvement of local riparian communities and indigenous peoples in the governance and management of resources in protected areas; their eviction and the dispossession of their agricultural assets without compensation; illegal practices on the part of the authorities in charge of park protection; restricted access to information, and the lack of environmental education and socio-economic programmes for local communities.

In his presentation, Lionel Bisimwa emphasised the importance of deconstructing perspectives that victimise indigenous peoples and avoiding the trap of homogenising these communities. On the contrary, any accompaniment of these communities in their struggle for distributive justice, access to decision-making and freedom from discrimination should take into account their historicity and local contexts.

During discussions it was pointed out that conflicts surrounding the PNKB have led to a form of exploitation of indigenous peoples and local communities by politically and economically stronger individuals and groups. As a result, some representatives of these populations are said to be taking advantage of the situation to enrich themselves through the illegal exploitation of natural resources.

Case Study: Co-management of parks through "Community Conservation Committees"

The governance of Kahuzi-Biega National Park (PNKB) is currently characterised by a co-management system led by the state through the Institut Congolais pour la Conservation de la Nature (Congolese Institute for Nature Conservation - ICCN) with the support of certain organisations and with some international support. This system integrates elements of participatory governance, implemented through so called Community Conservation Committees (CCC) that have been put in place in areas surrounding the park. This system aims at the effective involvement of local communities in the management of this endangered world heritage site through which the ICCN is also supposed to support the local development of communities bordering the park. Nevertheless, pressures from human activities (poaching, occupation of park lands for agriculture and livestock, cutting of bamboo, firewood and wood for similar purposes, and artisanal mining) are intensifying and the biodiversity of the park is eroding faster than ever.¹⁹ This apparent failure of the PNKB co-management system has been explained by weak local ownership of the participatory mechanism, as well as structural factors such as poor governance, population growth and armed conflict, characterised by the presence of illegal armed groups within the limits of the park.²⁰ To date, riparian populations, who sometimes turn to family prohibited practices such as extraction of wood and bushmeat from protected areas to secure their livelihoods, find themselves pitted against managers of PNKB.²¹ This kind of dangerous and recurring situations suggest that the co-management facility is yet to be sustainably applied.

20 Mushagalusa & Ansoms 2013

¹⁶ DPE Nord-Kivu 2012

¹⁷ Dubiez et al. 2021

¹⁸ Mukumba 2020

¹⁹ Spira 2018

²¹ Mukumba 2020



Development of alternative energy sources

If the wood-energy sector feeds into conflict dynamics and contributes to environmental destruction in the DRC, what about development of alternative energy sources? Prof. Mbasa Elu outlined the opportunities and risks associated with the options available to date, namely a hydro-electric power project and the extraction of methane gas from Lake Kivu:

In North Kivu, the Matebe Hydroelectric Power Plant was inaugurated in 2015 to address the carbonisation problem and reduce pressure on Virunga National Park (PNVi). However, up until now, riparian populations continue to use firewood and charcoal far more than electricity, because they do not have enough money to connect their households to the local electricity grid or to pay the bills for electricity consumption. Of households that have connected to the grid, the majority use power only for lighting and not for cooking. More thought needs to be given to how local populations can easily access energy from the Matebe power plant for sustainable protection of PNVi, but also as a key action in climate change mitigation. It should also be noted that the loss of income associated with a decline in the charcoal market could increase the livelihood vulnerability of individuals and families who depend on it, pushing them in the direction of armed groups. Therefore, it is important to identify and promote viable socio-economic alternatives.

A project that fits into the same logic of clean energy generation is that of extracting and developing methane gas from Lake Kivu. However, this project is associated with a number of environmental and human safety risks. These include harmful emissions to the atmosphere and the discharge of wastewater and solid waste; impacts on the stability of the stratified layers of the lake following the discharge of water after gas-liquid separation; technological risks (gas leaks, fires); hazards related to natural disaster events (earthquake, volcano), etc. The implementation of the gas extraction project has been delayed since 2019 and the environmental and social impact assessment is yet to be completed.

The artisanal mining sector – at the heart of the climate question

Security issues related to the artisanal and small-scale mining (ASM) sector are taking place against a backdrop of growing demand for minerals essential for new technologies and the global energy transition, with some minerals being extracted from mining sites in eastern DRC.

It is widely recognised that artisanal mining and trade in these minerals are important elements in the local economy in several areas, but also in the perpetuation of conflict, insecurity and human rights violations, deforestation and pollution in eastern DRC.

In a review article on the governance of the ASM sector, Prof. Marie Rose Bashwira et al. note that despite several reform initiatives²², many mining areas are still affected by conflict. Illegal activities by state and non-state armed actors in many mining sites remain a problem and governance of this sector continues to suffer from significant deficits. Even though the presence of state agencies has increased at some sites, they often fail to fulfil their responsibilities, with some of them engaging in illegal practices. A clear example is the taxation of mining sites within Kahuzi-Biega National Park, where artisanal mining is formally prohibited.²³



²² ITSCi, BSP, RCS Global, Due Diligence, CIRGL, OECD etc. These initiatives include mapping, identification, control and compliance, as well as the assessment and development of mining sites, as well as the monitoring of traceability and certification of the origin of mineral substances.

²³ Wakenge et al. 2021

In her contribution at the workshop, Prof. Bashwira addressed the issue of security risks and environmental governance deficits in the artisanal mining sector, highlighting gender dimensions. Referring to research conducted by the International Peace Information Service (IPIS), she noted that conflict and violence is common in ASM mining sites, many of which are located within national parks. Economic, social, and political tensions have been reported at 29% of ASM mining sites and interference by state and non-state armed actors have occurred at 41% of sites. Multiple sources of tension had been recorded, including disagreements over geographical boundaries between different mining operations.²⁴

With regard to land conflicts in the context of mining, it was suggested that the greatest risk of tensions arises between mining licence holders on the one hand and farming communities on the other. The latter often lack formal title deeds although they depend on the land for their survival. As for the formal owners of the land, they often benefit from contractual agreements with mining companies. Other conflicts in the sector arise from the juxtaposition of industrial and artisanal mining.

Prof. Bashwira went on to note that practices used in artisanal mining sites are at the root of biodiversity loss and the degradation of forests, thus contributing to the problem of climate change and environmental destruction:

- Water pollution resulting in the loss of aquatic species, due to the use of mercury, acids and cyanide, and poor management of mining waste;
- Soil and vegetation degradation due to the use of locally sourced timber and explosives in mining sites, abandonment of sites without rehabilitation/ lack of reforestation and underground mining in shafts (beyond 30 meters) which weaken the ground and leads to landslides and erosion;
- Deforestation around sites related to the use of charcoal in production and for domestic purposes by local populations.

The workshop participants undertook a joint analysis of the problem of natural resource governance in North and South Kivu, linked to security and environmental aspects. One of the main problems identified was the weak application of laws and regulations in the sectors concerned, in a context characterised by hybrid governance. Added to this was a lack of technical expertise and the absence of institutional coordination mechanisms among actors in this field. Another contributing factor to poor management of the sector was regulatory overlap and contradictory laws and regulations, i.e. modern rules that are sometimes out of step with local practices and context. This would sometimes result in overlapping rights and titles, which points to the need for efforts to harmonise the different institutional and legal frameworks. Finally, the exclusion of local communities and indigenous peoples from the management of natural resources contributes to the perpetuation of certain conflicts, including in the ASM sector, and the failure to respect the rights of these population groups.

Women in the ASM sector

Women are a marginalised group in the ASM sector, representing 20% of the workforce in mines and 50% of the total population in mining communities, but occupying very few decision-making positions in the sector. Women are usually assigned to low-paid, low-value jobs, such as crushing, collecting and washing, due to cultural norms that call into question the acceptability of women's involvement in mining.²⁵ Nevertheless, they continue to play a key role in the ASM sector, providing ancillary services such as cooking, transports and supply of everyday items in mining communities. According to the mapping carried out by IPIS; women were present at 53% of sites and were more represented at large mining sites.²⁶

Women often work in dangerous conditions characterised by a lack of PPE, exposure to dirty water and other environmental hazards. Added to this are human rights violations such as exploitation, rape and sexual abuse. They are often exposed to illnesses such as cough, pneumonia and back pain. Despite a significant female presence in the ASM sector and despite the specific challenges they face in this context, ongoing reform initiatives in the Congolese mining sector often make women invisible, reducing them to the role of unknown intermediary actors.

²⁴ Bulakali et al. 2022

²⁵ Wakenge et al. 2021

²⁶ Bulakali et al. 2022

THE LAND ISSUE – TOWARDS SUSTAINABLE SOLUTIONS?

The issue of access to and control of land is fundamental to conflict dynamics in eastern DRC. It is also closely linked to natural resource management and distribution, as well as the management of protected areas, forest conservation and the fulfilment of the rights and needs of communities. Increased pressure on ecosystems due to climate change will require conflict sensitive, equitable and sustainable management of land and other natural resources from the local level up. This section, based on the presentations of Josué Mbusa of Friends of the Earth Forum and Francois Biloko of Réseau CREF, aims to summarise the challenges and opportunities inherent in the current land management system and reform.

Land reform from a conflict and environmental perspective

Josué Mbusa focused on the ongoing land reform process. As noted in his presentation, the situation in the DRC is characterized by a strong increase in demand for land, fuelled by sectoral interests that are poorly coordinated, leading to conflicts at community level and between different social groups. The concentration of populations in certain areas characterised by a very high population density is one of the many factors that may push communities to occupy spaces in protected areas. This pattern is reinforced by tracts of land being conceded to certain individuals, including dignitaries and local elites, as well as multinationals and other foreign players. As a result, less than 10% of agricultural potential is actually developed. It was also recognized that current land tenure practices, characterised by overlapping land governance regimes (between statutory law and custom) and the multiplicity of actors involved in the land sector, represent a source of conflicts of jurisdiction and overlapping rights and titles. As a result, there is a problem of widespread tenure insecurity. In turn, unsecured or disputed land rights discourage investment and add confusion and ambiguity vis-a-vis the status of so-called community lands. In short, the malfunctioning land governance system plays an important role in multiple, polymorphic, recurrent and costly land disputes and conflicts, with damaging consequences for socio-economic development and environmental protection.

The reform process – situational analysis

The new national land policy, a policy framework formally adopted in April 2022, provides broad guidelines for the ongoing land reform process. The expected next stage in the process is the adoption of a new land law reflecting the provisions of this policy, followed by land administration reform.

As spelled out in the presentation made by Josué Mbusa, the new policy framework recognises the normative and institutional deficits that currently exist in addressing the environmental and social impacts of sectoral development plans, programmes and projects. For example, the current land law does not engage with environmental and social impacts in relation to the issuance of land titles for largescale land use. In addition, it does not take into account new land requirements for the development of projects to enhance environmental services, as part of the Clean Development Mechanism (CDM) and Reducing Emissions from Deforestation and Forest Degradation (REDD+) processes. The risks associated with climate-induced migration and its impact on land resources are clearly recognised in the new policy, which refers to different social groups and their movement in search of fertile land and water.

The guidelines for this policy framework include measures aimed at protecting the environment, underlining the obligation of all land investors to comply with legally prescribed environmental standards and monitor the effective implementation of commitments made in this area. The Congolese government itself has undertaken to incorporate into its National Land Plan measures aimed at maintaining the carbon capture capacity of the land.

Public participation of men and women in decision-making processes relating to the land sector lies at the heart of the document, which includes, among other things, an imperative to establish advisory councils to support decision-making processes in natural resource management. Equitable access to land for indigenous peoples and the enjoyment of their land rights is another priority. The government is now committed to working towards ending restrictions on women's access to and appropriation of land, as well as full and secure enjoyment of their land and property rights.



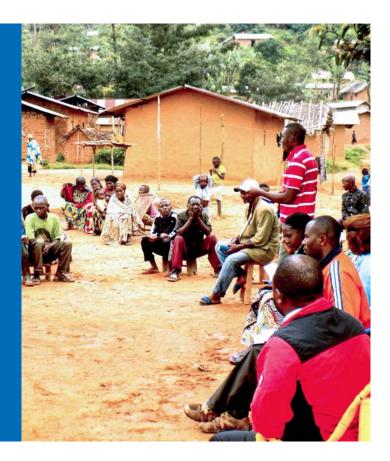
Challenges as formulated at community level

Josué Mbusa also summarised the many concerns raised by civil society, local communities and customary authorities in consultations that were organised during the policy formulation process. Their demands related to various issues, including:

- the need to guarantee the right to free, prior and informed consent of local communities before any decision is taken regarding land allocation;
- the right to fair and equitable compensation;
- the resettlement of individuals or communities prior to the execution of any decision to expropriate land in the public interest.

With regard to securing land tenure, one of the issues raised was the recognition of collective rights - i.e., the possibility of granting land titles to families, clans and especially groups of indigenous peoples. The importance of the participation of indigenous peoples in provincial commissions was emphasised, with a view to ensuring that their claims are taken into account in this reform process.

Other aspects raised in the consultations were purely environmental: mandatory reforestation, environmental impact studies and the organisation of participatory park boundary demarcation initiatives related to national parks.

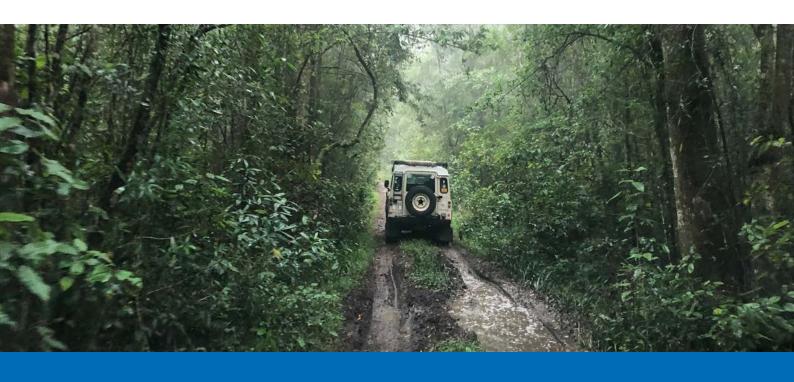


Community forestry as a peacebuilding tool

The current legal framework already facilitates the acquisition of forest concessions by local communities. Drawing on the work of Réseau CREF in this field, Francois Biloko shared some insights regarding the prospects and challenges for environmental protection and conflict prevention.

A Local Community Forest Concession (CFCL) can be awarded perpetually and free of charge to a local community by the government, on the basis of customary forest land ownership. The concession can be used for the satisfaction of the needs of the community, however under the obligation to apply rules and practices that guarantee sustainable management of the land. The acquisition process is well defined and includes mapping and boundary demarcation in collaboration with neighbouring communities and other stakeholders. Communities are advised not to include disputed spaces that border a protected area and that could become subject to discussions between the park and the community.

The law also calls for the establishment of certain structures for the management of the concession: the Community Assembly, the Council of Elders, the Local Management Committee and the Monitoring and Evaluation Committee. A simple management plan must be established and validated by the Community Assembly and approved by the head of the ETD (chiefdom/sector or rural commune). The success of the plans often depends on the possibility of mobilising the necessary resources for its implementation as well as adequate technical support. Constructive relationships with neighbouring communities are also essential from a conflict prevention perspective, given the access to natural resources under the control of a CFCL.



THE SITUATION OF DEFENDERS OF ENVIRON-MENTAL, LAND AND NATURAL RESOURCES RIGHTS – A CROSS-CUTTING ISSUE

Judicial and extra-judicial harassment of defenders of environmental, land and natural resources rights is part of a broader problem of non-respect for human rights that persists in the country²⁷ and is indicative of an atmosphere unfavourable to the implementation of certain reforms.

In his presentation, Vicar Batundi Hangi of Synergie Ukingo Wetu (SUWE), a local mechanism for the protection of human rights defenders (HRDs), discussed the security of HRDs in North Kivu, and applicable prevention strategies.

SUWE recorded and processed 119 cases of threats against HRDs in North Kivu from January to December 2022, including 105 male and 14 female activists. 27 out of 119 activists worked in the field of the environment, climate change and natural resources. Threats against civil society actors are mainly a reaction to their activism against oil exploitation, trafficking in endangered species and other live animals, looting of minerals by companies and organisations, invasion of national parks, illegal fishing and dispossession of the lands of indigenous peoples and local communities. Activists are subjected to several forms of threats and repression. SUWE regularly records reports of arrests, wrongful convictions, death threats, home and office break-ins, surveillance and other acts aimed at muzzling civil society actors, community leaders and opinion makers.

Another issue identified by the workshop was an apparent lack of dialogue between authorities and civil society actors/activists. Participants pointed to a number of causes such as the lack of a shared agenda between government and civil society and the absence of a common vision. The need for a permanent framework for dialogue and information exchange was also mentioned; the lack thereof has contributed to the broader problem of inhibited understanding between different actors, and relationships characterized by mistrust between state and non-state actors. The manipulation of civil society by politicians and a general predisposition to act based on individual interests, coupled with institutional instability, were further mentioned as causes contributing to a confrontational relationship between state and civil society actors.

27 Bureau Conjoint des Nations Unies aux Droits de l'Homme en République Démocratique du Congo 2023

"Most clearly, there is an urgent need for greater attention to climate change and environmental degradation in conflict analyses "

OUTLOOK

While recognising the complexity of ecological and human (political, economic and social) systems and the multiple ways in which climate change interacts with these systems in eastern DRC, producing various security risks at multiple levels and speeds, some preliminary conclusions can be drawn, based on the issues and themes that emerged during the workshop. Most clearly, there is an urgent need for greater attention to be paid to climate change and environmental degradation, its causes and effects, in conflict analyses in North and South Kivu, and in the responses to these conflicts and their root causes. Advocacy at the level of national and international institutions is required to influence policies and programmes, and to mobilise the financial resources needed to address the identified issues. The following conclusions and recommendations formulated jointly by the workshop participants focus on avenues for future action targeting a wide range of actors from local to national level and beyond, who should be involved in the identification and implementation of solutions. They provide a starting point for collective efforts to identify specific needs, relevant actors, priorities, and appropriate strategies to reduce the various and complex risks that have been documented, whilst contributing to sustainable development and peace.

1) NEED TO CAPITALISE ON EXISTING EXPERIENCE AND INVEST IN NATIONAL EDUCATION AND RESEARCH

While there are some research initiatives underway on climate change and its consequences in eastern DRC, few studies overtly make the link between climate change, peace, and security in the region. The workshop took stock of the current research and identified some gaps and needs for investment in scientific research in the field, including documentation of practices and knowledge within local communities and indigenous peoples. Research is also needed into the gendered impacts of climate change and insecurity, to better understand the different roles, responsibilities and capacities of women and men, the power relations between the sexes and between generations, and how these factors affect the opportunities and vulnerabilities of different groups.

In view of the above, the following recommendations were made:

- a) Incorporate aspects of environmental protection/climate change into the national education programme from primary school onwards.
- b) Implement trainings of trainers at the community level in the integrated management of natural resources and implementation of initiatives to raise people's awareness of the ecological and economic values of ecosystems, and the importance of environmental education.



- c) Promote and fund scientific research and research-action projects on ecosystems in North and South Kivu to assess climate change and its impacts, including on conflict patterns, capitalising on existing scientific capacities present in the region.
- d) Set up flexible mechanisms for the transfer of knowledge from scientists to decision-makers and communities.
- e) Promote the identification, documentation and appreciation of traditional knowledge and practices of indigenous peoples and local communities, paying attention to the specific roles and knowledge of women and men, in natural resource management and climate change adaptation.
- f) Identify adaptation strategies already implemented by communities, paying attention to gender dimensions, and support those that are deemed effective, taking into account the different resilience capacities and the perceptions of the affected communities.
- g) Establishment of weather stations and seismological observatories throughout the country.

2) NEED TO STRENGTHEN INTEGRATED PLANNING AND IMPLEMENTATION OF ADAPTIVE AND PREVENTIVE MEASURES, IN ORDER TO REDUCE THE VULNERABILITY OF COMMUNITIES AND CONTRIBUTE TO RESTORING THE SOCIAL FABRIC

Environmental degradation linked to climate change and disrupted weather patterns contributes significantly to the vulnerability of communities - a trend that is accentuated by rapidly evolving crises and events such as torrential rains, landslides etc. A rise in conflicts between farmers and herders is already apparent in some areas, which is thought to be partly attributable to changes in weather conditions, provoking acts of violence due to impacts on communities' lifestyles and livelihoods.

The limited capacity of state authorities, particularly at decentralised levels, to prevent and manage climate-related natural disasters, only serves to increase this vulnerability, and aggravate security risks faced by the population. More positively, the existence of a national adaptation plan to climate change clearly demonstrates the commitment of the government to the issue. As pointed out in the plan, entry points at provincial and local levels should be identified for the integration of its considerations in day-to-day governance practices.

One way of reducing climate risks would be to promote whole-of-society approaches, integrating both state and traditional governance systems, civil society, the private sector, etc., into the planning and implementation of the government's plan for climate change adaptation. Much as adaptation to climate change must be integrated into other planning processes at national and local level, a conflict prevention perspective in these processes is also necessary to avoid escalation of tensions and to capitalise on opportunities for dialogue. Collaborative processes of this kind aimed at exchanging knowledge, defining priorities and determining policies can thus help to restore people's confidence in the state and revitalise the social fabric.

In this respect, the following recommendations have been made:

- a) Support local governance structures in establishing inclusive processes for managing climate stress.
- b) Mobilise traditional authorities in the identification of solutions to the security impacts of climate change at the local level.
- c) Integrate environmental protection aspects into government socio-economic programmes, including the Local Development Programme for the 145 Territories (PDL-145T).
- d) Include in the national budget allocations for environmental and climate change mitigation and adaptation programmes at all levels, in accordance with established mandates.
- e) Implement disaster risk reduction and prevention plans at national, provincial, and local levels and reinforce early warning systems.
- f) Put in place a permanent, multi-sectoral platform for dialogue on climate change and its effects on conflict, security, and vulnerabilities.
- g) Set up a permanent regional multi-stakeholder mechanism for information exchange and create frameworks for exchanges between farmers on issues pertaining to climate change.
- h) Strengthen capacities and efforts for the restoration of degraded ecosystems and reforestation, with particular attention to adapted and sustainable agricultural methods.

3) NECESSITY TO REFORM NATURAL RESOURCE GOVERNANCE AT THE LOCAL LEVEL

The existence of persistent conflicts between local populations, indigenous peoples, and park rangers in eastern DRC stems at least in part from the suffering of local communities in the face of conservation policies and non-inclusive implementation practices disrupted by private interests. The lack of economic opportunities is also pushing people towards illegal activities to the detriment of forest areas.

Adding to this are the extractive sectors – an integral part of the conflict landscape in the region – which are today disrupted by illegitimate interests and marked by the weakness of responsible authorities, contributing to threats to forests and water sources, and to the health and wellbeing of mining and riparian communities. To remedy some of these problems, it will be necessary to establish or, where appropriate, reinvigorate inclusive mechanisms for the governance of natural resources and environmental protection, with a view to better responding to the needs and rights of populations. These approaches should ensure the genuine participation of women and men from different segments of the population, including indigenous peoples, young people, etc., both in the identification of problems and in the planning and implementation processes, to ensure equitable access to resources.

Within this framework, the following recommendations have been made:

- a) Build the capacity of stakeholders in respect of the human rights-based approach to the management of natural resources and the protection of ecosystems.
- b) Develop mechanisms for participatory and inclusive governance and management of natural resources, which include local communities and indigenous peoples, and which incorporate complaints mechanisms to ensure the protection of community rights.
- c) Increase attention and research into the socio-political, economic and environmental dynamics around the national parks of North and South Kivu provinces, in order to contribute to community-level development and resilience and to environmental protection.
- d) Ensure that women working in artisanal mines are recognised as a diverse group, and deepen understanding of the causes that lead (or force) them to work in mining sites, acknowledging both the opportunities and obstacles they face in the artisanal mining sector.
- e) In the context of the multiplicity of reform initiatives and state and non-state structures involved in the ASM sector; ensure that institutional coordination in the sector is strengthened, while taking into account the representation of the interests of the workforce, particularly women and marginalised groups active in the sector.

4) NEED FOR A LAND TENURE SYSTEM THAT FACILITATES CONFLICT PREVENTION AND ENVIRONMENTAL PROTECTION

Land reform represents an opportunity towards more inclusive and coordinated approaches to land management, a more equitable distribution of natural resources among the population, environmental protection and the prevention and resolution of conflicts at local level.

To this end, a reformed and decentralised land tenure system should incorporate mechanisms to ensure the inclusion of communities (including women and men from marginalised groups, minorities, young people, etc.) in the sustainable management of forest areas. The experiences of community forestry, processes for securing community land tenure, participatory demarcation, etc. of the co-signatories of this report (Réseau CREF, Strong Roots Congo) and other actors at local level, should be taken into account in the implementation of the reform, in order to capitalise on the expertise and lessons learned in this area.

This will require the real commitment and will of the state and political elites at all levels as well as genuinely inclusive and transparent processes enabling local communities to continue to participate in consultations, take part in decisions and play an active role in land administration structures, notably at the local level.

To facilitate this, the following recommendations have been made:

- a) Train those involved in community forestry who will later be able to assist the ICCN in its activities.
- b) Involve the ICCN in the process of acquiring CFCLs for areas bordering protected areas.
- c) Promote the principles of the rule of law and good governance (transparency, accountability, judicial independence, etc.) in land and natural resource governance, while insisting on the equal participation of women, young people and indigenous peoples in these processes.

5) ENSURE THE PROTECTION OF HUMAN RIGHTS DEFENDERS AND THE PROMOTION OF THEIR SKILLS

Human and environmental rights defenders in the DRC have an important role to play in formulating demands to decision-makers and in raising public and government awareness of environmental rights issues. Participants in the workshop called for stronger protection measures for environmental rights defenders, coupled with roust frameworks for consultation between civil society and public institutions. This could contribute to enhancing the application of the principles of transparency and accountability in the management and distribution of natural resources (extractive sector, forestry, etc.) and to better capitalise on the skills of activists in the search for sustainable and equitable solutions.

Relating to this issue, the following recommendations were made:

- a) Build the capacity of human rights defenders on protection mechanisms, risk management, applicable regulatory frameworks and other resilience measures.
- b) Raise awareness among judges about the fundamental rights of activists, relevant environmental frameworks etc.
- c) Organise regular joint missions for relevant state authorities and civil society to document and analyse the various human rights violations and threats to the integrity of ecosystems, in order to reconcile the perspectives and understanding of both parties.
- d) Hold quarterly analysis and evaluation meetings to strengthen interactive dialogue between activists and the state in order to foster closer ties and resolve problems identified in this sector (dialogue, exchange of information, etc.).
- e) Capitalise on activists' knowledge and pass it on to other sections of society, including local authorities.

CITED WORKS

ARTICLES AND REPORTS

Balasha, A.M., Munyahali, W., Tshomba, J., Okwe, A.N, Fyama, J.N.M., Lenge, E.K., Tambwe, A.N. 2022. Understanding farmers' perception of climate change and adaptation practices in the marshlands of South Kivu, Democratic Republic of Congo. Climate Risk Management, 39 (2023)

Batumike, R., Bulonvu, F., Imani, G., Akonkwa, D., Gahigi, A., Klein, J.A., Marchant, R., Cuni-Sanchez, A. 2022. Climate Change and Hunter-Gatherers in Montane Eastern DR Congo. Climate and Development, 14 (5): 431–42. DOI : https://doi.org/10.1080/17565529.2021.1930987

Bulakali, N. Z., Matthysen, K., Muller, T. 2022. Analysis of the interactive map of artisanal mining areas in eastern Democratic Republic of Congo, 2022 Update. IPIS, Antwerp

Bureau Conjoint des Nations Unies aux Droits de l'homme en République Démocratique du Congo (BCNDHR). 2023. Analyse de la Situation des Droits de l'homme, République Démocratique de Congo, Janvier-Juin 2023 DPE Nord-Kivu. 2012. Rapport sur la consommation annuelle de la braise dans la ville de Goma. Unpublished, Goma

Dubiez, E., Imani, G., Gazull, L. Péroches, A. 2021. Rapport d'étude de la filière bois-énergie de la ville de Goma. CIRAD

FriedrichEbert-Stiftung, NUPI & SIPRI. 2023. Climate Change and Security in West Africa: Regional Perspectives on Addressing Climate-related Security Risks. URL : https://www.sipri.org/sites/default/files/2023-03/fes-reportclimate-a4-03.pdf. Retrieved on 27 September 2023

Funder, M., Marie Cold-Ravnkilde, S., Peters Ginsborg, I. 2012. Addressing Climate Change and Conflict in Development Cooperation: Experiences from Natural Resource Management. 04. DIIS Report. Copenhagen: Danish Institute for International Studies Marijnen, E., Verweijen, J. 2019. The charcoal challenge in DRC's Virunga. URL : https://blogs.lse.ac.uk/africaatlse/2019/03/25/virunga-charcoal-trade/. Retrieved on 27 September 2023

Mudinga, E., Muzalia, G., Van Acker, T., Musamba, J. Polepole, P. 2023. Understanding Climate Change and Conflict in the Ruzizi Plain, DR Congo. Unpublished

Mukumba P, 2020. Résilience communautaire des riverains autochtones Batwa dans le contexte du conflit au Parc National De Kahuzi Biega, Est de la RD. Congo. European Scientific Journal, Vol.16, No.29, 83-104

Mushagalusa E., Ngendakumana S., Ansoms A. 2013. Analyse critique du processus de cogestion du parc national de Kahuzi-Biega en République Démocratique du Congo. La revue électronique en sciences de l'environnement [En ligne], Hors-série 17 | septembre 2013. DOI : https://doi.org/10.4000/vertigo.13873

Muvundja, F. A., Wüest, A., Isumbisho, M., Kaningini, M.B., Pasche, N., Rinta, P., Schmid, M. 2014. Modelling Lake Kivu Water Level. Variations over the Last Seven Decades. Limnologica 47: 21–33. DOI : https://doi.org/10.1016/j.limno.2014.02.003

Spira, C. 2018. Inventaire de la Biodiversité dans le Parc National de Kahuzi-Biega, République Démocratique du Congo. Bukavu : Wildlife Conservation Society

Suárez, S.M. 2015. The right to land and other natural resources in the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas. FIAN International Briefing

Vervisch, T., Mudinga E., Muzalia, G. 2020. Policy Brief: MONUSCO's Mandate and the Climate Security Nexus. URL : https://www.gicnetwork.be/policy-brief-monuscos-mandate-and-the-climate-security-nexus/. Retrieved on 27 September 2023

Wakenge, C.I., Bashwira Nyenyezi, M.-R., Bergh, S.I., Cuvelier, J. 2021. From 'conflict minerals' to peace? Reviewing mining reforms, gender, and state performance in eastern Democratic Republic of Congo. The Extractive Industries and Society, 8, 2 (2021)

PRESENTATIONS

Emery Mudinga (Angaza Institute, Bukavu), Godefroid Muzalia (GEC-SH, Bukavu), Tomas Van Acker (GIC, CRG, Gent), Josaphat Musamba (GEC-SH), Patient Polepole (Angaza Institute), « Comprendre le changement climatique et les confits dans la Plaine de la Ruzizi, RDC », March 2023

Fabrice Muvundja Amisi (ISP Bukavu, Université Catholique de Bukavu), « Changement climatique et ressources en eau du bassin du lac Kivu », March 2023

Francois Biloko (Réseau CREF), « De la gestion foncière : Modèle de gestion par la communauté face à la sécurité climatique – Cas de la Concession Forestière de Communauté Locle (CFCL) », March 2023

Gérard Imani (Université Officielle de Bukavu), « Changements climatiques et ses effets sur les systèmes biophysiques et sociaux », March 2023

Josué Mbusa, « Processus de la reforme foncière en cours en RDC : Pour quelle contribution a la sécurité climatique ? », March 2023 Lionel Bisimwa Matabaro (Angaza Institute, ISDR Bukavu), « Conservation de la nature au prisme de l'exclusion et de luttes de peuples autochtones pour la justice environnementale autour du PNKB », March 2023

Marie Rose Bashwira (Centre de Recherche et d'Expertise en Genre et Développement), « Risques sécuritaires liés à la destruction de l'environnement dans le secteur minier artisanal : illustration des zones minières de l'Est de la République Démocratique du Congo », March 2023

Ndemo Mbasa Elu (ULPGL-Goma), « Exploitation des ressources naturelles comme source de conflits et de dégradation de l'environnement dans les provinces du Nord et Sud-Kivu : défis et perspectives », March 2023

Vicar Batundi Hangi (SUWE), « Droits Humains et la justice environnementale : approches préventives et la sécurité des activistes de la société civile », March 2023

Wivine Munyahali (Université Catholique de Bukavu, Université de Lubumbashi), « Understanding farmers' perception of climate change and adaptation practices in the Marshlands of South Kivu, DRC », March 2023

WWW.FBA.SE

twitter.com/FBAFolke facebook.com/FolkeBernadotteAcademy instagram.com/FolkeBernadotteAcademy linkedin.com/company/FolkeBernadotteAcademy soundcloud.com/FolkeBernadotteAcademy

WWW.RESEAUCREF.ORG

twitter.com/reseau_cref facebook.com/reseaucrefrdc linkedin.com/company/reseau-cref instagram.com/reseau_cref

WWW.STRONGROOTSCONGO.ORG

instagram.com/strong_roots_congo facebook.com/StrongRootsCongo





