RESILIENTAFRICA NETWORK

RESILIENCE INNOVATION CHALLENGE

2016-2018

EASTERN AFRICA RESILIENCE INNOVATION LAB

RESILIENCE INNOVATION CHALLENGE FOR CONFLICT (RIC4CONF)

GRANT STRUCTURE AND GUIDELINES

February 2016
www.grants.ranlab.org

Table of Contents

1. Overview

1.1 ResilientAfrica Network (RAN)

ResilientAfrica Network (RAN) is one of the eight university-based Development Labs making up the Higher Education Solutions Network (HESN) established by the United States Agency for International Development (USAID) and existing within its Global Development Lab (http://www.usaid.gov/GlobalDevLab). RAN's core partners include Stanford University, Tulane University, and the Centre for Strategic and International Studies (CSIS). Within Africa, RAN is a partnership targeting 20 universities in 16 African countries. The Network is led by Makerere University in Kampala, Uganda and the secretariat is located in the School of Public Health at Makerere University. RAN is structured around four core establishments referred to as Resilience Innovation Labs (RILabs) which include: the Eastern Africa RILab (EA RILab) based in Uganda and hosted by Makerere University, the West Africa RILab (WA RILab) based in Ghana and hosted by the University for Development Studies, the Horn of Africa RILab (HoA RILab) based in Ethiopia and hosted by Jimma University, and the Southern Africa RILab (SA RILab) based in South Africa with University of Pretoria as host. By applying science, technology, innovation, and partnerships, and using evidence-based approaches, RAN seeks to identify, develop and scale innovative solutions that will strengthen the resilience of African communities afflicted by natural as well as human-made shocks and stresses (http://www.ranlab.org). The RAN development lab was launched in November 2012.

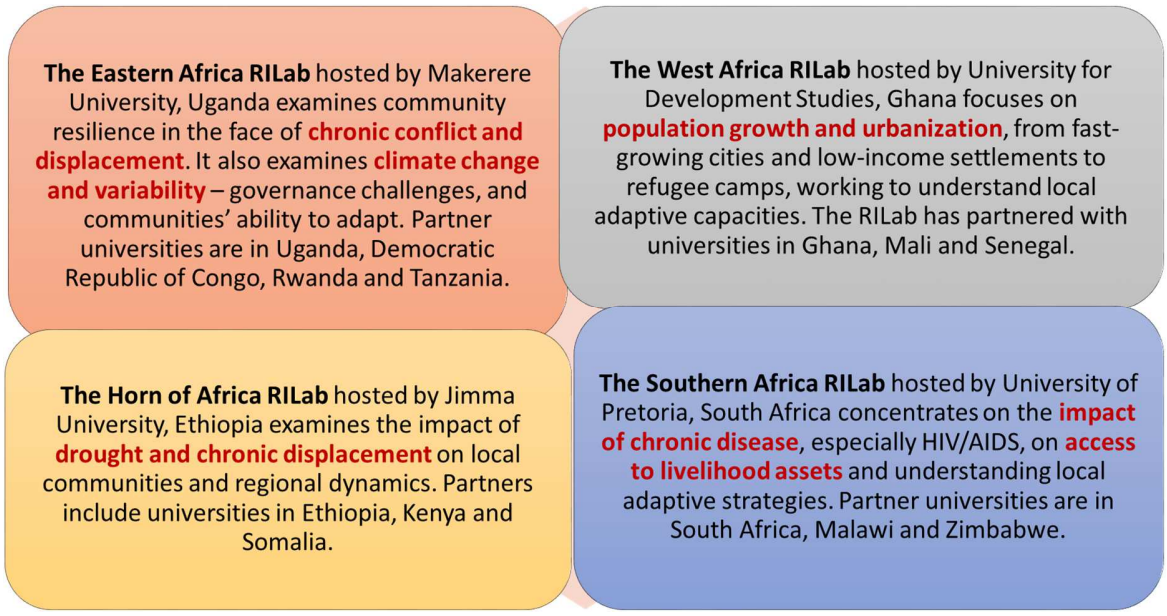

Figure 1: Overview of RILabs and their thematic areas

RAN has three main objectives: 1) To design and operationalize a scientific, data-driven, and evidence-based resilience framework for sub-Saharan Africa; 2) To strengthen resilience at the individual, household, and community levels through innovations; and 3) To enhance resilience-related knowledge generation and sharing. RAN's vision is 'Resilient African communities through innovative solutions', while its mission is 'to strengthen resilience of African communities through university-led, local, innovative solutions using evidence-based approaches respectively'. RAN defines resilience as the capacity of people and systems to mitigate, adapt to, recover and learn from shocks and stresses in a manner that reduces vulnerability and increases well-being.

Rationale for the RAN: Development interventions and humanitarian aid have been historically project based. Although these efforts have saved lives, they have not sufficiently built resilience of target communities to recurrent shocks and stresses. This is the reason why the same shocks and stresses result in the same consequences year in and year out. RAN seeks to break these negative cycles by tapping into the adaptive capacities of target communities to strengthen their resilience to challenges affecting them. Therefore, RAN's primary reason for existence is the identification, development and piloting of resilience building innovations, and bringing these to scale so as to significantly impact communities in sub-Saharan Africa.

1.2 RAN's Resilience Framework

RAN has elucidated a theoretical framework for its approach to resilience. This is summarized in Figure 2.

Figure 2: The RAN Conceptual Resilience Framework

Theory of Change (TOC):RAN's Theory of Change states: 'The resilience of people and systems in Africa will be strengthened by leveraging the knowledge, scholarship, and creativity that exists across the ResilientAfrica Network to incubate, test, and scale innovations that target capabilities and reduce vulnerabilities identified by a scientific, data-driven, and evidenced-based resilience framework for sub-Saharan Africa'.

Upon reasonable development and testing, the innovations incubated by RAN shall be translated into 'resilience interventions' and scaled in representative target populations. RAN's assumption is that the effects observed in the test populations can be replicated and brought to scale in other communities that share similar development challenges in Sub-Saharan Africa. We postulate that if the 'right innovations' (hence interventions) are applied to a reasonable degree of scale in target communities (i.e. that a 'substantial' proportion of the population in the target communities 'adopts' them), they will significantly contribute to 'improving' the resilience of these communities. We are using the term 'strengthening resilience' rather than 'building resilience' because we believe that communities will not start from zero – there is existing strength and background resilience (in form of adaptive strategies) in the communities on which we shall build. The impact of resilience interventions on communities should be measurable. Successful innovations/interventions are expected to impact on at-least one or more building blocks of resilience in the target communities. These 'building blocks of resilience' shall be in the form of measurable 'resilience dimensions' and will be described in Section 2.

1.3 RAN's Resilience Innovation Challenges (RICs)

RAN seeks to source, develop and scale transformative innovations that strengthen the resilience of communities against natural and human-made shocks and stresses, in line with RAN's thematic areas of focus. In order to effectively tap into the immense innovation potential available not just on the African continent, but globally, RAN supports resilience innovation challenges where the best ideas and/or solutions will receive grants to further develop these projects towards achieving widespread usage and reaching full scale. RAN is using **three** main approaches to source for innovations: (1) Crowd-sourcing (also known as the Resilience Innovation Acceleration Program – RIAP), (2) Design-thinking based ideation (also known as the Resilience Innovation Challenges - RICs), and (3) Collaborative Resilience Innovation Design - CRID.

The crowd-sourcing approach (or RIAP) is a bottom-up approach that underscores RAN's conviction that great ideas come from everywhere and from anyone. Hence, RAN acknowledges the existence of promising prototypes/proof of concepts under development within RAN universities and in-country innovation hubs as well as the community at large. Using open innovation exhibitions as a method of crowd-sourcing ideas, RAN identifies promising ideas, assesses what is hindering them to progress and supports them to be developed to the next level.

The design thinking-based approach (or RIC) is a top-down approach where RAN uses an intervention strategy process to conceptualize and launch innovative solutions designed for impact and scale. The process prioritizes interventions by identifying those with the highest

transformative potential for the most pressing resilience challenges in target communities across the RILabs. This approach is based on Stanford University's ChangeLabs framework. In an Intervention Strategy Workshop (ISW), technical experts and stakeholders collaboratively use resilience findings to develop critical intervention pathways and to identify the most potentially impactful projects within these pathways. This information is then used to develop resilience innovation challenges that attract multi-disciplinary teams of innovators to develop new solutions. Most of the solutions developed under this approach are freshly ideated to respond to the grant calls.

The collaborative resilience innovation design (CRID) approach on the other hand is a highly collaborative intervention design process in which multi-disciplinary teams of experts, scholars and stakeholders are invited to develop system level interventions in a CRID Workshop. The starting point for solution creation in CRID is the set of priority intervention pathways identified in an Intervention Strategy Workshop (ISW). However, instead of the RIC approach of calling for solutions from the innovator community, teams of experts and stakeholders engage in a CRID Workshop to design model projects required to systematically address the priority intervention pathways. While the types of projects developed through the RIAP and RIC approaches are typically small to medium sized projects, those developed through the CRID approach are larger projects designed to cater for a set of complementary system level challenges rather than discrete challenges. The CRID approach therefore generates 'an ecosystem of complementary innovation projects' rather than discrete projects. This set of complementary innovation projects is then used to develop an open CRID challenge to attract multi-disciplinary teams of innovators and stakeholders to participate in a co-creation process to identify, develop and incubate a combination of innovative projects in support of system-level interventions in the target community.

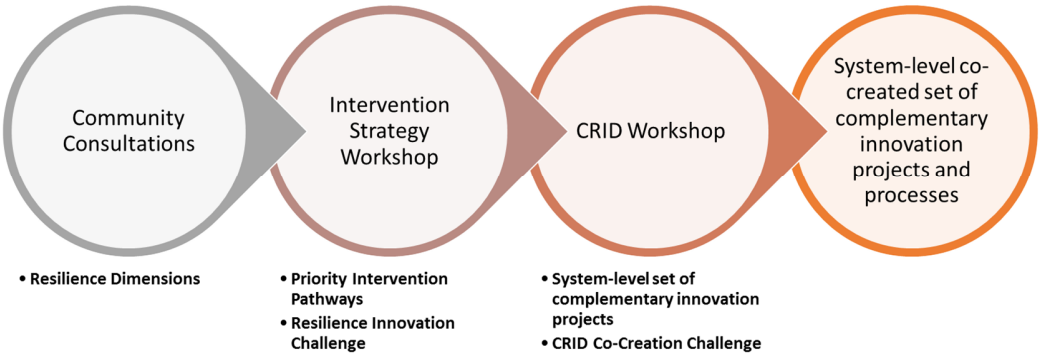

Figure 3: Collaborative Resilience Innovation Design (CRID) approach

Our three-pronged approach to sourcing innovations allows us to draw upon expert judgment on intervention priorities but at the same time allowing us to tap into the enormous innovation potential of independent innovators and collaborating teams of experts, better positioning RAN for resilience impact. This call is seeking innovative solutions to resilience

challenges that have been identified and developed using the RIC process. The intervention pathways guiding this call are explained in detail in Section 3 of this call.

1.4 The EA RILab

The Resilience Innovation Challenge for Conflict (RIC4CONF) is being hosted by the Eastern Africa RILab (EA RILab) that is based at Makerere University School of Public Health, Uganda. Partner universities constituting the EA RILab include Makerere and Gulu Universities (Uganda), University of Rwanda (Rwanda), University of Kinshasa (Democratic Republic of Congo – DRC), and Muhimbili University of Health and Allied Sciences (Tanzania). To facilitate the resilience building process, RAN has identified seven communities where its core resilience challenges are highly prevalent within the countries hosting these institutions. The seven communities include four communities in Uganda, two from Rwanda and one community from the DRC. Each of these communities is aligned to a particular sub-theme as described in Table 1
These communities are engaged in monitoring change in resilience factors over time, and to test hypotheses about the effectiveness and efficiency of proposed solutions on individuals, households and communities.

EA RILab Vision Statement:

The vision of the Eastern Africa RILab is to have African communities that are resilient to the shocks and stresses affecting their livelihoods, making use of innovative solutions to their context specific resilience challenges. The EA RILab envisions dynamic self-sufficient households in target communities that effectively harness local agency, indigenous adaptive capacities, and innovative solutions to disrupt current approaches to production and market engagement in a manner that builds reliable livelihood safety nets, cushions them from chronic conflict related shocks and stresses, and leads to sustainable development.

EA RILab Philosophy:

The Eastern Africa RILab will contribute to strengthening the resilience of communities by nurturing and scaling innovations with the highest transformative potential. It has applied a data driven methodology to identify resilience priorities in target communities, select intervention pathways with the highest potential on communities. The EA RILab will rally innovators to provide solutions to these challenges using science and technology. RAN will tap into the massive capacity of university scholars and other innovator communities to ideate and co-create. Throughout the intervention process, the RILab will use a human-centered design approach that takes into account the local application of proposed solutions. Given that the resilience challenges of target communities are complex, RAN and the EA RILab will apply a systems approach to intervention in which critical change levers in the system are used as the basis for identifying the most potentially impactful intervention pathways. The ultimate aim of these interventions is to strengthen the resilience of African communities to priority shocks and stresses.

1.4.1 Description of EA RILab Target Communities

As part of the application, innovator teams will have the choice to select a target community where they wish to implement the proposed innovation. The seven EA RILab communities are highlighted in Table 1 and described in detail below.

Table 1: EA RILab Target Communities

Country	Communities (Sub-theme)
Democratic Republic of Congo	1. North and South Kivu Provinces (Gender based violence)
Rwanda	1. Nyamagabe and Gicumbi Districts (Refugee influx into Rwanda from DRC) 2. Musanze, Nyabihu and Rubavu Districts (Recurrent landslides and floods)
Uganda	1. Kasese, Hoima, Nebbi Districts (Recurrent epidemics and floods in Albertine Region) 2. Soroti, Amuria and Katakwi Districts (Recurrent floods alternating with drought in Teso Region) 3. Bududa, Manafwa and Butalejja Districts (Recurrent landslides and floods in the Elgon Region) 4. Pader, Lamwo and Lira Districts (Sluggish recovery from the chronic conflict in Northern Region)

1.4.1.1 DRC - North and South Kivu Provinces

Stretching over an area of 59,483 km2 (22,967 sq. mi) and with a total population of over 5.7 million, North Kivu borders the provinces of Orientale to the north and northwest, Maniema to the southwest, and South Kivu to the south. To the east it borders with Uganda and Rwanda. The province consists of three cities - Goma, Butembo and Beni and six territories - Beni, Lubero, Masisi, Rutshuru, Nyiragongo and Walikale. Its capital is Goma. The province is also home to the Virunga National Park which is a home to the endangered mountain gorillas. The province of North Kivu has been the epicentre of war in the DRC (Stearns, 2012). It has generated a multitude of armed groups, with over two dozen emerging over the past two decades. It was here that the precursors to the Congo wars began with ethnic violence in 1993, and it is here that the most formidable challenges to stability in the country persist today. The armed groups that have emerged in North Kivu have features in common, but there is no comprehensive theory that explains them all. They draw on three sources of instability: local, regional, and national.. The country's rule of law does not adequately guarantee property rights or the force of law to suppress armed rivals. This

reinforces the belief that the only way of protecting property and individual freedoms is through armed force.

South Kivu province borders the provinces of North Kivu to the north, Maniema to the west, and Katanga to the south. To the east it borders with Rwanda, Burundi and Tanzania. The capital city is Bukavu and the province spans an area of 65,070 km2 (25,120 sq. mi) with a total population of 4.6 million. The province of South Kivu has been at the heart of the conflict in the eastern DRC (Vlassenroot, 2013) and it was here that the First Congo War (1996–7) started. After the cessation of the Second Congo War (1998–2003), the province has continued to be hit by a wave of violent local conflicts have fuelled by political opportunism and local struggles over land and power.

Both South and North Kivu provinces do have a high concentration of artisanal mining communities and these communities rate insecurity as the main reason for sustained or increased poverty. The poverty is exacerbated by other factors such as population displacement and poor access to land and markets. The fighting between armed groups in these provinces frequently culminates into violence especially against women, systematic pillage, killing of civilians, arson and displacements. Although the two provinces have a high concentration of minerals and mines, agriculture is the primary and preferred source of income for more than 80% of the families in mining communities in South Kivu. Households in these provinces derive revenue from a wide portfolio of sources including agriculture, mining, commerce, fishing, mineral transportation and other daily work. Farming is generally considered as a more reliable source of income than the 'inconsistent' revenues generated by mining and business.

Recurrent conflict in the Democratic Republic of Congo's North and South Kivu provinces is uprooting more civilians and exposing an increasing number of women, girls, boys and men to rape. Most cases of sexual violence are committed by armed men. Although the number of cases reported is soaring, many more cases remain unreported.

1.4.1.2 Rwanda - Kigeme and Gihembe Refugee Camps

The violent clashes fuelled by ethnic tensions and armed conflicts over land in North and South Kivu Provinces of the Democratic Republic of the Congo (DRC) have resulted in the displacement of more than 2.2 million people inside the country and an additional 70,000 people have crossed the border into neighbouring Rwanda and Uganda. Currently, Rwanda hosts more than 57,641 refugees. The majority of the refugees are located in five refugee main camps namely Gihembe, Kigeme, Kiziba, Nyabiheke and Nkamira.

Kigeme refugee camp is located in Nyamagabe district of the southern province, about 150 Km from Kigali and 120 km from the Bukavu border. This camp was established in 2012 to host refugees who fled fierce fighting between FARDC soldiers and the M23 rebels. Historically, Kigeme camp hosted some 2,100 Burundian refugees until May 2009. The Government of Rwanda re-opened and expanded it in June 2012 in order to host thousands of

refugees who had been temporally received in Nkamira transit center in Rubavu near the borders of Rwanda-Goma. Kigeme camp is built on terraced steep hills divided by the main road to Kigali. The two hills are referred to as Site A and Site B and together constitute 34 hectares. The major concern in this camp is related to the heavy rainfall which frequently causes flooding and landslides due to the inadequate drainage systems. Additional concerns include reduction in food rations, lack of space for livelihood activities due to the congestion within the camp.As of 2014, the total population of refugees in Kigeme is 18,430. 99% of those refugees originated from North Kivu Provinces in the Eastern part of the Democratic Republic of Congo (DRC) and are Kinyarwanda speakers.

Gihembe refugee camp is located in Byumba town, Kageyo Sector of Gicumbi District in Northern Province, 60 km north from Kigali City. This camp was established in December 1997 to host Congolese refugees who fled conflicts in the Eastern DRC and initially hosted at Mudende camp in Rubavu District. Following attacks by armed groups at Mudende camp, the Government of Rwanda and UNHCR decided to move refugees far from the border, then Gihembe camp was established to accommodate survivors of those attacks that had caused severe causalities to some of these refugees. Currently, the camp is built on 40-hectares land with 3,213 households. As of 2014, the total population of refugees in Gihembe camp stood at 14,708 refugees of which 99.9% of the population is predominately Congolese nationals originating from North and South Kivu Provinces.

Both women and children below 18 years of age predominate the population in the two camps standing at slighlty more than 50% of the total population. The management and coordination in both Kigeme and Gihembe refugee camps is done by the Government of Rwanda through the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) and other agencies such as UNHCR, WFP. The government and these implementing partners assists refugees in eleven critical areas of intervention such as: Non-Food Items (NFIs), Nutrition, Water and Sanitation, Health (Primary Health Care, HIV/AIDS Prevention and Treatment, Reproductive Health Care), Shelters and Infrastructure Construction, Education, Community Services, Livelihood, Protection (including Child Protection and Sexual and Gender Based Violence (SGBV)) and Environment Protection. Livelihood activities include voluntary saving and loan associations (VSLA), vocational training, small business creation and support, cooperatives focusing on agricultural and small livestock farming. The people living in the camps are also trained on a premise that they will apply the skills they have learned to rebuild their lives when their return to the DRC becomes possible.

1.4.1.3 Uganda - Northern Region

Northern Uganda was devastated by a 20-year armed conflict from 1986 to 2006 (Otunnu, 2002b, OPM, 2007).The most affected areas were Gulu, Kitgum and Pader districts (Acholi region), with spill-overs into Lira, Otuke and Aleptong districts (Langa region) (ACF, 2010b, ACF, 2010a, Bozzoli et al., 2012).The conflict led to loss of lives in the magnitude of tens of thousands of people and loss of economic self-determination for hundreds of thousands more (Otunnu, 2002b, OPM, 2007). Over two million people were left internally displaced; this

level of displacement has been reported to be one of the highest in the world (Jens Claussen and Nordby, 2008, UNDP, 2010). Another primary effect was child abuse and child neglect. Over 50% of the insurgents' militia was made up of children who were abducted and forced to commit atrocities. Others were defiled and forced into teenage marriage to the militiamen (Opprann, 2009, Gagne, 2011, Annan and Brier, 2010, Cecilie Lanken, 2012, UN).The insurgency also led to a phenomenon known as 'night commuting' whereby tens of thousands of children would walk up to 8kms at night for protection in the urban areas (OPM, 2007, UNICEF, 2005).

The secondary effects of the civil war included: A loss of socio-economic and livelihoods resilience, a breakdown in social-cultural networks and value systems, an increase in sexual and gender-based violence, an increase in psychological disorders including PTSD, suicide and despair, poverty, food insecurity, breakdown in infrastructure, health effects such as increase in prevalence of HIV/AIDS, deadly epidemics and morbidity and mortality due to preventable diseases, decline of health systems and other social services and land disputes (OPM, 2007, ISIS-WICCE, 2001, Otunnu, 2002a, Kinyanda, 2010, Akumu, 2005). The war also resulted into orphanhood which further exposed the already vulnerable children to inequity and violence due to lack of social safety nets from the community (Oleke et al., 2006). Poor health/morbidity due to lack of access to medical/psychological services further increased vulnerability (Kinyanda et al., 2010).

The most vulnerable groups were women and children who faced severe physical and psychological health issues, which continue to have negative implications on their lives (Corbin, 2008). The factors that make people, infrastructure and institutions vulnerable to the effects of civil war include: lack of education since they are not empowered to build capacity for resilience, lack of livelihoods diversification, and loss of socio-cultural controls. Being in IDP camps led many parents to relinquish their responsibilities to institutions and NGOs (Angucia et al., 2010). Lack of dependable physical space prevented people from making positive life changing interactions; this created individualism in the community (Angucia et al., 2010). Gender was also an important factor; being female exposed women to sexual violence (Kinyanda et al., 2010). The poor condition in the IDP camps led to appalling sanitation and hygiene, loss of privacy, dignity, massive overcrowding and malnutrition (UPFI). Many of these effects have persisted beyond the conflict. Cattle raiding also increased vulnerability of communities since it led to loss of their livelihood (OPM, 2007). The delays in detection, response, and containment of the various problems that resulted from the conflict, made the population vulnerable to the effects of the civil war (Angucia et al., 2010, Kinyanda et al., 2010). Another key effect of the situation was the growth of reliance on Government and donor aid which includes food and non-food items – this resulted in a situation where a large section of the population was trapped in 'victimhood and dependency', losing a large part of their self-dependency.

Among the adaptive and coping strategies have been numerous programs for recovery. Civil society organisations and international agencies have been at the fore-front of these programs that have included re-settlement of formerly displaced persons from the camps back to their homes, economic recovery programs (including promotion of farming and agri-business,

restocking, and other economic incentives). There have also been numerous programs to support the revamping of social services (including water, health and education). At the community level, there have been efforts at re-establishing social cohesion and cultural controls. The communities have sought both physical and emotional support from family, friends, social groups and humanitarian organizations, enlightening the world about their situation using photography, story-telling, chanting, dancing, songs, theatre, and writing, as a way of rebuilding their lives (Mark Sommer, 2011, Edmondson, 2005). They have also been seen to use cultural and religious coping strategies, which studies have reported as contributing to the counteracting of vulnerabilities (Murthy and Lakshminarayana, 2006).

However, despite all efforts at reconstruction, the pace of recovery has remained slow since the end of the war in 2004. Data from serial Demographic and Health Surveys (UDHS 2001, UDHS 2005 and UDHS 2011), as well as the AIDS Indicator Surveys (AIS 2004 and 2012) show that the Northern region has the lowest socio-economic indicators compared to all other regions of Uganda. Agriculture still remains the major source of income to the population of Northern Uganda. The major crops grown are millet, sorghum, maize, upland rice, cassava, sweet potatoes, peas, sesame, groundnuts, sunflower, soya bean, bananas, cotton and tobacco. The region is also famous for cattle keeping. There are a number of extension services and programs received by this region including the National Agricultural Advisory Services (NAADS).

1.5 The EA RILab priority resilience issue

The EA RILab focuses on two resilience themes: (1) strengthening resilience to the effects of climate change (that manifests as recurrent drought alternating with floods, landslides, and disease epidemics), and (2) mitigating the effects of acute and chronic conflict that manifest as Gender Based Violence (GBV), refugees, and slow pace of recovery after a conflict. These thematic areas of focus were identified through an extensive baseline literature review that focused on identifying resilience issues that affect the largest section of the population in its network countries. This was a crucial step in RAN's resilience framework.

2.0 The Eastern Africa RILab Resilience Innovation Challenge for Conflict (RIC4CONF)

2.1 The Resilience gap

Although Sub-Saharan Africa has continued to enjoy unprecedented rates of economic growth—new technologies, better governance, and increasing investment flows creating new opportunities for innovation and economic and human development—across the continent, vulnerable populations continue to contend with recurrent crises and stresses that leave them struggling to recover and unable to expand economic opportunities or to improve well-being. Recurrent shocks and stresses—caused by conflict, climate variability, disease, and natural disasters—too often overwhelm traditional coping mechanisms and create a corrosive cycle of fragility and risk. The Great Lakes Region (encompassing Burundi, Rwanda, Uganda, north-eastern DRC, and north-western Kenya and Tanzania) for instance, has witnessed some of the direst conflicts on the African continent, rooted in longstanding tensions over ethnicity and citizenship, grievances over access to resources, including land and minerals. A total of 56 million people live below the national poverty line in the region, of which 47 million, or 71 per cent, are in the DRC.

2.1.1 Resilience gap in DRC

DRC is grappling with the issue of a protracted conflict with increasing armed groups. In the east and north-east of the DRC, ethnic tensions and inequitable access to land have led to renewed violence since early 2012 resulting in the internal displacement of more than 2.2 million people – leaving survivors with one of the worst humanitarian crises in the world with high levels of disease and malnutrition. A further 70,000 people have crossed the border into neighboring Rwanda and Uganda. Figure 4 presents the resilience dimensions from community consultations on conflict in North Kivu and South Kivu provinces.

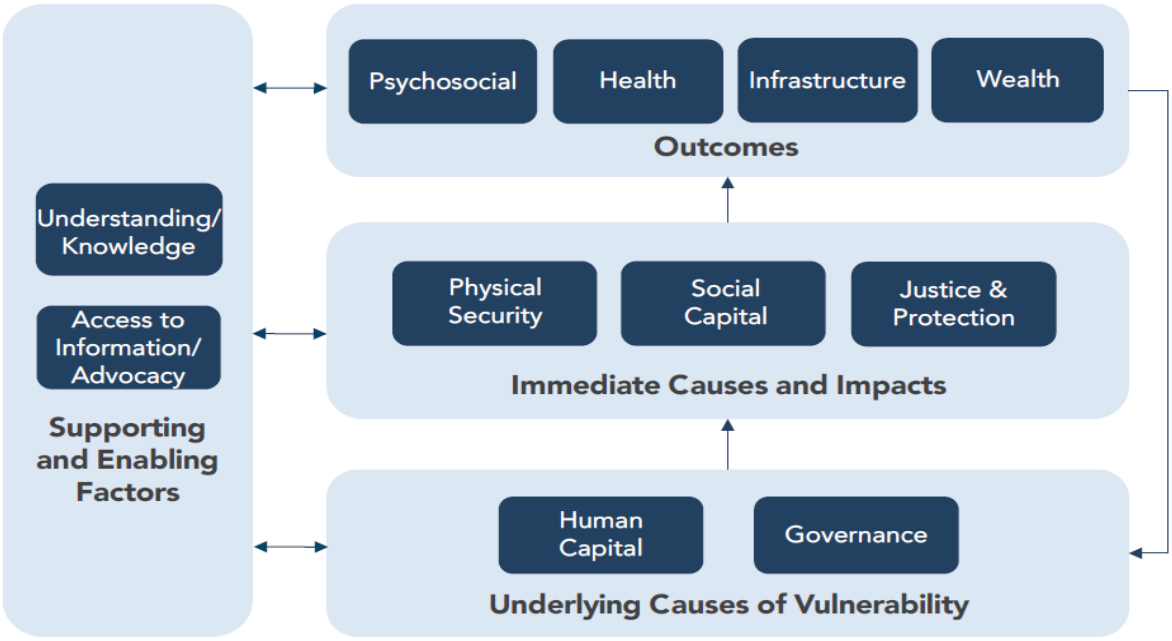

Figure 4: Resilience Framework for Target Communities in North & South Kivu Provinces – Conflict *(Source: RAN - State of African Resilience Report, 2015)*

Among the most devastating manifestations of insecurity is the high prevalence of sexual and gender-based violence (GBV) in DRC. Thousands have become victims of violence and abuse, with women and children bearing the brunt of the conflict and subsequent humanitarian crisis. Sexual violence especially against women and children is one of the main manifestations of the conflict in DRC. According to one estimate, more than 1,150 women were raped each day in DRC – staggering rates that leave in their wave physical injuries, unwanted pregnancies, sexually transmitted diseases, and incalculable psychological trauma. The communities have also reported other security concerns - prospect of death, arson, and the destruction of infrastructure. It is also worth noting that the victims of chronic conflict are faced with both physical and psychological trauma. The women and girls that have been victims of GBV express feelings of shame, humiliation, and loss of dignity among others which consequently pose significant negative attitudes towards relationships and as well predispose the women and girls to further violence once they enter into marital relationships. The cases of GBV have also been fuelled by the lack of a fair judicial system which has led to injustice and impunity for aggressors in an armed conflict setting. Figure 5 presents the resilience dimensions from community consultations on gender based violence in North Kivu and South Kivu provinces.

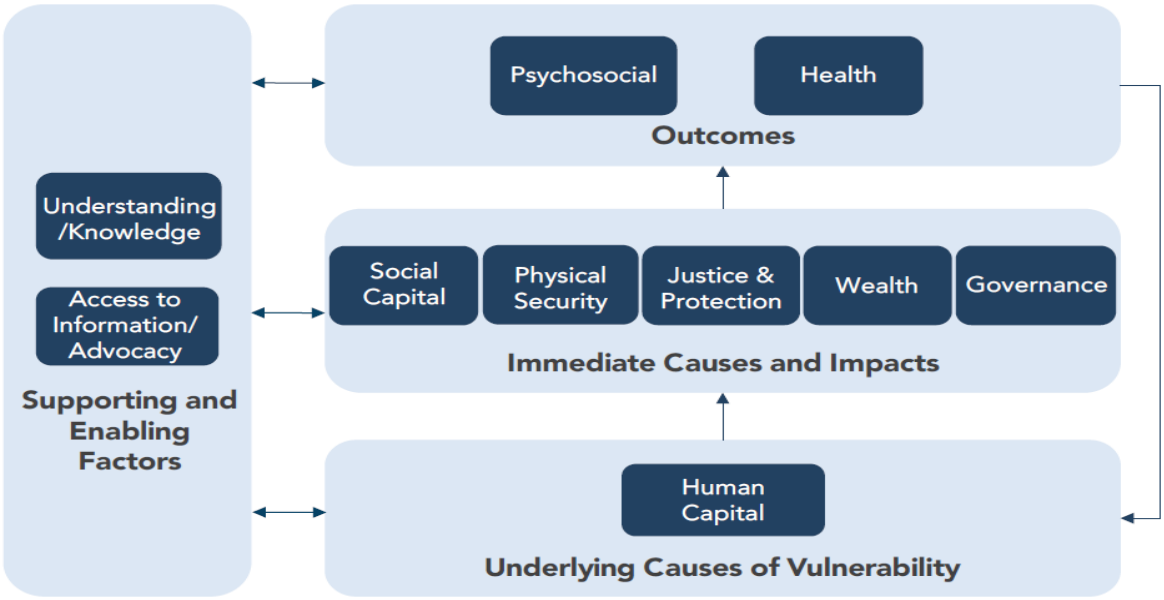

Figure 5: Resilience Framework for Target Communities in North & South Kivu Provinces – Gender Based Violence *(Source: RAN - State of African Resilience Report, 2015)*

In consultations with communities, low levels of human capital is the underlying cause of their vulnerabilities – referencing the lack of trained and educated personnel to establish physical infrastructure and adequate governing bodies. Furthermore, perhaps due to the country's weak central government and citizens' lack of faith in its ability to provide services, respondents stressed the importance of formal and informal mechanisms, and the need for processes and institutions through which citizens and groups can articulate their interests, exercise their legal rights, meet their obligations, and mediate their differences. By extension, respondents noted, the judicial system is weak, which has led to a lack of justice and impunity for aggressors in armed conflict and cases of gender-based violence.

2.1.2 Resilience gap in Rwanda

Rwanda has been faced with an endless issue of influx of refugees from DRC. With regard to the Congolese refugees living under encampment in Rwanda, there are low socio-economic opportunities that are leveraged in the camps. There are only a few lower level classes that are offered in the camps leaving a vast number of children dropping out of school. Even those who get an opportunity to accomplish their education out of the camps, they are faced with an issue of unemployment as jobs are scarce. The camps also contend with the issue of insecurity with reported cases ranging from robbery, rape and drug abuse. Figure 6 presents the resilience dimensions from community consultations on manifestations of the increased influx of refugees into Rwanda.

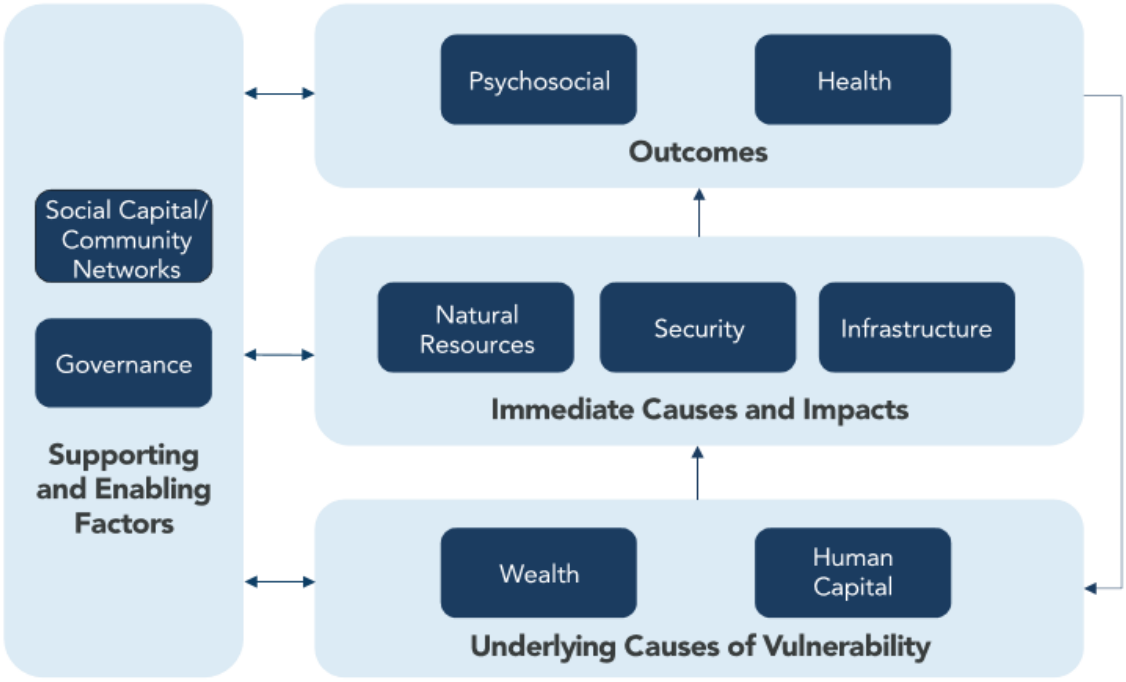

Figure 6: Resilience Framework for Target Communities in Rwanda facing increased influx of refugees *(Source: EA RILab Community Consultations: Rwanda Country Report, 2015)*

Community consultations revealed a good collaboration between the refugee camp administration and the local community administration (outside the camp). Governance and social/community networks were described as support and enabling resilience dimensions. There is also political will towards helping refugees live a better and fulfilled life. The government of Rwanda has constructed a new modern market in Gihembe refugee camp and has also built a school for children to access free primary and ordinary level education etc. The government has integrated refugees into Rwandan community initiatives, sensitization, health care, and other benefits from all government policies with a strong structural organization. Security is ensured through community policing and it is Ministry of Disaster Management and Refugee Affairs (MIDIMAR) that ensures the overall management of the camp. Refugees are visited and sensitized by government high officials like Parliamentarians (Senators). The information is rapidly widespread by the government when it concerns refugees, through family chiefs elected by refugees.

2.1.3 Resilience gap in Uganda

Data from available literature and RAN's community consultations with key stakeholders reveal that northern Uganda has persistently lagged behind on most development indicators despite attempts at fast-tracking the pace of recovery from a 2-decades chronic conflict that severely affected this region. This has been partly attributed to lack of viable livelihood opportunities for this particular community. The aftermath of the chronic conflict that ravaged Northern Uganda has continually been characterized by a sluggish pace of recovery

of communities with little or no viable livelihoods. The insurgency led to massive displacements of communities and encampment. Many of the communities were left homeless for decades. The salvage of peace in this region led to resettlement of communities back on their ancestral land but many could not verify their discrete land boundaries, and this has affected the communities' livelihoods. Additionally, due to encampment, many of the families were left to depend on aid, much of which came from local and international Non-Government Organizations (NGOs). Upon resettlement back into the community, the people had no alternative sources of viable livelihoods. Some of the communities took on subsistence agriculture where they now depend on a narrow range of crops which they use both for household subsistence, as well as income generation when they sell part of their produce. It is also important to note that the insurgency in Northern Uganda has particularly affected children, women, youth and the elderly. The women and young teenage girls have resorted to commercial sex for survival, leading to an increase in the prevalence of HIV/AIDS. The youth have a negative attitude towards work, which is exacerbated by the already limited employment/livelihood opportunities leading to idleness and unproductivity. Some attempts at diversification of livelihoods have resulted into negative adaptation, i.e., some of the livelihood options newly adopted by the community result in undesirable effects that further threaten the communities' resilience. For example, there are many reported cases of alcoholism among men in this region as a result of women taking on alcohol production as an alternative means of income generation.

Thus while chronic armed conflict is a distinct problem set, respondents in Pader, Lamwo, and Lira Districts attribute northern Uganda's challenges to the quality of governance. The respondents frequently identified similar drivers of vulnerability: lack of social services, corruption, and the need for a mechanism to resolve land disputes – all of which, ideally, fall within the purview of the government, thus its position in the resilience framework as a fundamental cause. Figure 7 presents resilience dimensions from the consultations in northern Uganda.

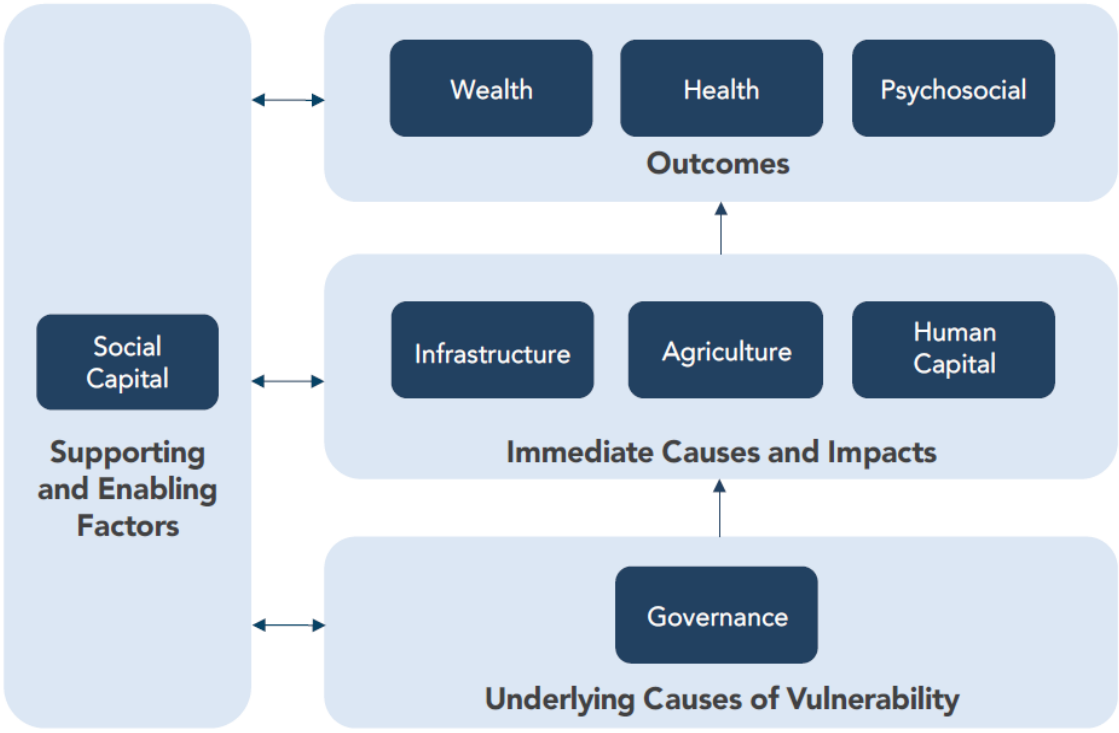

Figure 7: Resilience Framework for Target Communities in Pader, Lamwo, Lira Districts, Northern Uganda *(Source: RAN - State of African Resilience Report, 2015)*

To mitigate the lack of effective governance and fully recover from the effects of the 20-year conflict, most respondents agreed that the priorities should be to build physical infrastructure, increase access to formal education, and decrease dependence on agriculture. Without effective governance, as shown in the outcomes level of the framework, communities contend with deep poverty and report significant deficits in physical health and psychosocial well-being.

Current government programs came up regularly in discussions, particularly those administered by the National Agricultural Advisory Services (NAADS). In some cases, they were characterized as positive adaptations, providing modified agricultural inputs to combat the effects of climate variability, such as fast-yielding and drought-resistant seeds. And through the process of sensitization, some communities have successfully adopted indigenous, drought-resistant crops that include sorghum, maize and cassava, as well as farming practices that improve yields. However, government programs were in some instances criticized for corruption, for aiding only selective beneficiaries, and for not always providing high-quality agricultural inputs. To the extent that communities viewed a growing dependence on these and similar programs, and on international aid and relief more generally, the receipt of various forms of assistance is ultimately viewed as a coping strategy.

Compounding the problem is the trend of resettlement. As the security situation has improved, displaced families have begun returning home to lands that have since been

claimed by others, leading to disputes for which there is no clear, legal resolution. According to respondents, until the government has the capacity to resolve land disputes, the outlook for dependable agricultural output among resettled populations will remain uncertain.

2.1.4 Overview of resilience dimensions for RIC4CONF

There has been a great effort by the international donor community in providing humanitarian assistance that has saved countless lives in the affected communities of Uganda, DRC and Rwanda. However, due to the repeated nature and chronicity of disasters, there is now an urgent need to refocus humanitarian assistance on the concept of resilience—helping communities to recover but at the same time strengthening their capacity to mitigate and withstand future shocks and increase their security and well-being. This integration of resilience programming into relief and development efforts may potentially break the cycle of vulnerability and may provide locally driven solutions to better ensure more sustainable and effective impacts. A detailed content analysis of data generated from community consultations in Uganda, Rwanda and DRC resulted in the identification of the following dimensions of resilience that would inform the EA RILab's resilience challenge call. The issues affecting the communities and their local adaptive capabilities have been summarized into 10 resilience dimensions: 1) Wealth, 2) Health, 3) Human capital, 4) Infrastructure, 5) Psychosocial well-being, 6) Security, 7) Governance, 8) Social capital/Social networks 9) Agriculture, 10) Environment. The RIC4CONF call provides an important opportunity for innovators to engage with the local communities to develop solutions to address the issue of chronic conflict and its effects. Specifically, how are communities in northern Uganda contending with the effects of post-conflict recovery? How are communities in DRC addressing the issue of Gender Based Violence as a result of the conflict? How is Rwanda addressing the issue of influx of refugees from DRC as a result of the conflict?

2.2 The RIC4CONF call

This call focuses on the sourcing, developing, and scaling of transformative technologies and approaches that will strengthen resilience to shocks and stresses that arise from chronic conflict and its effects. In particular, RAN is looking to catalyse and incentivize the development of solutions that will impact agricultural production and markets, enhance skill building in education curriculum, as well as livelihood diversification and financial inclusion. Grants ranging between US$15,000 to US$40,000 are anticipated under Phase 1 of this call. Winners of Phase 1 Grants will then qualify to compete for Phase 2 grants (which are anticipated to range between US$50,000 to US$100,000), while winners of Phase 2 grants may subsequently complete for Phase 3 (Awards are anticipated to range between US$100,000 and US$ 200,000). The grants will support development of innovative approaches and technologies that will strengthen resilience to the effects arising from chronic conflict within the Eastern Africa region. **[Note: RAN reserves the right to change the projected award amounts or the number of anticipated awards at any time.]**.

The Eastern Africa RILab identifies and will fund projects in three priority intervention pathways for resilience building around chronic conflict related shocks and stresses.

Intervention Pathway 1: Harnessing curriculum development towards skills development and entrepreneurship

The majority of the selected RAN target communities have found themselves trapped in chronic conflict rendering them vulnerable to the effects of the conflict. The lack of access to quality education and life skills coupled with very high levels of unemployment are issues that require urgent and novel solutions. Due to the high levels of unemployment, the communities especially the youths have turned to drug abuse (including alcohol and illicit drugs) which render them to engage in high risk behaviours such as prostitution and theft in order to 'survive'. The other means of survival for these communities that are trapped in chronic conflict and its aftermath is through handouts from government and non-governmental organizations. However, this has created and fuelled a wave of dependency on aid among the community. This pathway focuses on: 1) re-imagining the education system through development and implementation of novel curriculum that will create and further improve the quality of human capital, 2) promotion of psychosocial wellbeing to further promote optimism and self-determination to curb the growing 'dependency syndrome' and 3) promotion of vibrant food systems (farming and food value addition).

Intervention Pathway 2: Financial inclusion for wealth creation

Communities often display the potential to bounce back through adaptation and coping strategies in a wake of a disaster. They may bounce back to the same status level or even to a level better than their previous state. The worst scenario is when they bounce back to a level below their prior status as they get trapped by the effects of the shock or stress. Adaptation is often constrained by low and ill diversified livelihoods and the low levels of financial engagement and inclusion. We are thus targeting solutions that will substantially empower RAN target communities by creating better financial inclusion for rural households through savings and access to credit as well as solutions tailored at diversifying livelihoods through highly profitable farm and off-farm businesses.

Intervention Pathway 3: Creating an inclusive environment for every citizen

Most of the current judicial systems are faced with a huge concern of transparency. The current land tenures are not favourable to the traditional folks whose main source of livelihoods is subsistence farming. The chronic conflict in East Africa led to massive displacement of people into camps. For those who returned after the conflict, there were no clear boundaries of the land and some people who know the boundaries had been cleared leaving behind a generation of young people who had no idea of the boundaries. This created a lot of land disputes as people were claiming the same piece of land. Even in DRC, where the communities are faced by chronic conflict which has a linkage to minerals, the major source of livelihoods is agriculture. Other causes of land conflicts within the EA RILab region include lack of documentation as the true land owners, and poor land tenure systems among others. There is an urgent need to influence the land policy reforms. Innovative ideas

may focus on building the community's capacity to engage their leaders and civil servants on pertinent issues through advocacy and/or dialogue in community and leaders. Table 2 presents anticipated outcomes targeted by RIC4CONF.

Table 2: Anticipated outcomes of the proposed interventions

Final outcomes	Intermediate outcomes
1. Diversified livelihoods 2. Markedly improved household incomes, wealth and income security 3. Reduced economic impact of shocks and stresses from climate variability on households and communities 4. Alternative livelihood options 5. Food secure households with reduced malnutrition 6. Peaceful cohabitation 7. Self-reliant communities 8. Reduced dependency 9. Revenue/taxes for government 10. Improved psychosocial well being 11. Resilient sustainable farming methods 12. Improved quality of life 13. Increased integrated risk management to cater for shocks and stresses	1. Improved agricultural practices 2. Improved farmer engagement in multiple income generating activities 3. Increased agricultural yield per acre 4. Improved post-harvest value addition/reduced post- harvest loss 5. Land conflicts resolved 6. Land disputes minimized 7. Land value increased 8. Increased farmer access to markets 9. Improved farmer leverage within produce markets 10. Reduced death cases and trauma 11. Decreased psychological stress 12. Sustainable peace building 13. Enhanced gender equity and equality 14. Reduced GBV 15. Increased options for profitable farm and off-farm 16. Businesses for rural farmer 17. Increased savings both financial and food staff 18. Improved opportunities for coupling businesses that synergize each other 19. Negotiate body relations 20. Reduced/No early marriages and Legal consensual marriages 21. Availability of psychological support services 22. Equal capacity and opportunities for men and women to contribute to development 23. Reduce the rate of school dropouts 24. Increased skilled labor force

2.2.1 Key Dimensions of Change

The planned RIC4CONF intervention will contribute to creating change through eleven (11) 'change dimensions', and aligning with six (6) resilience dimensions.

Table 3: Dimensions of change for the proposed interventions

Resilience dimensions addressed	Change dimensions
Wealth	1. Income/Wealth
	2. Viable agribusiness & other ventures
	3. Diversified livelihoods
	4. Financial inclusion (savings, access to credit, insurance)
Agriculture	5. Agricultural yields
	6. Agricultural value addition
	7. Adoption of better agricultural practices
Human capital	8. Job/employment levels/Education
Health	9. Nutritional Status/Diagnostics
Psychosocial	10. Life skills
Governance	11. Transparency/Accountability/Democracy

2.3 Objectives of the RIC4CONF Call

Communities that experience recurrent shocks and stresses arising from chronic conflict are largely dependent on humanitarian aid and subsistence farming and face the challenge of non-diversification. The RIC4CONF Grants are designed to achieve the following objectives.

General Objective:

To strengthen resilience of target communities by building their agency to promote learning, skills development and entrepreneurship by improving and promoting psychosocial wellbeing; by modernizing agriculture; fostering financial inclusion and diversification to profitable enterprises; and by creating an inclusive environment through good governance to end gender based violence (GBV) and other forms of injustice.

Specific Objectives:

The specific objectives of the RIC4CONF call are:

1. To transform communities affected by chronic conflict through promotion of education, skills development and entrepreneurship so as to create a vibrant, optimistic and dependent community
2. To improve agricultural practices through increasing agricultural production, reducing post-harvest losses as well as well as promotion of agricultural value addition.
3. To strengthen the micro economy by introducing diverse viable livelihoods to break the cycle of dependency while promoting sustainable living.
4. To increase financial inclusion for people trapped or recovering from conflict through newer, robust models and currencies for saving, access to credit, and risk transfer
5. To improve on the existing governance systems through justice, civic engagement, transparency and accountability in communities affected by chronic conflict.

The RIC4CONF organizers and partners strive to provide a round of grants that lead to resilience building around these five objectives.

3.0 RIC4CONF Grants: Structure, technical overview and schedule

3.1 Overview of the grant structure

RIC4CONF anticipates identifying and funding up to five (5) project teams addressing any of the sub-challenges described under the intervention pathways in sub-section 3.2 of this call. Teams will be selected based on the quality of their applications which will be evaluated to ascertain resilience building potential, potential for transformative impact, scalability, feasibility, and viability. Each successful team will receive a RIC grant to support the development of their proposed idea dependent on their current status and progress. The RIC4CONF grants are structured into three distinct and progressive phases where each phase has specific implementation requirements and funding levels:

- The first phase is the 'Solution Development' Phase;
- The second phase is the 'Piloting' Phase; and
- The third and final phase is the 'Scaling' Phase.

Progressing from one phase to the next will be competitive and will be incumbent on successfully meeting the requirements of a given phase based on set evaluation criteria as detailed in Section 6 of this call. Out of the five (5) teams that are anticipated to receive Phase 1 funding, it is anticipated that only the best three (3) will be selected to receive Phase 2 funding, and only the best two of these three are anticipated to be selected to receive Phase 3 funding. Additionally, to be selected, teams will have to demonstrate the extent to which human capacity development aspects have been mainstreamed into their activities for increased individual and community level agency, as well as green technologies and approaches where appropriate. This requirement underscores RAN's belief in the power and agency of the individual community member as a critical aspect of resilience building and sustainability. By mainstreaming human capacity development and increased agency we mean proposed solutions should contain a component for understanding and promoting the community's 'know-how' to apply the solution, empowering them to manage their affairs without necessarily always relying on external support, and ensuring access by marginalized groups like women and youth. By 'green technologies and approaches' we mean solutions that on the whole are eco-friendly and contribute to better protection of the environment and conservation.

The anticipated dates for all phases of the competition are provided in **Table 4.**

Phase 1: Solution Development Phase

Competition for Phase 1 shall be open to all eligible individuals or entities. The call will be opened on the **9th of February 2016**. A panel of judges will select up to **five** (5) finalists based on the merit of their applications (Evaluation criteria provided in Section 6). The five finalists will each receive a Phase 1 grant. Participants will use this grant to develop a 'proof of concept' or a 'preliminary prototype' of the proposed solution. The concept should

demonstrate technical feasibility and viability of the proposed solution, either with a physical simple prototype (for technology based ideas), a viable unit process (for physical processes), or a viable concept (for conceptual approaches).

Phase 2: Development of a refined optimized prototype and pilot testing

Phase 2 grants will only be awarded to a sub-set of winners of Phase 1 grants upon verification of the prototype plausibility, functionality and potential for adoption (awardees will provide visual, video or text-based evidence of results depending on the type of idea). A subset of up to three (3) grantees will be selected for award of a Phase 2 grant, based on projects that demonstrate clear potential for resilience building from Phase 1. *[Note: Respondents to the general call cannot apply directly for this set of grants. These grants will be competed for by Phase 1 grantees only, upon satisfactory completion of deliverables for Phase 1]*. Participants will use this grant to develop a refined optimized prototype that is ready for deployment on a larger scale. They should pilot it on a smaller scale and optimize it further to a level that is viable for multiplicative use and scale.

Phase 3: Larger scale testing, business model development and scale

Phase 3 grants will only be awarded to a sub-set of winners of Phase 2 grants upon verification of a refined optimized prototype (for technology based solutions) or a refined technically plausible concept (for solutions in form of approaches or models) that is scalable and with clear transformative potential. A subset of two (2) grantees will be selected for this award, based on projects that demonstrate clear scalability and transformative potential from Phase 2 development. Participants will use this grant to implement their business model, test their prototype or approach on a wider scale and position it for resource multiplied scaling for transformative impact. *[NB: Respondents to the general call cannot apply directly for this set of grants. These grants will be competed for by Phase 2 grantees only, upon satisfactory completion of deliverables for Phase 2]*

3.2 RIC4CONF call structure and pathway description

This section provides the RIC4CONF grants call structure, a description of the three intervention pathways, and a technical overview of the innovation sub-challenges. The Eastern Africa RILab has identified three priority intervention pathways that have a high transformational potential to impact resilience strengthening around chronic conflict related shocks and stresses:

- **Intervention Pathway 1:** Harnessing curriculum development towards skills development and entrepreneurship
- **Intervention Pathway 2:** Financial inclusion for wealth creation
- **Intervention Pathway 3:** Creating an inclusive environment for every citizen

Each pathway comprises of resilience tracks within which are the different problem sets to be tackled by the innovator teams. These are described in detail below.

3.2.1 Intervention Pathway 1: Harnessing curriculum development towards skills development and entrepreneurship

This pathway focuses on re-imagining the education system through development and implementation of novel curriculum, promotion of psychosocial wellbeing and promotion of vibrant food systems (farming and food value addition).

Track 1: Curriculum development and implementation

Background/Context: Like in many of the countries on the African continent that grapple with chronic conflict, the civil and military unrests often do result in the destruction of much economic and social infrastructure. During a conflict, most of the eligible school-age children do lack access to school as a result of displacements into Internal Displacement Camps or migration to neighbouring countries. The displacements as a result of conflict are compounded by other issues as highlighted here: 1) Instructions and teaching methods-Most rural schools lack adequate learning materials and environments conducive to learning. Training teachers to be more outcomes-based, sensitive to gender, and better able to teach about life skills among other capacities is critical. 2) Approach to curriculum development-Some of the current curricula are rigid and hence not responsive to learner needs. 3) Monitoring and evaluation methods-There is a gap in the current measurement tools and methodologies to assess the quality of learning achievement and the school environment. This calls for an urgent need to create new systems to adequately track learning and demonstrate progress or identify the need for extra help in time to address learning gaps in order to improve school attendance and performance. 4) Supervision-Some of the factors that have contributed to the low participation and completion of schooling include poverty, the indirect costs of education (such as textbooks, uniforms, meals), effects of disease epidemics such as HIV/AIDS, orphanage and 'cost' for a family losing girls' labour at home. 5) Low ICT uptake and integration for skills development and entrepreneurship.

Examples of proposals include (but are not limited to) the following:

- Teaching and learning methodologies or technologies or approaches that are more effective and interactive e.g. child-to-child learning
- Novel practical and useful platforms for providing complementary and/or alternative (non-formal) opportunities for education. Alternative basic education may for instance address specific needs of the refugee communities and any other 'mobile' communities
- Develop and mainstream gender responsive pedagogy/platforms to steer education given many families' cultural preference for enrolling all boys before enrolling any girls.
- New networks of school or university-level clubs that help promote access to quality education for both male and female students as well as addressing issues of gender, sexuality and HIV/AIDS, menstruation management, child-friendly learning, school mapping, advocacy, peer-to-peer mentoring and mass communication among others.

- Technologies or approaches that harness new forms of multimedia for learning-radio or television programmes, dramas, debates, music, dance and poetry
- New technologies or approaches that promote friendly learning environments. For instance a policy environment that allows pregnant girls or young mothers to school (in view of the high rates of adolescent pregnancy in sub-Saharan Africa); safe and secure school environments that are free from sexual harassment, gender-based violence and exploitation, corporal punishment; and an environment with sufficient latrines and sanitation facilities including sanitary pads for the girl child.

RAN would hence want to open the door for a collaborative enterprise with innovators, especially with regard to schools and schooling for Ugandan children.

Track 2: Psychosocial

Background/Context: Based on the untold legacies of the chronic conflict in Uganda and DRC, psychological issues have become a prominent issue which require a robust holistic & sustainable response at family, graphic community and society at large. This track provides a different lens to view psychosocial issues from a clinical perspective to socio-economic opportunities that promote community engagement in productive ventures and subsequently reduce crime and suicidal cases. This will enhance self-reliance, psychological wellbeing, food sovereignty and increased resilience. For instance, in northern Uganda, the region has experienced a slow economic recovery after a long standing 20-year chronic conflict resulting into encampment, high dependency syndrome, non-viable coping strategies such as alcohol brewing for income, low levels of community engagement in productive ventures. There are high levels of crime and suicidal cases. Similarly, the high influx of Congolese refugees into the camps of Kigeme and Gihembe in Rwanda creates a high tension on the existing social services such as healthcare, access to water and good sanitation, food security and nutrition, education, housing. There are also cases of sexual and GBV, low agriculture production and issues related to child protection.

Examples of proposals include (but are not limited to) the following:

- Novel technologies, approaches or platforms that harness laughing (‘laugh clinics’ to improve psychosocial wellbeing). How might we leverage music, dance and drama and other forms of multimedia or sports to improve communities from the effects of armed conflicts?
- Invest and regulate traditional medicine
- Approaches to regulate alcohol (especially local brew) production and consumption
- Platforms that offer life skills (entrepreneurship networking information)
- Early diagnostics, investment in modern medicine and regulation of traditional medicine and folk practices.

Track 3: Modernizing agriculture and promotion of value addition

Background/Context: The production and distribution of food intersect with some of the most critical issues of our time: health and nutrition, poverty, energy, climate change, biodiversity, water, and labour. Whereas there has been a global call to end global poverty and hunger, the world's dominant food and agriculture systems are faced by complex and very urgent challenges including pervasive hunger and malnutrition (both undernutrition and obesity), pollution (including that arising from agricultural activities), labour incongruities, and extreme inequities in distribution of farm land and food access. There are still colossal gaps in the methods of farming as well as post-harvest handling of produce, farmer/community attitude towards farming and a gap in the available policies and frameworks.

Thus, achieving food security, justice, health, and sustainability in food systems, and equitable access to nutritious food, requires significant changes, ideas, and problem-solving by people and organizations in a wide variety of disciplines. Rural farmers are stuck in subsistence forms of agriculture based on small fragmented acreage and inefficient methods of agriculture and livestock rearing. Furthermore, the heavy dependency on rain-fed farming makes the majority of households vulnerable to the unpredictable and erratic rainfall pattern with alternating drought and floods. There is inadequate and ill skilled labour for agriculture-mainly women and children are taking lead in producing food an issue compounded by low mechanization in the agricultural sector. Another challenge that rural communities are faced with is post-harvest handling of produce with a substantial amount of both perishable produce (e.g. vegetables and fruits) and less rapidly perishable produce (e.g. grain and legume seeds) ending into waste. There is limited access to affordable technologies for produce processing to improve its quality before sale (lack of value addition to raw produce). These two factors interplay to drastically reduce the price of their produce. On the other hand, produce distributors who are able to sort, refine and add value to produce often get much higher profits than the farmers. We are seeking a solution that will transform post-harvest handling of produce to facilitate value addition in an eco-friendly way.

We are seeking solutions that can substantially increase the yield-per-acre among rural holdings while making production more efficient and sustainable, modern improved seeds, cropping technologies that resist nuisance weeds, pest control, adaptation to drought, harnessing flood water for agriculture, among other. We are also looking out for projects that have the potential to improve post-harvest handling of produce so as to reduce post-harvest losses.

Examples of proposals include (but are not limited to) the following:

- Technologies or approaches in Public Health that aim to improve children's nutrition and health outcomes or address issues of hunger and/or obesity.
- Technologies or approaches that greatly reduce agriculture's greenhouse gas emissions and promote sustainable agricultural practices.
- Technologies or approaches that highlight and drive public/stakeholder awareness of issues such as inadequate labour for agriculture. How might we make farming attractive and appealing to the youth?

- Technologies or approaches that aim to improve storage methods to reduce postharvest food loss and food waste for small-scale farmers in the developing world.
- Technologies or approaches that collate and disseminate agricultural related information for development e.g last mile communication of climate early warning information
- Technologies or approaches that significantly increase yield while keeping the production ecosystem green
- Technologies or approaches that prolong production capacity in drier seasons without disrupting bio-diversity as well as technologies or approaches that leverage flood water for agriculture
- Technologies or approaches that expand available surfaces for crop and animal husbandry without encroachment on high risk or protected environmental zones
- Low cost farming implements that make production more efficient as well as sufficient
- New approaches for increasing yield for indigenous drought resistant starches and vegetables
- Improved locally adaptable storage technologies
- Improved locally adaptable technologies for drying/preservation of produce
- Low cost technologies and approaches for basic processing and local value addition to agricultural produce
- Technologies or approaches that re-define the existing land tenure systems to foster agriculture and increase yield
- New forms of cooperatives

3.2.2 Intervention Pathway 2: Financial inclusion for wealth creation

Individuals living in communities that are faced with chronic conflict are disproportionately trapped into chronic poverty. Some of these communities have an abundance of minerals and other natural resources which also serve as the source and catalysts for chronic conflicts in the EA RILab region. The citizens do rely on assistance/humanitarian aid whereas other depends on one or a narrow range of livelihood options such as subsistence farming resulting in limited finite incomes and chronic poverty. The low financial inclusion coupled with a pervasive culture of not saving for investment further drives most communities into deeper levels of poverty. Most of the communities also depend on subsistence farming with little or no diversification of livelihoods. This pathway seeks to create and foster a culture that reduces consumerism, improve savings and access to credit. We are also targeting ideas that provide alternative sources of livelihoods for the target communities.

Track 4: Financial Inclusion

Background/Context: There is an increasing number of individuals and business enterprises that still lack access to basic financial services. The rural and poor households who are 'unbanked' often find it difficult to access credit, savings and insurance services from commercial banks and other financial institutions. Because of their low levels of financial

literacy, they are often considered a high risk group by commercial banks, which are mainly driven by profit. Farmers also lack the collateral they need to secure the size of loans that are required for establishing viable businesses. There is also an issue of lack of a savings culture by the local folks. This includes both monetary savings and storage of some produce surpluses for use in low output months. This is compounded by the lack of insurance services. Without access to finance, it is difficult for rural farmers to attain a well-being of their families, expand their businesses as well as venture into new profitable enterprises. For small and medium enterprises (SMEs) who struggle to secure capital, the lack of access to financial services further creates critical obstacles to their own growth, as well as the economic and employment potential they represent.

We are seeking for innovator teams to develop new models or approaches to increase household access to credit, savings and insurance services to catalyze development among rural households and power investment. Precisely, we are looking out for an avalanche of novel products, services, tools or mechanisms that disrupt current credit financing as well as igniting a culture to save for investment amongst the rural and peri-urban households. We are also looking out for novel insurance schemes that safeguard communities from shocks and stresses that further erode resilience.

Examples of proposals include (but are not limited to) the following:

- Novel technologies, approaches or platforms to facilitate saving among smallholder farmers
- Models that simplify saving in commercial and/or rural banks for rural farmers
- Models, approaches or technologies that channel savings directly to predetermined low risk investments
- New and disruptive forms of currency that can be channelled into savings
- Innovative models and approaches for risk mitigation through risk transfer, accessible by rural communities
- Innovative credit products/services for smallholder farmers (Credit 'circles' for the future)
- Disruptive mechanisms for overcoming traditional barriers to accessing credit in rural communities
- New and disruptive forms of currency that can be channelled into credit payments
- Innovative solutions for overcoming non-compliance to credit repayments to ensure continuity of village micro-credit facilities while maintaining farmer confidence
- Financial literacy programming for underserved communities
- Programs to support SMEs to access or manage capital

Track 5: Diversifying livelihoods for resilience

Communities trapped in chronic conflict in DRC- north and south Kivu- along with the communities that are displaced into Rwanda due to the conflict in DRC normally depend on humanitarian aid. Similarly, the aftermath of the chronic conflict in northern Uganda has been characterized by a high level of dependency, idleness among the youth and an adoption of some rapid return cottage industries like alcohol brewing by women. This has fuelled a

high level of alcoholism among men and use of illicit drugs among the youth. This lack of diversification is driven by either a lack of options for viable business in their contexts, a lack of trade skills to try extra-agricultural businesses or a pervasive fear of risk taking due to lack of entrepreneurial skills. We are therefore targeting solutions that can easily be deployed in the refugee camps in Rwanda, the war-torn communities in DRC and business solutions that can catalyze the pace of recovery after the chronic conflict that ravaged northern Uganda. The proposed ideas should be easy to set up, moderately-to-highly profitable, and rapidly adaptable to rural situations. The purpose is to create viable business for livelihood diversification among communities so as to reduce their dependence on humanitarian aid and subsistence farming in order to increase their incomes.

Examples of proposals include (but are not limited to) the following:

- Models, approaches or platforms for outsourcing of micro-work for rural youth with access to technology
- Models or platforms to profit for the rural poor to tap into and profit from emerging industries like mobile telecommunications, mineral exploration, transport and education
- Highly profitable and low-cost to set up businesses for women, unemployed youth and refugees living in camps
- Models for development of rural franchises and profitable long-term family businesses among rural poor
- Public health related models, approaches or platforms to help in diagnosis and prevention of diseases of public health concern as well as those that can be channelled into a business

3.2.3 Intervention Pathway 3: Creating an inclusive environment for every citizen

Track 6: Inclusive Governance Systems

This track focuses on two main areas: 1) Governance including access to justice, civic engagement, transparency and accountability, and 2) Sexual and Gender Based Violence especially with a key interest in women's participation and empowerment. Most of the current judicial systems are faced with a huge concern of transparency. The current land tenures are not favourable to the local community whose main source of livelihoods is subsistence farming. The chronic conflict in northern Uganda led to massive displacements of people into camps. On return, there were no clear boundaries of the land and some people who know the boundaries had been cleared leaving behind a generation of young people who had no idea of the boundaries. This created a lot of land disputes as people were claiming the same piece of land. In DRC, although the communities are faced by chronic conflict which has a linkage to the minerals, the major source of livelihoods is agriculture. Other causes of land conflicts include lack of documentation as the true land owners and poor land tenure systems among other. There is an urgent need to influence the land policy reforms.

Innovative ideas may focus on building the community's capacity to engage their leaders and civil servants on pertinent issues through advocacy and/or dialogue in community and leaders. How do we propose new frameworks for citizen participation when it comes to discussing issues that concern policy? Citizenship participation in the policy process ('Bottom-up approach') is crucial. Teams will also be expected to develop contextually relevant technologies or approaches for addressing Gender Based Violence and asymmetries therein. There are issues of advocacy and dialogue norms – how might we break the socio-cultural norms that prevent women from actively participating in dialogue to end GBV? Also to take note of is the role of art in addressing pressing social issues through visual, literary, performing arts or any other form to change the way we perceive the world and advocate for the desired change cannot be underestimated. Engaging in art can ignite and cause change through provision of a platform for dialogue and collaboration.

Examples of proposals include (but are not limited to) the following:

- Platforms that engage the local and central governments tailored to promote government accountability, transparency, and responsiveness to the needs of the local communities.
- Innovative art projects that meaningfully engage with issues of advocacy, justice, and community-building. The ideas may use an array of multimedia- visual/conceptual art, photography, videography, music, dance, theatre/performance art, creative writing, or other forms keeping the context of the target communities in mind.
- Technologies or platforms for settling disputes (such as land wrangles, etc) among individuals or communities in a manner that promotes community cohesion.
- Platforms for building the capacity of women, men and the youth to take an active role in combatting Gender Based Violence and advocate for citizens' rights. The platforms should provide a gender 'lens' through which needs and concerns are advocated for.
- Novel platforms and technologies that empower and improve women's ability to make and act on decisions
- New communication channels that bring to the table the voice of the minority

3.3 Sub-challenge grants and additional costs

3.3.1 Grant amounts

This call comprises three pathways and six tracks, with RIC grants anticipated to be awarded as follows:

- A total of 5 grants will be awarded in Phase 1 (Anticipated award range: US$15,000-40,000)
- A total of 3 grants will be awarded in Phase 2 (Anticipated award range: US$50,000-100,000)
- A total of 2 grants will be awarded in Phase 3 (Anticipated award range: US$100,000-200,000)

NOTE: RAN reserves the right to change the projected award amounts, or the number of anticipated awards, at any time. The release of this call does not obligate the RAN to make any awards.

3.3.2 Official currency

All currency quotations in the RIC4CONF call should be in United States Dollars (US$).

3.3.3 Resources beyond the award

Awardee teams shall be responsible costs for all research and development, prototyping, travel, and shipping expenses that exceed the grant amount awarded in this call. Grant money and other reimbursement amounts will be paid through an agreement with the RAN and are subject to the availability of funds. RAN reserves the right to determine the grant amount awarded to a particular team and to vary grant amounts among selected finalists based on RAN's analysis of the proposed project budget and the availability of funds. The Judging Panel, RAN and USAID reserve the right to reassess the technical requirements and performance evaluation criteria, or to cancel the availability of the grants at any time.

However, RAN is fully cognizant of the fact that bringing successful interventions to full scale may in some projects require much more resources than can be provided by the RAN. As part of the mentorship process, RAN will provide support to grantees in Phase 2 and 3 on development of viable business models and mobilization of external funding from interested agencies, especially for interventions that are clearly impactful on the communities.

3.4 Implementation schedule

Table 4 provides an overview of the call schedule from when the call opens on 25th January 2016.

Table 4: RIC4CONF call schedule

Milestone	Dates
Phase I	
Call open for applications	9th February – 11th April 2016
Dedicated Question and Answer Period	9th February – 11th April 2016
FAQs posted online starting	9th February 2016
Applicant support 1st Webinar	24th February 2016
Applicant support 2nd Webinar	23rd March 2016
Open day clinic	30th March 2016
Application deadline	11th April 2016
Evaluation and selection of finalists	12th April – 29th April 2016
Grants awarded and finalists announced	9th May 2016
Implementation period	9th May 2016 – 9th November 2016
Phase I Evaluation	10th November – 30th November 2016
Phase II:	
Finalists Selection (from Phase I grantees) including preparation of Phase 2 action Plans	1st December – 16th December 2016
Phase 2 Grants awarded	16th December 2016
Implementation period	19th December 2016 – 19th June 2017
Phase II Evaluation	20th June – 30th June 2017
Phase III:	
Finalists Selection (from Phase II grantees) including preparation of Phase 3 action Plans	1st July 2017 – 14th July 2017
Phase 3 Grants awarded	14th July 2017
Implementation period	17th July – 17th January 2018
Phase III Evaluation	18th January – 31st January 2018
Reporting, project close out and dissemination for scale (Phase 3 projects)	2nd February – 16th February 2018

4.0 RIC4CONF Grants: Eligibility, terms, and conditions

4.1 Rules for eligibility

4.1.1 Teams of university students, university faculty and student-faculty collaborations from established universities worldwide are eligible to apply.

4.1.2 Organizations are also eligible to apply. Potential applicant organizations may include foundations, NGOs, faith-based organizations, private businesses, business and trade associations, colleges and universities, community based organizations and civic groups. All applicants in this category must be legally recognized entities, formally registered under applicable law, and they should attach evidence to that effect on their application.

4.1.3 Teams of individuals that are not university students are also eligible to apply.

4.1.4 Entities that are ineligible to apply include: Government agencies (local and foreign), non-incorporated entities (informal organizations), and individuals not affiliated with any legally recognized entity as specified in rules 4.1.1, 4.1.2 and 4.1.3 above. Individuals interested in applying for the RIC4CONF call are encouraged to form teams in line with the requirements given in rules 4.1.1 and 4.1.3 above. Other entities ineligible to apply include any individuals or organizations participating in, linked to, or sponsoring subversive activities including criminal acts, terrorism or related activities. A background check will be conducted on all teams considered for the grants for their status regarding United States Government (USG) Office of Foreign Assets Controls (OFAC) sanctions lists, and for the legal nature of their affiliate organization.

4.1.5 Colleges, universities, and research facilities that are funded by, and/or affiliated to, a foreign government are not considered a foreign government.

4.1.6 Grants may not be awarded to an organization from, or with a principal place of business in, a country subject to trade and economic sanctions administered by the Office of Foreign Assets Control (OFAC) of the United States Department of Treasury or to any individual or entity subject to targeted trade and economic sanctions administered by OFAC. For more information see OFAC website: http://www.ustreas.gov/ofac/. The current list of OFAC restricted countries includes Iran, Syria, Cuba, North Korea, and Sudan. However, the list of countries subject to OFAC restrictions may change, and RAN will conduct a final eligibility determination prior to award. All USAID restrictions pertaining to US Government funding apply.

4.1.7 The RAN Resilience Innovation Challenge seeks applications that have an operational focus in low-income and middle-income countries, as defined by the World Bank (http://data.worldbank.org/about/country-classifications/country-and-lending-groups). The implementation of the project including pilot and testing will be done in the countries covered by the Eastern Africa RILab – Democratic Republic of Congo (DRC), Rwanda, Uganda, and Tanzania.

4.2 RIC4CONF Teams

4.2.1 A "Team" refers to a group of individuals working on a particular RIC4CONF challenge. Each Team must select a designated Team Leader who will serve as the primary point of contact for this team on all matters related to implementation of the grant, and correspondence. The Team Leader should be the individual responsible for day to day project management and should be reasonably accessible to respond to different tasks related to implementation in case the team is awarded. He/she should be an adult (at least 18 years of age) in sound mental state.

4.2.2 If selected, teams must submit a Letter of Commitment from each team member as part of their submission documents. In this letter, each organization or individual must submit in writing their commitment to participate in project activities, specifying their exact role in the project. Further, the letter should specify the nationality of each individual and Date of Birth for each individual. For individual organizations or affiliate organizations the country where they are incorporated should be specified.

4.3 Intellectual Property

Any Intellectual property that shall be created or generated jointly by the parties shall be jointly owned by the parties in accordance with their inventive contribution to such Intellectual Property. All awardee teams shall grant to Eastern Africa Resilience Innovation Lab (EA RILab) and its affiliates (these include USAID, Makerere University and partner universities) a non-exclusive, royalty-free, perpetual license to use any resultant or derived intellectual property (e.g. product, service, or technology) that will be developed using the RIC4CONF grants, for development work.

Each Team must clearly delineate any intellectual property included in the application that was previously developed by the Team, to which the Team wishes to protect as proprietary data. Such intellectual Property must be clearly marked as proprietary data.

All proceeds accruing from commercialization of IP generated via RIC4CONF grants, following the conclusion of the grant period will be negotiated on a case-by-case basis amongst the parties, but in line with existing IP policies of the EA RILab partner universities.

5.0 Submission of applications

5.1 Application submission

Submission of applications will be done via an online platform at grants.ranlab.org/. All applications must be submitted via this platform and RAN will not accept applications submitted via any other means. Complete instructions on how to submit applications are provided on the website. Applicants must ensure that their applications are successfully submitted on the platform in their entirety, and they will receive a confirmatory email from the online platform as proof that their application has been successfully submitted. If the Applicant experiences any difficulty with submitting an application through the Online Application Platform, the Applicant should send an e-mail to the Eastern Africa RILab RIC4CONF support team at: support.earilab@ranlab.org

5.2 Rules governing submission and participation

5.2.1 Applications must be written and submitted in English

5.2.2 Applications must be submitted via the web-based platform at grants.ranlab.org/. Those submitted via regular mail, facsimile, or email will not be accepted.

5.2.3 **Complete applications must be submitted by the deadline of the RIC4CONF call (11:59 pm East Africa Time on April 11, 2016) using the online platform.** No additions or modifications to the applications will be accepted after this submission deadline.

5.2.4 RAN bears no responsibility for any transmission errors associated with electronic submissions.

5.2.5 If no application meets the required threshold to receive a grant, the call may be reopened at the sole discretion of RAN, the EA RILab, and USAID.

5.2.6 Liability: Participants agree to assume any and all risks, and waive claims against RAN and its related entities and partners for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from their participation in this innovation challenge.

5.2.7 Teams can submit more than one application. In such instances, each of the different projects will be submitted and reviewed separately.

5.3 Applicant support

5.3.1 Questions during the pre-submission period

Applicants will have an opportunity to pose questions regarding the innovation challenge or any part of the application process. The question submission period will run from 9th February to 11th April 2016. Applicants may submit questions to support.earilab@ranlab.org during this timeframe. The Questions and Answers will be posted on the FAQ section on the platform website (grants.ranlab.org) by 9th February 2016.

5.3.2 Webinar

EA RILab will host two public webinars on February 24th and March 23rd, 2016 to allow potential RIC4CONF applicants to ask any pertinent questions and seek clarifications for anything that may not be clear regarding the call. The connection and schedule details for this webinar will be posted on grants.ranlab.org.

5.4 Information required from applicants

5.4.1 Basic applicant information

Through the Online Application Platform, applicants are asked to input details regarding their team to participate in the RIC4CONF call. The information is being collected for demographic purposes only and will not affect the evaluation of the application. This information will not be used for any other purposes other than those related to this call. The following information will be collected:

- Name and full address of the Team
- Teams applying as organizations that are registered as legal entities should indicate the name of the organization and include the country where the organisation is incorporated/registered. Such teams will be required to upload documentary evidence of official incorporation.
- All teams should indicate particulars of the team leader as their Point of Contact (name, position title, telephone number, e-mail address)
- Names of other organizations/firms that are partnering on the application
- Short profiles of key team members highlighting their expertise and experience

5.4.2 Technical information

- Concise application title
- Intervention pathway, Track and country/context applied for
- A description of the proposed solution, indicating what is innovative about the solution given the current state of knowledge, how the solution aligns with the proposed theory of change as given in the technical details for each challenge in Section 3.0, and how the implementation of the solution would be structured and positioned for success, taking into account the need to build agency and adopt 'green' technologies and approaches, where appropriate for overall success and sustainability.
- Project Budget: Teams will be required to upload their proposed activity budget and Gantt chart detailing their proposed activities and timelines. Guiding templates for this information will be available on the online application platform. At this level, teams will be expected to budget only for Phase 1 funding. Budgets should be itemized based on the activities to be undertaken to provide necessary deliverables for Phase 1 funding. Thereafter, a summary budget that re-categorizes key costs in the following categories should be derived from the detailed budget:
  a) Personnel costs

b) Travel/Transportation
c) Equipment
d) Supplies
e) Administrative and other Costs

Application form limited to 30,000 characters (approximately 5,000 words or 10 pages of single spacing, font size 12, Times New Roman)

6.0 Judging applications and selection of finalists

6.1 Judging phases

The RIC4CONF grant is a 3-phased grant where teams advance from one phase to the next based on evidence and expert evaluation. Each stage focuses on different aspects within the innovation development timeline and as such, different evaluation criteria will be used for the different stages. Table 3 below provides a summary of the different phase-specific evaluation criteria.

6.2 Judging panel

6.2.1 The Judging Panel is responsible for evaluating applications for alignment with RAN's theory of change with respect to strengthening resilience to shocks and stresses arising out of chronic conflict. The Judging Panel is comprised of highly qualified and impartial judges with expertise in the technical domains in which the intervention pathways lie (i.e. agriculture, development, markets, behaviour change, engineering, financial services etc.), resilience building, development programming, business modelling, and user-centred design approaches. The Judging Panel is also drawn from various sectors including academia, civil society organizations, the private sector, public sector, development partners and USAID national and regional representatives.

6.2.2 RAN and USAID retain the sole and absolute discretion to declare the finalists and award all grants in this call. Any such decision may not be challenged by any entrant.

6.2.3 All members of the Judging Panel will sign Non-Disclosure Agreements, as well as statements acknowledging that they make no personal claim to the intellectual property developed by Teams or relevant partners.

6.3 Phase-based evaluation criteria

The following criteria will be used to evaluate applications at the three different stages of the RIC4CONF call.

Table 5: Phase based evaluation criteria

Evaluation Criteria	Evaluation Aspects	Maximum Score
Phase I		
Alignment to RIC4CONF intervention pathways for strengthening resilience	Does the proposed solution address the desired resilience outcomes for each sub-challenge/track?	10%
Technical Approach and Methodology	Is the proposed solution innovative? Does it have the potential to disrupt current practices and approaches? Does it constitute a paradigm shift? Is it feasible? Is it viable? Is it sustainable? Is the proposed implementation methodology sound and appropriate for the local context?	40%
Plausibility of proposed business model and potential for scale	Is Scale built into the solution? Is the business model sufficiently disruptive? Is it viable for local communities? Can it be replicated in similar contexts? What is the proposed diffusion strategy?	20%
Team composition	Does the team have the required expertise, experience and necessary contacts to deliver? Do they have a local footprint?	10%
In-building eco-friendly solutions and Natural Resource Conservation	Does the proposed approach incorporate aspects of going 'green' for sustainability and resilience building? Are proposed approaches and technologies (where appropriate) 'green' and pro-natural resource conservation?	10%
Building agency	Does the proposed approach incorporate aspects of the key bedrock/basic issues of developing human agency and resilience building? How does the proposed solution empower the target communities to solve the resilience challenge(s)?	10%
Phase II		
Technical feasibility	Is the approach or technology technically feasible? Is the solution cost-effective and innovative compared to existing alternatives? Does it have transformative potential? Has it been optimized for efficiency? Have unintended consequences been identified and strategies to amplify or mitigate these been put in place? This will also include early evidence from Phase I solution development.	40%
Business model and Market viability	Have market assessments been done? Has the business model been refined to reflect the market trends? Is the refined diffusion strategy sufficiently plausible?	30%
People (user) aspects	Is the solution user-friendly? Is it easily adoptable? Is it acceptable given the socio-cultural dynamics? Have aspects that require human behaviour change been addressed? Has the desired behaviour been adequately cultivated? Have agency aspects been promoted?	30%
Phase III		
Technical Feasibility	Has the technical approach been optimized? [By optimization, we mean that the prototype or concept is developed to a model with acceptable or better efficiency than the existing technical standard (e.g. 75% validity for screening tests, 75% efficiency	15%

	for engines, sufficiently acceptable aesthetics, dexterity and ergonomics (for technology based prototypes) or sufficiently proven cause-effect linkages, input and process considerations and clearly established potential confounders (for a conceptual approach based solution)]	
Evidence of adoption	Have a critical number of users adopted and continued to use the solution? Does the solution demonstrate additional positive spin-offs and/or a paradigmatic shift?	25%
Market viability assessment	Is the solution viable given the operational context? Has the business model been refined to maximize scaling potential?	25%
Awareness of and strategies to address/comply with policy and regulatory requirements	Does the team demonstrate sufficient actionable knowledge on the policy and regulatory environment that could impede or catapult scaling of the innovation? Have appropriate strategies to address policy or regulatory impediments been designed?	10%
Stakeholder buy-in	Have critical partnerships for implementation and scale been identified? Has commitment to participate been sought and received favourable response?	25%

6.4 Selection of finalists

Once the application period closes, a team of reviewers/judges will assess all submitted applications using the evaluation criteria given in this section. Incomplete applications will be excluded from the evaluation process. The evaluation process will proceed in multiple stages:

- ***Stage 1:*** The reviewers will identify an initial shortlist across the different innovation sub-challenges, selecting the top tier applications per sub-challenge.
- ***Stage 2:*** The shortlisted teams will make a live pitch to the judges and respond to various questions posed to them by the judges. These questions will have arisen out of their written submissions and will include any issues flagged for clarification by the reviewers, as well as any ad-hoc questions arising from the live pitch. The pitch sessions will be conducted either face-to-face or using appropriate communication technologies.
- ***Stage 3:*** RAN will consult with relevant technical and geographic experts within USAID and final selection decisions will be made.

6.5 Notification of award

Successful Teams will be notified by e-mail and telephone to their designated point of contact. Successful teams and their affiliate organizations will also be profiled on the grant website: grants.ranlab.org/.

6.6 Tracking your application

The grant website will contain information on the status of the applications at the different stages. Tracking will be provided for the entire batch of applications and not for individual applications.

7.0 RIC4CONF Innovator Support: Capacity Building and Mentorship

Selected finalists will be enrolled into RAN's incubation support program run by the Eastern Africa RILab. The RILab will offer technical support to the teams as they develop solutions in line with their awards.

7.1 Induction activities

Successful applicants will be taken through a brief pre-award induction period, to set the pace for their working relationship, scheduling and ethics with RAN. This process will include:

- *Induction meeting:* A brief induction meeting to agree on methods of work, milestones and award disbursements. Applicants will be formally inducted into RAN's Innovation Incubation Pipeline.
- *Formation and proof of a multi-disciplinary team:* Winning teams will under-go a team composition check and will be advised on the critical composition of their team that caters for cross-discipline needs of their idea. Teams with clear gaps will be required to source additional membership to bridge gaps.
- *Contracts and IP issues:* Following the completion of revision of team composition, teams will be referred to RAN's appointed Legal team to sign an agreement for the award.
- *Work plan:* Successful teams will be required to develop a work plan for execution of the development of their idea. This work plan will be agreed upon with the EA RILab team.
- *Compulsory skills training:* Successful teams will be required to under-go some basic trainings at a convenient time when they are next offered by the RILab. Two of these courses will be compulsory for all awardee teams (Not all team members will be required to attend but each team will be represented by at least one team member):
    - Short course in Resilience Interventions (RI) (Equivalent to 1.5 credits or 1 Week): The concept of resilience is a relatively new term to many university students and stakeholders. Because RAN's primary interest is in innovations that build resilience, at least one member from all innovator teams initiated into RAN's development incubator will have to undergo a rapid course on 'Resilience Interventions' as a minimum standard across the RILabs
    - Short course in Design Thinking (DT) (Equivalent to 1.5 credits or 1 Week): RAN's approach to innovations will be driven by the 'Human-Centered Design philosophy. At least one representative from each selected team should undergo this training. The training will incorporate best practices in design of innovations that meet actual needs of communities. It will also include fail-fast approaches to rapid prototyping and clear elaboration of a theory of change.

      The courses will be provided in dual mode as 'face-to-face' or as 'M-KITs' (A series of short multi-media online tutorials organized to impart specific skills) to increase their accessibility and to facilitate flexibility in time schedules of innovators, given other academic requirements that students have. The face-to-face courses will be offered at the lab premises on a regular predictable basis

(e.g., the Eastern Africa RILab will offer these courses on a quarterly basis). In order to build innovation capacity, the courses will be open to all students and faculty in the partner universities while the online courses/M-Kits will be open to an international audience. Detailed information on the availability and platforms for taking the M-Kits will be provided in due course. Admission to the face-to-face courses will be on a first-come-first-serve basis, although RAN innovators will be given due preference.

- *Other skills trainings:* During the design phase, Teams or team mentors may realize the need for acquiring specific skills in a particular skills area. RAN will have a menu of courses ('face-to-face' and 'M-KITs') that interested teams can choose to take to enhance their capacity.

- *Mentor matching:* Innovator teams will be matched with suitable mentor(s), facilitated by the EA RILab. Mentors should be professionals with technical knowledge of the solution domain in which the respective innovator teams are working. Additional mentors may be identified in due course when the innovation has reached other stages where it requires specific expertise like an entrepreneurship plan or community testing. Mentors should as much as possible be persons with proven interest in innovation and ready to offer services and time as champions of student innovations, with minimal cost to the project.

- *Inductive brain-storming:* The EA RILab will invite the successful applicants for an inductive brain-storming session in which they will present their idea and a detailed technical critique will be provided. The RILabs will compose the teams of technical persons to critique these ideas.

7.2 Mentorship support to innovators

Although RAN's innovation awardee-mentor teams will each be expected to operate with a reasonable degree of autonomy, the RILabs will develop an incubation support program to provide continuous support to developers based on their needs at different stages. Incubation support will be provided asynchronously to the different teams and in a sufficiently flexible way to allow innovators with different needs to benefit.

Support activities will also be open to other innovators and potential innovators not necessarily in RAN's innovation pipeline, so as to build innovation capacity and team based learning. Upon selection, all project teams shall as a requirement propose a suitable Faculty sponsor from a recognized academic department (or equivalent academic unit) preferably within any of RAN's network universities or any other accredited University within the country where the project will be implemented. The proposed faculty mentor/sponsor should be technically aligned with the team's technical requirements and will offer technical guidance and academic input into their activities. In addition to this mentor the EA RILab may, if they deem it fit, identify and attach one or more mentors in other technical dimensions needed for the proposed solution to be developed and optimized.

Mentorships support will include:

- Brainstorming/ideation/Rapid prototyping sessions for developers to refine their idea
- Elective trainings on specific skills areas identified from the developers
- Linkage to communities to brain-storm of ideas and collect additional information on prototypes and test refined prototypes
- Working space for small team discussions
- Referral linkages to specialty labs where developers can develop special components of their prototypes
- Linkage to other HESN partners offering support that is in line with their work
- Bringing on more mentors with additional expertise in specific areas
- Technical vetting of resilience and support in outlining a theory of change for each innovation

8.0 Important definitions

Adaptive capacity: The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to avert some or all of the negative effects of a shock or stress.
Institution: Refers to the leadership or governance structure for the affected community.

Livelihoods infrastructure: Refers to holdings on which households or communities depend for income e.g. gardens/crops, stored produce.

MKITS: Refers to a series of short multi-media online tutorials organized to impart specific skills sets for innovation developers asynchronously and at a distance aimed at enhancing specific skills sets among resilience innovators. They are defined as 'high value learning objects' because they will be designed in such a way that they transmit critical technical information to develop a critical knowledge base and/or specific skills for the innovator in a relatively short period of time. [Example: An from a computing class is developing a prototype for a malaria diagnostic device but ins not knowledgeable about sensitivity and specificity of screening tests in human beings – he/she may take a rapid course in 'Validity of Screening tests', another in 'Ethics of research on human subjects' and another in 'Phase 1, II and III clinical trials' but these will be designed only to impact the critical background knowledge so that they are well aware of the standard of practice in the public health arena when developing their prototype.] The MKITS will be prepared and packaged by RAN's RILabs and will consist of short themed sessions using different media. An interested person may use one MKITS (e.g. an MKITS on 'Rapid Prototyping') within a set of MKITS (e.g. on Design thinking) or may use a complete cluster of kits which when combined form a course (e.g. on Resilience) or may use a mix of different M-Kits from different courses.

Physical infrastructure: This refers to built physical structures e.g. buildings, roads, bridges, schools, churches/mosques that are vulnerable to the effects of a shock or stress.

Resilience: RAN defines resilience as the capacity of people and systems to mitigate, adapt to, recover and learn from shocks and stresses in a manner that reduces vulnerability and increases well-being.

Resilience Innovation: A resilience innovation refers to a newly applied science driven 'technology' or 'approach' with the potential to demonstrably impact positively on one or more dimensions of resilience in a particular community and other communities that share similar resilience dimensions. It may be a totally new idea, or an existing idea that is applied differently of in a community where it has not been applied before.

Risk: The probability of suffering damage (to life, property, economic disruptions and environment) from a hazard for a given area and reference period.
Shock: A sudden occurrence befalling the communities, resulting in a significant challenge to their livelihood.
Stress: A slow-onset or chronic occurrence befalling the communities, resulting in a significant challenge to their livelihood
Vulnerability: The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. Vulnerability can encompass the immediate vulnerability factors as well as the causes and underlying drivers of vulnerability.

9.0 Health, safety, ethics and environment

All team members must participate in all required training and briefings required by the RAN Resilience Innovation Challenge Team, USAID, and partners, including regular briefings and team meetings. In addition to complying with applicable law and regulations, each Team is expected to employ appropriate safety precautions during technology or any other demonstrations. All teams must wear appropriate personal protective equipment if implementation of their projects requires working in environments with unhealthy exposures. In the event that the Judging Panel or facility personnel observe dangerous actions or conditions that may potentially impact the safety of the Teams or any other persons, the Resilience Innovation Challenge Team shall have the right to suspend or disqualify a Team from competing and/or advise a Team that, until the condition is corrected, testing by the Team must cease and will not be eligible as a valid grant application. All approaches or solutions that require invasive procedures on humans must undergo the institutional/ethical review processes of their respective countries. RAN will not seek ethical approvals on behalf of any awardee team; it is the responsibility of teams to do so. However, RAN will not support sub-awardee research that involves potentially invasive procedures on human subjects without proof of ethical approval from appropriate Institutional/Ethical Review Boards. Team mentors shall provide relevant support to their teams in development of such ethics protocols is needed, as part of the incubation support process. All projects will undergo Environmental Impact assessment before award and those found to have an impact on the environment will be required to submit an Environmental Mitigation and Monitoring Plan (EMMP).

10.0 Monitoring and evaluation

10.1 Project M&E plans

Following the award, and as part of the incubation process, each Team will be guided to develop an M&E plan for their project. The plan will be revised at each phase for ideas that make it to Phases 2 and 3. The plan will indicate key milestones and process indicators, based on which progress in implementation will be tracked. The milestones will also determine the instalments in which the grant amount will be disbursed.

The M&E plan will also include a set of output and outcome indicators to be developed in line with the respective output and outcome indicators for the specific intervention pathway, as well as the resilience dimensions targeted. These indicators should be measurable and may include both qualitative and quantitative indicators.
Assessment of the impact of innovations will be measured in two ways:

1. *At the testing and scale up stage:* Each innovator will be required to collect relevant quantitative and qualitative data on a case-study basis to show the potential utility of their innovation on the test communities, in line with the output and outcome indicators

specified in the M&E plan for their project. Innovators will be supported during Level II of their incubation process to develop a theory of change, aligned with one or more dimensions of RAN's resilience framework. In addition to the in-built M&E framework for each project, innovators will be required to avail their prototypes/deliverables for inspection as part of RAN's follow-up on grant performance.

2. *Term surveys in target communities:* The RILabs will conduct periodic term surveys on study communities to assess impact of interventions on resilience.

10.2 Post award period reporting

As a condition of accepting these grants, Teams will agree to participate in reporting up to 2 years following the conclusion of their award period. RAN will require Teams to report activities related to the technology developed for the grant including, but not limited to: outputs/outcomes, fundraising, partnerships, investments in the technology, commercialization, market entry and growth. The purpose of the reporting is to allow RAN to: 1) Determine the extent to which solutions have moved to scale, 2) Determine the extent to which adopted solutions have resulted in a measurable impact on the problem (improvement through greater efficiency, cost-effectiveness, or more people reached), and 3) report relevant and required information to USAID including an Environmental Mitigation and Monitoring Report (EMMR) every 6 months only for projects that require environmental check.

References

ACF 2010a. PROJECT EVALUATION: Livelihoods and Economic Recovery in Northern Uganda (LEARN-1).

ACF 2010b. PROJECT EVALUATION: Livelihoods and Economic Recovery in Northern Uganda (LEARN-1).

AKUMU, C., I. AMONY, 2005. . "Suffering in Silence: a study of sexual gender based violence (SGBV) in Pabbo camp, Gulu district, Northern Uganda." UNICEF.

ANGUCIA, M., ZEELEN, J. & DE JONG, G. 2010. Researching the reintegration of formerly abducted children in northern Uganda through action research: Experiences and reflections. *Journal of Community & Applied Social Psychology,* 20**,** 217-231.

ANNAN, J. & BRIER, M. 2010. The risk of return: Intimate partner violence in Northern Uganda's armed conflict. *Social Science & Medicine,* 70**,** 152-159.

BOZZOLI, C., BRÜCK, T. & MUHUMUZA, T. 2012. *Movers or Stayers? Understanding the Drivers of IDP Camp Decongestion During Post Conflict Recovery in Uganda* [Online]. Available: http://www.novafrica.org/papers/110.pdf [Accessed 10 June 2013].

CECILIE LANKEN, V. 2012. Truths out of place: homecoming, intervention, and story-making in war-torn northern Uganda. *Children's Geographies,* 10**,** 441-455.

CORBIN, J. N. 2008. Returning home; resettlement of formerly abducted children in Northern Uganda. *Disasters,* 32**,** 19.

EDMONDSON, L. 2005. Marketing trauma and the theatre of war in northern Uganda. *Theatre Journal,* 57**,** 451-474.

GAGNE, T. 2011. Uganda: Current Conditions and

the Crisis in North Uganda.

ISIS-WICCE 2001. Medical Interventional Study of War Affected Gulu District, Uganda.

JENS CLAUSSEN, R. L. & NORDBY, A. N. A. E. 2008. Appraisal of the Peace Recovery and Development Plan for Northern Uganda.

KINYANDA, E., MUSISI, S., BIRYABAREMA, C., EZATI, I., OBOKE, H., OJIAMBO-OCHIENG, R., WERE-OGUTTU, J., LEVIN, J., GROSSKURTH, H. & WALUGEMBE, J. 2010. War related sexual violence and it's medical and psychological consequences as seen in Kitgum, Northern Uganda: A cross-sectional study. *BMC International Health and Human Rights,* 10**,** 28.

KINYANDA, E., S. MUSISI, ET AL. 2010. "War related sexual violence and it's medical and psychological consequences as seen in Kitgum, Northern Uganda: A cross-sectional study." BMC International Health and Human Rights 10(1): 28.

MARK SOMMER, G. M. 2011. *Ruin and Resilience in Northern Uganda* [Online]. Available: http://www.prx.org/pieces/69351-ruin-and-resilience-in-northern-uganda [Accessed 7 June 2013].

MURTHY, R. S. & LAKSHMINARAYANA, R. 2006. Mental health consequences of war: a brief review of research findings. *World Psychiatry,* 5**,** 25.

OLEKE, C., BLYSTAD, A., MOLAND, K. M., REKDAL, O. B. & HEGGENHOUGEN, K. 2006. The Varying Vulnerability of African Orphans The case of the Langi, northern Uganda. *Childhood,* 13**,** 267-284.

OPM 2007. PEACE, RECOVERY AND DEVELOPMENT PLAN FOR NORTHRN UGANDA (PRDP) 2007-2010.

OPPRANN, K. 2009. Review of Livelihoods and Economic Recovery in Northern Uganda (LEARN)

OTUNNU, O. 2002a. "Causes and consequences of the war in Acholiland." Retrieved 9 June, 2013, from http://www.c-r.org/accord-article/causes-and-consequences-war-acholiland-2002.
OTUNNU, O. 2002b. Population displacements: Causes and consequences. *Refuge: Canada's Journal on Refugees,* 21.
STEARNS, J. 2012. North Kivu: The background to conflict in North Kivu province of eastern Congo. Rift Valley Institute.
UN. Uganda: Child soldiers at centre of mounting humanitarian crisis. Available: http://www.un.org/events/tenstories/06/story.asp?storyID=100 [Accessed 22nd June 2013].
UNDP 2010. Returning to uncertainty; Addressing vulnerabilities in Northern Uganda.
UNICEF 2005. NORTHERN UGANDA UNICEF HUMANITARIAN SITUATION RPORT.
UPFI. *Overview of Kitgum, Pader and Gulu Districts* [Online]. Available: http://www.ugandapeacefoundation.org/index2.php?option=com_content&do_pdf=1&id=7 [Accessed 19 June 2013].
VLASSENROOT, K. 2013. South Kivu: Identity, territory, and power in the eastern Congo. Rift Valley Institute.