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# HIGHER EDUCATION SOLUTIONS NETWORK – ANNUAL REPORT (FY 2015)

Makerere University  
ResilientAfrica Network  
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## I. Executive Summary

Year III saw the ResilientAfrica Network advance through a number of planned strategies, culminating into a viable portfolio of innovations supported in the network. RAN's activities were organized around its 3 core objectives: fostering a deeper understanding of resilience, innovating for resilience intervention and knowledge sharing on innovations and resilience pathways.

Regarding resilience activities, qualitative resilience data analysis activities were completed across the network, resulting into the First State of African Resilience Report for RAN. Following two previous successful polls in Uganda the previous year, the first Deliberative Poll (DP) in Ghana was successfully executed in Ghana, while findings from the pioneer DPs in Uganda were disseminated to key stakeholders at local and central government levels. All Resilience Innovation Labs have completed the draft study protocols for their resilience quantitative surveys, while 3 of 4 RI Labs have collected the data.

RAN successfully conducted its 5th partner's forum, in which a mid-term review of performance of RAN's strategies across the network was conducted. This led to the identification of core strategies for the remaining half of the project. RAN's M&E plan was also reviewed and key indicators updated in line with learning from two-and-a-half years of implementation. Regarding innovations, four Intervention Strategy Workshops (ISWs) and two Collaborative Resilience Intervention Design (CRID) workshops were conducted, resulting in completion of all ISWs targeted under the current award. This brings to a total of 6 ISWs conducted across the 4 RILabs and marks the completion of all ISWs planned in the project's life. The ISWs translated RAN's resilience findings into entry points for innovation known as 'priority intervention pathways for resilience building'.

Two innovation grant call processes were successfully completed involving two RILabs, resulting into 14 newly on-boarded innovation teams under RAN's Open Resilience Innovation Challenges (ORICs). This brings RAN's portfolio of directly supported innovation projects to 19, including 5 projects earlier awarded under RAN's Resilience Innovation Acceleration Program. Innovation management capacity was built for all RILab innovation management teams through three workshops focusing on managing innovations, impact potential and ethnography. RAN's RILabs conducted various stakeholder engagement activities.

The East Africa RILab implemented a wide-reaching innovator support and outreach program that included Design Thinking trainings, pitch sessions, ideation/co-creation sessions, ignite series, hackathons and design clinics. Regarding knowledge sharing, 439 MKITs of different types were produced, setting the stage for RAN's MKITs 2.0 strategy, where MKITs will be categorized according to learning themes and packaged for wide dissemination. RAN's first State of Resilience Report for Africa was published and widely disseminated. Its dissemination boosted RAN's status as a key player in understanding resilience in the region. The report provided a nidus for a growing strategic relationship with IGAD. Several university faculty, students, and external organizations were engaged in RAN's activities across the network, resulting in a substantial engagement output for RAN. This further enhanced RAN's social capital to various stakeholders. RAN activities reached out to 11 of RAN's target communities across the continent, involving them in need-finding to validate RAN's newly awarded innovation projects.

Key gaps noted included: That two of the RILabs had not yet completed their grant processes and hence did not have a grants portfolio; the fact that most of RAN's innovations are new and innovators have not yet explored scaling options and business plans; the need to grow other RILabs' innovation spaces into vibrant centers for innovation support; and the need to roll out a strategy for anticipatory evaluation and continuous situational monitoring of innovations in RAN's portfolio (Impact Potential).

## 2. Major Milestones and Events Completed

- Protocols for quantitative resilience data collection in 8 RAN partner countries covering 14 target communities were completed
- The first Deliberative Poll, an innovative approach to involving communities in the policy process and prioritization, was successfully conducted in Ghana
- Two post-deliberative polling stakeholder dissemination meetings to policy makers at local and national levels were executed in Uganda, attended by political and technical leaders from the districts and central government ministries. The specific take-aways from these meetings were twofold: (1) RAN used the findings from the DP to develop policy briefs summarizing three issues namely Land management, Resettlement management and population pressure, the policy options to deal with and recommendations on the best options. The policy briefs targeted government policy makers such as Members of Parliament (MPs) in the affected districts who will use the results to formulate or influence policy in the 3 issues to cause change in the communities at the grassroots. (2) Through the connection with MPs, RAN will present the findings at the National Budget Conference in order to inform the budget meetings held at National level.
- RAN's 5th partner's forum was successfully conducted, in which a review of the outputs of RAN's partners was made and strategies for strengthening its approach elucidated
- Four Intervention Strategy Workshops (ISWs) and two Collaborative Resilience Intervention Design workshops were conducted, resulting in completion of all ISWs targeted under the current award; these, together with the Deliberative Polls resulted into translation of resilience assessment findings into 21 priority intervention pathways for resilience building across target communities in Africa
- Two innovation grant calls were successfully completed involving two RILabs, resulting into 14 newly on-boarded innovation teams under RAN's Open Resilience Innovation Challenges (ORICs). This brings RAN's portfolio of directly supported innovation projects to 19, including 5 projects earlier awarded under RAN's Resilience Innovation Acceleration Program
- Innovation management capacity was built for all RILab innovation management teams through three workshops focusing on managing innovations, impact potential and ethnography
- At least 20 innovative ideas received indirect support through RAN's innovator outreach activities across the network including pitch sessions, involvement in international events, and co-creation sessions
- 439 MKITs of different types were produced, and setting the stage for RAN's MKITs 2.0 strategy, where MKITs will be categorized according to learning themes and packaged for wide dissemination
- RAN's first State of Resilience Report for Africa was published and widely disseminated to over 700 stakeholders in successful events held in Washington DC, Kampala and Nairobi. The report provided a nidus for a growing strategic relationship with IGAD
- Over 100 University faculty were engaged in RAN's activities across the network.
- About 267,800 of students, partners and stakeholders were involved in various RAN activities and meetings, resulting in a vibrant engagement output for RAN. This further enhanced RAN's social capital to various stakeholders

- RAN activities reached out to 11 of RAN's target communities across the continent, involving them in need-finding to validate RAN's newly awarded innovation projects

### 3. Key Activities

Act.	Description	Achievement
1.1	Conduct resilience quantitative survey related activities	
1.1.1	Conduct EA & HoA RILabs resilience workshop	<p>TU DRLA worked with the RAN Secretariat and the RILabs to: 1) develop quantitative analysis presentation materials and workshop tools; 2) initiate development of country specific quantitative survey Protocols, which specified the following: a. Context, goals, and objectives of the quantitative resilience assessment; b. Sampling and coverage; c. Enumerator selection, training, field work, data entry; d. Survey tools; e. Analysis plan and key indicators; f. Schedule; g. Budget; and 3) identify quantitative data collection support needs moving forward.</p> <p>A joint Quantitative Data Collection Planning Workshop was conducted for both EA and HA RILabs in Kampala, Uganda on 24-26 October, 2014. The meeting set an Agenda/Next steps for drafting the Terms of Reference (data collection Protocols), to be developed and deployed for collection of the benchmark quantitative resilience data. The RILab Directors, program coordinators, and research team members from both RILabs attended the workshop. The research teams presented their respective preliminary survey protocols, and thorough discussions were held, led by experts from DRLA and RAN Secretariat. Ultimately, useful ideas were obtained for enhancement of the protocols. More refined survey protocols were developed and submitted to RANSec and DRLA for comments. Preparations for Resilience Surveys were nearly completed in all RILabs as at the close of this FY.</p>
1.1.2	Conduct SA & WA RILabs resilience workshop	<p>The SA and WA RILab Workshops were divided into two separate workshops – one in South Africa and the other in West Africa – as the WA RILab was unable to secure VISAs to South Africa due to the then on-going Ebola epidemic in the region.</p> <p>The SA RILab resilience quantitative survey planning workshop was conducted from 5-7 December 2014. Sixteen participants attended including those from Network+ Universities (Zimbabwe, Malawi, and Limpopo) in addition to the SA RILab team. The outcome of the workshop was an initial protocol for data collection as well as an initial draft survey tool. The protocol was submitted for ethical approval in April 2015. Data collection started in July '15 across all</p>

Act.	Description	Achievement
		<p>the RILab study sites.</p> <p>In WA RILab the workshop was conducted in January 2015 in Tamale, Ghana. The protocol for the quantitative study has been cleared by the IRB and preparations for data collection in the final stages.</p> <p>For each of these separate workshops, Tulane's DRLA worked with the RAN Secretariat and the RILabs to: 1) develop quantitative analysis presentation materials and workshop tools; 2) begin drafting country specific Protocols, which included: a. Context, goals, and objectives of quantitative data collection; b. Sampling and coverage; c. Enumerator selection, training, field work, data entry; d Survey tool; e. Analysis plan and key indicators; f. Calendar; g. Budget; and 3) Identify quantitative data collection support needs moving forward.</p>
I.1.3	Support proposal development for quantitative surveys and their IRB Approvals	<p>RAN Secretariat, with the support from TU/DRLA guided the research teams in all RILabs to develop their quantitative survey protocols and data collection tools and to submit them for IRB approvals.</p> <p>In the first two quarters Ethiopia submitted their survey protocol for IRB approval. They officially got their approval from the IRB of College of Health Sciences at Jimma University on May 12, 2015. <b>In Q3, the SA</b> RILab developed their protocol, the questionnaires and the consent forms. These documents were submitted and approved by the University of Pretoria Ethics committee in May 2015. Uganda and Rwanda had their tools and protocols submitted and approved by IRB on September 08 2015 and February 17 2015 respectively. The Rwanda protocol was submitted to RAN Secretariat and Tulane for further review and guidance. However, Rwanda is ready for data collection at the end of October in Q1 Year 4.</p> <p>By Q4 the Somalia survey protocol was still under review and is expected to be submitted for IRB approval in Q1 of Year 4.</p> <p>The EA RILab contacted the Uganda Bureau of Statistics (UBOS) for quantitative survey tools. The RILab examined these tools to beef up the indicator selection for the survey. Areas where there is extensive and most recent information were left out of the primary survey tools. Secondary data will be analyzed to determine these benchmark indicators.</p> <p>The EA RILab also signed a contract with a quantitative research expert to support quantitative data related activities under the EA RILab. The consultant will specifically analyze the study variables developed from the Uganda dimensions of resilience and develop a quantitative survey tool and protocol. The final protocol was cleared by the RAN Secretariat, following which it was approved by the Makerere University School of Public Health Institutional Review Board (IRB). By close of the quarter, data collection had kicked off.</p>

Act.	Description	Achievement
		<p>WA RILab revised their tools and protocols for IRB submission in Q3 and submitted them to the IRB in Q4. However, the IRB sent comments that required revision. The WA RILab addressed the comments and re-submitted to the IRB and by end of Q4, approval of the survey documents was still pending.</p>
1.1.4	Conduct Round I Quantitative data collection	<p>In Q4, Round I Quantitative Data collection began in all the RILabs with the exception of WA RILab. TU/DRLA provided onsite and online support to RILabs in Q4 as they launched Round I of their Quantitative data collection. SA RILab began their quantitative survey data collection on 22 June 2015 in 4 communities (Pyramid and Dikgale in South Africa, Chikwawa in Malawi and Beitbridge in Zimbabwe). Data collection and data entry has been completed in the communities of Pyramid, Dikgale but is still ongoing in Beitbridge and Chikwawa.</p> <p>At EA RILab, Uganda conducted training of 40 Research assistants from September 15-18 2015 on the study tools and methodology, community entry and sampling procedures. Piloting of the tools was also conducted during the same training period and the final tools revised. Uganda began their quantitative survey data collection on September 21 2015 in 4 communities of Bududa, Hoima, Amuria and Lamwo. Four field supervisors including the consultant supervised the data collection activities in the communities. Rwanda's data collection activities are scheduled to start Q1 Year 4.</p> <p>HoA RILab began their quantitative survey data collection from August 1-16 2015 in the communities of Borana zone. Somalia's data collection activities are scheduled to start Q1 Year 4..</p> <p>Preparations for data collection are ongoing in WA RILab; the training for research assistants on the quantitative survey took place from September 29th – 30th 2015. This brought together 21 participants in all out of which 5 are females (3 Faculty members, the Quantitative Study Consultant, 9 Research Assistants, 3 Supervisors and also 5 WA RILab staff). The aim of this training was to discuss the quantitative study tools, the methodology for the quantitative study and finally the strategy to adopt in collecting the data. Research Assistants have been scheduled to move into the field to start data collection in the next quarter.</p> <p>The next steps in the quantitative survey process will involve creating data entry screens, data cleaning, data entry, analysis and report writing. Tulane University will provide technical guidance during these processes.</p>
1.2	Develop protocols and conduct qualitative data	<p>This activity was changed to "Continue Qualitative Data Technical Support." The following sub activities also were added: 1.2.1 "Provide RILabs with technical support to refine their qualitative analysis in light of quantitative data findings": For which, Tulane provided a</p>

Act.	Description	Achievement
	collection for new communities	framework for quantitative data collection and analysis. 1.2.2 "Provide technical and editorial support to RILabs as they finalize their qualitative reports": Tulane provided technical and editorial support to Ethiopia, Somalia, Rwanda and Uganda on their full qualitative reports for publication and in-country and regional dissemination. CSIS completed editing of the reports and these have been uploaded online on the RAN website.
1.3	Conduct Secondary Data Analysis	In SA RILab, a draft paper based on secondary data analysis of GHS data conducted in Y2 is in progress. The RILab has set a target of December 2015 for submission to a journal. In HoA RILab, consolidation and updating of the comprehensive literature reviews in Ethiopia and Somalia are ongoing. HoA RILab also submitted for publication the Ethiopia qualitative study manuscript and is in the process of preparing the Somalia qualitative study manuscript for publication. In Uganda, a Research Fellow at Makerere University School of Public Health under the UNDP-RAN partnership has also submitted a manuscript for publication from the secondary data analysis.
1.4	Conduct Deliberative Polling activities	<p>Following the Deliberative Polling in Ghana, the Center for Deliberative Democracy (CDD) research team has been assisting Ghana to analyze the data and produce the preliminary report. The report includes preparatory activities for the poll (sampling and recruitment protocols, briefing materials preparations, and survey preparations), Key quantitative findings from the surveys before and after the deliberation, as well as qualitative issues and that arose from the policy discussions. The draft report was shared with the Tamale DP stakeholder advisory committee during a workshop held in Ghana June 24-25 2015 at the UDS international conference centre. The stakeholder advisory committee workshop attracted 25 participants including academia, government officials, private sector and NGO sector. Professor Fishkin from the CDD Stanford University, and the WA RILab team worked with the stakeholder groups to develop a plan for the wider dissemination. The goal of the dissemination is to facilitate policy impact and innovations, in particular, the filtering of waste-water and converting waste into energy in Ghana's rapidly growing urban areas. We think that the very credible results of this consultation if properly released will have beneficial effects for Tamale and related metropolitan areas in Ghana. Another high priority to emerge from the results was rain water harvesting. The research team will continue to work with the WA RILab team to further these reports and to produce policy briefs and articles for publication in year 4.</p> <p>During the second quarter of the Year 3, the CDD research team worked with the EA RILab to produce academic papers for the two Uganda Deliberative Polls held in July 2014. For this academic paper, the research team delved into in-depth analyses with regression modeling and small group dynamics analyses, including whether polarization occurred after small group discussions, changes in</p>

Act.	Description	Achievement
		<p>variances for small groups for policy proposals, and presence of domination from more privileged participants. Further, substantial efforts for qualitative analyses were employed for the transcripts from the small group discussions.</p> <p>Analyses of results from both polling projects in Ghana and Uganda is on an ongoing basis and some aspects of the qualitative results will be presented in various academic papers. The initial results of this work were presented at the launch of the State of African Resilience Report in May 2015 in Kampala, Uganda. The results of these analyses will be in the academic papers and/or available in subsequent reports submitted to RAN.</p> <p>In Q4 Year 3, Stanford University Centre for Deliberative Democracy worked with the WA RILab to prepare for the release of the Tamale DP results. Activities included regular calls between the teams at Stanford and UDS, report writing and revisions. The latter part of Q4 saw increased activity by the CDD team as they worked closely with the WA RILab team to prepare for the dissemination, targeted for October 28<sup>th</sup> 2015 in Year 4. This event is expected to attract USAID, US Local Mission Accra, academia, NGO, Government officials and private sector among others.</p>
1.4.1	Conduct one Deliberative Poll in Ghana (This activity is carried over from Year 2)	<p>In Q2 Y3, the CDD at Stanford University, in collaboration with the West Africa RILab, prepared for and executed one Deliberative Poll in Tamale, Ghana. The poll took place at the University for Development Studies (UDS) campus in Tamale, Ghana January 10-11, 2015. The preparation for these polls included, but was not limited to, briefing materials - written and video, survey (pre and post deliberation), training of moderators and personnel (January 7-8, 2015 in Tamale, Ghana), organization of logistics pre and post event, IRB process, Advisory Committee meetings, recruitment of participants and experts for the Deliberative Poll. The CDD further advised the WA RILab on data preparation, analyses, and preliminary reporting of the Deliberative Poll.</p> <p>In Q3, the WA RILab with the support of Center for Deliberative Democracy at Stanford University and RAN Secretariat continued to work on a draft preliminary report for the first Deliberative Poll in Ghana. The report includes a summary of events leading up to the Deliberative Poll, including sampling and recruitment protocols, briefing materials preparations, and survey preparations. This report was shared with the Tamale DP stakeholder advisory committee during a workshop held in Ghana in June 24-25 2015 at the UDS International Conference Centre that attracted 25 participants including academia, government officials, private sector and NGO sector. Professor Fishkin and the WA RILab team worked with the stakeholder group to review and set a plan for release of the results and policy implementation. The goal is to facilitate policy impact and innovations, in particular, looking at filtering waste-water and</p>

Act.	Description	Achievement
		<p>converting waste into energy. We think that the very credible results of this consultation if properly released will have beneficial effects for Tamale. Another high priority to emerge from the results was rain water harvesting.</p> <p>In Q4 Year 3, the research team continued to work with the WA RILab team to further these reports and to produce policy briefs and articles for publication in Year 4.</p>
1.4.2	Conduct post-DP policy briefs	<p>The CDD is working closely with the EA RILab to develop policy briefs for release in Uganda following the Mt. Elgon region DP events in July 2014. Professor James Fishkin attended two stakeholder dissemination meetings: one in Mbale, Uganda with the district officials and stakeholders of both Bududa and Butaleja to provide a detailed account of the results of the two DPs and their implications for policy.</p> <p>The second dissemination meeting was at the national level with government officials including representatives of the Prime Minister's Office and key members of the legislature about the Deliberative Polls in Bududa and Butaleja, Uganda. The meeting in Kampala was also attended by the district leaders from the two communities where the Deliberative Polls were conducted as well as key stakeholders from various organizations. The ensuing discussion provided an opportunity to highlight to stakeholders the key policy issues of concern to climate-centered development in the target communities. The feed-back also allowed RAN to refine the draft policy briefs arising out of the DP activity.</p> <p>The EA RILab has developed two policy briefs on 1) Land management &amp; resettlement and 2) Population pressure in the landslide and flood affected communities of the Elgon region, eastern Uganda. The policy briefs are in final stages of refinement and will be released in Q1 of Year IV. These will be disseminated to Ministerial level stakeholders at different target fora with the aim of informing policy.</p> <p>During the third quarter of 2015, the research team worked on academic paper for the two Uganda Deliberative Polls held in July 2014. The draft was reviewed by the EA RILab team and is now in the final stages of revision for publication in Year 4.</p> <p>In Q4 Year 3, Stanford University Centre for Deliberative Democracy continued to work with the WA RILab and EA RILab to prepare post DP policy briefs. The CDD conducted polarization and social inequality analyses using the data sets from the Tamale, Ghana Deliberative Polling project. The research team will continue to work with the WA RILab team to further these reports and to produce policy briefs and articles for publication in year 4.</p>

Act.	Description	Achievement
		Further analysis of results from both polling projects in Ghana and Uganda is still on-going; secondary findings will be presented in form of publications. The two RILabs will also develop information fact-sheets that address the community concerns identified in the polling.
I.5	Develop M&E plans for innovations under incubation	<p>Tulane's team held online meetings with the RAN Secretariat and the EA RILab to provide M&amp;E guidance and support for developing M&amp;E plans for innovations under development. They provided technical support to the Secretariat to help design tools for theories of change for innovations.</p> <p>In Q2, each of the five innovation projects under the Resilience Innovation Acceleration Program (RIAP) in the EA RILab attended a one-day Theory of change (ToC) development workshop in January, 2015. Each team came up with a draft ToC for their project at the end of each meeting. The draft ToCs were sent to Stanford and TU DRLA for comments.</p> <p>In Q3, the RAN M&amp;E team supported the innovation teams freshly awarded under the resilience innovation challenge for adverse climate effects (RIC4ACE) to develop elaborate theories of change for innovations. A one-day workshop was conducted with each of the seven innovation teams with the support of the five student interns in June 2015. A detailed description of the workshop outcomes is given in the M&amp;E section. These plans are being implemented. finalized</p> <p>In Q4 Year 3, the teams were being followed up to refine their ToCs and populate their M&amp;E plan documents. The M&amp;E team provided technical guidance to the innovator teams during this process and reviewed their M&amp;E plans before they were submitted to RAN Secretariat.(send these to Apollo)</p> <p>The SA RILab has scheduled supporting the new RIC4FIG Grantees with ToC development and M&amp;E plans for Q1 Year 4.</p>
I.6	Facilitate Forums & Meetings	
I.6.1	Facilitate the 5th RAN Partners' Forum	The RAN Secretariat, in close collaboration with TU/DRLA and Stanford University successfully organized RAN's Partner's Meeting which was held on 6-7 May 2015. The meeting brought together all RAN's partners including the RAN secretariat, RAN's core partners (Tulane and Stanford), RAN RILab directors, coordinators and Network Plus University focal persons, USAID Washington DC and USAID Uganda Mission representatives. Being a mid-term meeting for the project, the meeting particularly focused on reviewing RAN's progress to date, and key strategic issues of focus in the second half of the project's lifespan. Strategies were laid on how to strengthen the reach of RAN's resilience assessment outputs, re-orienting RAN to prepare for scaling, and building RAN into a platform for leveraging resources to spur scaling. Priority strategies of focus for the final 2.5

Act.	Description	Achievement
		years of the project were summarized in a document that was shared with all stakeholders.
1.6.2	Facilitate Steering Committee Meetings	<p>In Q1 Year 3, RAN secretariat, partners and RILab directors participated in the 5<sup>th</sup> RAN's steering Committee Meeting in Berkeley, California held on November 7, 2014.</p> <p>At the 5th partners' forum held in May 2015, RAN also held its 6<sup>th</sup> Steering committee meeting in which RAN's top management discussed strategic issues regarding RAN's progress and priorities. The draft community engagement strategy was presented to the steering committee members for their review and it was agreed that it be sent to all RILabs for their input before it can be approved. The innovations director sent it to all RILab directors who in turn reviewed and sent in their input. The strategy was submitted to the USAID team and is pending approval. The 6<sup>th</sup> Steering Committee meeting also mooted the idea of a global Resilience Conference as a platform to share all the learning from RAN's work. This conference has been included as a priority in RAN's Year IV workplan.</p>
1.6.3	Facilitate Stakeholder Forums including community feedback on resilience dimensions	<p>The EA RILab on January 21, 2015 disseminated findings from Deliberative Polls conducted in the districts of Bududa and Butaleja in the Elgon region Eastern Uganda. This district level stakeholder forum was held at Mbale Resort hotel and attracted over 50 participants, most of whom were district officials and community participants in the deliberation. Prof. James Fishkin from Stanford University also attended. During the meeting, key issues from the DPs were presented, discussed and validated by the local stakeholders.</p> <p>RAN, with the support of Tulane and CSIS, held the first launch of the state of Africa Resilience report at Washington DC on March 11<sup>th</sup>, 2015 that attracted 176 participants including dignitaries from the Embassy of the Republic of Uganda in Washington DC, USAID top management, representatives from the Management Sciences for Health, Makerere University top management, TU/DRLA, CSIS, multi-disciplinary students, faculty, the business community operating in the USA, private practitioners, RAN's Southern and West Africa RILab among others.</p> <p>On the 8<sup>th</sup> of May 2015, RAN, with the support of TU/DRLA, RAN then conducted the official launch of the report in Africa. The event took place at Makerere university main hall and it brought together 468 participants spanning Makerere University Leadership, USAID Washington DC, the Higher Education Solutions Network (HESN), US Global Development Lab, USAID Mission Uganda, RAN Core Partners, Network Universities, Network plus Universities, faculty, students, the community, innovators, Government officials, other development partners, the Private sector, Policy makers, Members of Parliament, the media among others. The report was officially launched by the State Minister for Health- in charge of General Duties, Dr. Chris Baryomusi. In attendance was the</p>

Act.	Description	Achievement
		<p>director of the center for development innovation at USAID Global development Lab, Mr. Dave Ferguson and Makerere Leadership. The state of resilience report can be accessed at <a href="http://www.ranlab.org">www.ranlab.org</a>.</p> <p>On the 10<sup>th</sup> of July 2015, RAN Secretariat, with the support of TU/DRLA, disseminated the State of Africa Resilience Report to key stakeholders at the East Africa region level, through a forum provided by IGAD. The event took place in Nairobi. It brought together 111 stakeholders from the East African region including the USAID regional office in Nairobi, , University of Nairobi, Benadir University Somalia, World Food Program (WFP), United Nations International Children’s Emergency Fund (UNICEF), United Nations Development Program (UNDP), World Bank, Food and Agricultural Organization (FAO), Africa Development Bank, CARE, Save the Children, Norwegian Refugee Council, Plan International, Science Africa, Swedish Government, Oxfam, Department for International Development (DFID), European Union, Islamic Relief Worldwide, UN Women, United Nations Office for Disaster Risk Reduction (UNISDR), United Nations High Commissioner for Refugees (UNHCR), International Organization for Migration (IOM), Plan International, Building Resilience Communities in Somalia (BRiCS), Swiss Agency for Development and Cooperation (SDC), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Catholic Relief Services (CRS), Somalia Resilience Program (SomReP), and the media among others. In attendance was the Executive Secretary of the Intergovernmental Authority on Development (IGAD), H.E. Ambassador (Eng.) Mahboub Maalim. The state of resilience report can be accessed at <a href="http://www.ranlab.org">www.ranlab.org</a>. Apart from the report dissemination, RANSec and the RILabs conducted a panel discussion in which different findings from the report, their implications and entry points for innovation were discussed.</p>
2.1	Set up and operationalize physical RILab spaces	
2.1.1	Operationalize physical HoA RILab space	<p>Due to the slow pace of the procurement process, HA RILab could not operationalize the Innovation Center in the first two quarters of Year 3. However in the two quarters, the RILab procured additional essential items for the Innovation Center, furnished the innovation space with most of the essential items and fixed some organizational and installation works. In addition, the physical RILab space was renovated.</p> <p>In Q3, the Innovation Center was operationalized by organizing such events as Movie Night for students of Jimma University as well as presentation and discussion of possible platform projects for the region’s innovation challenge.</p> <p>In Q4, following the inauguration of the lab space, HA RILab has been discussing strategies to attract students and faculty to the lab space to</p>

Act.	Description	Achievement
		make it more operational and vibrant as an innovations support center.
2.1.2	Setting up and operationalize physical WA RILab space	<b>The WA RILab</b> innovation space is yet to be furnished and operationalized. Considering that the space is located far from the UDS campus and is quite small, the RILab director has contacted UDS leadership in quest of a bigger space. As a result the University management has promised to offer the RILab a bigger space on the medical school campus. It is hoped that operationalization of this space will be completed in Year IV
2.1.3	Setting up and operationalize physical SA RILab space	SA RILab will use University of Pretoria premises for all innovation activities. The SA RILab identified the MakerSpace that is funded by the University of Pretoria and hosted by the University Library. The MakerSpace provides space for students and innovators to meet and brainstorm innovation ideas. The SA RILab plans to use the MakerSpace for regular meetings with innovators for regular support and feedback.  In Q4 Year 3, the SA RILab reached an informal agreement with University of Pretoria for SA RILab innovators to use MakerSpace; an MOU is in the process of being drafted.
2.2	Conduct RILab Intervention Strategy Workshops on additional thematic areas	
2.2.1	Conduct the first WA RILab Intervention Strategy workshop (ISW)	The WA RILab conducted its ISW on 23-25 March, 2015 tackling the theme of rapid urbanization. The workshop brought together 37 participants including faculty, public and private sector stakeholders, and community members. Similar to other RI Labs, WA RILab used its earlier resilience findings to identify three priority intervention pathways: Water, Sanitation, and Hygiene (WASH); Improved agricultural practices and markets; and Livelihood diversification and financial inclusion were identified. These will feed into the preparation of WA RILab's innovation grants call.
2.2.2	Conduct second EA RILab Intervention Strategy	<b>EA RILab carried out</b> the second intervention strategy workshop on its second thematic area of focus, 'effects of chronic conflict'. The meeting was held in August 12-14, 2015 and it drew 40 participants from the public and private sectors who are working in the field of

Act.	Description	Achievement
	workshop	peace, conflict and recovery. The meeting generated 4 priority intervention pathways. . These will feed into the preparation of EA RILab's innovation grants call for chronic conflict, RIC4CONF.
2.2.3	Conduct second HoA RILab Intervention Strategy workshop	<p>In Q4 Year 3, RAN Secretariat provided technical support to HA RILab as they conducted their second Intervention Strategy Workshop on the thematic area of resilience to the challenge of internal displacement in Somalia in partnership with Benadir University and with collaboration from the RAN Network-plus partner, University of Nairobi. The 3-day workshop was held August 24-28 at the Crowne Plaza, Nairobi Kenya. The ISW was followed by a 2-day CRID workshop so as to objectively determine where best to intervene and identify innovative solutions that have the potential to strengthen the resilience of communities affected by internal displacement in Somalia.</p> <p>This ISW marked the last of 6 ISWs planned under RAN's award.</p>
2.3	Prepare and manage Thematic Resilience Innovation Calls	
2.3.1	Manage Thematic Resilience Innovation Calls - Round 1 (EA RILab)	<p>The EA RILab Resilience Innovation Challenge for Adverse Effects (RIC4ACE) was closed in Q1 Y3 with a total of 350 applications. The entries were evaluated and submitted to the RAN Secretariat who submitted the top 7 RIC4ACE teams to USAID for review. USAID reviewed them and provided queries which the RILab responded to. The queries involved environmental assessments where 2 teams underwent Initial Environmental Examination (IEE). The teams: Mushrooming Livelihoods! and Better Farming Better Me! responded to IEE documents highlighting the scope of the projects and any environmental management measures related to the project activities. RAN received the updated documents and submitted them USAID.</p> <p>In Q3, the EA RILab announced the awards for the seven winning RIC4ACE innovator teams at the Kampala launch of the State of Resilience Report on 8<sup>th</sup> May, 2015. The awards were presented by the director of the Center for Development Innovation at the USAID Global Development Lab, Mr. Dave Ferguson. Since then the teams have been inducted and supported in development of their innovations theory of change and M&amp;E plans.</p> <p>In addition to the 5 RIAP innovation projects already under incubation at the EA RILab, the Lab in Q4 Year 3 started managing the 7 RIC4ACE innovated under the Lab. This makes a portfolio of 14 projects for the lab, including one project under a separate award (the Ebola Grand Challenge award)</p>
2.3.2	Release HA RILab Innovation call	HA RILab conducted the CRID workshop on 5-6 Feb, 2015 and came up with three platform projects. A meeting with external experts was conducted at the secretariat in Q2 in order to come up with the innovative platforms to take forward. Another meeting will be

Act.	Description	Achievement
		<p>conducted between the secretariat, the HoA RILab and other external experts to concretize the ideas and submit to USAID.</p> <p>RAN secretariat revised the grant call document and sent it out to the RILab for review. The revised document was submitted for USAID approval in Q4 and is yet to receive approval.</p> <p>In Q4 Year 3, RAN Secretariat also finalized review of one Resilience Innovation Acceleration Program (RIAP) project earlier identified from an innovation exhibition at Jimma University. The Rain Water Harvesting project was the only project judged as suitable for a RIAP award to emerge from the exhibition. The project has been submitted to USAID for approval and is awaiting feed-back.</p>
2.3.3	Manage Thematic Resilience Innovation Calls - Round 2 (HoA RILab)	This activity will be implemented in Year 4.
2.3.4	Release SA RILab Innovation call	SA RILab successfully launched RIC4FIG on December 1, 2014 focusing on the sourcing, developing, and scaling of transformative technologies and approaches that will strengthen resilience to food insecurity and limited opportunities for income generation that are associated with climate variability and limited infrastructure overlay by high burden of HIV/AIDS. See Attached RAN Call document. The call was closed on 31 January 2015 and 178 applications were received.
2.3.5	Manage Thematic Resilience Innovation Calls - Round 3 (SA RILab)	<p>SA RILab received 178 applications for the RIC4FIG call from 139 applicants. The evaluation process for the concept notes started on 12 February 2015 and was concluded on the 3rd of March 2014 and 46 Applications (39% female, 61% female) were shortlisted. 87% of all shortlisted applications were received from organizations, 11% from team of individuals and only 2% from a university based team. Challenge one and two had the most shortlisted applications (16 each). These were reviewed by 37 reviewers from multi-disciplinary backgrounds. 46 Applications were shortlisted to develop full applications. Review of full applications is in progress and will be concluded on 17 April 2015. Full report (Appendix 6) was shared with RAN secretariat after the conclusion of the process.</p> <p>Seven applications were selected in Q3 and recommended for funding. The full applications were forwarded to RAN secretariat which submitted them for USAID approval. In Q4 USAID approved the 7 projects on Sept 03 2015 and the Lab inducted the teams in September '15. Implementation of the projects is expected to begin in October 2015. This batch of projects brings SA RILab's portfolio to 7 innovation projects.</p>
2.3.6	Prepare innovation call Round 4 (WA	The Collaborative Resilience Innovation Design (CRID) workshop was conducted in Ghana on 26-27 March, 2015 immediately after the WA RILab's ISW workshop. The CRID workshop fleshed out the

Act.	Description	Achievement
	RILab)	intervention pathways to come up with platforms that will address the intervention. Three platforms were identified: 1) Waste management; 2) Water for domestic and agricultural use; and 3) Improved agriculture and markets. Meetings were held in Q3 between RAN secretariat, WA RILab and external experts to concretize the innovation pathways, laying the ground work for the RILab's grant call. WA RILab's innovation grant call (RIC4FAL) is now in the final stages of development RANSec is undertaking final review of the document, following which it will be submitted to USAID for review and approval. . It is hoped this will be completed in the 1 <sup>st</sup> Quarter of year IV.
2.3.7	Release round 4 WA RILab Innovation call	<b>This activity has been deferred to the</b> beginning of Year 4 because WA RILab's RIC4FAL grant call document is still being finalized
2.3.8	Manage Thematic Resilience Innovation Calls - Round 4 (WA RILab)	<b>This activity has been deferred to the</b> beginning of Year 4 because WA RILab's RIC4FAL grant call document is still being finalized
2.3.9	Prepare thematic Resilience Innovation Calls - Round 5 (focusing on conflict) (EA RILab)	EA RILab conducted its second ISW covering its second theme, 'resilience to the effects of conflict'. The workshop was conducted in August 2015. The RILab has already started preparing the Grant call document. It is hoped that this will be released in the first half of Year IV.
2.4	Incubate resilience innovation teams and provide innovator support	
2.4.1	Recruit Community Liaison Officer	The community Liaison officer was recruited at the secretariat in Q1 Y3 and is working closely with the innovators incubated in the EA RILab as they plan their NeedFinding activities in the communities. She will provide other RILabs with guiding documents and lessons learned that will be of help to their RILabs. She has led the process of developing RAN's Community Engagement Strategy.
2.4.2	Induct innovation project teams and set up project support teams	<p>In Q1 Y3, the EA RILab incubated five innovation teams under the Resilience Innovation Acceleration Program (RIAP). The project teams were supported through various workshops and trainings including: Development of theories of change, preparation of their work plans, intellectual property awareness, needfinding, and documentation to facilitate progress of their innovations.</p> <p>In Q3, the EA RILab conducted an induction workshop to the seven innovation teams on boarded under the RIC4ACE grant. The induction focused on highlighting expectations regarding the process they were to undertake to design and develop their ideas. They were introduced to RAN's innovation pipeline. The teams were urged to demonstrate their proofs of concept within the stipulated timelines</p>

Act.	Description	Achievement
		<p>and work with RAN departments to achieve their project objectives.</p> <p>During Q3, the SA RILab invited shortlisted projects to an initial writing workshop where an overview of RAN's approach to the innovation process was given, as well as support in fine-tuning their concepts. In Q4, the SA RILab conducted its induction workshop for the new RIC4ACE awardees. RAN Secretariat provided technical support and guidance to the SA RILab on the induction process. In addition to being introduced to RAN's innovation approach and pipeline, the innovators were introduced to key working documents supporting RAN's innovation pipeline including the following:</p> <ul style="list-style-type: none"> <li>(i) The draft contract</li> <li>(ii) Financial guidelines</li> <li>(iii) M&amp;E Plan document</li> <li>(iv) Guidelines for Needfinding</li> </ul>
2.4.3	Conduct a workshop on 'Managing Innovation: Innovators and Spaces'	<p>The Managing Innovation workshop was conducted on 29-30 January, 2015 in Kampala targeting RAN innovation staff from all RILabs. The workshop was attended by 30 participants including RILab Directors, Innovation Officers and program coordinators. Each RILab is expected to train their innovation teams on the principles learned from the workshop. Stanford's ChangeLabs team also proposed a framework for reconciling the innovation project management with the M&amp;E framework through capturing crucial parameters in the progress of innovations along RAN's pipeline to model impact potential for each innovation. This idea is being refined and customized for each innovation team.</p> <p>A follow-on of the January workshop took place in August 3-8, 2015 workshop where M&amp;E Officers and Innovation Officers from all RILabs were brought together to concretize the impact potential tracking and reporting for each innovation.</p>
2.4.4	Conduct innovator capacity-building and motivation activities	<p>The EA RILab through its outreach program conducted capacity building activities including Ignite workshops and peer-to-peer sessions. The objective of the "Ignite" workshops is to bring the RAN community up to speed with what it takes to create innovations in our local ecosystem.</p> <p>The first "Ignite" workshop was held at RAN office premises on February 13, 2015. It had an online attendance of 75 people via Eventbrite, an online event organizer that enables participant registrations accessed at <a href="http://www.eventbrite.com">www.eventbrite.com</a>. A peer to peer session was conducted at the International Health Sciences University (IHSU) Kampala, Uganda on March 11, 2015 and was attended by over 50 students from the University. The objectives were to: i) Find out if there are innovations /innovators within the university community and how they can be successfully scaled, ii) Conduct a NeedFinding activity to find out if the innovations presented match the needs presented.</p>

Act.	Description	Achievement
		<p>To spur women involvement in innovations, the EA RILab initiated the RAN4Gals program where girls/women in Secondary schools and Universities are supported to participate in the National Technovation program organized by the college of Engineering, design, Art and Technology (CEDAT) at Makerere University under Science, Technology Engineering and Mathematics (STEM) Education team to enhance girls/women innovation skills. EA RILab conducted field visits and mentored some young innovators from Lira Town as well as students at Mbarara University for Science and Technology in March 2015. This was in preparation for the national level Technovation competition. In Q3, RAN supported the Uganda Technovation Challenge 2015 that was held on 4-5 June 2015 at RAN offices in Kampala as part of building the capacity of young female innovators to further their innovativeness. Detailed reports on both the Technovation Challenge and Ignite series are provided in the Appendix I.</p> <p>In Q3 and Q4, EA RILab conducted several weekly pitching sessions with innovators. The purpose of the pitch sessions was to help innovators who have new ideas at the concept stage or early ideation level to develop their ideas into strong concepts through peer review. To streamline these pitches, RAN has developed objectives for the pitch sessions:</p> <ol style="list-style-type: none"> <li>i. To identify innovations/ideas that can be leveraged in line with RAN thematic issues.</li> <li>ii. To publicize RAN by engaging with other communities through sharing different innovative ideas</li> <li>iii. To offer to innovators guidance within the RAN approach to innovations including human centeredness, needsfinding and business mindfulness and others.</li> </ol> <p>The RAN team has also helped the teams or individuals pitching new ideas to brainstorm of potential business plans as well as potential funders for their projects. New ideas/innovations critiqued in RAN's pitch sessions to date include:</p> <ul style="list-style-type: none"> <li>➤ TB Track – Improving TB Treatment Outcome</li> <li>➤ A quick housing solution to disaster prone areas in Uganda; a case study of the Bududa landslides region.</li> <li>➤ Mama – ope Pneumonia kit for children</li> <li>➤ Human rights-reporter</li> <li>➤ Tele-medicine kit</li> <li>➤ The no-touch water tap</li> <li>➤ Solar egg-incubator</li> </ul> <p>The EA RILab is also developing a strategy to promote promising innovation projects that are not part of it mainstream grantees so that they can attract funding elsewhere. This includes featuring their ideas on the RI Lab's website as well as publicizing them to partners in RAN's engagement database. RANSec has also mooted and is</p>

Act.	Description	Achievement
		<p>developing a strategy to give student innovation grants in Year IV. These small grants will support emerging student ideas with a high innovative potential.</p> <p>The RAN Secretariat provided technical support to SA RILab as they conducted their Needfinding workshop for newly awarded grantees on Aug 12 2015. There were 14 participants. The main purpose of the Needfinding workshop was to build the capacity of innovators on the value of Needfinding in the communities where the innovations will be implemented. The workshop also focused on the how and when to conduct Needfinding as well as the process of rolling out need-finding. Innovators were also introduced to the concept of increasing innovations impact potential and developing an M &amp; E Framework for Innovations. The Needfinding workshop was guided by the SA RILab Director who emphasized the value of establishing a deeper connection with the communities to validate their needs throughout the innovations pipeline.</p>
2.4.5	Conduct targeted, team-specific capacity-building	<p>In January, 2015, each of the five RIAP incubatee projects in the EA RILab was invited to the Lab for one-on-one meeting to develop their capacity in setting their workplans with clear indicators that will be measured by the teams. By the end of the meeting, each team had come up with their Theory of Change (ToC).</p> <p>The EA RILab conducted a workshop on Intellectual Property (IP) facilitated by RAN lawyer on March 1, 2015. This was followed by one-on-one sessions between RAN's lawyer and each of the 5 incubated innovations under EA RILab on March 2-3, 2015. This was meant to enhance the knowledge of the innovators on IP related issues and sort out any queries concerning Intellectual property for the individual projects.</p> <p>In Q3, the seven newly awarded innovation teams under the RIC4ACE in the EA RILab underwent development of project specific Theories of Change in June and are refining their M&amp;E plans. The teams also developed project-specific interview guides to conduct needfinding in the targeted communities to gather insights that will be useful in developing, prototyping and refining their innovations.</p>
2.5	Building social capital for RAN to support innovation activities	<p>The EA RILab brought on-board 2 experts to support its outreach program and the RAN4Gals Technovation activities for the period of February - September, 2015. These technocrats enriched the EA RILab's "Managing innovations portfolio."</p> <p>The EA RILab in Collaboration with RAN Secretariat conducted a Design Thinking (DT) Workshop held on April 17, 2015 at Kisubi Brothers University College. The workshop was moderated by students trained by RAN during the DT Training of Trainers workshop that was held in March 2015 as part of a cascade pathway to infuse the DT skills across the RAN community. A detailed report on this workshop is attached in the Appendix 2.</p>

Act.	Description	Achievement
		<p>The EA RILab inaugurated its Innovation Advisory Board. RAN also engaged with various partners including UNDP (e.g. IGAD-UNDP Project on Resilience as well as on UNDP-GoU Meeting on Resilience at which made presentation on RAN's innovation process and projects), UNFPA (judge in their hackathon), the Aga Khan Foundation (A meeting was held to discuss how design thinking capacity building can be incorporated into the Aga Khan educational institutions; The Aga Khan Foundation was also invited to participate in the EA and HA RILabs' ISW workshops)</p>
2.6	Develop an impact and resource multiplication strategy	<p><b>Following the innovation management workshop at Stanford in June 2015, preliminary plans were made to conduct an impact and resource multiplication strategy development workshop in Q1 of Year 4.</b> RAN Secretariat has initiated an Internal Scaling Team which will also address impact and resource multiplication. The IST team members are:</p> <ol style="list-style-type: none"> <li>1. Deborah Naatujuna, Engagement Manager, Team Leader</li> <li>2. Christine Muhumuza, Research Officer</li> <li>3. Harriet Adong, Communications Manager</li> <li>4. Nathan Tumuhanye, EA RILab Director</li> <li>5. Sheila Agaba, EA RILab Technical Officer</li> <li>6. Deborah Namirembe, RAN Program Administrator</li> </ol> <p>The preliminary TOR for the team includes:</p> <p><u>1] Draft a Resource and Impact Multiplication Strategy</u>  This should identify strategic partnerships and resources that RAN can leverage to multiply the impact of innovations across RAN and the RILabs. It should also recommend strategies to develop partnerships with diverse stakeholders within Africa and beyond. Stakeholders include the USAID bureaus and departments and are necessary for RAN to expand its social capital as a platform for learning, resource leverage and scale. The Draft Strategy shall be presented to RANSec for review and adoption.</p> <p><u>2] Draft a Scaling Strategy for RAN innovations</u>  As we build a portfolio of innovations we need to think ahead and to integrate scaling efforts all along the innovations pipeline. This activity includes the need to identify and to spearhead planning for RAN's participation in internally and externally organized Scaling Events. The Draft Strategy shall be presented to RANSec for review and adoption.</p> <p><u>3] Develop training guide and materials for proposals and pitching</u>  The training guide and materials are expected to facilitate RAN and the RILabs in developing proposals and pitching materials as part of the Resource and Impact Multiplication Strategy. Drafts of the guide and materials shall be discussed with the RILabs and presented to RANSec for review and adoption.</p>

Act.	Description	Achievement
2.6.1	Conduct an impact and resource multiplication strategy development workshop	<p>Preparedness for scale has repeatedly been identified as a key gap in RAN's strategy, including at the mid-term portfolio review at the Lab Directors convening in Washington DC in April 2015 as well as RAN's partners' forum in May 2015. As part of the Managing Innovations workshops in Stanford and the RILab targeted one in Kampala, the Stanford team introduced to RAN the need to expand its approach to scaling of innovations. RAN has mooted the implementation of an inaugural scaling workshop in Year IV. Participants brainstormed on potential scaling partners that will be invited for the multiplication workshop targeted for June 2016.</p> <p><b>The RAN team, the Deputy Chief of Party, the Innovations Director and the M&amp;E Manager attended a workshop organized by ChangeLabs at Stanford on 24-26 June, 2015 that laid a ground on impact potential and scaling of RAN innovations. The ChangeLabs team provided a template to track innovation progress. At the end of the workshop there was need to hold a joint M&amp;E and innovation workshop where the M&amp;E team and the innovation officers were to work collaboratively in tracking the innovation process accurately. This workshop was scheduled for August 2015.</b></p> <p>RAN with technical support from Stanford University ChangeLabs organized and conducted a Joint Workshop for the Innovation Officers and the Monitoring and Evaluation Officers in all the RILabs. This workshop was held in August 3-8 2015 at RAN Offices in Kampala with 36 participants in attendance. The focus was on strengthening capacity in the use and application of RAN's Impact Potential Methodology as well as in overall project management. The workshop was meant to build the knowledge and capacity of the Innovations officers and M&amp;E officers in maximizing impact potential for the project portfolios they are overseeing. It involved brainstorming on the impact potential benchmarks and indicators for all the labs. The Joint August Workshop held a session on working with communities to assess their needs. <b>The M&amp;E team and the innovation officers were to work collaboratively in tracking the innovation process accurately.</b></p>
2.6.2	Implement the impact and resource multiplication strategy	<p>RAN has submitted 4 proposals to the Global Resilience Partnership as a means to mobilizing external resources to support the scaling of innovations in its Portfolio. One proposal has not been funded but 3 are still under review. RAN also submitted a proposal to the Africa Development Fund's ClimDev fund for climate-centered development. A response is awaited on this. Full-scale implementation of the core of RAN's resource multiplication strategy will however be rolled out in Year 4, when RAN has completed its strategy.</p>
2.7	Identify and implement platform projects	<p>The RAN secretariat, Stanford University together with HA RILab conducted at Collaborative Resilience Innovation Design (CRID) Workshop in Addis Ababa on 5- 6 February, 2015 and identified three platform projects: 1) Water for all, 2) Diversified livestock and</p>

Act.	Description	Achievement
		<p>livelihood; and 3) Information capacity building. The projects are under review at RAN Secretariat level.</p> <p>WA RILab also conducted a CRID workshop on 26-27 March, 2015 in Tamale Ghana and a total of 32 participants attended the workshop. The collaboration with experts identified three intervention platforms: 1) Waste management; 2) Water for domestic and agricultural use; and 3) improved agriculture and markets.</p> <p>In Q4 Year 3, the HA and WA RILab developed the first drafts of their grant calls. These documents are based on the platform projects identified in the CRID workshops. RIC4RED grant document for Ethiopia which contains platform projects focusing on recurrent droughts and the RIC4FAL grant document for Ghana are still under review by RAN Secretariat and USAID. The development of platform projects focusing on chronic internal displacements in Somalia is ongoing.</p>
2.8	Conduct ethnography workshop in Kampala with all RILabs (concurrent with 2.4.3)	<p>Stanford University led by Banny Banerjee and Theo Gibbs in close collaboration with the secretariat conducted a NeedFinding workshop in Kampala on 27-28 January, 2015. The workshop targeted innovation teams and innovation officers from each RILab. The five teams incubated in the EA RILab and the top 7 RIC4ACE applicants were also involved. The aim was to prepare innovation teams in tailoring their innovations to the users' needs and also to build in scaling at an early stage. The teams were introduced to techniques of engaging the community to understand their needs in an effective way. This was incorporated with practical demonstrations where innovators interviewed 'users' on the bag they would need and they prototyped the different bags to suit the users' needs. The innovation officers from RILabs which did not have innovations incubated yet are expected to train their innovators once they are on-boarded.</p> <p>This workshop was attended by about 40 participants from the four RILabs, RAN secretariat and Stanford University.</p> <p>In Q4 Year 3, the RAN Secretariat provided technical support to SA RILab as they conducted the Needfinding workshop on Aug 12 2015 with the soon to be on-boarded innovators. There were 14 participants. The main purpose of the Needfinding workshop was to build the capacity of innovators on the value of Needfinding in the communities where the innovations will be implemented.</p> <p>Various students and innovators at RAN also had the opportunity to be mentored on NeedsFinding approaches by Koffi Taha from MIT-IDIN.</p>
2.9	Conduct workshop & strategy planning	Preliminary stages of this activity were introduced in the Managing Innovations workshop (under activity 2.4.3) conducted on 29-30 January 2015 in Kampala. The SA RILab team plans to engage a

<b>Act.</b>	<b>Description</b>	<b>Achievement</b>
	for Scaling with RILab members	consultant to assist with drafting the RILab's Innovations management plan.
2.10.	Conduct meeting on working with communities as partners in innovation in EA RILab and focal community	<p>The EA RILab on January 16, 2015 in Gulu - Northern Uganda conducted a one – day workshop with community members in Gulu to help identify resilience issues that the RootIO innovation project under the EA RILab could address and thereafter inform the development of theories of change for each issue. Six issues were identified and these include: Governance, Education, Health, sustainable livelihoods and youth unemployment. The ToCs were drafted to guide RootIO on which issue to take on. However, the RootIO team agreed to conduct radio programmes that will be used to capture community views on the issues they face rather than narrowing the broadcast to a particular issue.</p> <p>The EA RILab hosted Kofi Taha who conducted a hands-on training on involving communities on 21, July 2015. Koffi is Associate Director and International Development Innovation Network (IDIN) Innovation Center Coordinator at the Massachusetts Institute of Technology (MIT)-IDIN. There were 38 participants. The audience consisted of the lab incubatees, student interns and RAN staff. He highlighted the importance of involving the community right from innovation project inception and 'walk the talk' with the community for not only sustainability purposes but also ability to gather community knowledge to the same. The session was an impactful one breaking down the design process while giving insights into how to effectively engage communities with emphasis on the importance of paying details to the power of partnership as an entry point to the communities.</p>
3.1	Build capacity to develop, host and evaluate M-KITs	The Joint Workshop for Innovation Officers and M&E Officers on Managing Innovations included a session on MKITs. The objective was to revisit our understanding and strategy for MKITs. Since then in collaboration with Stanford plus the EA and SA RILabs, we have been prototyping various MKITs Learning Platforms for roll out in Year 4.
3.1.1	Recruit an M-KITs Coordinator/ Multimedia Specialist	The secretariat recruited an MKITs coordinator in Q1 who will provide support to all RILabs in their MKITs development. In HoA RILab, the Innovations Officer has already taken the mandate to develop and upload relevant MKITs materials and he is closely supported by three faculty members from Jimma University.
3.1.2	Form strategic partnerships to set the stage for M-KIT development (Stakeholder meetings )	Except the WA RILab, which conducted its ISW at the close of the reporting period, all RILabs have already developed MKITs. EA RILab at the close of this reporting period conducted an MKITs competition which led to wide knowledge of the use of short videos/audio/photos to tell innovation stories. This competition was finalized by an official launch of the RAN MKITs to the general public. The HA RILab has developed MKITs from the CRID Workshop held in February 2015 and these were submitted to RAN Secretariat in Q3.
3.2	Conduct in-house Training Workshops on	

Act.	Description	Achievement
	M-KITs in RILabs	
3.2.1	Conduct in-house Training Workshop on M-KIT development in EA RILab	The new MKITs coordinator conducted hands on training for EA RILab staff and student interns in development of MKITs.
3.2.2	Conduct in-house Training Workshops on M-KIT development in SA RILab	The training activity has been deferred to Year 4 when RAN steps up efforts to scale the M-Kits strategy to all RILabs
3.2.3	Conduct in-house Training Workshops on M-KIT development in HoA RILab	This activity has been deferred to Year 4 when RAN steps up efforts to scale the M-Kits strategy to all RILabs
3.2.4	Conduct in-house Training Workshops on M-KIT development in WA RILab	This activity has been deferred to Year 4 when RAN steps up efforts to scale the M-Kits strategy to all RILabs
3.3	Support the design and development of innovation-project-based M-KITs in RILabs	
3.3.1	Support the design, development, hosting and evaluation of M-KITs in EA RILab	The MKITS coordinator initiated a drive to accelerate production of MKITs. Working with student innovators and RILab staff, over 900 MKITs were produced over the period of one year. This brings the total of current MKITs to 960. However, there are still challenges related to: 1) Identifying a suitable platform to host the MKITs; 2) Rationalizing the types of MKITs produced and 3) Categorizing the MKITs into formats that can be easily assembled to structured learning on innovation and resilience. This strategy is under development and will be rolled out in Year IV.
3.3.2	Support the design, development, hosting and evaluation of M-KITs in SA RILab	<b>The SA RILab</b> held a pitching session of shortlisted full applications for RIC4FIG which presented an opportunity for the development of MKITS for the RILab. 7 MKITS were identified and are being finalized. However, the broader strategy of rolling out MKITs has been deferred to Year 4 when RAN steps up efforts to scale the M-Kits strategy to all RILabs
3.3.3	Support the design, development, hosting and	This activity has been deferred to Year 4 when RAN steps up efforts to scale the M-Kits strategy to all RILabs

Act.	Description	Achievement
	evaluation of M-KITs in HoA RILab	
3.3.4	Support the design, development, hosting and evaluation of M-KITs in WA RILab	This activity has been deferred to Year 4 when RAN steps up efforts to scale the M-Kits strategy to all RILabs
3.4	Design and develop an effective transactional knowledge creation and sharing model	This activity has been deferred to Year IV when RAN finalizes its MKITs knowledge sharing strategy
3.5	Offer Project Level Documentation, Publication, M-KIT development and publicity support to resilience data and Innovations in RILabs	
3.5.1	Offer Project Level Documentation, Publication, M-KIT development and publicity support to resilience data and Innovations in EA RILab	In Q2 and Q3, the EA RILab had the five innovation teams under the resilience innovation acceleration program (RIAP) complete their Needfinding activities in the communities where they were to iterate or test their prototypes with the end-users. Video footages, audio and photos captured in these Needfinding activities created a platform for documentation, publicity and developing MKITS for each innovation team. The development of MKITS is under way with help of the RAN multimedia developer.
3.5.2	Offer Project Level Documentation, Publication, M-KIT development and publicity support to resilience data and Innovations in SA RILab	This activity has been deferred to Year IV when RAN finalizes its MKITs knowledge sharing strategy
3.5.3	Offer Project Level	The research team in Ethiopia has already prepared a manuscript for publication, shared the material with RAN Secretariat and DRLA at

Act.	Description	Achievement
	Documentation, Publication, M-KIT development and publicity support to resilience data and Innovations in HA RILab	Tulane University for comments and suggestions. Moreover, two M-KITS materials have been prepared and pending to be uploaded on YouTube; these are: Intervention Pathway I: Tackling Water Scarcity and Contamination; as well as the six intervention pathway canvas presentations. Besides, an MKIT prepared on the interview with HoA RILab Director awaits completion and approval from RAN Secretariat to be uploaded on the web.
3.5.4	Offer Project Level Documentation, Publication, M-KIT development and publicity support to resilience data and Innovations in WA RILab	This activity has been deferred to Year IV when RAN finalizes its MKITs knowledge sharing strategy
3.6	Conduct an M-KIT Competition/Challenge and Hackathon at EA RILab	<p>The EA RILab piloted the first MKIT competition under RAN. This competition was opened in February and the deadline for submission was March 25, 2015. This RAN MKITs challenge was run under two challenge categories: 1) MKITs (short videos) and 2) Photo challenge. RAN believes in the notion that "A picture is worth a thousand words" and it was also a requirement for each submitted photo to have a caption. This competition was climaxed with a launch of the RAN-MKITs on April 1, 2015 at the RAN office premises and a brief of the launch is provided in the appendix. This was done through a call for submissions in two categories; photos and videos. Many submissions were received and the winners got prizes on the climax day (the launch). The challenge ran for a month (March 2015) and the launch held on the 1st of April 2015 attended by 77 participants.</p> <p><b>The best three videos and photo stories were showcased. The judges provided insights to the teams on what makes a video/photo story captivating and how the winners emerged. The competition was presided over by the Manager at NTV Media house Uganda, Mr. Maurice Mugisha and he handed over the awards to the winners. The guest of honor also handed over certificates of award to the students who attended DT training on 31 March 2015 on the same occasion.</b></p>
3.7	Develop Resilience Courses	RAN EA RILab, with the support from TU/DRLA, developed a Post graduate professional certificate course in Disaster & Climate Resilience as part of a grant received from UNDP to train their workers in resilience. The course has 23 students and is offered at the School of Public Health Makerere University.
3.8	Prepare and Publish Annual State of Sub-	

Act.	Description	Achievement
	Saharan African Resilience reports	
3.8.1	Publish first Annual State of sub-Saharan African Resilience report	<p>In Q1, TU/ DRLA collaborated with USAID, the Secretariat, CSIS and RILabs to complete the final edits to the report, submit to a professional copy editor and finalize formatting.</p> <p>In Q2, the first annual “State of African Resilience” Report was launched in Washington DC and mainstreamed online on 11 March; 2015. The event attracted 176 participants who included academicians, policy makers, development partners, Government officials, USAID officials, researchers among others.</p> <p>In Africa, the first annual “State of African Resilience” Report was also launched in Makerere University, Kampala Uganda on 8 May, 2015. The report was disseminated widely throughout professional development networks and social media channels. The event attracted 468 participants from all over the world including; multi-disciplinary faculty, students, innovators, the community, policy makers, development partners, Government officials, USAID officials, researchers, Ambassadors, Members of Parliament, Honorable Ministers, Chancellors, faculty and students from other institutions of higher learning, other developmental partners, the media, the Center for Strategic and International Studies (CSIS), Duke University (both based in the United States of America) among others. Hon. Chris Baryomunsi, State Minister for Health in-charge of General Duties represented the Prime Minister of the Republic of Uganda, Rt. Hon. Dr. Ruhakana Rugunda as Chief Guest. He launched the “State of African Resilience” Report which highlights community consultation findings from the ResilientAfrica Network (RAN) and highlights major dimensions of resilience from the perspective of more than a dozen vulnerable communities across sub-Saharan Africa. Major partnerships and collaborations were realized as a result of the launch of the report most notably of which is the Intergovernmental Authority on Development (IGAD) partnership where RAN was invited by IGAD to discuss the report in Nairobi on July 13, 2015.</p> <p>In Q4, on July 13 2015, the RAN held regional discussions on the first annual “State of African Resilience” Report, with the Intergovernmental Authority on Development (IGAD). The event organized in partnership with IGAD brought together 111 participants including; United States Agency for International Development (USAID), Makerere University, Tulane University’s Disaster Resilience Leadership Academy (DRLA), University of Nairobi, Benadir University, World Food Program (WFP), United Nations International Children’s Emergency Fund (UNICEF), United Nations Development Program (UNDP), World Bank, Food and Agricultural Organization (FAO), Africa Development Bank, CARE, Save the Children, Norwegian Refugee Council, Plan International, Science Africa, Swedish Government, Oxfam, Department for</p>

Act.	Description	Achievement
		<p>International Development (DFID), European Union, Islamic Relief Worldwide, UN Women, United Nations Office for Disaster Risk Reduction (UNISDR), United Nations High Commissioner for Refugees (UNHCR), International Organization for Migration (IOM), Plan International, Building Resilience Communities in Somalia (BRiCS), Swiss Agency for Development and Cooperation (SDC), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Catholic Relief Services (CRS), Somalia Resilience Program (SomReP), and the media among others. This event was also widely publicized on Social Media-Twitter and Facebook.</p> <p>The Executive Secretary of the Intergovernmental Authority on Development (IGAD), H.E. Ambassador (Eng.) Mahboub Maalim, commended the work being done by Makerere University School of Public Health ResilientAfrica Network (RAN) with support from the United States Agency for International Development (USAID). RAN continues to foster partnerships with IGAD to strengthen resilience building among vulnerable African communities.</p>
3.8.2	Prepare the Second Annual State of sub-Saharan African Resilience report	This activity will be done in Year 4 because data collection activities for the quantitative surveys, on which the Second SRR will be based are still ongoing
3.8.3	Publish Second Annual State of sub-Saharan African Resilience report	This activity will be done in Year 4 because data collection activities for the quantitative surveys, on which the Second SRR will be based are still ongoing
3.9	Submit scholarly journal article/s for each of the RILab thematic areas of focus	<p>The SA RILab team members are drafting 3 articles from the qualitative data. One paper from each Network Plus University team is expected to be published by Q1 Year 4.</p> <p>TU/DRLA provided technical support to the HoA RILab in Ethiopia as it prepared its qualitative findings for journal submission. The HoA RILab together with other core staff, the research team in Ethiopia prepared a manuscript for publication, from the qualitative study conducted in Borana Zone of Southern Ethiopia, focusing on Recurrent Droughts. The manuscript was revised, edited and submitted for publication in peer-reviewed international journal.</p> <p>The EA RILab working with a research fellow under the UNDP – RAN partnership has drafted a manuscript that will examine resilience to floods and landslides in the districts of Bududa, Manafwa and Butaleja in the Elgon region, Eastern Uganda. Together with Stanford University’s Center for Deliberative Democracy and RAN secretariat, the EA RILab is also drafting manuscripts on deliberative polling.</p>
3.10	Develop, broadcast and maintain an online	This activity has been deferred to Year 4

Act.	Description	Achievement
	platform for RAN data	
3.10.1	Develop Online Platform	This activity has been deferred to Year 4
3.10.2	Broadcast Online Platform	This activity has been deferred to Year 4
3.10.3	Maintain Online Platform	This activity has been deferred to Year 4

## 4. Engagement of Partners and Other Actors

### 4.1.1. Interdisciplinary Collaboration

In Year 3, RAN continued to engage multidisciplinary teams in the following ways: 1. In Q1, EA RILab with technical support from RAN Secretariat, invited a multidisciplinary team of faculty (from Engineering, Anthropology, Information Technology and medicine) practitioners to three separate design-thinking based co-creation activities targeting global challenges: 1) The Fight Ebola Grand Challenge 2) the Saving Lives at Birth Grand Challenge, and 3) Monitoring Evaluation Research and Learning (MERL). Under USAID's Fight Ebola challenge, one of RAN's co-created ideas the re-imagined tent to support human-led service delivery won an award under this process. It was co-created by a team of 15 resource persons. Under the Saving Lives at Birth - a Grand Challenge for Development, the EA RILab hosted 23 experts, for ideation, brainstorming and rapid prototyping techniques based on design thinking principles formulated ideas. The outputs of this one day session were three innovative ideas that were refined into concepts for submission. Unfortunately the ideas did not attract any funding. Under Monitoring, Evaluation, Research and Learning (MERL), RAN participated in a joint co-creation workshop in Washington DC in which it became one of 4 consortia selected for award, under a concept to develop a tool-set for understanding complex systems known as Systems and Complexity MERL. RAN was notified of the award in Q4 of year 3.

### 4.1.2. Partner Engagement

1. The EA RILab invited multidisciplinary teams of students and faculty for a Design Thinking (DT) Workshop on 31st March 2015 at the EA RILab space aimed at training the participants to primarily consider interacting with end-users in designing any innovation in order to increase the innovation's relevance and uptake in communities. The faculty members who participated in this workshop applied the skills by training students in DT from various faculties at Kisubi Brothers University. This workshop was held on April 17, 2015 at Kisubi Brothers University College with 30 participants in attendance. The EA RILab in Collaboration with RAN Secretariat provided technical support. The DT workshops work on the model of Training the Trainer (ToT), in which trained resource persons train others as part of a cascade pathway to infuse the DT skills across the RAN community.

2. In Q3, EA RILab together with RAN secretariat engaged multi-disciplinary teams in a Brainstorming Session to co-create and co-design innovative solutions for “the 2015 Wharton - QS Stars Re-imagine Education Awards. The Grant challenge was seeking for the most innovative approaches to pedagogy from around the world in response to the rising cost of traditional education and the enormous advances technology that allow, the customization of education to individual learning styles, group learning, online interactivity, gaming and real-time employer projects. The output from this brainstorming session was that RAN submitted innovative ideas in response to this challenge.
3. In Q3, as part of RAN’s resource multiplication strategy, the EA RILab supported two of the innovations teams incubated in the Lab namely, saving on a mobile application (EDAD) and the community radio (RootIO) to prepare grant applications and submit to the Global Resilience Challenge which was awarding up to \$1 million to winners coming up with innovative solutions to build resilience in some of the world’s most vulnerable regions. This was submitted together with a third project idea co-created by RAN staff members.
4. The EA RILab hosted and engaged a team of engineers under the Innovation Consortium, a private-not-for-profit entity started by young Ugandan Engineers and Architects, involved in innovating for mechanical and architectural solutions. One of the key outputs of the partnership that has emerged is that the engineers offered to mentor our students/faculty who have mechanical/architecture related prototypes to optimize their designs. This collaboration has resulted into a monthly called the ‘Innovation Garage.’ RAN has so far conducted four Innovation Garages since June 2015 to-date. The Garage events are mainly focusing on engineering solutions but are open to all disciplines. The Garages bring together participants from various disciplines such as IT, Engineering, Computer Science, Architecture, Psychology and these disciplines contribute immensely to the designs of prototype.
5. The EA RILab also put out a call for applications for internship placements that solicited 190 applicants from different disciplines. The RILab shortlisted 30 student interns from the following disciplines: Mass Communication and Journalism, Software engineering, Information Technology, Computer Science, Education, Telecommunication Engineering and Electrical Engineering, and Public Health. The students worked in teams and worked with peers from other disciplines. This cross disciplinary approach had a significant impact on the quality of the final products. The students who worked on MKITs/short videos had good story boards thought out by journalism students and IT students helped in editing footage which was a good blend. The students also participated together in the Human Centered Design course, Leadership course and Basic GIS course.
6. In Q1, the SA RILab engaged students from different universities and faculties to apply for support to attend TechCon to showcase their innovations. Six applications were received of which three were shortlisted. One student from the School of Health Systems and Public Health was selected to represent the lab and show-case his project at the TechCon. Interdisciplinary engagement was also done for RIC4FIG publicity and drafting of the grant call document. Various faculties at the University of Pretoria as well as Network Plus Universities in Zimbabwe, Malawi and Limpopo were engaged to submit applications for the RIC4FIG call. Over 170 applications were received. A total of 22 reviewers for the call proposals were drawn from various faculties and fields including Agriculture, Education, Social Science, Health and Engineering. In Q3, the RILab engaged eight judges from different faculties (Public Health

Agriculture, Engineering, Economics and Social Sciences) in the RIC4FIG selection judging process. Q4 saw the SA RILab continue to foster interdisciplinary collaborations by ensuring that each of the innovation teams under RIC4FIG has members from various disciplines working together. This promotes enhanced integration of knowledge and expertise of several disciplines to develop solutions to complex problems in a flexible and open minded way. It has also fostered a spirit of ownership and shared decision making. For quantitative surveys, the SA RILab made use of professionals from various fields such as statisticians, social scientists and epidemiologists. Furthermore, the lab held a students' innovation contest. The contest was open to students from different faculties of universities in South Africa. All these engagements fostered interdisciplinary collaborations.

7. In the first two quarters of year 3, the HA RILab made efforts to involve faculty members from various fields of study, such as public health, medical science, water resource engineering, mainly from Jimma University and Addis Ababa University. One practical example was the reorganization and refinement of two innovation projects for presentation at TechCon 2014 in USA in November, 2014; they includes a) Locally Produced Phototherapy units for Treatment of Neonatal Jaundice by a postgraduate student from Addis Ababa University, and b) A Manual Oxygen pump, by an undergraduate student from Jimma University. One of our Interdisciplinary Faculty members, Dr. Esayas Alemayehu from Jimma University Institute of Technology, attended the TechCon 2014, along with our RILab Director, Prof. Kifle Woldemichael. The other examples of interdisciplinary collaboration are the development of survey protocols as well as the write-up of manuscripts from literature reviews and qualitative studies conducted earlier in Ethiopia and Somalia. The HA RILab also involved faculty members from various fields of study, such as public health, business and economics, water resource engineering, agricultural science and veterinary medicine, from Jimma University, Addis Ababa University, and University of Nairobi to participate in the Collaborative Resilience Innovation Design CRID Workshop conducted from February 5-6, 2015. The CRID approach 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 real time. The departure points for solution creation in CRIDs are the priority intervention pathways identified in the Intervention Strategy Workshops. Teams of experts sit and design the model projects required to address the priority intervention pathways. The types of projects developed through the CRID approach are larger projects designed to cater for a set of complementary system level challenges rather than discrete challenges therefore generating 'an ecosystem of complementary innovation projects' other than discrete projects. The projects designed under the CRID approach are then out-sourced to competent stakeholder agencies at the community level to develop and incubate them. The projects are rolled out in form of 'multi-function platforms', hence the name 'platform projects'. Because the projects involve an ecosystem of innovations, stakeholder agencies need to continuously work with scholars and innovators from universities as well as the communities themselves to identify which combination of innovative applications works and what does not work. RAN secretariat invited a multi-disciplinary team of 4 experts to refine the platform projects that emerged from the CRID workshop in HoA RILab on 19th March 2015. These included a Professor from Veterinary Medicine, a Water Engineer, and Agri-Business Expert and a Micro- Entrepreneur. The Experts deliberated on possible interventions on Water resource management, Livestock production and Entrepreneurial activities in the Horn of Africa.

The main objective was to build a platform around surface water resource management in which the lab can integrate improved livestock production and livelihoods diversification.

8. In the HA RILab, further opportunities for interdisciplinary collaboration arose from several meetings of the research team members while revising and updating the qualitative study manuscript submitted to the BMC Public Health journal in March 2015 and the quantitative survey protocol. There was also a mini-forum organized for presentation of an innovation project on Rainwater Harvesting in which useful comments and suggestions were provided in order to refine and enrich the project. The RILab also engaged faculty members in the retreat organized in Woliso Town from 29-31 May, 2015, in the write-up of two project specifications terms of references for CRID Meta Platform Projects. In Q4, HA RILab involved a number of faculty members from three colleges of Jimma University, namely College of Health Sciences, College of Social Sciences and Humanities as well as College of Business and Economics. A case in point is the active participation of faculty members in the orientation on RAN-HA RILab resilience program activities which was followed by survey training for data collectors and fieldwork supervisors, from July 24 to 26, 2015, on the Main Campus of Jimma University. Subsequently, twelve data collectors and four supervisors were deployed from the university to survey fieldwork in Borana Zone. Various other faculty members were involved in the quantitative survey preparatory activities. The lead consultant was a biostatistician from the College of Health Sciences, who developed the survey data entry templates.
9. In the WA RILab, a multi-disciplinary faculty team was engaged to help implement the activities of the RILab. A newly installed Innovations Advisory Board includes faculty and a student representative, with the aim of promoting access to information and opportunities by the students through their representative. The RILab also engaged a number of faculty members in the Deliberative polling (DP) activities as experts in various policy issues. This led to the exposure of the DP methodology to a cross-section of faculty members. Government agencies as well as civil society organizations involved in governance were also represented in the DP process. There is now wide acceptance among the stakeholders involved that the DP process is one of the best ways to go about policy formulations and also doing interventions for communities.
10. In addition to TU/DRLA RAN faculty members, RAN's Tulane University team also draws on expertise from other departments, such as the Tulane's School of Architecture, A.B. Freeman School of Business, School of Law, School of Public Health and Tropical Medicine the School of Social Work and the Department of Economics in the development of guidance documents as well as key white papers generated. DRLA also engaged faculty and staff in its network via the Strengthening Leadership in Disaster Resilience Program (SLDRP) to be active participants in RAN. The SLDRP is focused on building graduate programs in disaster resilience leadership. This strategic engagement will allow for easy cross-pollination of resilience lessons learned from RAN and SLDRP. One key RAN level output from this collaboration was the development of a Resilience Course for RAN. This course was used to train practitioners in Disaster Risk Management under the UNDP collaboration. In Q3, TU/DRLA collaborated with IGAD in bringing together stakeholders from the humanitarian community to disseminate and share learning from RAN's qualitative resilience findings. Stakeholders included FAO, WFP, and UNICEF among others. In Q4, Tulane University continued to foster interdisciplinary collaboration by linking RAN to IGAD, with a view to infusing RAN's resilience findings in

IGAD's work. Because of this link, RAN and IGAD are now co-authoring a partnership concept that could see the joint establishment of a, IGAD-led regional innovation hub in Nairobi. RAN is expected to provide the methodology and processes that will be used to run the Hub.

11. At Stanford University, the Center for Deliberative Democracy work with the WA RILab is inherently interdisciplinary—combining work in the social sciences (political science and communication) and work in Public Health and faculty from engineering. 4.2 Partner engagement.

The following partner engagements were realized in Year 3:

12. Makerere University School of Public Health under the EA RILab signed a collaboration agreement with UNDP to co-implement a project on Integrated Climate and Disaster Risk Management in Uganda. Specifically, RAN is mandated to 1) develop and conduct a tailored post-graduate professional certificate course on Disaster and Climate Resilience; and 2) conduct four researches in the field of resilience and climate risk management. Funded by UNDP, RAN trained 23 practitioners identified by the Office of the Prime Minister in Disaster and Climate resilience. The training was based on materials developed in collaboration with Tulane University. The research fellowships were awarded to four research fellows through a competitive application process.
13. RAN hosted a Post Techcon 2014 De-briefing event on Friday, 12th December 2014. The event was organized for students and faculty including those that did not participate in TechCon 2014 in California. It was an opportunity to showcase the EA RILab Innovations that were exhibited at Techcon 2014. Makerere Student Innovator David Tusubira passionately shared his experiences at TechCon and Graduate student David Lubega who was the 2nd runner up in the Innovation market place and best HESN student participant shared insights on conceptualizing and developing a winning innovation, using the case-study of his project, Hydroponic Fodder. We also had deliberations on RAN's approach to building an innovation ecosystem for strengthening resilience and RAN as a catalyst to innovations in the Region through multi- disciplinary teams. The climax of the event was the remarks from the Chancellor of Makerere University- Prof Mondo Kagonyera who inspired innovators.
14. The EA RILab also engaged with Mr. James Muwonge of the Uganda Bureau of Statistics (UBOS), an agency of the Government of Uganda, during development of their survey sample design. Tulane provided support in this survey design.
15. Prof. Ky Luu presented RAN's first annual State of African Resilience Report at meetings of the Global Alliance and the Intergovernmental Authority on Development (IGAD) Resilience Analysis Unit in Addis Ababa, Ethiopia. DRLA continues to engage with IGAD to disseminate the RAN report in Africa and on resilience related research in the region. Luu also works closely with the USAID resilience leadership team as well as the Rockefeller Foundation to keep them up to date on RAN's progress on both the qualitative and quantitative processes. In Q3, Ky Luu presented RAN's first Annual State of African Resilience Report at meetings of the UN's Food and Agriculture Organization (FAO) in Rome. In Q4, The TU/DRLA Team also partnered with the Intergovernmental Authority on Development (IGAD) Resilience Analysis Unit in Nairobi, Kenya share RAN's State of African Resilience Report with regional stakeholders. This was on July 12 2015 in Nairobi, Kenya, with 111 guests in attendance. The DRLA continues to engage with IGAD, UN agencies (including UNICEF and WFP), ECOWAS, the AGIR and other

international stakeholders to disseminate the RAN report in Africa and on resilience-related research in the region.

16. RAN connected with ASME (The American Society for Mechanical engineers) and Engineering for Change (E4C) at the 2014 TechCon in California. E4C then hosted RAN on one of their monthly Webinar series which took place on 21st January 2015 with a very engaging topic of discussion on “Harnessing Technology to Strengthen Communities' Resilience to Adverse Climate Effects”. ASME has established a focus on “engineering for global development” to create mechanisms to systematically bring the “engineering perspective” to global development efforts. Currently this includes a knowledge-exchange platform and global community of over 770,000 followers representing organizations and individuals dedicated to promoting sustainable and accessible technology-based solutions for underserved communities worldwide. The Engineering for Change (E4C) Webinar Series promotes emerging ideas and is network of passionate community of engineers and development practitioners. During this Webinar, the focus was on the technology imperative and potential technological interventions for the RIC4FIG call for the Southern Africa RILab in a bid to strengthen resilience to adverse climate effects. The Technology requirements relevant to an Engineering community discussed during the Webinar included potential irrigation projects, produce dryers, cheap storage for agricultural output, water harvesting and safe storage, early warning systems, low-cost, post-harvest processing solutions, land use maximization techniques, diagnostic solutions e.g. water purity, moisture content of produce, disease in remote and rural areas with limited or no electricity. Participants were introduced to RAN's work on strengthening the resilience of communities vulnerable to shocks and stresses in sub-Saharan Africa. The RIC4FIG challenge, including intervention pathways, focus communities, and the application process, insights on manifestations of adverse climate effects in Africa and the key challenges facing communities as a result. We also discussed potential collaboration opportunities under solution development, mentoring, capacity building and training in the RAN four RILabs. The Webinar was highly appreciated, feedback showed that it resonated with the attendees expectations.
17. RAN invited practitioners from Grameen Foundation and Thoughtworks - Kampala to co-facilitate a practical session in the Needfinding Workshop with the team from Stanford University. The workshop took place on 27- 28 January 2015. Emilia Klimuk Product Development Lead at Grameen and Christine Ampaire a Business Analyst at Thoughtworks, discussed key aspects on how their organizations are using Needfinding to advance their work and why it is valuable in the product design and development process. They gave real life examples in which Needfinding provided them with various and deep insights that forced their initial concept to pivot and be reformulated into something new while taking that powerful human insight into account and how it impacted on the acceptability of the final product. They brought the whole discussion on Needfinding to life and had an interactive session with the Innovators who initially had little exposure to this technique through the question and answer session.
18. Samsom Jarso, a Professor at Johns Hopkins University and Founder/CEO of the Andromeda Institute for Innovation and Implementation Science visited RAN on 11th March 2015 and he also visited Makerere University School of Bio-medical Engineering with the RAN Team. Samson Jarso was seeking a joint collaboration with RAN on building capacity in Biomedical Engineering courses between RAN, the RAN partner Universities in Ethiopia, Rwanda, Kenya and the

African Virtual University (AVU). We hope to submit a joint proposal in the coming months for funding to support Tutors in Bio- Medical Engineering courses in different Universities.

19. The HA RILab continued engaging their partners, such as the four Network Plus Universities, which include Addis Ababa University, Bule Hora University, University of Nairobi and Benadir University. The RILab has been closely consulting the officials of Jimma University with regard to procurement of the remaining essential items for its Innovation Center, equipping the RILab space, as well as strengthening their support for RAN-HoA RILab Project. The RILab has strengthened communication and engagement with RAN Secretariat through having a regular monthly Skype call every first week of the month. The RILab has communicated with its network plus Universities, and exchanged information and materials. Such communications include renewing MoU with Benadir University, and signing new MoU with Bule Hora University. The RILab also shared information and materials on funding opportunities with relevant faculty members from Jimma University as well as the network plus universities. Particularly, they interacted with their focal person at Bule Hora University who shared materials related to the socioeconomic profile of Borana Zone, their geographical focus area. HA RILab signed two MoUs with Addis Ababa University and University of Nairobi who are part of HA RILab network plus Universities, to formalize their relationship. HA RILab also got close engagement with the RAN Secretariat, aimed at raising their capacity. They received additional guidance and support on financial and technical matters, such as resilience surveys, publications, and innovation projects. In Q4, HA RILab actively engaged Jimma University Administration, in such areas as administrative and logistic arrangements for the survey fieldwork in Ethiopia; Bule Hora University in facilitating communications with local authorities in Borana Zone and the successful completion of survey fieldwork. Similarly, close collaboration was made with Benadir University in Somalia and University of Nairobi in Kenya, through which our RILab successfully conducted ISW and CRID Workshop, focusing on Chronic Internal Displacements in Somalia. In addition to University of Education, Winneba and University of Bamako, Mali with which the WA RILab signed MoUs in July 2014, the RILab signed a MOU with University of Dakar, Senegal on 26 February, 2015 bringing their Network Plus partners to three.
20. RAN collaborated with the International Committee of the Red Cross (ICRC) and the College of Computing and Information Sciences (CoCIS) at Makerere University to host the Humanitarian Innovation Event in East Africa on Friday June 19, 2015 at Makerere University Main Hall. The event brought together 150 humanitarian stakeholders, experts, scholars, researchers and innovators to discuss how innovations can improve the delivery of humanitarian services to people affected by armed conflict in relation to access to health care for victims of armed conflict, access to safe water for victims of armed conflict, prevention of sexual violence for victims of armed conflict, care for the victims and re-establishment of family links for victims of armed conflict. At the event RAN's Deputy Chief of Party participated in a panel discussion and also presented on the Re-Imagined Ebola Tent, a humanitarian innovation that won a Grant award under the USAID Fighting Ebola-Grand challenge for Development. Other panelists included Mr. Richard Mathela, the Medical Coordinator of Doctors Without Borders, Mr Simon Peter Anyanzo, Coordinator of Restoring Family Links at Uganda Red Cross Society, Prof Moses Kizza Musaaazi, a Senior Lecturer and Innovator of MakaPads and a range of other innovative products in water and housing. The event was crowned by a well-attended innovation exhibition that showcased carefully selected innovative projects with potential to address humanitarian

issues in relation to access to safe water, health and re-establishment of family links. It was a great opportunity for RAN to engage with other development partners and also for innovators to showcase products they have been working on in line with humanitarian response and some of the projects showcased could potentially get funding from these partners or even get useful connections to push their projects forward. We hope to nurture this partnership to lead to many other opportunities that will benefit our innovators.

21. RAN had a meeting with Médecins Sans Frontières (MSF)(Doctors without Borders) to discuss key considerations in the design of the Ebola Tent on August 26th 2015. RAN had also had initial discussions with MSF during the World Health Organization's (WHO) Consultation Meeting in Geneva, Switzerland, on March 24th-25th 2015 where MSF promised support in developing ETUs. MSF is an independent international humanitarian organisation that delivers emergency medical aid to people affected by armed conflict, epidemics, natural and man-made disasters or exclusion from health care in more than 60 countries. In emergencies and their aftermath, MSF provides essential healthcare, rehabilitates and runs hospitals and clinics, performs surgery, tackles epidemics, carries out vaccination campaigns, operates feeding centres for malnourished children and offers psychological support. During the meeting with MSF we got insights on Key design requirements for the HUECA tent like safety particularly to enable work flow of patients from one level ward to another while minimizing the risk of infection. Transparency to enable patients see the outside and not feel so cut off and allow for family and friends to see what is happening to their loved ones and also to avoid social stigmatization of patients. Quality of care to facilitate patient monitoring including 24/7 monitoring as well as to facilitate individual care, including possibility of private room particularly for suspect cases, Distinguished care levels to be able to distinguish and provide different levels of quality of care versus the probability of recovery. Areas where higher quality of care required can be provided due to higher probability of recovery while providing the necessary level for care for terminal patients. MSF highlighted that key challenge with current tents was Temperature which is currently addressed through ventilation, Air conditioning (AC) systems also often used. HUECA Innovators are putting in consideration all that was discussed during the weekly prototyping sessions. This is a potential partner we hope to engage further as we progress with the HUECA innovation.
22. On July 21 2015, young developers from around the world, along with innovators, development partners, practitioners and United Nations Population Fund (UNFPA) experts gathered together for a three-day Hack4Youth Design challenge. RAN partnered with UNFPA and played a big role in identifying young and talented developers to sign up for the event. RAN's biggest achievement was mobilizing big numbers of female developers from the Tech community. RAN developers teamed up with international developers in the seven teams that were created. RAN's Director of Innovations, Dr. Dorothy Okello, also joined the UN Secretary General's Envoy of youth Mr. Ahmad Ahlendawi and three judges who evaluated the team's pitches at the end of the 3-day hacking to decide on the most innovative solutions. The event was attended by 57 participants and many other partners who included Massachusetts Institute of Technology (MIT), SANA Mobile, Reach a Hand Uganda, UN Global Pulse/Pulse Lab Kampala and Praekelt Foundation. Participants developed mobile app solutions to promote young people's access to sexual and reproductive health and rights. Sponsored by UNFPA's Innovation Fund, the hackathon was a response to a growing commitment to leverage information and

communication technologies to empower young people, complimenting UNFPA's ongoing work and empowering young leaders so they can be pivotal agents for the health and wealth of society. Using methods drawn from design thinking and creative problem solving, the hackathon encouraged participants to think outside-the-box and design unconventional mobile health (mHealth) solutions. The hackathon followed principles of "user-centered design", actively engaging young people in the development of solutions that are based on their real needs and experiences. UNFPA is a potential partner that we hope to engage in subsequent activities at RAN like in the upcoming Social Design Clinics and we hope to collaborate further in identifying scaling partners and increasing visibility of RAN and building capacity of innovators in the human centered design approach.

23. RAN partnered with the Innovation Consortium group, a powerful combination of experienced engineers with practical experience to run an Innovations Garage in EA RILab. The Innovation Garage, which is hosted every last Friday of the month, is a great platform for innovators to build and get quick fixes of their engineering projects collaboratively with very creative and brave individuals. Focused on innovation as a cornerstone and key transformational element for development, the Innovation Garage is well positioned to assist innovators to refine their ideas and is guided by the Theme "Catalyzing Engineering Solutions". The Innovation Garage drives deep thinking by the attendees through brainstorm sessions, experimentation to pursue the best prototypes and solutions. These events are open to multi-disciplinary persons because we realize that each discipline contributes significantly to the quality of the Innovation. Through this Garage RAN hopes to support local solutions that will transcend nations and launch paradigm shifting innovations but also see technologies developed in Africa being launched on markets. The Innovation Garage is a great platform to support home grown solutions, engaging a radical group of innovators collaboratively re- inventing and inventing game changing solutions. Since its inception we have run 4 successful garage sessions and hosted incubatees from EA RILab that include the Solar Irrigation pump, Kungula! Maize Thresher, Rapid Solar Dryer, Community Radio Towers and Malaria control system. Each of the project pitched receives considerable attention which includes re-inventing some parts of the prototype or suggesting alternatives that could be less costly or more efficient and using readily available materials. The innovators are excited about the garage activities and greatly appreciate the feedback they receive from practicing engineers. The following new ideas emerged out of the Brainstorming sessions: (a) "Robust Radio Towers to support the community radio (RootIO) antenna and other radio antenna". During the pilot phase, the RootIO innovators team experienced challenges in procurement and setting up a low cost radio tower. During the Innovation Garage held on July 31 2015, attendees brainstormed on designing a low cost Radio Tower and the main aim was to bring down the cost from \$3000 to approximately \$500 and increasing the length of the tower from 12 to 25 meters. The overall goal was to lower the cost of initial setup of a full set of the Community Radio which involves a Radio Bucket to host the Radio Stations and the Tower to \$1,500 that a community can afford later on when we consider scaling this innovation and sustainability aspects of the radio. Participants proposed a Tripod Tower with 3 pillars made of galvanized pipes. b) Other exciting ideas that came through the brainstorming Garage session were inventions on a Ultrasound Malaria Control Towers. An Engineering student innovator presented a "Malaria Control System" a project he had been working on, involving the use of ultrasound technology to effectively drive away mosquitoes from homesteads and livestock in

villages to non-inhabited places, so as to massively apply insecticide to kill them, The current system prototype was made of a conveyor belt, on which a spraying arm and piezoelectric material were attached and moved over a village, from one end to the other. The system would then emit ultrasound to drive mosquitoes towards a given direction. When moving over uninhabited areas, the movement would slow down, allowing for concentrated spray of chemicals, to kill mosquitoes and their larvae. The belt would change direction of motion when the end of the designated area is arrived at and this would continue over and over again, till when stopped by an operator. This was an expensive mechanism and the design had limitations. Participants of the Garage proposed the “repel or attract and kill mechanism“ to wipe out mosquitoes. The new designs brainstormed included; constructing cheap towers made of timber or use of existing towers or even trees onto which the ultrasound frequency system is attached that attracts mosquitoes, a system that can decrease in wavelength at certain intervals. This system is placed in breeding areas of mosquitoes like swamps and at peak times when mosquitoes are active, a design sensor would also be embedded as an accessory to detect number of mosquitoes that have accumulated and then spray at once. The ultra sound frequency however attracts only female mosquitoes and so if these are killed in the long run the whole mosquito generation would be wiped out since there would be no reproduction without female mosquitoes. There are other sounds that were proposed of different animals like the dragonfly, bats to repel the mosquitoes without the ultra sound generator. The second design consideration was a cross tower on the base design with a transmitting circuitry , a spraying tank is attached like a drum of 200 litres the tank would have a sprinkler and dozing pump, 2 pumps and regulator ball valve where the dozing pump mixes the chemical for spraying. To eliminate a spraying pump in areas where there is power, there was an option of mosquitoes being trapped at one point in a wire mesh that electri-circuits them. The Engineering consortium has embarked on sketching this idea together with the innovator before physical prototypes can be designed. These two projects stirred up garage members to propose totally new ideas, other projects like the Maize Thresher, Solar Dryer and Solar Irrigation pump also received useful feedback and ideas that will lead to expansion of the size of the designs or changing the placement of certain components to make the design more efficient. RAN has generated many ideas through engaging participants in such brainstorming sessions and these ideas can potentially get support so that they are launched in the industry.

24. The EDAD project, an innovation team under EA RILab that is developing a mobile phone based savings mechanism, engaged the Bank of Uganda (BoU) as a pertinent stakeholder and as a Regulator of financial institutions in Uganda. The purpose of the meeting was to obtain a clearance letter to enable the innovators to open savings box-based collection accounts in any regulated commercial bank, to understand and gather the requirements needed to get a letter of clearance or no objection, to understand the available work done by BOU on financial literacy for the benefit of target communities and to obtain a supportive perception of EDAD as a mobile money intermediation service rather than placing it under the agency banking category. BoU is the Central Bank of the Republic of Uganda is responsible for monetary policy and monetary stability in Uganda. The innovators were informed of the standards and requirements they needed to fulfill as they pilot their project. They also received formal authorization to engage a commercial bank to host the saving account of the mobile money users. EDAD is in the process of finalizing an MOU with Top Finance Bank Ltd to host the first EDAD Savings Box

Account. It is expected that Top Finance Bank will submit a request for a letter of no objection to open this account.

25. RAN has just signed an MOU with BridgeSpan in support of helping our innovators build in scalability right from the early stages of development of their ideas, as well as capacity to engage with the communities to test and refine prototypes of their products. This project will also further our collaboration with Stanford and MIT D-Labs as resource persons. Specifically, this grant will cover three areas with a focus on the EA RILab: 1) Training on scaling and business plan development: In order for the EA RILab to support innovators to develop suitable business plans and scaling strategies, there is need to provide training to innovators and staff on scaling with emphasis on: Business plan development, stakeholder analysis and outreach, resource mobilization, and product diffusion. A comprehensive training needs assessment will be conducted to identify the needs that are customized to the current innovation teams 2) Mentorship for EA RILab innovators: Adults learn best when formal trainings are combined with the chance to practice new skills in real-life projects. This grant will enable EA RILab to link the innovators to business development experts so as to maximize impact, and will connect innovators to subject matter experts on areas relevant to their projects (e.g., connecting to mobile experts for innovators working on SMS platforms, etc.) 3) A locally-adaptable toolset: Currently, EA RILab (with support from Stanford University) has been able to develop Need Finding toolsets. However, we lack skills and expertise for community co-creation. This grant will facilitate the development of toolsets to link innovators to communities so as to enhance the relevance of innovator ideas through continuous co-creation with communities - it is expected to have MIT D-Labs joining this initiative too. We have seen success with existing toolsets for Training of Trainers, e.g., RAN staff and innovators, who then use these tools on projects in communities, and expect to see similar application from further development of our tools. The toolset will be disseminated to the other RILabs and the wider development community. 4.3 Collaboration Across the HESN.

RAN had several HESN level engagements in year 3:

26. Eight RAN student Projects participated in TechCon 2014 in California 8-10 November 2014. The RAN Secretariat successfully completed an evaluation process of projects that were received from the four RILabs to be considered for TechCon 2014 Innovation Market Place. This included scanning through the submitted abstracts and virtual interaction with some Innovators from the RILabs via Skype and E-mail. We received a total of 20 projects from the RILabs: 4 from WA RILab, 3 from SA RILab, 3 from HoA RILab and 10 from EA RILab. Of the 20 submissions 8 projects were selected to participate in the TechCon Innovation Market Place which include; i) Manual Oxygen Backup Device - Horn of Africa RILab ii) Locally Produced Phototherapy Unit for Treatment of Neonatal Jaundice - Horn of Africa RILab iii) The asthma severity staging and predicting device/instrument for patient self-care, management and participation in preventative and health behavioral change efforts. - Southern Africa RILab iv) Unearthing the Potential of Earthworms - Eastern Africa RILab v) K-FREE - An early breast cancer detection Mobile App that uses an android phone and portable hand held device -Eastern Africa RILab vi) Hydroponic fodder production for livestock: An innovation to mitigate shocks of drought and limited land resource faced by livestock keepers in sub-Saharan Africa - Eastern Africa RILab vii) Grain amaranth– from humble vegetable to health solution innovators – Eastern

## 4.2. Summary of Collaboration Across HESN

1. During TechCon, the EA RILab Director interacted with a team from MIT-CITE and discussed about the potential for partnership between the two universities. The MIT-CITE team was interested in recruiting Makerere University students to partner on two of the projects that MIT-CITE was working on in Uganda: 1) Post harvest storage, and 2) malaria rapid diagnostic tests. This partnership is ongoing and was executed in January 2015.
2. TechCon provided a unique opportunity to RAN Innovators to connect with other global Innovators. It was a great learning experience with passionate speakers who shared their visions, failures, successes through Dev talks, and pitched science and technology solutions for development. Students enjoyed the Ice Breaker networking session on the first day of TechCon where they interacted with students from other HESN Labs and made great academic friends. They truly loved meeting others from the HESN Labs, building with marshmallows and spaghetti, and talking about the ideas that energize them. Dr. Ticora Jones encouraged attendees during her opening plenary to make new contacts and emphasized the importance of multiplying potential impact through networking.
3. Big Ideas, an annual contest organized by University of California - Berkeley which is open to all HESN Universities was yet another competition that attracted participation from RAN students. We had 19 teams representing over 50 students from RAN (Makerere University) submit proposals in the pre-proposal round of the Big Ideas Contest. The contest categories included; Open Data for Development, Mobiles for Reading, Conflict & Development, Food System Innovations, and Global Health. Big Ideas is aimed at providing funding, support, and encouragement to interdisciplinary teams of students who have innovative solutions to address important social challenges. The deadline for pre-proposals was on 13th November 2014. We also had some faculty from Makerere University participate as Judges of this competition from November - December 2014. Of the 19 teams from RAN (Makerere University) that submitted pre-proposals in the Big Ideas Contest, 2 teams from Makerere University – RAN were selected to advance to the next stage and to submit full proposals which were due on 10th March 2013. The students worked with their assigned mentors to submit full proposals.
4. RAN students participated in the annual HESN Photo contest that was due on 1st Oct 2014. The photo contest was organized to showcase and celebrate great accomplishments and efforts of all HESN-affiliated students, staff, researchers and HESN-alumni like past researchers or participants of summits as they worked to solve some of development challenges. The HESN received over 300 photos from all the eight development Labs. A student Mugumya Ivan (RAN) who submitted Photos from a World Environmental Health Day event in Uganda received a high number of votes and was the second best following the overall winner Sydney Beasley, from MIT CITE's Lab, who won the 2014 HESN Photo Contest with a photograph of women in Ranoda, a village outside Ahmedabad - India, demonstrating how to use the Orlab water quality test kit. The RAN community had an interactive opportunity to vote for the best photo which ended on 20th Oct 2014.

5. RAN hosted MIT - IDIN students from the D-Lab who were in Uganda for a one month pilot study in Soroti - Eastern part of Uganda. The students visited our Innovation spaces and had an opportunity to interact with the RAN Chief of Party – Prof William Bazeyo, the RAN team and Student Innovators on 9th January 2015. MIT students pitched their projects that were intended to be piloted in Soroti and got positive feedback from RAN on how best to interact with the end users and maximize their community visit. Our students also presented their projects which they are currently working on and there was an opportunity to find where each of the Labs projects would intersect. MIT also shared some upcoming opportunities like IDIN Innovator Summits in India and Botswana. We had a close out and de-brief meeting on Tuesday 27th January 2015 when the students returned from Soroti. It was a very insightful interaction and hopefully we shall have some collaborative research projects emanating from the two HESN Labs.
6. Student researchers from MIT – CITE (Comprehensive Initiative on Technology Evaluation) jointly worked with a team of students from Makerere University to do a study on Post-harvest handling techniques. RAN identified four Makerere students to partner with the MIT team and a faculty from Makerere to serve as a mentor. The students conducted their study in Gulu and Jinja Districts, involving analysis of the social, economic and technical aspects of crop storage in Uganda by smallholder farmers. By creating a system-level model that is structured to allow changes in technology and policy assumptions, the models can be generalized to different locations, environments, crops, and customs. We had an initial planning meeting at RAN on 14th January 2015 to welcome the students to Uganda and discussed details on how to approach the communities. The RAN Chief of Party in his remarks commended the value of multi-disciplinarity where engineering students work with agriculture students and the community to address community needs based on a new understanding of complex situations. The students from Makerere will continue the Research and data analysis once the MIT students return back to USA. We had a closeout meeting for the teams on Thursday 29th January 2015. MIT - CITE is one of the Labs under the HESN. This partnership is one of the many ways in which RAN is tapping from the HESN ingenuity. EA RILab collaborated with The Comprehensive Initiative for Technology Evaluation (CITE) HESN Lab at MIT in the summer on 8th June 2015 engaging 40 students from Makerere University College of Business and Management Sciences (COBAMS) to run a one-day seminar and exercise in Evaluating Post-harvest Storage Technologies in a Supply chain contract elicitation. Students from this college were selected based on their coursework and background experience in Business and Entrepreneurship. The goal was to explore the last-mile and artisanal Ugandan crop storage sector with the students. CITE conveyed learnings about risk sharing in supply chains, manufacturing before receiving orders, and having excess inventory after a sales period. The exercises had Makerere students reflect on these learnings in the context of last-mile and artisanal firms, and convey their own individual approaches to risk sharing agreements in supply chains. The data from the exercise will be processed, and the results will be used to help inform change in the private post-harvest storage sector. This builds from an engagement that started last year during TechCon 2014 in California with Prof. Jarrod Goentzel, Emily Gooding, Mark Brennan from MIT and later a Research Team that came to Uganda in January 2015. MIT – CITE Research team in Uganda has been studying the supply and demand of hermetic crop storage technologies. The evaluation is examining bags, plastic silos, and metal silos used in storage. The study is focused on evaluating a UN World Food

Programme (WFP) Special Operation introducing hermetic technologies to farmers throughout the country and scoping out the already existing, though nascent, hermetic storage sector in Uganda. Early this year in January 2015, CITE worked with a different group of students from a different discipline in Agriculture from College of Agriculture and Environmental Sciences (CAES) at Makerere University through fieldwork and classroom exercises. This collaboration is one of the many ways in which Makerere University – RAN and MIT-CITE are tapping into the potential of a big University Network while engaging multi-disciplinary teams to solve development challenges. The HESN continues to create a vibrant framework of cooperation between development professionals and academia by harnessing the ingenuity and passion of scientists, students, faculty, and entrepreneurs to solve some of the world's most pressing challenges.

7. RAN has continued to engage with AidData HESN Lab under the HESN inter university collaboration through summer internship activities to build capacity of our local developers on the use of spatial visualization and analysis. The third cohort of students from AidData had many participating Universities from the USA who include; (University of Texas Austin, Brigham Young University, UC Berkley, University of Colorado Denver, and College of William & Marry). The Summer Fellows arrived in Uganda in June and the summer period runs from June – August 2015. The fellows who are largely based at different host organizations for 10 weeks pledged to be available on flexible days to conduct GIS training and a Hackathon at the end of the Summer. The Fellows are working in organizations in Kampala which include; UNICEF, Economic Policy Research Centre (EPRC) at Makerere University and Agency for Transformation and Transparency International, to build capacity and leverage AidData's geospatial data and tools while identifying opportunities to incorporate those tools into the organization's work.
8. RAN and AidData interacted on the following joint planned activities: (1) 8 AidData Summer Fellows met with the RAN Team and the RAN Internship students on Tuesday 16th June, 2015. During this engagement, the two teams shared insights on the projects they were working on, goals and their expectations from the internship program. They had a great interactive session where both teams told stories about their Internship experiences so far, acknowledging how different this is from the usual classroom experience. The story and the Photo Gallery can be accessed on RAN website, [www.ranlab.org](http://www.ranlab.org). Two (2) Fellows trained the RAN interns on the basics of AidData geocoding and GIS in a half-day training session on July 10, 2015. On July 17, 2015 AidData fellows trained 25 Makerere Students with more Geocoding experience in advanced techniques and analyses at the Department of Geomatics and Land Survey at College of Engineering. On Thursday, July 30, 2015, a one-day Hackathon event on use of spatial data visualization and analysis to address a specific challenge (or challenges) was conducted by the fellows and it attracted 63 student innovators.
9. RAN –MIT D-Lab collaboration on the cook-stove adoption study in Soroti –Uganda: RAN has continued to engage with HESN Labs which is great opportunity for our students and faculty to interact with Innovators from other Labs in the USA. Massachusetts Institute of Technology (MIT), Department of Mechanical Engineering and D-Lab collaborated with RAN to conduct a study on; "Sustained adoption of clean cooking products through a market-based intervention in Soroti, Uganda" from August 10– September 4, 2015. The premise of the study was to investigate motives and behavior change required to achieve sustained adoption of improved

biomass cooking products (cookstoves and briquette fuels) and their impact on indoor air quality. The study was aimed at evaluating instruments for measuring sustained adoption and impact from clean cooking technologies such as charcoal briquette fuels introduced through a market-based intervention in Soroti, Uganda. RAN supported MIT- D-Lab in the IRB (Internal Review Board) processes and approval of the research protocol to conduct the study in Soroti - Uganda. RAN also identified 3 students (Joseph Opiding, Denis Oktel and David Tusubira) from College of Engineering Design and Art (CEDAT) Makerere University who participated in the Research Study in Soroti for two weeks. MIT D-Lab team designed interview instruments for approximately 40 households in the scoping study. The study involved researchers from MIT, D-Lab team travelling to Soroti district in Eastern Uganda to conduct interviews and post-interview data analysis and in installation and commissioning of sensors, RAN students also assisted with check-ins on households and maintenance of the sensors where it was needed. The HESN has provided a great platform that promotes collaboration and allows researchers, innovators, and institutions to directly engage in solution development. This is one of the student engagement, research and innovation activities we continue to do with other HESN Labs which we have found truly rewarding to our Innovators and Researchers. We anticipate this to lead to substantial joint research collaborations. There is a lot we can learn from these collaborations and we hope that RAN will continue to be a point of reference when other HESN Labs intend to do community engagement activities in sub-Saharan Africa.

10. Makerere University Faculty wins UC Berkeley's DIL grant: Makerere University Faculty, Dr. Engineer Bainomugisha, an Associate Professor of Computer Science at the School of Computing & IT – Makerere University, won a one-year spring 2015 Development Impact Lab (DIL) Innovate Grant award to support a project he is spearheading entitled “Participatory Road Infrastructure Monitoring”. He is working with a research team comprised of graduate students that have interest in mobile and cloud computing, Internet of Things, security and privacy, crowdsourcing and participatory sensing. The project involves use of sensors (GPS and accelerometer) embedded in mobile phones to automatically detect road damages and provide mapping to act as a warning to motorists and also inform city authorities of parts that need repair. The research award will also facilitate campaigns for participatory road infrastructure monitoring with a selected number of motorists in and around the city. DIL Innovate Grants are awarded by the Development Impact Lab (DIL) of UC Berkeley, which is part of USAID's Higher Education Solutions Network (HESN). RAN will continue to support this team working more specifically on accessing target communities to do a Needfinding so as to ensure that the project is centered on the end users. Opportunities like the DIL Innovate Grant are continually shared within the RAN network. We have been encouraging students, faculty and the community to apply for all opportunities shared via the HESN and we have been inviting interested applicants to guide them through the application process. DIL Grant Competitions are shared annually and Awards can support graduate student researchers, software developers, international travel, small-scale surveys. We hope to increase the number of students, Faculty and Innovator applicants for DIL grants in the coming years so that we get more innovations from universities accessing funding and technical support from the HESN.
11. A key focus for RAN is community engagement in the innovation design process. In July 2015, RAN hosted Kofi Taha, MIT D-Labs, to conduct a session on community-drive innovation. Participants included EA RILab innovators and interns. Participants were encouraged about how

feasible it is to test even with simple constructs (e.g. paper and dry maize cobs) innovator ideas and co-create within communities.

#### 4.2.1. Data

1. In the HA RILab, further opportunities for interdisciplinary collaboration arose from several meetings of the research team members while revising and updating the qualitative study manuscript submitted to the BMC Public Health journal in March 2015 and the quantitative survey protocol. There was also a mini-forum organized for presentation of an innovation project on Rainwater Harvesting in which useful comments and suggestions were provided in order to refine and enrich the project. The RILab also engaged faculty members in the retreat organized in Woliso Town from 29-31 May, 2015, in the write-up of two project specifications terms of references for CRID Meta Platform Projects. In Q4, HA RILab involved a number of faculty members from three colleges of Jimma University, namely College of Health Sciences, College of Social Sciences and Humanities as well as College of Business and Economics. A case in point is the active participation of faculty members in the orientation on RAN-HA RILab resilience program activities which was followed by survey training for data collectors and fieldwork supervisors, from July 24 to 26, 2015, on the Main Campus of Jimma University. Subsequently, twelve data collectors and four supervisors were deployed from the university to survey fieldwork in Borana Zone. Various other faculty members were involved in the quantitative survey preparatory activities. The lead consultant was a biostatistician from the College of Health Sciences, who developed the survey data entry templates.
2. In addition to TU/DRLA RAN faculty members, RAN's Tulane University team also draws on expertise from other departments, such as the Tulane's School of Architecture, A.B. Freeman School of Business, School of Law, School of Public Health and Tropical Medicine the School of Social Work and the Department of Economics in the development of guidance documents as well as key white papers generated. DRLA also engaged faculty and staff in its network via the Strengthening Leadership in Disaster Resilience Program (SLDRP) to be active participants in RAN. The SLDRP is focused on building graduate programs in disaster resilience leadership. This strategic engagement will allow for easy cross-pollination of resilience lessons learned from RAN and SLDRP. One key RAN level output from this collaboration was the development of a Resilience Course for RAN. This course was used to train practitioners in Disaster Risk Management under the UNDP collaboration. In Q3, TU/DRLA collaborated with IGAD in bringing together stakeholders from the humanitarian community to disseminate and share learning from RAN's qualitative resilience findings. Stakeholders included FAO, WFP, and UNICEF among others. In Q4, Tulane University continued to foster interdisciplinary collaboration by linking RAN to IGAD, with a view to infusing RAN's resilience findings in IGAD's work. Because of this link, RAN and IGAD are now co-authoring a partnership concept that could see the joint establishment of a, IGAD-led regional innovation hub in Nairobi. RAN is expected to provide the methodology and processes that will be used to run the Hub.
3. The EA RILab also engaged with Mr. James Muwonge of the Uganda Bureau of Statistics (UBOS), an agency of the Government of Uganda, during development of their survey sample design. Tulane provided support in this survey design.

4. Prof. Ky Luu presented RAN's first annual State of African Resilience Report at meetings of the Global Alliance and the Intergovernmental Authority on Development (IGAD) Resilience Analysis Unit in Addis Ababa, Ethiopia. DRLA continues to engage with IGAD to disseminate the RAN report in Africa and on resilience related research in the region. Luu also works closely with the USAID resilience leadership team as well as the Rockefeller Foundation to keep them up to date on RAN's progress on both the qualitative and quantitative processes. In Q3, Ky Luu presented RAN's first Annual State of African Resilience Report at meetings of the UN's Food and Agriculture Organization (FAO) in Rome. In Q4, The TU/DRLA Team also partnered with the Intergovernmental Authority on Development (IGAD) Resilience Analysis Unit in Nairobi, Kenya share RAN's State of African Resilience Report with regional stakeholders. This was on July 12 2015 in Nairobi, Kenya, with 111 guests in attendance. The DRLA continues to engage with IGAD, UN agencies (including UNICEF and WFP), ECOWAS, the AGIR and other international stakeholders to disseminate the RAN report in Africa and on resilience-related research in the region.

#### 4.2.2. Solutions (Creation, Testing, Scaling)

1. The EA RILab invited multidisciplinary teams of students and faculty for a Design Thinking (DT) Workshop on 31st March 2015 at the EA RILab space aimed at training the participants to primarily consider interacting with end-users in designing any innovation in order to increase the innovation's relevance and uptake in communities. The faculty members who participated in this workshop applied the skills by training students in DT from various faculties at Kisubi Brothers University. This workshop was held on April 17, 2015 at Kisubi Brothers University College with 30 participants in attendance. The EA RILab in Collaboration with RAN Secretariat provided technical support. The DT workshops work on the model of Training the Trainer (ToT), in which trained resource persons train others as part of a cascade pathway to infuse the DT skills across the RAN community.
2. In Q3, EA RILab together with RAN secretariat engaged multi-disciplinary teams in a Brainstorming Session to co-create and co-design innovative solutions for "the 2015 Wharton - QS Stars Re-imagine Education Awards. The Grant challenge was seeking for the most innovative approaches to pedagogy from around the world in response to the rising cost of traditional education and the enormous advances technology that allow, the customization of education to individual learning styles, group learning, online interactivity, gaming and real-time employer projects. The output from this brainstorming session was that RAN submitted innovative ideas in response to this challenge.
3. In Q3, as part of RAN's resource multiplication strategy, the EA RILab supported two of the innovations teams incubated in the Lab namely, saving on a mobile application (EDAD) and the community radio (RootIO) to prepare grant applications and submit to the Global Resilience Challenge which was awarding up to \$1 million to winners coming up with innovative solutions to build resilience in some of the world's most vulnerable regions. This was submitted together with a third project idea co-created by RAN staff members.
4. The EA RILab hosted and engaged a team of engineers under the Innovation Consortium, a private-not-for-profit entity started by young Ugandan Engineers and Architects, involved in

innovating for mechanical and architectural solutions. One of the key outputs of the partnership that has emerged is that the engineers offered to mentor our students/faculty who have mechanical/architecture related prototypes to optimize their designs. This collaboration has resulted into a monthly called the 'Innovation Garage.' RAN has so far conducted four Innovation Garages since June 2015 to-date. The Garage events are mainly focusing on engineering solutions but are open to all disciplines. The Garages bring together participants from various disciplines such as IT, Engineering, Computer Science, Architecture, Psychology and these disciplines contribute immensely to the designs of prototype.

5. The EA RILab also put out a call for applications for internship placements that solicited 190 applicants from different disciplines. The RILab shortlisted 30 student interns from the following disciplines: Mass Communication and Journalism, Software engineering, Information Technology, Computer Science, Education, Telecommunication Engineering and Electrical Engineering, and Public Health. The students worked in teams and worked with peers from other disciplines. This cross disciplinary approach had a significant impact on the quality of the final products. The students who worked on MKITs/short videos had good story boards thought out by journalism students and IT students helped in editing footage which was a good blend. The students also participated together in the Human Centered Design course, Leadership course and Basic GIS course.
6. In Q1, the SA RILab engaged students from different universities and faculties to apply for support to attend TechCon to showcase their innovations. Six applications were received of which three were shortlisted. One student from the School of Health Systems and Public Health was selected to represent the lab and show-case his project at the TechCon. Interdisciplinary engagement was also done for RIC4FIG publicity and drafting of the grant call document. Various faculties at the University of Pretoria as well as Network Plus Universities in Zimbabwe, Malawi and Limpopo were engaged to submit applications for the RIC4FIG call. Over 170 applications were received. A total of 22 reviewers for the call proposals were drawn from various faculties and fields including Agriculture, Education, Social Science, Health and Engineering. In Q3, the RILab engaged eight judges from different faculties (Public Health Agriculture, Engineering, Economics and Social Sciences) in the RIC4FIG selection judging process. Q4 saw the SA RILab continue to foster interdisciplinary collaborations by ensuring that each of the innovation teams under RIC4FIG has members from various disciplines working together. This promotes enhanced integration of knowledge and expertise of several disciplines to develop solutions to complex problems in a flexible and open minded way. It has also fostered a spirit of ownership and shared decision making. For quantitative surveys, the SA RILab made use of professionals from various fields such as statisticians, social scientists and epidemiologists. Furthermore, the lab held a students' innovation contest. The contest was open to students from different faculties of universities in South Africa. All these engagements fostered interdisciplinary collaborations.
7. In the first two quarters of year 3, the HA RILab made efforts to involve faculty members from various fields of study, such as public health, medical science, water resource engineering, mainly from Jimma University and Addis Ababa University. One practical example was the reorganization and refinement of two innovation projects for presentation at TechCon 2014 in USA in November, 2014; they includes a) Locally Produced Phototherapy units for Treatment of Neonatal Jaundice by a postgraduate student from Addis Ababa University, and b) A Manual

Oxygen pump, by an undergraduate student from Jimma University. One of our Interdisciplinary Faculty members, Dr. Esayas Alemayehu from Jimma University Institute of Technology, attended the TechCon 2014, along with our RILab Director, Prof. Kifle Woldemichael. The other examples of interdisciplinary collaboration are the development of survey protocols as well as the write-up of manuscripts from literature reviews and qualitative studies conducted earlier in Ethiopia and Somalia. The HA RILab also involved faculty members from various fields of study, such as public health, business and economics, water resource engineering, agricultural science and veterinary medicine, from Jimma University, Addis Ababa University, and University of Nairobi to participate in the Collaborative Resilience Innovation Design CRID Workshop conducted from February 5-6, 2015. The CRID approach 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 real time. The departure points for solution creation in CRIDs are the priority intervention pathways identified in the Intervention Strategy Workshops. Teams of experts sit and design the model projects required to address the priority intervention pathways. The types of projects developed through the CRID approach are larger projects designed to cater for a set of complementary system level challenges rather than discrete challenges therefore generating 'an ecosystem of complementary innovation projects' other than discrete projects. The projects designed under the CRID approach are then outsourced to competent stakeholder agencies at the community level to develop and incubate them. The projects are rolled out in form of 'multi-function platforms', hence the name 'platform projects'. Because the projects involve an ecosystem of innovations, stakeholder agencies need to continuously work with scholars and innovators from universities as well as the communities themselves to identify which combination of innovative applications works and what does not work. RAN secretariat invited a multi-disciplinary team of 4 experts to refine the platform projects that emerged from the CRID workshop in HoA RILab on 19th March 2015. These included a Professor from Veterinary Medicine, a Water Engineer, and Agri-Business Expert and a Micro- Entrepreneur. The Experts deliberated on possible interventions on Water resource management, Livestock production and Entrepreneurial activities in the Horn of Africa. The main objective was to build a platform around surface water resource management in which the lab can integrate improved livestock production and livelihoods diversification.

8. RAN connected with ASME (The American Society for Mechanical engineers) and Engineering for Change (E4C) at the 2014 TechCon in California. E4C then hosted RAN on one of their monthly Webinar series which took place on 21st January 2015 with a very engaging topic of discussion on "Harnessing Technology to Strengthen Communities' Resilience to Adverse Climate Effects". ASME has established a focus on "engineering for global development" to create mechanisms to systematically bring the "engineering perspective" to global development efforts. Currently this includes a knowledge-exchange platform and global community of over 770,000 followers representing organizations and individuals dedicated to promoting sustainable and accessible technology-based solutions for underserved communities worldwide. The Engineering for Change (E4C) Webinar Series promotes emerging ideas and is network of passionate community of engineers and development practitioners. During this Webinar, the focus was on the technology imperative and potential technological interventions for the RIC4FIG call for the Southern Africa RILab in a bid to strengthen resilience to adverse climate effects. The Technology requirements relevant to an Engineering community discussed during

the Webinar included potential irrigation projects, produce dryers, cheap storage for agricultural output, water harvesting and safe storage, early warning systems, low-cost, post-harvest processing solutions, land use maximization techniques, diagnostic solutions e.g. water purity, moisture content of produce, disease in remote and rural areas with limited or no electricity. Participants were introduced to RAN's work on strengthening the resilience of communities vulnerable to shocks and stresses in sub-Saharan Africa. The RIC4FIG challenge, including intervention pathways, focus communities, and the application process, insights on manifestations of adverse climate effects in Africa and the key challenges facing communities as a result. We also discussed potential collaboration opportunities under solution development, mentoring, capacity building and training in the RAN four RILabs. The Webinar was highly appreciated, feedback showed that it resonated with the attendees expectations.

9. RAN invited practitioners from Grameen Foundation and Thoughtworks - Kampala to co-facilitate a practical session in the Needfinding Workshop with the team from Stanford University. The workshop took place on 27- 28 January 2015. Emilia Klimuk Product Development Lead at Grameen and Christine Ampaire a Business Analyst at Thoughtworks, discussed key aspects on how their organizations are using Needfinding to advance their work and why it is valuable in the product design and development process. They gave real life examples in which Needfinding provided them with various and deep insights that forced their initial concept to pivot and be reformulated into something new while taking that powerful human insight into account and how it impacted on the acceptability of the final product. They brought the whole discussion on Needfinding to life and had an interactive session with the Innovators who initially had little exposure to this technique through the question and answer session.
10. RAN partnered with the Innovation Consortium group, a powerful combination of experienced engineers with practical experience to run an Innovations Garage in EA RILab. The Innovation Garage, which is hosted every last Friday of the month, is a great platform for innovators to build and get quick fixes of their engineering projects collaboratively with very creative and brave individuals. Focused on innovation as a cornerstone and key transformational element for development, the Innovation Garage is well positioned to assist innovators to refine their ideas and is guided by the Theme "Catalyzing Engineering Solutions". The Innovation Garage drives deep thinking by the attendees through brainstorm sessions, experimentation to pursue the best prototypes and solutions. These events are open to multi-disciplinary persons because we realize that each discipline contributes significantly to the quality of the Innovation. Through this Garage RAN hopes to support local solutions that will transcend nations and launch paradigm shifting innovations but also see technologies developed in Africa being launched on markets. The Innovation Garage is a great platform to support home grown solutions, engaging a radical group of innovators collaboratively re- inventing and inventing game changing solutions. Since its inception we have run 4 successful garage sessions and hosted incubatees from EA RILab that include the Solar Irrigation pump, Kungula! Maize Thresher, Rapid Solar Dryer, Community Radio Towers and Malaria control system. Each of the project pitched receives considerable attention which includes re-inventing some parts of the prototype or suggesting alternatives that could be less costly or more efficient and using readily available materials. The innovators are excited about the garage activities and greatly appreciate the feedback they receive from practicing engineers. The following new ideas emerged out of the Brainstorming sessions: (a)

“Robust Radio Towers to support the community radio (RootIO) antenna and other radio antenna”. During the pilot phase, the RootIO innovators team experienced challenges in procurement and setting up a low cost radio tower. During the Innovation Garage held on July 31 2015, attendees brainstormed on designing a low cost Radio Tower and the main aim was to bring down the cost from \$3000 to approximately \$500 and increasing the length of the tower from 12 to 25 meters. The overall goal was to lower the cost of initial setup of a full set of the Community Radio which involves a Radio Bucket to host the Radio Stations and the Tower to \$1,500 that a community can afford later on when we consider scaling this innovation and sustainability aspects of the radio. Participants proposed a Tripod Tower with 3 pillars made of galvanized pipes. b) Other exciting ideas that came through the brainstorming Garage session were inventions on a Ultrasound Malaria Control Towers. An Engineering student innovator presented a “Malaria Control System” a project he had been working on, involving the use of ultrasound technology to effectively drive away mosquitoes from homesteads and livestock in villages to non-inhabited places, so as to massively apply insecticide to kill them, The current system prototype was made of a conveyor belt, on which a spraying arm and piezoelectric material were attached and moved over a village, from one end to the other. The system would then emit ultrasound to drive mosquitoes towards a given direction. When moving over uninhabited areas, the movement would slow down, allowing for concentrated spray of chemicals, to kill mosquitoes and their larvae. The belt would change direction of motion when the end of the designated area is arrived at and this would continue over and over again, till when stopped by an operator. This was an expensive mechanism and the design had limitations. Participants of the Garage proposed the “repel or attract and kill mechanism“ to wipe out mosquitoes. The new designs brainstormed included; constructing cheap towers made of timber or use of existing towers or even trees onto which the ultrasound frequency system is attached that attracts mosquitoes, a system that can decrease in wavelength at certain intervals. This system is placed in breeding areas of mosquitoes like swamps and at peak times when mosquitoes are active, a design sensor would also be embedded as an accessory to detect number of mosquitoes that have accumulated and then spray at once. The ultra sound frequency however attracts only female mosquitoes and so if these are killed in the long run the whole mosquito generation would be wiped out since there would be no reproduction without female mosquitoes. There are other sounds that were proposed of different animals like the dragonfly, bats to repel the mosquitoes without the ultra sound generator. The second design consideration was a cross tower on the base design with a transmitting circuitry , a spraying tank is attached like a drum of 200 litres the tank would have a sprinkler and dozing pump, 2 pumps and regulator ball valve where the dozing pump mixes the chemical for spraying. To eliminate a spraying pump in areas where there is power, there was an option of mosquitoes being trapped at one point in a wire mesh that electric-circuits them. The Engineering consortium has embarked on sketching this idea together with the innovator before physical prototypes can be designed. These two projects stirred up garage members to propose totally new ideas, other projects like the Maize Thresher, Solar Dryer and Solar Irrigation pump also received useful feedback and ideas that will lead to expansion of the size of the designs or changing the placement of certain components to make the design more efficient. RAN has generated many ideas through engaging participants in such brainstorming sessions and these ideas can potentially get support so that they are launched in the industry.

11. The EDAD project, an innovation team under EA RILab that is developing a mobile phone based savings mechanism, engaged the Bank of Uganda (BoU) as a pertinent stakeholder and as a Regulator of financial institutions in Uganda. The purpose of the meeting was to obtain a clearance letter to enable the innovators to open savings box-based collection accounts in any regulated commercial bank, to understand and gather the requirements needed to get a letter of clearance or no objection, to understand the available work done by BOU on financial literacy for the benefit of target communities and to obtain a supportive perception of EDAD as a mobile money intermediation service rather than placing it under the agency banking category. BoU is the Central Bank of the Republic of Uganda is responsible for monetary policy and monetary stability in Uganda. The innovators were informed of the standards and requirements they needed to fulfill as they pilot their project. They also received formal authorization to engage a commercial bank to host the saving account of the mobile money users. EDAD is in the process of finalizing an MOU with Top Finance Bank Ltd to host the first EDAD Savings Box Account. It is expected that Top Finance Bank will submit a request for a letter of no objection to open this account.
12. RAN has just signed an MOU with BridgeSpan in support of helping our innovators build in scalability right from the early stages of development of their ideas, as well as capacity to engage with the communities to test and refine prototypes of their products. This project will also further our collaboration with Stanford and MIT D-Labs as resource persons. Specifically, this grant will cover three areas with a focus on the EA RILab: 1) Training on scaling and business plan development: In order for the EA RILab to support innovators to develop suitable business plans and scaling strategies, there is need to provide training to innovators and staff on scaling with emphasis on: Business plan development, stakeholder analysis and outreach, resource mobilization, and product diffusion. A comprehensive training needs assessment will be conducted to identify the needs that are customized to the current innovation teams 2) Mentorship for EA RILab innovators: Adults learn best when formal trainings are combined with the chance to practice new skills in real-life projects. This grant will enable EA RILab to link the innovators to business development experts so as to maximize impact, and will connect innovators to subject matter experts on areas relevant to their projects (e.g., connecting to mobile experts for innovators working on SMS platforms, etc.) 3) A locally-adaptable toolset: Currently, EA RILab (with support from Stanford University) has been able to develop Need Finding toolsets. However, we lack skills and expertise for community co-creation. This grant will facilitate the development of toolsets to link innovators to communities so as to enhance the relevance of innovator ideas through continuous co-creation with communities - it is expected to have MIT D-Labs joining this initiative too. We have seen success with existing toolsets for Training of Trainers, e.g., RAN staff and innovators, who then use these tools on projects in communities, and expect to see similar application from further development of our tools. The toolset will be disseminated to the other RILabs and the wider development community.
- 4.3 Collaboration Across the HESN.
- RAN had several HESN level engagements in year 3:
13. Eight RAN student Projects participated in TechCon 2014 in California 8-10 November 2014. The RAN Secretariat successfully completed an evaluation process of projects that were received from the four RILabs to be considered for TechCon 2014 Innovation Market Place. This included scanning through the submitted abstracts and virtual interaction with some

Innovators from the RILabs via Skype and E-mail. We received a total of 20 projects from the RILabs: 4 from WA RILab, 3 from SA RILab, 3 from HoA RILab and 10 from EA RILab. Of the 20 submissions 8 projects were selected to participate in the TechCon Innovation Market Place which include; i) Manual Oxygen Backup Device - Horn of Africa RILab ii) Locally Produced Phototherapy Unit for Treatment of Neonatal Jaundice - Horn of Africa RILab iii) The asthma severity staging and predicting device/instrument for patient self-care, management and participation in preventative and health behavioral change efforts. - Southern Africa RILab iv) Unearthing the Potential of Earthworms - Eastern Africa RILab v) K-FREE - An early breast cancer detection Mobile App that uses an android phone and portable hand held device -Eastern Africa RILab vi) Hydroponic fodder production for livestock: An innovation to mitigate shocks of drought and limited land resource faced by livestock keepers in sub-Saharan Africa - Eastern Africa RILab vii) Grain amaranth– from humble vegetable to health solution innovators – Eastern Africa RILab viii) Duka: A Location Specific Landslide Early Warning System - Eastern Africa RILab.

### 4.2.3. Student Engagement

1. AidData – RAN GIS Project at Makerere University: 12 third year students from Makerere University - College of Engineering pursuing Land Survey and Geomatics worked on a Spatial Vulnerability assessment project in partnership with the AidData HESN lab. The students started working on the project from 26th Feb 2015 and are expected to complete by end of April 2015. The students are specifically looking at “Maternal Health Mortality factors”. They carried out an Analysis of what makes mothers more vulnerable, existing Aid toward Maternal Health and a comparison of where the Aid is directed vis-a-vis the communities that are most vulnerable. They used existing shape files, UBOS data and Demographic Health Survey reports. The output will be GIS maps to help decision makers and funding bodies to quickly identify the vulnerability index, factors that caused the vulnerability and current status of where the Mortality Health aid is directed. This project will eventually contribute 30% to the student’s academic credits. The AidData team helped to give comparison data on existing Aid for Maternal Health, offered online assistance to the tutors and conducted one Google Hangout session with the tutors and all the students on 27th March. AidData is expected to do a partial evaluation of the projects. Students are scheduled to do final presentations on 4th May 2015
2. Students Design Thinking Workshop: On 31st March RAN hosted 30 multidisciplinary teams of students to a Design Thinking Workshop on 31st March – 1st April 2015. The primary objective was to build capacity of students in the Design Thinking process - one of the human-centered design methodologies - that RAN is using to ensure community involvement throughout the sourcing, design and testing stages during innovation solution development. We invited students from different disciplines which included; Social Sciences, Communication and Journalism, Veterinary Medicine, Business and Commerce, Bio- medical Engineering, Software engineering, Telecom Engineering. The students were taken through the Design thinking principles using Stanford ChangeLabs tools and available MKITs on Design Thinking. The students enjoyed extensive group work with hands-on activities on needs finding, problem synthesis and framing, rapid prototyping, testing, iteration and story-telling. The DT session was conducted in a train-the-trainer format with the objective of developing capacity of students to be able to cascade the skills in their different departments at the University. We now have student Champions who are well-placed to cascade DT skills across their innovator networks which will greatly influence the quality of projects they will be developing at the University and the projects they will submit

for exhibitions, competitions and Innovation Challenges. The MKITs on DT are readily available on the RAN YouTube channel for students to update their skills and to train fellow students in the future. The MKITS can be accessed via the link  
<https://www.youtube.com/watch?v=Ibygb6WVsPA>,  
[https://www.youtube.com/watch?v=C6BISp\\_LUUQ](https://www.youtube.com/watch?v=C6BISp_LUUQ)

3. Student Outreach to IHSU in Kampala, Uganda: The RAN team visited the International Health Sciences University (IHSU) in Kampala on 11th March 2015 as one of the outreach activities in the region aimed at building the capacity of students and faculty to innovate. The RAN team facilitated a 3 hour seminar that attracted approximately 40 Public Health students and faculty from this University. The seminar discussions were guided by the theme “Ideas in a Box “. One of the questions that was posed to the participants was “What ideas do you have that can be nurtured to address communities’ challenges?” “Such questions are a great way to start generating ideas” added Mr. Brian Ndyagumba the Innovation Lab and Outreach Consultant at the RAN Eastern Africa Resilience Innovation Lab. Additionally, the students and faculty were introduced to RAN and the opportunities they can leverage from in the network and wider Higher Education Solutions Network (HESN). They were later taken through practical exercises on ideation using the Empathy Map and the Business Model Canvas to help them develop innovative projects.
4. The WA RILab engaged 30 students as moderators for the Deliberative Polling event. This led to students appreciating and understanding the DP Process. 3 students also were engaged in the ISW and CRID workshops in March. The students had an opportunity to interact with experts from the different disciplines and also engage in the fruitful discussions as they captured workshop deliberations. They had a good experience to work with the KUMU website to draw the relationships that came up on the system diagram about the resilience challenges in West Africa.
5. Students internship program at RAN: The EA RILab hosted 30 students (4 graduate and 26 undergraduate) in the second cohort of the internship program that lasted 10 weeks from 4th June – 4th August 2015. The students came from different Universities in Uganda with the majority coming from Makerere University. The students were placed in 4 departments, both at the RAN Secretariat and EA RILab namely 1) Research and Data Analysis, 2) ICT and Multimedia Department 3) Innovations and 4) Communication and Engagement. During this program, students were exposed to a working environment that gives them hands-on assignments and project tasks to gain in-depth real world training, and acquisition of professional virtues and expertise. RAN worked closely with the student interns to ensure that they have a diverse and enriching experience that taps into their youthful talents and skills. The students were specifically involved in the following; i. Developing M-KITS from the raw video footage at the end of the program; ii. Developing Information Management Systems which will include a dynamic Database of the contacts that RAN has engaged in the various RAN events, workshops and Trainings iii. Developing an Innovations database capturing all Innovation projects that have pitched in the EA RILab, in different exhibitions and academic projects from different departments iv. Upgrading the RAN website and the EA RILab website v. Besides the above tasks allocated to the students, RAN trained them to acquire skills in: Design Thinking, Needfinding, M-KIT development, Resilience and Leadership to create young Resilience leaders, and Social Media Management. The Internship program was a very good opportunity for RAN to groom Innovator and Resilience student champions, equip them with knowledge and skills and these can be cascaded to their fellow students after undergoing Training the Trainers workshops. The EA RILab is committed to engaging students and faculty across its sub-network of universities as part of the bigger RAN Engagement Strategy. The EA RILab will serve as a ‘model RILab’ and shall be involved in ‘prototyping’ this internship program. Once successful, the rich insights from this program can inform a design and implementation of similar internship

- programs under the other RILabs (HoA, WA & SA RILabs) especially that they are based in Universities and most courses have this embedded in the students' academic program.
6. The SA RILab engaged 8 students (2PhDs, 1 Master and 5 undergraduates) to participate in the pilot quantitative survey from 23-24 June 2015. The pilot quantitative survey aimed at pre-testing the quantitative survey tools namely the questionnaire and the consent form and revising the tools according to the feedback from the pilot. The students were drawn from the departments of Engineering, Public Health and Information sciences, Accounting, Quantity Surveying, Human Resource Management and Education. The master student also assisted in the RIC4FIG pitching process which took place on 12 May 2015.
  7. RAN, with the support of UC Berkeley, one of the development Labs under the HESN, organized a movie night for students entitled 'Girl Rising'. Girl Rising is a revolutionary film that follows the life stories of nine girls from the developing world, who struggle every day for freedom, education and a voice in their home countries of Cambodia, Haiti, Nepal, Ethiopia, India, Peru, Sierra Leone and Afghanistan. On 20 April 2015, the EA RILab showed the movie to 110 students at Makerere University main hall. At the HoA RILab, the movie was shown on April 28, 2015 at the HoA innovation space to students residing on the Main Campus of Jimma University. The WA RILab also held a Movie Night and it drew a total participant of 92 students (86 students (49 females and 47 males), 2 ICT Staff from the university and 4 WA RILab staff. The Movie was shown in the Computer Laboratory of the School of Medicine at University for Development Studies. The RILabs had an opportunity of publicizing RAN to the students and also helping them draw lessons from the movie in order to promote GIRL RISING among students by acting as agents of change within their families, homes, communities and among their peers.
  8. In Q4, SA RILab engaged a total of 89 students this quarter in the following activities. Quantitative survey (34), Innovation contest (17), School of Health Systems research day (13) Needfinding (3), M& E/Theory of change lecture (18), Students from Community Engagement (2 ) and Induction(2).
  9. The student interns at the EA RILab completed their internship on July 31 2015. RAN engaged multi-disciplinary students from different universities and majority from Makerere University. Student internships are an important part of their university experience and for all the students that were engaged found the RAN Internship program very enriching. The interaction with their academic supervisors also showed that they greatly appreciated the different activities that these students were assigned to work on and how the students later on performed on these activities. Students participated in the Design Thinking course, How to document using MKITs, Leadership and change management course, Social media course, Basic GIS training, communication principles. In addition to developing information management systems and re-designing our website, they also participated in innovation events like the monthly ignite innovator series, humanitarian innovation event, National Technovation challenge. The students generally reported that they found the internship program at RAN as a form of experiential learning that gave them valuable opportunities to discover the professional world firsthand and to apply classroom knowledge to practice. About 6 students on internship developed and submitted concepts they had generated at RAN for the Global Center for Food Systems Innovation (GCFSI) Student Innovation Grant. GCFSI Lab a consortium led by Michigan State University (MSU) and one of eight development labs funded by the USAID Global Development Lab under HESN. RAN is optimistic that the grant writing skills the student acquired will help them to apply for many other innovation prizes. RAN plans to have internship programs run in other RILabs so that students would cover the same capacity building content.
  10. Partnership with Kampabits Digital Design School, Kampala Uganda RAN is hosting 4 student interns (3 females and 1 male) from Kampabits for three months from August 17 – November 17 2015. Kampabits is a Digital design school established in Kampala Uganda and involves the

empowerment of vulnerable youth with ICT/multimedia, entrepreneurship, sexual reproductive health and life skills in order to position them to benefit from opportunities offered by the growing ICT market in Uganda and East Africa, while enabling them to mitigate immediate social challenges surrounding them and preparing them to be independent and self-reliant citizens. The training duration is 12 months. Part of the curriculum involves counselors who provide counseling sessions and support Sexual reproductive health (SRHR) sessions. The school has 80 youths who have completed the phases of Getting connected, Digital Garage and Media lab and have graduated. The students are working in the RAN Multimedia department to help in video editing of short videos and have skills in web designing, web development, graphics and motion designs and have been designing posters for marketing and publicizing EA RILab events and some of the posters are regularly posted on RAN social media platforms. .

11. RAN, in September 2015, onboarded a graduate intern with a Bachelors Degree in Mass Communication from Uganda Christian University (UCU). The intern will be directly working with the Communications and Engagement Unit at RAN. 4.5 Community Engagement.
12. RAN with the support of the Stanford ChangeLabs team and Ms Emeila Kliumuk and Mr Joel Muhumuza from Grameen Foundation on 06 March, 2015 engaged innovators in a hands-on training to develop a targeted, flexible interview guide for Needs assessment, how to capture interviews and how to effectively synthesize insights while in the field. The innovators were exposed to conducting both one-on-one and focus group interviews during the practical session. Following the training, all the innovation teams under the resilience innovation acceleration program (RIAP) went out to conduct Needfinding assessments to gain deep human insights which can be used to refine the problem they are addressing or refine the solution. The protocol, interview guides, consent forms for these assessments were submitted to and approved by the Makerere University, School of Public Health, Higher Degrees and Ethics Committee. The rationale for conducting these studies is that it provides the community with an opportunity to adopt solutions that have incorporated human centered designs and solutions that address the community actual needs rather than imposing a solution on the community.
13. RAN Secretariat provided technical support to the EA RILab to build the capacity of the innovators incubated under the EA RILab to conduct Needfinding surveys. Needfinding is the process of gathering deep human insights which can be used to develop a problem or refine a solution. Needfinding heavily uses the principle of developing empathy for the end-user, that is, putting yourself in the shoes of the person you are designing for and the best way to do this is to conduct a Needfinding survey by going out into the target community where the innovation will be implemented and interacting with potential users of the product. The major purpose of conducting Needfinding surveys is to enable innovators to validate whether the problem actually exists in the community and whether the proposed solution/ innovation actually addresses the community's actual needs. The survey protocol and survey tools are approved by the Institutional Review Board (IRB). Needfinding surveys are characterized by community consultations through focus group discussions and key informant interviews with a variety of stakeholders. During these surveys, the innovators interact with a variety of potential beneficiaries of the product at the community level assessing their thoughts, attitudes, preferences, statements, actions, beliefs, culture of people through observing and interacting with them. Through these community interactions, human insights are gathered which are used to refine the products in a way that incorporates the community's actual needs. This process involves a lot of iterations to the products. Such a human-centered focus enables problem-solving teams to address community needs in creative and more resilient fashion while also facilitating a natural opportunity for prototyping. The major objective of these surveys was to assess factors affecting the design and uptake of the products among end-users in the target communities. The following innovation projects conducted their Needfinding surveys in the following target communities: The key insights obtained were useful in informing the next steps

and refining the products to address the community's actual needs. (i) Name of innovation: The community radio (RootIO) Target community: Kitgum, Patongo, Aber Key Insights: The kind of radio programming (news, music, topics for discussion, etc) the community in the selected communities would like to listen to, their favorite programming, and amount of time that should be allocated for the programmes (ii) Name of innovation: Low cost solar Irrigation pump Target community: Pallisa Key Insights: Majority of the respondents are willing to pay for the product on a cost recovery basis (installments); Marketing and distribution model where commercial farmers are willing to pay for the product on individual basis while subsistence farmers are willing to pay in groups; Negative attitudes towards buying the product by themselves investments (iii) Name of innovation: Matibabu Target community: Apac Key insights: These concerned sensitivity and specificity of the device(i.e. what is the sensitivity of this device in comparison to the electronic microscope, which is the gold standard?), portability of the device, cost of the device, distribution of the device in health centres, security of the device, trust; marketing and distribution model (especially for agents). (iv) Name of innovation: Domestication of Earthworms Target community: Wakiso Key insights: Quantity of earthworms to be produced in relation to the number of birds, cost of materials used in setting up the breeding pits at household level; trust; marketing and distribution models; Social aspects- Negative attitudes especially among the women towards touching the creepy earthworms (v) Name of innovation: EDAD Target community: Kasese Key insights: Pertinent need of savings mechanisms noted; Saving is done in form of animals; Being a majorly illiterate and unbanked community, it was observed that some people do not know how to use the mobile money services available on their mobile phones (vi) Name of innovation: RAPID Target community: Wakiso Key insights: The biggest cause for worry was the glass material the team intended to use to develop the drier and how it would work in the remote areas; The team was also challenged to think of whether the drier was to be developed only by the team and sold out to farmers or whether farmers were allowed to locally develop the same drier with other materials (vii) Name of innovation: Kungula; Maize thresher Target community: Nakasongola Key insights: Dissatisfaction with the manual thresher because its slow and labor intensive; Already existing maize Thresher discovered in the community developed by another organization and being used by the community; This forced the team to go back to the drawing board to plan the re-design of their model. (viii) Name of innovation: Better Farming Better Me Target community: Hoima Key insights: Selection of beneficiaries; Challenges in monitoring and management of operations among beneficiaries (ix) Name of innovation: Village Egg Bank Target community: Yumbe Key insights: Selection of beneficiaries; Challenges in monitoring and management of operations among beneficiaries More details of the community engagement results are included in the Appendix.

RootIO launched their first radio station dubbed 'Aber Community radio 'airing on 103.8 FM on Saturday, May 23rd 2015 in Aber sub-county, Oyam district. The event attracted 365 potential beneficiaries of the community radio. RootIO also launched their second radio station dubbed 'Pabbo Community radio 'on 27 May, 2015 in Pabbo sub-county. The occasion attracted 201 participants. The officials and delegates from RAN, the district and the media fraternity graced both functions with the announcement and "ribbon cutting" taking place. A range of local delegates were invited including the sub-County Chiefs and Chairman, the Community Development Officer, District Information Officer and District Councilors from Aber and Pabbo to attend. More communication on this launch is provided in the link under Appendices. Further still in Q3 RootIO radio was launched in Patongo and Kitgum districts. By end of September, 2015 the reactions from the community showed that they are excited to have this community radio; they no longer travel long distances to broadcast their adverts; their content is recorded and aired out daily. They advertise in their community and at a less cost because they simply

call in to the radio. The radio stations in the four sites are now broadcasting news channels (including British Broadcasting Corporation (BBC)) as most of the communities expressed the need to listen to news to keep abreast with current affairs in the world. The radio stations run several programs tackling issues on national perspectives among others. The RootIO team has identified some community members as volunteer presenters to present the radio programs because they have the knowledge to share with the community. RootIO also engages youths by training them and building their capacity to be able to operate these stations. However, sometimes the team experiences technical failures when running the radio station that the RootIO community liaison officer at the station cannot handle. The RootIO team intervenes to provide technical support to mitigate the trouble shooting and attend to the technical failures.

1. On 4th July 2015, the EA RILab supported the Improved Push and Pull Team to conduct a dissemination exercise at Buyanga sub-county hall in Iganga district where 230 potential beneficiaries were engaged. The District Community Development Officer Mr. Batuka Samuel and other district officials were in attendance to grace the occasion. The purpose was to provide feedback to the community on the progress attained by the project in relation to their case -control demonstration garden. The community was able to witness evidently the difference between the two gardens. This exercise helped to raise awareness among the general public on the effectiveness of this innovative approach geared towards controlling the growth of the Striga weed. We also engaged with potential users of the push and pull approach to listen to their opinions so as to identify potential challenges related to inputs and develop an effective replication model for transferring this approach to other areas similarly affected with Striga. During this event, the team also engaged with potential stakeholders and 14 champion agents were selected by the community members themselves, who will drive this innovation to the next level in the communities to ensure rapid uptake among farmers and to generate positive impact in the communities. The event involved the community touring the demonstration gardens to see for themselves the effectiveness of adopting the new improved push and pull approach. More communication on this dissemination is provided in the communications data table.
2. Sensitization of communities by EDAD: Two of the members from the EDAD innovation team under the EA RILab visited Kasese district for one week in September, 2015 with the aim of initiating an awareness drive to sensitize the local communities of Kasese district towards the application of the EDAD Mobile Money Saving Box for saving money using mobile phones. This was part of the mini piloting phase of the EDAD project in the District. The sensitization campaign reached over 700 of the target population, who comprise mainly the unbanked and financially excluded members in Kasese district. The awareness message aired on both TV and Radio, was designed to bring out the fact that much as many people have already been saving by using traditional boxes and other money hiding places to keep their savings, they can now apply mobile telephone technology to ease their activities and eliminate the risks attached to using the traditional means, let alone the inability of such means to earn them interest on their savings. . The reaction from the community was positive. Most of them were surprised that such a tool existed. Apart from the advert, most of the community requested for a radio talk show where they would be able to call in and ask more questions about EDAD saving box. The community was concerned with the longevity of EDAD as they drew from their experience of a previous intervention that was introduced to them but lasted a short time and the people lost their money. Other concerns from the community included: how much it will cost open an account with EDAD, what the minimum amount is to start saving, how much interest they will earn and how favorable it is compared to banks and other saving schemes, and how secure their money

will be. Nevertheless, seventy (70) people have so far registered with EDAD and 22 have registered as agents and ready to be trained.

3. SA RILab has made plans and preparations to conduct community sensitization visits to establish project support structures and conduct needs finding sessions with the innovation teams. It is hoped that this will prepare the communities for the innovators, meet with key community leadership and key stakeholders and focal people. The plan is to also identify mentors for the innovators. Great progress was made with the quantitative survey pre-test through engaging community development workers and the local ward 49 Councilor in Pretoria. Full cooperation was received from the community members and the team was able to collect the required data. This highlighted the need to always engage the community leadership and the relevant stakeholders when doing community entry. The team also leveraged on great support from students in the pretest survey. In Q4, The RILabs with innovator teams have actively engaged the communities e.g. through needs-finding sessions. SA RILab engaged members of the Dikgale and Beitbridge communities during this quarter from Sept 7-10 2015. There were 107 and 96 community members/key stakeholders engaged in Dikgale and Beitbridge respectively. The purpose of community engagement by the Lab was to introduce the projects to the communities before the innovators conduct needs-finding for prototyping.
4. HA RILab also conducted community engagement activities during Q4. In the preceding days and during the Ethiopia survey fieldwork, our supervisors and data collectors actively engaged some selected community members in the two districts of Borana Zone in Southern Ethiopia. They played important roles in providing list of households and supporting the supervisors as well as the data collectors as field guides.

## 5. USAID Engagement

### 5.1. USAID/Washington Interactions

The SA RILab team interacted with USAID Washington at the TechCon 2014. In particular was the meeting held with Madeline Williams from the Global Development Lab to discuss USAID signature efforts in Southern Africa. The SA RILab Director also had a meeting with the Global Development Lab representatives in Pretoria to discuss possible collaboration with the RESILIM project.

Signature efforts are being led by Mission offices to work closely with local communities to invent, test and apply ground breaking ideas to help end extreme poverty, better, faster, cheaper and at greater scale. In South Africa this effort is focused on the water resources within the Limpopo River Basin. It was agreed that the SA RILab will share some of their data with the project and linkages will be made between the project and SA RILab Limpopo team where the RESILIM project is focusing on. The SA RILab also engaged Dr Cameroon Bess and Dr. Karen Duca from USAID Washington to assist with reviewing RIC4FIG applications. TU DRLA Executive Director Ky Luu held strategic discussions with USAID/OFDA throughout this period regarding the Ebola disaster response and utilization of RAN network partners in the region. Luu also met with the USAID/DCHA front office regarding resilience and USG humanitarian programming. Luu also provided USAID/HESN with updates on quantitative data collection and the status of the first Annual State of African Resilience report throughout the period. The RAN team represented by the Chief of Party, the Co-chief of party at TU/DRLA, Prof. James Fishkin, two RILab directors and the communication manager were engaged in the facilitation of the launch of the first annual State of African Resilience report in Washington D.C on 11 March 2015 where several officials from USAID attended the launch including: David Ferguson, Director, Center for

Development Innovation, U.S. Global Development Lab; Dr. Maggie Linak, Science and Technology Fellow HESN; Tara Hill, Senior Program Manager HESN, Dr. Ticora Jones, Division Chief HESN. The EA RILab team interacted with the USAID mission at the 2014 TechCon hosted at UC Berkley, California. The RILab, Dr. Dorothy Okello, was part of a Climate Change and Development panel at TechCon panel that discussed climate change. Issues discussed included: major climate related challenges being faced in our region, linkage of the EA RILab/RAN in addressing these challenges, the role of the community in addressing/mitigating/adapting to climate change, the role of science, technology, and innovation to address these challenges among other topics. RAN's Chief of Party, the Deputy Chief of Party, the Innovation Director and the M&E manager interacted with the HESN and the USAID Global Development Lab (GDL) personnel during the 2015 HESN Lab Directors convening (LDC) held on 15-17, April 2015 at Washington DC. Among the GDL personnel were the Executive Director, Ms Ann Mei Chang; the director of the development center for innovations, Dave Ferguson; the Division chief for HESN, Dr. Ticora Jones; the senior program manager HESN, Ms Tara Hill and the activity manager, Dr. Maggie Linak. The LDC event focused on innovative approaches to solution creation, testing, and scaling for international development. The eight HESN Development Labs showcased the innovative solutions and methodologies emerging from their work in order to connect more deeply with each other and the broader development and higher education communities focused on social innovation. The event brought together about 50 participants from a forum of a wide range of stakeholders to engage in a multi sectoral dialogue to energize the network of solvers and scalers for development.

RAN, also had an opportunity to interact with Ms Tara Hill and Dr. Maggie Linak and Mr. Dave Ferguson at the 5th RAN partners' forum and the launch of the RAN state of African resilience report held in May 2015. RAN interacted with USAID officials at the launch of the first annual State of African Resilience report in Kampala, Uganda and planned a July launch in Nairobi, Kenya. Several officials from USAID attended the Uganda launch including: David Ferguson, Director, Center for Development Innovation, U.S. Global Development Lab; Maggie Linak, Science and Technology Fellow HESN; and Tara Hill, Senior Program Manager HESN. The SA team engaged with Maggie Linak from USAID Washington who attended and supported the RIC4FIG pitching sessions and selection process on 12 May 2015. This was helpful to get insights on some of the key issues USAID focuses on when selecting the innovations for funding and particularly in relation to environmental monitoring.

### **5.1.2. Other (Non-Lab) USAID/Washington Interactions**

Prof. Ky Luu met with Tom Staal, Assistant Administrator for Bureau for Democracy, Conflict and Humanitarian Assistance (DCHA) as well as Tom Beck, Director of USAID Resilience Secretariat during which they discussed RAN's Resilience Framework and opportunities for further dissemination of findings to inform them of RAN's qualitative and qualitative activities.

## 5.2. USAID Mission Interactions

The SA RILab held a meeting on the 8th of December to discuss the RESILIM project one of USAID Southern Africa Mission Signature Efforts. The meeting was attended by various stakeholders in the water field as well as Global Development Lab representatives Mr. Cameroon Bess and Ms. Madeline Williams. The meeting with USAID Southern Africa mission was useful in SA RILab connecting with the leaders of the RESILIM Project aimed at supporting equitable access to water, reducing climate vulnerability through promoting science based adaptation strategies.

In addition some USAID SA Mission office staff particularly from the Agriculture department will also take part in reviewing of the RIC4FIG applications. Two SA Mission staff – Dr. Joan Matji and Mrs. Patricia Masanganise assisted with reviewing the phase I RIC4FIG applications. Officials from the USAID mission office will also be requested to attend the pitching of innovations to be conducted in May. TU DRLA Executive Director Ky Luu interacted with USAID Missions by providing technical support on resilience and identifying potential linkages between USAID, Rockefeller, and SIDA as partners within resilience. The HA RILab exchanged information on planned innovation projects and the role of Innovation Advisory Board (IAB) with one of our contact persons at USAID Mission in Ethiopia, Mr. Dubale Admasu. The main focus of the discussion was getting USAID Mission's approval of Mr. Dubale's membership in our IAB. However, this issue has not been decided upon yet. There is a need for further engagement and discussion in this regard. The SA RILab interacted with Ms Patricia Masanganise from USAID Southern Africa Mission office who attended and supported the RIC4FIG pitching sessions and selection process on 12 May 2015. It was useful to have her on the panel and she gave good insights in the shortlisting process.

Prof. Ky Luu met with USAID/Kenya and USAID/Senegal. At USAID/Kenya, he discussed linking the RAN to the RAU and disseminating RAN's qualitative analysis and key findings to IGAD member states through the IGAD platform. At USAID/Senegal, he discussed linking the RAN and disseminating RAN's qualitative analysis and key findings through Economic Community of West African States (ECOWAS) and the Global Alliance for Resilience Initiative (AGIR). The grant call process as well as review of the Year 4 work plan involved review by USAID missions as well although this was not a direct engagement on our part, but a requirement in the USAID review process. The responses have also guided some of our upcoming activities, e.g., during the upcoming WA RILab DP Dissemination Meeting we shall seek to further our engagement with the USAID Ghana Mission.

USAID Southern Africa, South Africa Mission, the Zimbabwe Mission, and the Malawi Mission made suggestions and comments on four of the seven innovation RIC4FIG projects. All comments were addressed and projects were all approved for funding.

Following the Nairobi launch of RAN's State of African Resilience, Ky Luu traveled to West Africa to meet with various partners. During the trip, he met with the USAID Mission Director in Senegal (as well as UNICEF and WFP) where they discussed RAN's Resilience Framework and opportunities for further collaboration and dissemination of quantitative findings. On 17 July 2015, RAN hosted the Executive Director of the U.S. Global Development Lab at United States Agency for International Development (USAID) Ms Ann-Mei Chang who visited the ResilientAfrica Network (RAN) offices in Kampala, Uganda.

This was also an opportunity to interact with the USAID Uganda Mission Director. Ms. Leslie Reed and Ms. Erin Wroblewski, USAID/Uganda Program Officer accompanied Mei to RAN. Prof. Barnabas Nawangwe, Makerere University Deputy Vice Chancellor in-Charge of Finance and Administration and RAN Patron joined Prof. William Bazeyo, Dean Makerere University School of Public Health and RAN Chief of Party/Lab Director, RAN multidisciplinary Innovator teams and the RAN Team to interact, appreciate and discuss innovation in relation to strengthening resilience.

## **6. Monitoring & Evaluation**

### **6.1. M&E Updates**

RAN Monitoring and evaluation activities are on track. The M&E team, with support from TU DRLA, extended support to the grant awardees under the Resilience Innovation Acceleration Program (RIAP) to develop M&E plans for each innovation project. Each of the RIAP innovator teams incubated in the EA RILab was engaged in a one-on-one day workshops in January 2015 to develop theory of change for their projects. At the end of each the meetings, a draft Theory of Change (ToC) was developed and these were shared with Stanford to advise on M&E for innovation management. The Stanford team provided comments and the innovation teams refined their ToCs and produced drafts of the M&E plan documents. A similar process was followed for the RIC4ACE innovation teams that were on-boarded in Q3 Year 3.

From 8th - 19th June 2015, the RAN M&E team together with 5 student interns (1 undergraduate and 4 master students) participated in the one-day Theory of Change development workshops for each of the 7 RIC4ACE innovation projects incubated under EA RILab. A lot of brainstorming was involved in these workshops right from problem identification to solution ideation. In the workshop, the team also brainstormed the key activities, indicators of success and assumptions for each project. The interns were tasked with capturing all the ideas that came up in the meeting from each innovation team's workshop and to deliver the problem tree, the objective tree, the theory of change and the logframe at the end of each workshop.

On 24th June 2015, the interns produced the four deliverables for each innovation team. The interns were then tasked to populate the M&E plan template with the outputs of the workshop and produce a draft M&E plan document that would be shared with the innovation teams. They worked as a team and compiled the plans in consultation with the M&E Manager. The draft plans were shared with the innovation teams for their further input to complete the documents. RAN awaits feedback from the teams. In June 2015 the M&E Manager together with the deputy chief of party and the innovation director attended a meeting at ChangeLabs at Stanford University where managing and scaling strategy for innovations were discussed. The ChangeLabs team provided an initial template for documentation of innovation progress that was discussed with innovation officers at the joint workshop for M&E and innovation officers held in August 2015 at RAN offices in Kampala. The innovation officers together with the M&E officers discussed the templated to come up with a systematic reporting mechanism for the innovations. The proposed template tool for measuring impact potential for each innovation project

capture parameters that will be customized for each innovation and monitored for progress and once the template is finalized it will be rolled out to the innovation teams in year 4.

In year 4, an additional report reflecting impact potential will be submitted to USAID in addition to the regular M&E reporting requirements. RAN won the Monitoring, Evaluation, Research and Learning Innovations (MERLIN ) award to use innovative systems tools to help transform design, decision-making, and interventions in development under the Systems and Complexity Consortium with partners in the United States. RAN M&E team and the IT personnel will continue to work with the whole RAN team to ensure the success of this project. The online reporting system for RAN will be extended to incorporate other tools for impact potential to enable ease in capturing all information regarding RAN and its innovation portfolio. RAN, with the support of TU/DRLA, through face-to-face and online meetings underwent a rigorous revision of the M&E plan to better reflect RAN’s efforts in strengthening resilience through innovative solutions in targeted African communities. The revisions included incorporating updates of the change from MOOCs to MKITS, inclusion of new indicators and developing indicator reference sheets for new HESN core indicators, and revising RAN performance targets. An updated M&E plan was submitted to and approved by USAID.

## 6.2. Deviance from M&E Targets

Reference Number	Indicator	2015 Target	2015 Actual	± % Deviation from Target	Explanation of deviance from target
Gin1	Total dollar value of outside (non-USAID) resources utilized to the dollar value of USAID investments	\$277,578	\$1189237	328%	Actual far exceeded the target because the cumulative cost share for the rent for the RAN/EA RILab building was computed for the 5 years of the project lifespan.
Gin2	Number of transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN Development Labs	12	1	-92%	RAN hoped that the 4 RIAP and the 7 RIC4ACE projects would start implementation in Q1 Year 3 but unfortunately only RIAP was able to start and these are progressing well but majority of them will complete development phase in Q1 Year 4.
Gin3	# of transformative innovations, technologies, or approaches that were piloted with human, financial, or institutional resources contributed by HESN Development Labs	1	0	-100%	The one RIAP project under pilot experienced delays due to license requirements and will complete the phase in Q1 Year 4.

Gin4	# of transformative innovations, technologies, or approaches that were adopted with human, financial, or institutional resources contributed by HESN Development Labs	0	0		
Gin5	# of transformative innovations, technologies, or approaches that achieved wide-scale adoption with human, financial, or institutional resources contributed by HESN Development Labs	0	0		
Gin6	# of transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by HESN Development Labs	13	1	-92%	Since the rest of the projects had not yet completed the development/pilot stage, RAN could not do an evaluation of all of them. This was only done for the one project that was completed.
Gin7	# of US students via HESN partners serving as fellows in developing countries (for more than one month)	12	10	-17%	RAN hopes to engage more students from HESN Labs
Gin8	Number of innovations, technologies or approaches in the innovation pipeline	13	29	123%	In addition to the awarded innovations, RAN provides mentorship support on other innovations that are not funded.
Gin9	Number of innovations, technologies or approaches that complete at least one of the five stages in the innovation pipeline	13	1	-92%	Only one RIAP project managed to complete the development phase..
	Number of beneficiaries reached	200,000	189271	-5%	
Gin11	Number of innovations, technologies, or approaches that have reached more than 1 million people	0	0		
Gin12	Number of innovations, technologies, or approaches that have reached more than 5 million people	0	0		
Oin1	Number of new data-related technologies, tools, approaches, and best practices supported or applied with human, financial, or institutional resources contributed by HESN Development Labs	20	25	25%	All RILabs managed to complete quantitative survey documents in year IV

Oin2	Number of data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	20	15	-25%	RAN working to complete and share more datasets
IR1.2in1	<i># of users who access data and tools made available with support from human, financial, or institutional resources contributed by HESN Development Labs(custom indicator)</i>	700	830	19%	RAN had more engagement activities where users interacted with our tools.
IR1.3in2	<i>Number of development professionals proficient in data management and use due to human, financial, or institutional resources contributed by HESN Development Labs (custom indicator)</i>	40	167	318%	The quantitative data collection exercise required more Research Assistants than previously anticipated.
O2in1	Time required for developing, piloting, adopting, scaling, and evaluating transformative innovations, technologies, and approaches receiving human, financial, or institutional resources contributed by HESN Development Labs	6	10	67%	Because of unforeseen circumstances the innovation team required more than the anticipated time for development e.g seasons
IR2.2in1	<i># of white papers, articles, assessments, analyses, and evaluations on development challenges, innovations, technologies, approaches, and contexts (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) published in targeted fora and publications OR provided to USAID operating units, HESN partners, and the broader development community</i>	15	19	27%	RAN had the privilege for 10 abstracts to be accepted at the Djibouti conference and this causes the excess in the targets.
IR2.2in3	<i># of targeted communities who participated in assessment, analysis, and evaluation of innovations, technologies, and approaches supported with HESN Development Lab(custom indicator)</i>	19	28	47%	The innovation teams had the opportunity to conduct Needfinding for their projects in the communities and this increased the target.

IR2.3in1	# of MOUs or other agreements signed with public sector, private sector, local community partners, and one HESN Development Lab	8	25	212%	The target considered new MOUs signed not RAN's network Universities
IR2.3in2	number of stakeholders engaged in problem solving with one HESN Development Lab (disaggregated by partnership type)	80	105	31%	RAN has had the opportunity to engage several stakeholder categories in their activities
O3in2	# of MOUs or other agreements signed with public sector, private sector, and local community partners and more than one HESN Development Lab	4	2	-50%	RAN hopes to engage more with other HESN labs.
O3in3	# new development related classes or disciplines created by university departments with human, financial, or institutional resources contributed by HESN Development Labs	4	0	-100%	RAN expects in future to develop more courses from the MKITS developed
IR3.2in1	# of visitors to Network knowledge-sharing platforms	72,000	73740	2%	RAN is currently devising more effective ways of broadening online reach
IR3.4in1	# of students participating in short term practica or other field experiences through human, financial, or institutional resources contributed by HESN Development Labs	2000	2639	32%	RAN's visibility to students has increased and therefore the engagement activities with them have increased as well.
IR3.4in2	# of Hubs created with human, financial, or institutional resources contributed by HESN Development Labs	4	2	-50%	RAN is in the process of creating more innovation centres.
IR3.4in3	# of participants in Hubs, summits, and other problem-solving institutions created with human, financial, or institutional resources contributed by HESN Development Labs	100000	268000	168%	RAN has expanded the engagements to reach participants via face to face and online.
IR3.4in4	# of participants in crowd-sourcing or other open challenges created with human, financial, or institutional resources contributed by HESN Development Labs	500	2281	356%	The applications received for Research assistant far exceeded the target.

I.0 R.a	Number of resilient dimensions and indicators populated with data collected in targeted communities and made available through human, financial, or institutional resources contributed by RAN	40	0	-100%	RAN expected to have completed data collection and analysis of the quantitative survey but most RILabs could only up to data collection in Year 3
G.1 RAN indicator	Number of innovations or technologies that demonstrably advance resilience	0	0		
G.2 RAN Indicator	Number of individuals participating in implementing innovative approaches scaled out by RAN	200,000	182196	-9%	RAN is still continuing to engage individuals (primary beneficiary and actors) to move forward RAN's innovation agenda
2.1.R.a	Number of students, faculty and community members who are trained in design thinking skills with human, financial or institutional resources provided by RAN	150	82	-45%	Other RILabs are still slow at training individuals in DT skills, but improvement measures will be a focus in Year 4.
2.1 R.b	Number of students, faculty and community members who are trained in design thinking skills with human, financial or institutional resources provided by RAN that go on to apply design thinking skills	30	8	-73%	Measures will be worked on to have more trained people train others in DT skills.
2.2 R.a	Number of private and public sector actors involved in development of innovations	5	8	60%	RAN has had private sectors extend support to their innovation teams
2.2 R.b	Number of University multi-disciplinary creative teams participating in innovation development	13	21	62%	This is beyond target because RAN had anticipated RIC4FIG awardees for Year 4
2.3.H.a	Number of transformative interventions/innovations; technologies, or approaches that were <i>scaled up</i> with human, financial, or institutional resources contributed by RAN	0	0		
2.3 R.a	Number of innovations or technologies that result in joint business ventures or public/private partnerships	0	0		
3.0 H.a	Number of students, staff, and faculty enrolled for courses or disciplines created by RAN	40	23	-43%	RAN expects to develop more courses from the MKITS where students will enroll.

3.0 H.b	Number of students, staff, and faculty completed the courses or disciplines conducted by RAN	32	23	-28%	RAN expects to develop more courses from the MKITS where students will enroll.
3.1 R.a	Number of informal or formal learning opportunities (short courses) created by RAN partners	350	441	26%	RAN's new strategy to documentation, MKITS, is helping spread out more learning opportunities.

## 7. Lessons Learned / Best Practices

1. **Managing open calls:** Following the RIC4FIG call a number of lessons were learnt: The staggered approach of submitting concept notes before requesting for full proposals, while time consuming, proves to be valuable in terms of giving insight and an opportunity to limit competition to pre-selected concepts that are closely linked to the outcomes we expect by context, challenge and pathway. Given the diverse background and expertise of reviewers, the aggregate scores obtained from the reviewers needed to be closely reviewed further for outliers especially in cases where detailed comments were made by each reviewer. It is important that reviewers put in detailed comments together with their scores. The availability of comments for each application is therefore an important output from the review platform. A systematic documentation of the process followed through the solicitation process is critical for a couple reasons. Firstly, it is in line with the requirements for full and open competition that the process be as transparent and fair as possible. Secondly, it helps protect the process from possible protests from applicants who may feel prejudiced by any occurrence during the process. Third, it helps understand the process of selecting innovations and how that links back to the identified dimensions and anticipated outcomes of the interventions. The team benefited a lot from stakeholder engagement for publicizing the call and also to ensure that all key members are appraised on the process. It is important to ensure that community gatekeepers and leaders are informed and involved in all processes to avoid miscommunication by community members.
2. **Clear goal for quantitative data:** During the first quarter of year 3, the TU/DRLA Team learned that defining goals and objectives for the consistent quantitative data collection and reporting policies has been a challenge. Firstly, this was due to the diverse and dynamic nature of collaborating with different universities. Secondly, the RAN team hoped that the quantitative survey would be used to capture baseline data to inform individual innovation projects. However, it was learned that the survey would not serve the data roles as required for each individual innovation project and it was agreed to conduct the two exercises separately. Particularly, the survey would address general characteristics informing RAN resilience dimensions in representative communities while innovation projects are all unique requiring specific data in specific communities to address specific problems, The Tulane Team also found that the quantitative data collection workshops owe their success in large part to the collaboration between the different country teams; a variety of technical capacities exist, so the network approach on the development of data collection tools and protocols has proven useful.
3. **Data sharing:** Some universities across the RAN expressed hesitancy towards sharing data before they have published their findings. However, after constant communications and highlighting USAID open data sharing policy, an understanding was reached and some Universities have started sharing the data. RAN is working towards avenues for enhanced data sharing and is fully intending to comply with all USAID open data policies.

4. Qualitative reports: During the second quarter of year 3, the TU/DRLA Team learned that editing can be a lengthy but important process. Although RILabs' qualitative reports were reviewed, commented on and revised extensively, there remain minor but important issues in language and presentation of findings. While the style and content are respected, the review process must consider cultural differences in presenting sensitive issues such as gender-based violence, subjective moral issues and perceptions/interpretations of attitudes. Additionally, choice of vocabulary (words like 'lazy' or 'ignorant') must be carefully considered to take into account the multiple cultural perspectives from which the reports will be viewed, conserving meaning while avoiding misinterpretation.
5. Collaborative approach: The RILabs learnt that involving relevant professionals in program activities contributes a lot to insuring the quality and reliability of programs. However, achieving high level of engagement and partnerships requires strong commitment, continuous follow-ups and hard work. There is a crucial need to keep the strong commitment of the focal persons at RAN network plus Universities, actively engaging them in the resilience program activities, and supplying them with the necessary supports. The involvement of faculty, staff, students, and relevant innovators is also crucial for the success of this project. The interactive sessions during the quantitative planning workshop were educative and the team members from the Network plus Universities were able to learn from each other. By providing input to the quantitative protocols (including tools), there has been a lot of effort in balancing the provision of specific guidance (which risks over prescribe the data to be collected) and allowing the RILabs to create freely (which risks very unstandardized and non-harmony of data across the network.). The RILabs that completed draft quantitative data collection protocol and tools early (first) are then required to wait until other RILabs submit protocol so that there is a sufficient pool of ideas across the network to draw from and share to foster harmonization of tools, approaches and indicators where possible. This slows the overall process considerably, but it also strengthens the process by maximizing the benefits of working as a network. During the Washington D.C. launch of the State of Sub Saharan African Resilience Report, the collaboration between the secretariat, RILabs, Tulane and CSIS worked extremely well. Despite the excellent reception of the launch, it was observed that the information presented could have better addressed the questions/interests of the attendees. As more presentation materials are developed across network, there will be greater sets of more standardized presentations to draw from, be in content, format or presentation flow.
6. Reflecting on this reporting period, attendance at 2014 TechCon was an eye opener for the team to learn about emerging ideas in the innovations sphere. In addition the team has realized the need for more engagement with the USAID Missions to understand other projects they are supporting such as the RESILIM project in South Africa which the RILab found relevant to their work if resources are leveraged.
7. HoA RILab space: In terms of operationalizing the RILab space and launching innovation projects, the RILab has not achieved as much as was envisaged, due to some administrative and technical bottlenecks, for instance slow procurement process, and lack of competent suppliers of some equipment. The fact that our RILab is located far away from the capital has added further barrier to effective and quick launching of innovation projects that target addressing the resilience challenges of Borana pastoralists. Another area that requires quick improvement is the designing and launching of resilience knowledge sharing platforms. In order to remove the current barriers and move forward, the RILab needs close follow-ups and support from RAN Secretariat and its partners, sharing guidelines and practical experiences. Having completed year 3, the RILab feels the urgency to move from resilience studies to resilience innovation projects that practically strengthen communities' resilience. Discussions to address these challenges were held between RAN secretariat and the RILab and the following strategies were agreed upon. To solve administrative challenges, it was suggested that the RILab identifies a person to handle

RAN administrative matters within Jimma University to reduce the bureaucracy. Also to easily reach the pastoralist community, the HoA RILab was advised to bring onboard NetworkPlus University that is located in Borana Pastoralist community and as a result Bule Hora University has been identified as another NetworkPlus University. RAN secretariat is also working towards refining the call for proposals to address the challenges generated from the HoA intervention strategy and CRID workshops and these were submitted to USAID by end of Year 3.

8. Promote community engagement: The community is at the core of RAN's resilience and innovation activities. From the Needfinding workshop held in SA RILab, there was a great appreciation of RAN's needs finding and ethnography methodology
9. Appreciation of RAN's Innovation Management Approach: The SA RILab appreciated the value of conducting Needfinding in innovations management as they plan to implement the RIC4FIG innovations in the communities. Similar appreciation was revealed by the innovation teams in the EA RILab. Some of the teams were hesitant to conduct needfinding but later realized that it was a very important exercise to inform their innovations and to bring them closer to the innovation end-user.
10. RAN and TU/DRLA have realized that there is an urgent need to fast track coordination and provide general and harmonizing guidance since a key challenge existed in trying to keep the labs on pace, so that expertise and ideas from one lab can be shared and used by another. When dates for the quantitative data protocol/questionnaire development, enumerator training, and fieldwork began to experience delays in some countries and early implementation in others, the challenges to harmonize data collection approaches across labs became even more challenging. A positive outcome is that, while standardization is less than optimal, there is also a wide variety of novel approaches to measuring resilience related indicators being implemented across the labs (rather than one slightly more homogenized through attempts at standardization), which will provide RAN with an extremely large set of tested indicators to draw from.
11. Another challenge arose during efforts to organize the Nairobi, Kenya launch of the State of Sub Saharan African Resilience Report with IGAD and the RAN Secretariat. While the collaboration worked well, coordinating the invitee list presented some challenges. Particularly challenging was working out an optimal solution for hand-delivering invitees to select participants and working out messaging that would appropriately address varying needs of the hosts. Additionally, due to the widespread publicity leading up to the launch, there was a large group of university students who registered to participate. While this was a good first step in engaging young African students, in future events RAN may look more closely at how to leverage these interests. In particular, RAN may consider streaming the forums live for global participation and may also consider offering additional forums to more deeply engage students in resilience building discussions.
12. Communication and follow-up: In the past, RAN struggled to bridge the geographic and temporal distance between Stanford and RAN and communication was challenging at times. In Q4, we found a productive rhythm and were able to overcome this challenge more than we have in the past. Setting up a predictable weekly check-in time via Skype (and following through every week) was a key element of success, as it enabled the Stanford team to understand what was going on at RAN overall and manage our expectations and timelines accordingly. Another element of success was making sure that there was a clear follow-up action plan for the series of August workshops that Stanford conducted, so that the RI Labs knew what was expected, and on what timeline, immediately following those workshops.
13. Promote joint development of work plans across the Network: A collaborative approach was used to both develop benchmarks and indicators for RAN's Impact Potential Methodology as well as to gather contributions for RAN's Year 4 Workplan. This should help further ownership of the various activities by the RILabs who are the key implementing partners within our network.

## 8. Future Activities

In the next reporting period the following activities are planned:

- I. Data
  - a. Setting target date of December 2015 for submission of manuscripts for the qualitative data
  - b. Finalize quantitative data survey collection in RAN target communities
  - c. Provide virtual and field technical support as needed
  - d. Conduct a desktop review of effective online databases design platform tools to develop an interactive platform for disseminating RAN data to a global audience;
  - e. Begin preparations for RAN's first annual Resilience Conference in May 2016;
  - f. Provide technical support and analysis for the second-annual State of African Resilience Report
  - g. Conducting training on survey data analysis, completing Ethiopia survey data entry and proceeding to data analysis as well as report writing
  - h. Conducting Somalia survey fieldwork training, carrying out fieldwork and data entry;
  - i. The CDD will continue to work with the EA and WA RILabs on policy briefs based on the Deliberative Polling findings from each of the DP projects conducted with the respective labs. The CDD will continue to analyze data from the DP projects as needed for the policy briefs and/or reports. A journal article is currently being revised that is based on the Uganda DP projects and should be published within the year. We expect to produce an article from the Ghana project as well within the year that may be published.
2. Innovations management
  - a. Identify and ensure that all innovators have appropriate mentors
  - b. One on one meetings with innovators to discuss the work plans, budget and M and E strategy
  - c. Other Innovator support activities
  - d. Develop innovation specific M&E plans and ex-ante, formative and summative evaluations of innovations by providing technical analysis and support to innovation teams
  - e. Conducting engagement meetings and workshops
  - f. Launching RIC4RED Grant;
  - g. Incubating Rainwater Harvesting Project
  - h. Preparing and submitting Somalia grant document focusing on chronic internal displacements
  - i. Organizing some events at HoA RILab Innovation Center and encouraging faculty and student innovators;
  - j. Moving into year 4, we are excited to continue the implementation and active measurement of Impact Potential at all the Labs and teams, as well as support RAN in the on-boarding and training of innovation teams at all 4 Labs. Second, we expect to increase the level of training activities occurring via video, through the MKITS platform.

Finally, we will continue to support RAN to development viable business models for its teams' products and for its own Labs, in order to ensure that its impact scales up and extends beyond a 2 year time horizon

- k. Follow up on review of the various draft grant calls for approval and release during the first quarter of Year 4
  - l. Active monitoring and reporting on innovators' progress using the Impact Potential Methodology framework
  - m. Development of a Scaling Strategy for RAN
3. Knowledge sharing
- a. Develop M-KITs on the RAN Resilience Methodology. The M-KITs will form the basis for a pilot online course to be offered to new RAN network plus partners and others interested in learning the methodology
  - b. Launching the HoA RILab Website
  - c. Following up the publication of Ethiopia qualitative study manuscript
  - d. Preparation of Somalia qualitative study manuscript and submitting for publication
  - e. Developing and sharing some MKITS materials
  - f. Rollout of an interactive strategy and platform for RAN MKITS

## 9. Environmental Monitoring

Of the 7 top applicants from the RIC4ACE call that RAN submitted to USAID 2 required to undergo an Initial Environmental Examination (IEE). The two teams were contacted and they addressed the IEE and RAN submitted back the responses to USAID. Once the two teams start implementation of their research grant projects they will be monitored to keep adhering to the USAID Environmental Impact Assessment policy. As innovation teams set out to develop their innovations, environmental concerns will be watched out in case they emerge and mitigated according to authorized regulations.

## 10. Risks/Issues and Mitigation

RAN Secretariat has noted that time is a key constraint for the rollout of the remaining grants. Mitigation measures include close collaboration with the RILabs, Stanford, and USAID in the development process. Innovators feeling overburdened by RAN processes (e.g. meetings, events etc that are not explicit activities in their workplan but beneficial to them) as they implement their projects. Mitigation will include further engagement particularly in terms of early notices, sharing more information about the significance of what we are proposing, etc. At HoA RILab the major risk issue is that we sent survey research teams to the target communities two years after the community consultations had been carried out, but no tangible intervention project has been implemented. Consequently, there was a risk of facing community fatigue and dwindling support. However, careful and systematic communications were made through our focal person in Borana Zone as, involving local officials, field guides and community leaders. Ultimately, the local people were encouraged to support the project and actively participate in the survey fieldwork. Overall, there is an urgency to implement the identified innovation projects before the local communities lose hope and interest in RAN HoA

RILab Project. Across RAN, innovators, staff and partners have various levels of engagement with the internet access and with multimedia production. Mitigation measures will include trying to simplify as much as possible the new rollout as well as to ensure minimal bandwidth requirements as possible for use/upload of RAN MKITS.

## II. Other

### Appendices

1. Launch of the first Community Radio-RootIO in Oyam District, Northern Uganda (Luganda). <https://www.youtube.com/watch?v=Z2yshDkV5pE&list=PL-j0GgDO9bs4KsPWolIYwPZWYAlMxh6fl>
2. Push and Pull Dissemination exercise <https://www.youtube.com/watch?v=quxzmyt2Ihg&index=9&list=PL-j0GgDO9bs4KsPWolIYwPZWYAlMxh6fl>
3. Communications attachments: <http://www.ranlab.org/communications/attachments/apr-may-jun2015.pdf>,
4. Communications attachments:<http://www.ranlab.org/communications/attachments/jul-aug-sep2015.pdf>
5. Needfinding activities (uploaded in the documents section) Participatory needs assessment-Focus Group Guide-RIC4FIGSeptember 28 2015 Interview Guide-RIC4FIGSeptember 28 2015 RIC4FIG Needfinding Protocol
6. Quantitative survey activities Survey Fieldwork in Ethiopia-3.JPG Survey Training in Progress in Ethiopia.JPG Survey Fieldwork in Ethiopia-1.JPG Survey Training Certificate Handover-2.JPG Survey Training Certificate Handover-1.JPG
7. Community consultations (uploaded in the documents section) FINAL EA RILab Uganda Community Consultations Report Conflict FINAL\_EARILab Uganda Community Consultations Report Climate Climate change report- RAN version
8. Back to millet Stakeholders meeting Report (uploaded in the documents section)
9. Business Modelling workshop report (uploaded in the documents section)
10. WA HESN Movie Night Pictures from the WA HESN Movie Night IMG2630.JPG Pictures from the WA HESN Movie Night IMG2618.JPG
11. Outreach activities (uploaded in the documents section) Peer 2 Peer report - Gulu
12. RIC4FIG Innovations Progress Report-Submitted08July (uploaded in the documents section)
13. Detailed results from community engagements (uploaded in the documents section)

# APPENDIX

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## APPENDIX I. HESN Monitoring & Evaluation (M&E) Indicators - FY15 Annual

Code	M&E Code Description	Target Value	Reached Value	%
HESN_OZRAN-in2	# of individuals participating in implementing innovative approaches scaled out by RAN	200000	182196	91.1%
HESN_0in01	\$ Total dollar value of outside (non-USAID) resources utilized	277578	1189237	428.4%
HESN_0in02	# transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN Development Labs	12	1	8.3%
HESN_0in03	# transformative innovations, technologies, or approaches that were initially piloted with human, financial, or institutional resources contributed by HESN Development Labs	1		0.0%
HESN_0in04	# transformative innovations, technologies, or approaches that achieved early adoption with human, financial, or institutional resources contributed by HESN Development Labs	0		---
HESN_0in05	# transformative innovations, technologies, or approaches that transitioned to scale with human, financial, or institutional resources contributed by HESN Development Labs	0		---
HESN_0in06	# transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by HESN Development Labs	13	1	7.7%
HESN_0in07	# US students via HESN partners serving as fellows in developing countries (for more than one month)	12	10	83.3%
HESN_0in07_Other_F	# US Female students (other or unknown degree program) serving as fellows		6	---
HESN_0in07_Other_M	# US Male students (other or unknown degree program) serving as fellows		4	---
HESN_0in08	# innovations, technologies or approaches in the innovation pipeline	13	29	223.1%
HESN_0in09	# innovations, technologies or approaches that completed at least one of the five stages in the innovation pipeline	13	1	7.7%
HESN_0in10	# beneficiaries reached	200000	189271	94.6%

<b>Code</b>	<b>M&amp;E Code Description</b>	<b>Target Value</b>	<b>Reached Value</b>	<b>%</b>
HESN_0in11	# innovations, technologies, or approaches that have reached more than 1 million people	0		---
HESN_0in12	# innovations, technologies, or approaches that have reached more than 5 million people	0		---
HESN_0zRAN-in1	# innovations or technologies that demonstrably advance resilience	0		---
HESN_1.0in1	# new data-related technologies, tools, approaches, and best practices supported or applied with human, financial, or institutional resources contributed by HESN Development Labs	20	25	125.0%
HESN_1.0in2	# data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	20	15	75.0%
HESN_1.0in2_new	# new data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	20	15	75.0%
HESN_1.0zRAN-in1	# resilience dimensions populated with data collected in targeted communities and made available through human, financial, or institutional resources contributed by RAN	40		0.0%
HESN_1.1in1_NPR	# citations in targeted non-peer reviewed fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.1in1_PD	# citations in targeted project documents of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.1in1_PR	# citations in targeted peer-reviewed fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.2in1	# users who access data and tools made available with support from human, financial, or institutional resources contributed by HESN Development Labs	700	830	118.6%
HESN_1.3in2	# development professionals proficient in data management and use due to human, financial, or institutional resources contributed by HESN Development Labs	40	167	417.5%

<b>Code</b>	<b>M&amp;E Code Description</b>	<b>Target Value</b>	<b>Reached Value</b>	<b>%</b>
HESN_2.0in1	# months required for developing, piloting, adopting, scaling, and evaluating transformative innovations, technologies, and approaches receiving human, financial, or institutional resources contributed by HESN Development Labs	6	10	166.7%
HESN_2.2in1	# white papers, articles, assessments, analyses, and evaluations on development challenges, innovations, technologies, approaches, and contexts (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) published in targeted fora and publications OR provided to USAID operating units, HESN partners, and the broader development community	15	19	126.7%
HESN_2.2in2	# citations of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts in targeted fora/publications/projects	0		---
HESN_2.2in3	# targeted communities who participated in assessment, analysis, and evaluation of innovations, technologies, and approaches supported with HESN Development Lab	19	28	147.4%
HESN_2.3in1	# MOUs or other agreements signed with public sector, private sector, local community partners, and one HESN Development Lab	8	25	312.5%
HESN_2.3in2	# stakeholders engaged in problem solving with one HESN Development Lab	80	105	131.3%
HESN_2.3zRAN-in1	# private and public sector actors involved in development of innovations	5	8	160.0%
HESN_2.3zRAN-in2	# innovations or technologies that begin as or result in potentially income generating ventures or public/private partnerships	0		---
HESN_3.0in2	# MOUs or other agreements signed with public sector, private sector, and local community partners and more than one HESN Development Lab	4	2	50.0%
HESN_3.0in3	# new development related classes or disciplines created by university departments with human, financial, or institutional resources contributed by HESN Development Labs	4		0.0%
HESN_3.2in1	# visitors to Network knowledge-sharing platforms	72000	73740	102.4%
HESN_3.3in1	# classes or disciplines supported by HESN Development Labs with human, financial, or institutional resources contributed by HESN Development Labs	0		---

<b>Code</b>	<b>M&amp;E Code Description</b>	<b>Target Value</b>	<b>Reached Value</b>	<b>%</b>
HESN_3.3zRA N-in1	# students, faculty and community members who are trained in design thinking skills with human, financial or institutional resources provided by RAN	150	82	54.7%
HESN_3.3zRA N-in2	% students, faculty and community members who are trained in design thinking skills with human, financial or institutional resources provided by RAN that go on to apply design thinking skills	20	9.75	48.75%
HESN_3.3zRA N-in2nume	# students, faculty and community members who are trained in design thinking skills with human, financial or institutional resources provided by RAN that go on to apply design thinking skills	30	8	26.7%
HESN_3.3zRA N-in3	# students, staff, and faculty enrolled for course or disciplines created by RAN	40	23	57.5%
HESN_3.3zRA N-in4	# students, staff, and faculty completed course(s) or disciplines created by RAN	32	23	71.9%
HESN_3.3zRA N-in5	# informal (seminars, brown bag lunch, webinar, etc.) or formal (short courses) learning opportunities conducted by RAN partners	350	441	126.0%
HESN_3.4in1	# students participating in short term practica or other field experiences through human, financial, or institutional resources contributed by HESN Development Labs	2000	2639	132.0%
HESN_3.4in1_ Masters_F	# Female MASTERS students participating in short term practica		2	---
HESN_3.4in1_ Masters_M	# Male MASTERS students participating in short term practica		3	---
HESN_3.4in1_ Other_F	# Female students (other or unknown degree program) participating in short term practica		803	---
HESN_3.4in1_ Other_M	# Male students (other or unknown degree program) participating in short term practica		1800	---
HESN_3.4in1_ PhD_F	# Female PhD students participating in short term practica		0	---

<b>Code</b>	<b>M&amp;E Code Description</b>	<b>Target Value</b>	<b>Reached Value</b>	<b>%</b>
HESN_3.4in1_PhD_M	# Male PhD students participating in short term practica		0	---
HESN_3.4in1_Undergrad_F	# Female UNDERGRAD students participating in short term practica		16	---
HESN_3.4in1_Undergrad_M	# Male UNDERGRAD students participating in short term practica		15	---
HESN_3.4in2	# Hubs created with human, financial, or institutional resources contributed by HESN Development Labs	4	6	150.0%
HESN_3.4in3	# participants in Hubs, summits, and other problem-solving institutions created with human, financial, or institutional resources contributed by HESN Development Labs	100000	268000	268.0%
HESN_3.4in4	# participants in crowd-sourcing or other open challenges created with human, financial, or institutional resources contributed by HESN Development Labs	500	2281	456.2%
HESN_3.4zRAN-in1	# multi-disciplinary creative teams participating in innovation development	13	21	161.5%

## APPENDIX II.A. Innovations: Technologies and Approaches - FY15 Annual

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Back to Millet	Back to Millet Project will uses recipes and aesthetics to re-define the taste of millet and other waning traditional starches like Sorgum, Cassava and Sweet potatoes. New forms of processing, impurity removal, mixing, refinement and presentation of these foods will increase their palatability and taste, so that more people in rural and urban settings choose to consume them as an attractive, tasty, and healthy and more resilient alternative staple to maize and rice which are swallowing up the consumption space for starchy carbohydrate across the world. The team held a stake holders workshop on 18, August 2015 with the following objectives; 1) Help refine and develop the idea of a cookery competition to help rebrand traditional grains as super foods 2) Develop a consortium of stakeholders who can combine their efforts to create a highly effective campaign 3) Develop a consensus on the implementation of a campaign.	Uganda	Stage 1: Development	40	No	No
Approach	Baobab Fruit for Dollars in Beitbridge (B4D)	The project seeks to diversify and increase household income as well as improve food security through exploiting income earning optionsavailable on the natural forestry product value chains, using baobab fruit, Adansonia digitata.	South Africa	Stage 1: Development	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Better Farming Better Me	There are high levels of food insecurity and environmental degradation in communities that rely on only one form of commercial crop production. This is seen mainly in areas where tobacco is the only perennially grown cash crop. The key challenge is how to wean off household from dependency on one crop, in a complex system where various incentive structures (e.g. provision of fertilizers, seed and farming implements and guaranteed purchases by tobacco companies although at very low prices) tend to keep farmers in a dependency loop. This proposed innovation will empower households to: 1) reduce dependence on tobacco, 2) enhance farmers abilities to generate adequate food, and 3) create a fora where public health and poverty eradication programmes can be promoted and scaled up. The intervention will be developed and piloted by the Centre for Tobacco Control in Africa (CTCA) in partnership with Gudie Leisure Farm. The intervention will involve introducing Kroiler chicken and high yield maize as alternative enterprises to tobacco growing under the theme 'Diversification of Income for Improved Life for tobacco dependent communities in Uganda' The team carried out a needsfinding survey in Hoima district - Western Uganda from 24-28, August 2015.	Uganda	Stage 1: Development	46	No	No
Technology	Community Radio (RootIO)	The four radio stations are operational in 4 districts in Northern Uganda.	Uganda	Stage 2: Initial Piloting	181875	No	No
Technology	Electronic Dollar A Day (EDAD)	The EDAD Project seeks to create an enabling mobile e-Savings platform for people to save as little as a dollar per day (EDAD) from their daily or regular earnings to leverage any future development plans. The team conducted a needsfinding survey from 25-08-2015 to 01-09-2015 aimed at collecting information that would assist the design of an appropriate mobile savings platform for users in the target population (individuals and groups) in Kasese district in western Uganda. A number of insights were collected which are informing the next steps.	Uganda	Stage 1: Development	742	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Food Security for Every Family	The project seeks to introduce a series of water pumps and irrigation methods that will provide a means to grow food and earn income throughout the year. The target population is small-scale irrigation farmers and fabricators in Chikwawa district.	South Africa	Stage 1: Development	0	No	No
Approach	Goats Value Chain for Prosperity (G4P)	The project will support community based social entrepreneurs to create milk collection and processing centres working with community based goat producers. The project activities seek to address challenges associated with limited opportunities for income generation in the local economy, low incomes for rural smallholder farmers and food insecurity.	South Africa	Stage 1: Development	0	No	No
Approach	Improved Life and Entrepreneurial Skills through the Self-Help group approach	The Self Help Group (SHG) project promoted by Sinamandla and implemented by capacitated partner organisations is an innovative approach for strengthening resilience, reducing poverty and transforming communities as it mobilises and empowers women in the poorest households in target communities using what they already have to start a process of development that impacts over-time at the individual, group, household and community levels.	South Africa	Stage 1: Development	0	No	No
Approach	Improved Push and Pull	This is an innovation approach seeking to solve the persistent problem of striga weed and maize stem borer. They have implemented this approach in the communities and the results have clearly demonstrated to the community the effectiveness of adopting the improved push and pull approach	Uganda	Stage 1: Development	230	Yes	Yes

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	KUNGULA "Thresh it"	Kungula "Thresh It" Project aims at optimizing post-harvest handling of maize by availing low cost mechanized threshers that will markedly increase processing output while reducing post-harvest losses, contamination and labor. The vast majority of rural families use indigenous threshing and winnowing practices which are inefficient, laborious and time wasting. Manual threshing (by beating) results into high levels of contaminants from soil and broken cobs within the output, as well as broken seeds with loss of nutritious parts of a substantial portion of the seed. Manual winnowing results in inadequate removal of non-seed residues like broken cobs and chaff. The process is labour intensive, draining the effort of mostly women and children who are the ones that often undertake this laborious work. The team finalized their needfinding survey in Nakasongola district-Uganda. The team has gone back to the drawing board to see how the insights got from the community are to be integrated in the development of the Kungula thresher.	Uganda	Stage 1: Development	33	No	No
Technology	Low Cost Solar Irrigation Pump	The team completed the optimal design of two solar pumps: (i) Surface solar water pump (ii) Submersible solar water pump. Production drawings were developed and model equations computed. For this category of solar water pump, the design specifications are as follows: (i) The designed pump should be able to deliver 15m <sup>3</sup> /day (15,000 liters) working for 5 hours average. (ii) The designed head ranges between 10 meters to 20 meters. (iii) It needs 0.5 HP dc motor to 1 HP (iv) The system will use solar panels assembled based on power requirements. The team also fabricated and built an oil furnace for melting the material that is to be used in sand casting the pump parts.	Uganda	Stage 1: Development	42	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Matibabu	<p>The team along with EA RILab director traveled to Portugal and visited 1 potential partner company. The company is PEDRO-GOMES DESIGN and it is taking lead in refining the MATIBABU prototype along with the following 'Exatronic as electronics expert and an ISO13485 certified company for engineering and development of Medical Devices under European Directive 42/93/EEC; • Professor Carlos Correia, as Full Professor at University of Coimbra, Portugal, with extensive experience on physics, instrumentation and medical devices; • IMM - Molecular Institute – IMM will provide swift access to synthetic hemozoin for the mentioned In Vitro Testing of the prototypes. This collaboration is aimed at developing three prototypes as detailed;</p> <p>1. Using a magnet: The most challenging aspect of using magnetism is to be able to produce a magnetic field of about 1 Tesla within a small volume equivalent to a fingertip. For that the team (partner companies) will consider a permanent magnet array, such as a Halbach array, to avoid the need of electric power to produce an electromagnetic field. The high magnetic field is very important to detect low concentrations of hemozoin and, thus, parasites. This is to be scientifically tested.</p> <p>2. Impedance: Another technique to be explored looks at the impedance spectra obtained with frequencies between 1 Hz and 1 MHz, again with and without an externally applied magnetic field. Electric Impedance Spectroscopy is the key theory behind this scenario. The idea is that the presence of hemozoin will change the spectra on the presence of a magnetic field and, thus, if changing the magnetic field is changing the spectra then hemozoin is present in concentrations above a currently unknown concentration. This is also to be scientifically tested.</p> <p>3. Magnet and impedance combined.</p>	Uganda	Stage 1: Development	40	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Mobile Solutions for Marginalised Communities (MOSMAC)	This proposed project seeks to build a dedicated web-service and mobile application with differentiated features to introduce and facilitate a mobile auctioning system to rural small scale farmers.	South Africa	Stage 1: Development	0	No	No
Approach	Mopane Worm for Nutrition and Income Generation in Zimbabwe (MW4NIG)	The project seeks to facilitate training and capacity strengthening to increase Mopane worm productivity. Group formation and dynamics will be achieved through facilitation by the experts in the team developing a training curriculum at multiple levels that includes: developing manuals for group formation, technical production processes on Mopane worms, conservation of the natural habitat, health and safety of harvesters and collaboration with institutional actors.	South Africa	Stage 1: Development	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Mushrooms for Mushrooming Livelihoods	Rural farmers in Eastern Africa largely depend on traditional food and cash-crops, which often attract low incomes from the agricultural markets. Rising populations have also contributed to a shortage of land and as a result, available land for agriculture is limited due to the land fragmentation. Farmers also do not have options for off-season agriculture as many crops depend on moisture from the rains. Growing of high value crops on smaller holdings could provide an important livelihood option for rural farmers. Mushroom growing could be one such alternative. Mushrooms are not widely grown in eastern Africa yet their demand is high, especially in the hotel industry. The supply gap is met by imports, yet there is immense potential for local farmers to tap into this growing market. One of the key barriers to mushroom growing in the region is the requirement to use cotton-seed hulls as the medium for germinating and growing the mushroom plant. In addition, the cotton-seed hulls have to be sterilized, and this is often undertaken by roasting them – firewood is the main source of energy for this purpose, yet it is increasingly scarce. This lack of access to suitable materials is the key barrier to mushroom growing among rural farmers. This project proposes to explore and develop a new medium for mushroom growing.	Uganda	Stage 1: Development	0	No	No
Technology	Rapid Agricultural Produce Indirect Dryer (RAPID)	The RAPID project conducted their needfinding surveys in Wakiso district in September 2015. The project is working on developing prototypes of the solar dryer that incorporates the insights from the community.	Uganda	Stage 1: Development	33	No	No
Approach	Trust Insects for Food	This project seeks to develop a farming system for commercially producing grain sorghum, a resilient crop with the concomitant conversion of the resultant waste stover as feedstock for the lucrative niche business of producing edible mealworms at an industrial scale.	South Africa	Stage 1: Development	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Unearthing the Potential of Earth worms	The team completed the construction of the earthworm breeding unit at Kabanyolo Agricultural Research Institute a subsidiary of Makerere University College of Agriculture and Environmental Sciences. The team has finalized the preparations for all the earthworm seeds that are to be introduced in the breeding Unit to breed earthworms in large numbers. These are to be introduced in the breeding Unit under four substrates (material under which the earthworm can thrive). These include Chicken waste, Biogas slurry, Municipal waste and Cow dung. The team is aiming at making a comparative analytical study on how the yields and growth rates vary with different substrates which will inform the advice that the team shall be giving to stakeholders in bid to answer the concerns that were raised during the needfinding survey conducted in quarter 3.	Uganda	Stage 1: Development	41	No	No
Approach	Village Egg Bank	The Village Egg bank Project introduces a new unconventional form of currency in which farmers contribute 'an egg at a time' into a village egg bank. Any farmer can contribute, regardless of whether they have one or several chickens. These regular deposits of eggs will ensure a constant supply, while the egg pool would provide a mechanism for bulking the available eggs for better market leverage. The team conducted a needfinding survey in Yumbe district-Northern Uganda aiming at assessing major factors influencing the design and uptake of the Village Egg Bank approach among farmers in Yumbe District.	Uganda	Stage 1: Development	48	No	No
Approach	Amaranth	This solution has been developed by a faculty-led team from the School of Food Technology, Nutrition and Bio-engineering, Makerere University. RAN supported this innovation by providing documentation and video profiling support required to meet the 2014 innovation marketplace submission requirements. This solution was submitted and accepted to compete in TechCon 2014 Innovation marketplace. The EA RILab will continue to offer advisory support and stakeholder engagement as the team seeks to market and scale their innovation.	Uganda		0	Error	Error

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Asthma Grid	This concept is under development by an graduate student from the University of Pretoria, South Africa. RAN supported this innovation by offering technical critique and providing documentation and video profiling support required to meet the 2014 innovation marketplace submission requirements. This solution was submitted and accepted to compete in TechCon 2014 Innovation marketplace. The SA RILab will continue to offer technical support and mentorship to the innovator as they continue to develop their concept further	South Africa		0	Error	Error
Technology	Duka	This concept is under development by an undergraduate student from Makerere University. RAN supported this innovation by offering technical critique and providing documentation and video profiling support required to meet the 2014 innovation marketplace submission requirements. This solution was submitted and accepted to compete in TechCon 2014 Innovation marketplace. The EA RILab will continue to offer technical support and mentorship to the innovator as they continue to develop their concept further.	Uganda		0	Error	Error
Technology	Hydroponic Fodder	This solution has been developed by a faculty-led team from the College of Veterinary Medicine, Animal Resources & Bio-security, Makerere University. RAN supported this innovation by providing documentation and video profiling support required to meet the 2014 innovation marketplace submission requirements. This solution was submitted and accepted to compete in TechCon 2014 Innovation marketplace. The EA RILab will continue to offer advisory support and stakeholder engagement as the team seeks to market and scale their innovation.	Uganda		0	Error	Error

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	K-Free	This concept is under development by a multidisciplinary team of undergraduate students from Makerere University. RAN supported this innovation by offering technical critique and providing documentation and video profiling support required to meet the 2014 innovation marketplace submission requirements. This solution was submitted and accepted to compete in TechCon 2014 Innovation marketplace. The EA RILab will continue to offer technical support and mentorship to the innovator as they continue to develop their concept further.	Uganda		0	Error	Error
Technology	Low-cost Phototherapy Unit	This technology has been developed by an innovator based in Addis Ababa university, Ethiopia. It is already adopted and in use in two public hospitals. RAN supported the video profiling of this innovation and will endeavour to support the innovator in his plans to produce improved units in larger numbers and forge necessary partnerships required to reach more beneficiaries. This solution was submitted and accepted to compete in TechCon 2014 innovation marketplace	Ethiopia		0	Error	Error
Technology	Manual Oxygen Pump	This concept is under development by an undergraduate student from Jimma University, Ethiopia. RAN supported this innovation by offering technical critique and providing documentation and video profiling support required to meet the 2014 innovation marketplace submission requirements. This solution was submitted and accepted to compete in TechCon 2014 Innovation marketplace. The HoA RILab will continue to offer technical support and mentorship to the innovator as they continue to develop their concept further.	Ethiopia		0	Error	Error
Approach	Ghana Deliberative Poll		Ghana	Stage 3: Early Adoption	212	Error	Error
Approach	Quantitative Surveys			Stage 3: Early Adoption	5652	Error	Error

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Community Sensitation				237	Error	Error

## APPENDIX II.B. Evaluations - FY15 Annual

Output Type	Name of Output	Description/Abstract	Country	Status
Evaluation	Push and Pull Evaluation	An expert evaluation was conducted for push and pull innovation project.	Uganda	Complete

## APPENDIX II.C. Data-Related Approaches, Tools, Best Practices - FY15 Annual

Output Type	Name of Output	Description/Abstract	Country	Status
Data-Related Tool	Rapid assessment of resilience factors in target intervention communities in Ghana	Focus Group Discussions Guide Key Informant Interview Guide	Ghana	Complete
Data-Related Tool	BRIEFING MATERIALS FOR DELIBERATIVE POLLING IN TAMALE	A set of briefing materials on:  1. Livelihood and Food Security 2. Water, Sanitation and Hygiene  to guide participants for a Deliberative Polling event in Tamale metropolis in Ghana	Ghana	Complete
Data-Related Tool	Questionnaire for pre-DP survey	A total of 64 questions (39 policy options) on 1. Livelihood and Food Security 2. Water, Sanitation and Hygiene for participants of the pre-DP survey	Ghana	Complete
Data-Related Tool	Questionnaire for post-DP survey	A total of 74 questions (39 policy options) on 1. Livelihood and Food Security 2. Water, Sanitation and Hygiene for participants of the post-Deliberative Polling survey	Ghana	Complete
Data-Related Approach	RIC4FIG Full proposal template	A document to guide applicants to write a full proposal in response to the RIC4FIG RFA	South Africa	Complete
Data-Related Tool	Questionnaire: Quantitative Survey Uganda	The Questionnaire is for the Quantitative Survey Uganda	Uganda	Complete

<b>Output Type</b>	<b>Name of Output</b>	<b>Description/Abstract</b>	<b>Country</b>	<b>Status</b>
Data-Related Tool	Questionnaire: Quantitative Survey Rwanda	Questionnaire Quantitative Survey Rwanda	Rwanda	Complete
Data-Related Tool	Questionnaire: Quantitative Survey Ethiopia	Questionnaire Quantitative Survey Ethiopia	Ethiopia	Complete
Data-Related Tool	Questionnaire: Quantitative Survey Somalia	Questionnaire Quantitative Survey Somalia	Somalia	Complete
Data-Related Tool	Questionnaire: Quantitative Survey South Africa	Questionnaire Quantitative Survey SouthAfrica	South Africa	Complete
Data-Related Tool	Questionnaire: Quantitative Survey Ghana	Questionnaire Quantitative Survey Ghana	Ghana	Complete
Data-Related Tool	Protocol: Quantitative Survey Uganda	Protocol: Quantitative Survey Uganda	Uganda	Complete
Data-Related Tool	Protocol: Quantitative Survey Rwanda	Protocol: Quantitative Survey Rwanda	Rwanda	Complete
Data-Related Tool	Protocol: Quantitative Survey Ethiopia	Protocol: Quantitative Survey Ethiopia	Ethiopia	Complete
Data-Related Tool	Protocol: Quantitative Survey Somalia	Protocol: Quantitative Survey Somalia	Somalia	Complete

Output Type	Name of Output	Description/Abstract	Country	Status
Data-Related Tool	Protocol: Quantitative Survey South Africa	Protocol: Quantitative Survey South Africa	South Africa	Complete
Data-Related Tool	Protocol: Quantitative Survey Ghana	Protocol: Quantitative Survey Ghana	Ghana	Complete

## APPENDIX II.D. Publications or Reports - FY15 Annual

Name	Description/Abstract	Country	Status
State of African Resilience: Understanding Dimensions of Vulnerability and Adaptation	During the last decade, sub-Saharan Africa enjoyed unprecedented rates of economic growth, with new technologies, better governance, and increasing investment flows creating new opportunities for innovation and economic and human development. Yet across the continent, vulnerable populations continue to contend with recurrent crises and stresses that leave them in a cycle of fragility and risk, struggling to recover and unable to expand economic opportunities or to improve well-being. This report examines resilience from the perspective of vulnerable communities across Africa and identifies the most promising entry points for innovations that can increase resilience capacity. Subjects for analysis include the challenges of climate variability and post-conflict recovery in Uganda, chronic internal displacement and conflict in Somalia, gender-based violence in DRC, the link between HIV/AIDS and poverty in South Africa, and rapid urbanization in Ghana.	Uganda	Complete
Qualitative study manuscript was submitted to a peer-reviewed international journal	The Qualitative study manuscript of Ethiopia was submitted to BMC Public Health journal. It was edited by English language professional before submission.	Ethiopia	Complete

Name	Description/Abstract	Country	Status
<p>Qualitative Assessment of Resilience to the Effects of Climate Variability in Uganda</p>	<p>Background: Uganda has continued to boast of an economic growth, development in infrastructure, better governance, and increasing investment flows creating new opportunities for innovation and economic and human development. However, this has not been the case for Northern Uganda as 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. This has been majorly attributed to the chronic conflict that ravaged the region. At the height of this 20-year armed conflict, which spanned from 1986 to 2006, nearly two million Ugandans were displaced. Estimates of those killed by the Lord’s Resistance Army during that span range in the tens of thousands, and a comparable number of children were abducted by the rebel group, forced to join the ranks, and commit atrocities on its behalf. Less than a decade removed from the conflict, the region is still trying to recover, with many of its districts focused on addressing the high levels of poverty and lingering psycho-social effects of the war. Methods:The Eastern Africa Resilience Innovation Lab (EA RILab) carried out a wide consultation involving communities that were affected by chronic conflict in the three districts of Lamwo, Pader and Lira in Northern Uganda. Three focus group discussions and two key informant interviews were conducted in two sub-counties in each district. Key informants were representatives of government agencies, development agencies operating in the study districts and political/religious/opinion leaders. Focus group discussions included eight participants in each sub-county. The communities were engaged in a quest to understand how best to prevent, mitigate, and overcome the recurrent issues related to chronic conflict. Specifically, the findings provide some of the answers to the cardinal question: how are communities in northern Uganda contending with the effects of post-conflict recovery? Results:The findings from the community consultations yielded a number of dimensions of resilience that elaborate on the underlying causes of vulnerability as well as the adaptive capacity of the community to mitigate effects of shocks and stresses that befall them. These included governance, human capital, social capital, environment, agriculture, health, wealth, infrastructure and psycho-social well being.</p>	<p>Uganda</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
Qualitative Assessment of Resilience to the Effects of Chronic conflict in Uganda	<p>SUMMARY: Uganda is vulnerable to climate variability including increased frequency and intensity of rainfall, droughts and floods. Three sub-regions, Albertine in the western part of the country and Teso and Mt. Elgon in the east, suffer from recurrent floods, with resulting destruction of crops and infrastructure, water contamination and disease outbreaks. Teso sub-region also suffers from drought, and Mt. Elgon also experiences recurrent landslides. Population pressures, lack of awareness of how to mitigate these shocks and stresses, poor infrastructure (roads, schools, health facilities, water and sanitation), lack of livelihood diversification and resistance to relief or development efforts perceived as inappropriate or favoring certain beneficiaries have prevented communities in these vulnerable areas from improving their incomes. Land shortage has led communities to reclaim wetlands and forest reserves, dramatically changing the ecosystem. OBJECTIVE: The general objective of the qualitative assessment was to understand the drivers of vulnerability and adaptive capacity of the target communities to climate variability. The specific objectives were to identify the effects of priority shocks and stresses that communities face and explore the factors that lead to persistent vulnerability and promote coping and adaptation in order to develop resilience dimensions and propose interventions to strengthen resilience. METHODS: The assessment was done in three sub-regions – Albertine in western Uganda and Teso and Mt. Elgon in eastern Uganda. Twenty-six key informants were interviewed. The key informants were representatives of nongovernmental organizations (NGOs), government agencies, development agencies operating in the study districts and political/religious/opinion leaders. Eighteen Focus Group Discussions (FGDs), one in each sub-county, were conducted in the local language. FGD participants were mobilized by sub-county focal persons (Community Development Officers) from the most affected parishes and included youths, women’s group representatives, local opinion leaders, local cultural leader, local political leaders and other community members affected by climate variability. RESULTS: The main shocks and stresses resulting from floods, drought and landslides in the three sub-regions are environmental degradation, poverty, food insecurity, damaged infrastructure and increased morbidity and mortality. Challenges for these communities that depend on subsistence agriculture are markets that favor middlemen, corruption, a high rate of school dropouts, disenfranchised youth, dilapidated road networks and a poor response to mobilization and sensitization campaigns aimed at conserving or improving the environment. Interventions to strengthen resilience to climate change to improve the key resilience dimensions of wealth and health in this context could include building entrepreneurship skills among youth and women, increasing agricultural yields, supporting market access and leverage, increasing access to schools, forming savings groups and sensitizing and educating communities to take action instead of lamenting the effects of climate-related shocks and stresses.</p>	Uganda	Complete
Uganda community consultation report on resilience to the effects of climate change	The report describes the process of formulation the resilience Dimensions from the communities , Uganda community consultations.	Uganda	Complete

Name	Description/Abstract	Country	Status
Uganda community consultation report on resilience to the effects of chronic conflict	The report describes the process of formulation the resilience Dimensions from the communities , Uganda community consultations.	Uganda	Complete
RAN Ethiopia Report community consultation report	The report describes the process of formulation the resilience Dimensions from the communities , Ethiopia community consultations.	Ethiopia	Complete
RAN Somalia Report community consultation report	The report describes the process of formulation the resilience Dimensions from the communities , Somalia community consultations.	Somalia	Complete

Name	Description/Abstract	Country	Status
<p>Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2015</p>	<p>(HOA RILAB)Understanding Resilience Dimensions and Adaptive Strategies to the Impacts of Recurrent Droughts in Borana Zone, Oromia Region, Ethiopia: A Qualitative Study with Grounded Theory Approach:1ZewdieBirhanu, 2Argaw Ambelu, 3Negalign Berhanu, 4Abraraw Tesfaye,5KyLuu, 5Deborah Elzie,6Roy William Mayega, 6William Bazeyo,5Apollo M. Nkwake, 7Kifle Woldemichael</p> <p>Address: Horn of Africa Resilience Innovation Lab; Jimma University, Ethiopia</p> <p>Corresponding Author: Zewdie Birhanu (zdkoricha@yahoo.com); Abstract</p> <p>Background: Ethiopian pastoralist communities, particularly Borana pastoralists, have been increasingly suffering from recurrent droughts which resulted in increased vulnerability as well as eroded resilience capacities and strategies. Therefore, this study was designed to understand vulnerability factors, adaptive and coping strategies against impacts of recurrent droughts and to develop a context specific and data driven resilience building framework.</p> <p>Methods: The main fieldwork was conducted in two drought affected pastoralist districts of Borana Zone, Oromia Region, Southern Ethiopia, from September to October 2013. Primary data were collected from relevant key informants and community members through twelve Focus Group Discussions and thirty six Key Informant Interviews. The data were transcribed verbatim and analyzed using ATLAS.ti.7.1.</p> <p>Results: Due to recurrent droughts, pastoralist communities' resilience capacities have been eroded leaving them without effective coping and adaptive strategies. In fact, there had been a lot of indigenous coping and adaptive strategies such as asset redistribution and restocking, migration and mobility, traditional water source development, small scale alternative livelihood and asset development. However, the communities had engaged in so many coping strategies which had negative consequences, and have gradually damaged their resilience capacities. The key vulnerability factors included poor livelihood and asset diversifications; limited access to and unresponsive infrastructures and social services for humans and livestock; lack of access to early warning and metrological information; ethnic conflicts and instability; as well as degraded social networks as related to livelihood pattern and livestock production. A context specific resilience building conceptual framework, which consist of eight resilience dimensions, has emerged from the data. These dimensions operate at different capacities, and they include environment; livestock; infrastructures and social services; wealth; community social network; governance, peace and security; psychosocial health; and human capital. The framework is a suitable and useful tool to understand and design context specific resilience programming to build resilience to recurrent droughts in the pastoralist communities.</p>	Ethiopia	Complete

Name	Description/Abstract	Country	Status
<p>Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2016</p>	<p>(EA RILAB)Adaptive and underlying factors that influence the community’s ability to manage the impacts of landslides and floods in the Mt Elgon region, Uganda: a qualitative study;Jimmy Osuret* 1, Lynn Atuyambe1 Roy William Mayega1 , Julius Ssentongo1, Nathan Tumuhameye1, Grace Bua1, Doreen Tuhebwe1 William Bazeyo1; 1. Makerere University College of Health Sciences, School of Public health;*Corresponding author e-mail: jimmyosuret@gmail.com:Introduction: the occurrence of landslides and floods in East Africa has increased over the past decades with enormous Public Health implications and massive alterations in the lives of those affected. In Uganda, the Elgon region is reported to have the highest rates of landslides and floods and its been reported to be vulnerable to the impacts of recurrent landslides and floods .This study aimed at understanding the underlying factors and adaptive capacities of the Elgon Region community to the landslides and floods. Methods: we conducted a secondary data analysis of a qualitative data set from Resilient Africa Network. Resilient Africa Network using qualitative methods collected data from three districts through focus group discussions and key informant interviews with development partners, policy, and community stakeholders. The focus of the study was resilience to recurrent landslides and floods as a result of climate variability in the Elgon region. Six focus group discussions and 8 key informant interviews were conducted. The data was analysed using content analysis. Results: the key underlying factors for vulnerability included; poverty from the destructive effect of disasters, lack of awareness on preventive measures, limited land and population pressure making people move to high risk areas, construction of houses with weak indigenous materials, cultural beliefs affecting people’s ability to cope. The effective adaptive capacities used to deal with landslides and floods included good farming methods, sensitization on mitigation measures and livelihood diversification. From a resilience perspective some of the strategies used to respond to these disasters were ineffective and did not build permanent protection from the impact of landslides and floods such as, reliance on government and other partners, using indigenous knowledge for early warning and relocation of displaced populations as people often returned back to high risk areas due to cultural attachments. Conclusion: response to landslides and floods in disaster prone communities of Uganda has been suboptimal mainly due to deep routed links to poverty, culture and lack of awareness. This calls for support in designing more focused interventions targeting these underlying factors as well as involvement of key stakeholders in order to build resilience in this community and other similarly affected areas.Key words: Adaptive Underlying factors Floods Landslides Uganda</p>	<p>Uganda</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
<p>Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2016</p>	<p>DSSAT and APSIM model simulations in evaluation of maize adaptation practices under different climate change scenarios: Patrick Musinguzi<sup>1</sup>, Majaliwa Mwanjalolo<sup>2</sup>, Moses Makooma Tenywa<sup>1</sup>, Josephine Nampijja<sup>2</sup>, Jacqueline Bonabana-Wabbi<sup>3</sup>, Fredrick Bagamba<sup>3</sup>, Carol Nandozi<sup>2</sup>, Kizza Charles Luswata<sup>1</sup>, Gummadi Sridhah<sup>4</sup> and KCP Rao<sup>4</sup> : <sup>1</sup>Department of Agricultural Production, Makerere University; <sup>2</sup>Department of Geography, Geo-informatics and Climatic Sciences, Makerere University; <sup>3</sup>Department of Agribusiness and Natural Resources Economics, Makerere University; <sup>4</sup>International Crops Research Institute for Semi-Arid Tropics (ICRISAT), Ethiopia; Correspondence e-mail: musipato@yahoo.com : Abstract: Introduction: High risks and vulnerability to climate change remain the biggest threat to crop production in Sub-Saharan Africa. The impact of climate change on maize production was evaluated in Albert Rift in Uganda using climate and crop simulation models. Methodology: The Decision Support System for Agro-technology Transfer Model (DSSAT) and Agricultural Productivity Simulator (APSIM) models were calibrated and validated using observed climate, soil and agronomic data in the region. Historical data (1980-2009) and future projected climate were used for one time period 2040-2069 (MID century). We used 5 Global Circulation Models (GCMs) and the impact of climate change on yield was assessed for Mid Century, at 8.5 Representative Concentration Pathway (RCP). Results and discussion: Results from the crop models demonstrated high yield variability in the region, mainly attributed to rainfall variability and model uncertainty in yield predictions. APSIM model simulated an increase in maize yield with all the 5 GCMS. The DSSAT model simulated yield decline with 2 GCMS (CCSM4 and GFDL-ESM2M). Other GCMS in both models showed that adaptation practices such as longe 9, N fertilizers, and changing planting date will result in double agricultural yield gain. Crop models demonstrated high uncertainty in predicting future crop productivity. Recommendation: Efforts are needed to improve model prediction capabilities to increase certainty in predicting climate change impacts on agricultural yield. Key words: Maize yield. Climate Change, Adaptation, Mid-Century, Crop Models</p>	<p>Uganda</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
<p>Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2017</p>	<p>(EA RILAB)Rapid Appraisal of Resilience to Floods and Landslides in Musanze, Nyabihu and Rubavu Districts, Northern and Western Provinces, Rwanda.Rugigana Etienne1; Ndagijimana Albert1;1: Eastern Africa Resilience Innovation Lab; University of Rwanda; College of Medicine and Health Sciences; School of Public Health;Corresponding Author: Rugigana Etienne (rugigana@nursph.org):Background: Rwanda is prone to a wide range of natural hazards. Areas of the northwestern part of the country experience recurrent floods and landslides, aggravated by steep slopes, soil instability, heavy rains and poor drainage. These heavy rains, coupled with a loss of ecosystems resulting from deforestation and poor agricultural practices, have resulted in destruction of crops, houses and other infrastructure as well as loss of life and livestock.Objective: The aim of the study was to gain deeper understanding of the drivers of vulnerability and adaptive capacity of Northern and Western Provinces of Rwanda to floods and landslides in order to develop resilience dimensions and metrics and identify possible innovations and interventions to strengthen their resilience. Methods: A rapid assessment was conducted in Musanze, Nyabihu and Rubavu Districts in Northern and Western Provinces of Rwanda. Qualitative data through focus group discussions and key informant interviews were conducted. Key informants included officers from the Ministry of Disaster Management and Refugee Affairs focal persons, district and sector in-charges of Social Affairs, sector agronomists and district representatives of the Rwanda Environmental Management Authority. Data analysis involved identifying initial codes, forming code families/categories to develop resilience dimensions. The Resilient Africa Network (RAN) resilience framework was used to identify the causes of floods and landslides, the underlying these causes, their primary and secondary effects and the capacities of the communities to adapt to the shocks of floods and landslides.Findings: Dimensions of resilience to floods and landslides identified in the Rwanda study included Wealth, Human Capital, Social Capital, Psychosocial/Wellbeing, Infrastructure, Natural Resources/Environment, Health/Health Services and Governance. Participants highlighted Wealth and Human Capital dimensions as the underlying causes of vulnerability to floods and landslides while Natural Resources/Environment and Infrastructure dimensions were identified as the immediate causes and effects of vulnerability. Dimensions Governance and Social Capital/Community Networks were identified as supporting factors while most communities consider the Health and Psychosocial/Wellbeing dimensions as an outcome of better resilience.Conclusion: Achieving maximum impact in Northern and Western Provinces of Rwanda requires an investment in strengthening community based governance, strengthening health systems and maximizing the psychosocial wellbeing of these communities. Therefore, there is need for innovations around anti-erosive plants, flood resistant crops and livelihood diversification ventures. Key words: Resilience dimensions; Floods/Landslides; Rwanda</p>	<p>Uganda</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
<p>Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2018</p>	<p>(RAN)THE STATE OF AFRICAN RESILIENCE: UNDERSTANDING DIMENSIONS OF VULNERABILITY AND ADAPTATION; A REPORT FROM RESILIENTAFRICA NETWORK (RAN):Authors: William Bazeyo, Ky Luu, Dorothy Okello, Nathan Tumuhameye, Lekan Ayo-Yusuf, Dennis Chirawurah, Kifle Woldemichael &amp; Roy Mayega. Address: ResilientAfrica Network, Makerere University School of Public Health. Corresponding Author: Roy William Mayega (rmayega@ranlab.org)Background: Despite unparalleled rates of economic growth in sub-Saharan Africa, vulnerable populations continue to struggle with recurrent shocks and stresses that leave many struggling to recover and unable to expand economic opportunities or improve well-being. East Africa grapples with the effects of recurrent floods, landslides, drought in some areas and chronic conflict in other areas. West Africa’s densely populated urban settlements face environmental health hazards and displacement due to overcrowding, poor sanitation and flooding while regions further north grapple with food insecurity and desertification. In Southern Africa, HIV/AIDS pandemic adds a layer of hardship on already poor and food insecure households. Horn of Africa is faced with recurrent drought and chronic displacement that have undermined the livelihoods of farmers and pastoralists, resulting in cyclical spikes in malnutrition and food insecurity. RAN currently working in 16 communities across Africa leverages the knowledge, scholarship and creativity of African universities to identify and develop human centred innovations to strengthen resilience in target communities. Objective: To gain a deeper understanding of the drivers of vulnerability and adaptive capacity of the target communities to priority shocks or stresses as a basis for informing development of resilience dimensions and metrics so as to develop innovations that will result in improved resilience of target communities.</p> <p>Methods: Using a resilience assessment framework derived from a model by Tulane University’s Disaster Resilience Leadership Academy, Resilience Innovation Labs (RILabs) conducted focus group discussions and key informant interviews with development partners, policy, and community stakeholders. The analysis model involved the understanding of the adaptive capacities, coping strategies, vulnerability factors, causes of vulnerability and effects. The RILabs identified and prioritized dimensions of resilience setting a baseline that assists in measuring and assessing the impact of ultimate interventions. This data feeds into the four steps of RAN’s resilience framework and also to inform the intervention strategy workshops which in the end generated the intervention pathways for resilience innovations.</p> <p>Results: Nine key general dimensions of resilience were identified across the RILabs; wealth/livelihood, health, infrastructure, psychosocial, natural resources, governance, social capital and community networks, Human-capital and security. Wealth/livelihood dimension was the most common dimension to emerge across the target communities and most often linked to other dimensions within RILabs’ resilience frameworks. Most community contexts identified governance as a supporting or enabling factor. RILab findings are presented in context-specific frameworks that show schematically how particular dimensions relate to and influence communities’ overall vulnerability and resilience.</p> <p>Key Words: Resilience, Adaptation, Dimensions, community consultatio</p>	<p>Uganda</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2019	(SA RILAB)Resilience factors associated with HIV/AIDS and poverty: The case of Beitbridge district,Zimbabwe: Sunungurai D Chingarande	South Africa	Complete
Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2020	(SA RILAB)Resilience in the context of HIV/AIDS and poverty in South Africa: A case of Ga-Dikgale rural community:J.C Makhubele,P.Chaminuka and J.Ngambi	South Africa	Complete

Name	Description/Abstract	Country	Status
<p>Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2021</p>	<p>A Survey to Determine the Most Effective Methods for Delivering Severe Weather Early Warnings to Fishermen on Lake Victoria: Richard Tushemereirwe<sup>1</sup>, Doreen Tuhebwe<sup>1</sup>, Nathan Tumuhameye<sup>1</sup>, Julius Ssentongo<sup>1</sup> Dr. Prof. Emerita Mary Ann Cooper<sup>2</sup>, Florence Mutonyi D'ujanga<sup>3</sup>: 1. Makerere University College of Health Sciences, School of Public Health 2. University of Illinois at Chicago 3. Makerere University College of Natural Sciences, Department of Physics; Introduction: Five thousand people are estimated to die on Lake Victoria every year by drowning mainly due to severe weather hazards. The northern part of Lake Victoria experience the most thunderstorm days in the world. The unpredictable and severe weather conditions; the resultant socio-economic dimensions are major contributors to poverty, disease, gender-based marginalization, and violence. Shoreline communities of Lake Victoria have the highest prevalence of extreme poverty, illiteracy and HIV/AIDS in the whole East African region. Objectives: Ultimately, our goal is to save lives of fishermen and others who use Lake Victoria for their living by delivering timely and effective Severe Weather Early Warnings (SWEW) via smart phones to those at risk. Before this can become a reality, it is essential to find out why previous systems have not been successful. Methods: we conducted a survey between April and May 2015. A questionnaire was administered to fishermen and others who work around the Lake to gather individual and community views. We inquired about the ideas for better design and implementation of SWEW, use of smartphones, ability and willingness to pay for such a service. Respondents were randomly sampled from those who participated in the earlier pilot of Mobile Weather Alerts supported by World Meteorological Organization. The questionnaire was digitized using Open Data Kit (ODK) software for convenience and timeliness. In addition to the survey (quantitative) Key Informant Interviews (KII) and Focused Group Discussions (FGD) were conducted by trained personnel. Results were reported to a central server and summarized by trained personnel. Results: One hundred seventeen respondents from 14 landing sites (communities) spread on the Islands of Bubeke, Bukasa and Lulamba were interviewed. The major route of death on Lake Victoria is drowning because 97% of respondents could recall more than two different cases of drowning involving more than three people each in the last one year. When asked specifically what caused drowning, 87% cited high winds and 30% cited poorly maintained boats. There has been several attempts to deliver severe weather alerts to fishermen in the past, the last one being the Mobile Weather Alerts. Eighty two percent of the respondents reported that they use mobile phones as the main tool of communication while only 15% have smartphones that can receive Early Warning Alerts through internet connectivity. Concerning the desire for commercial weather alerts, 75% of respondents welcomed it while 65% were willing to pay for such a services. Conclusions: The results show the lack of a sustainability model, as a major hindrance to an Early Warning System. An Early Warning System is feasible in this community, but must be accompanied with public education, design and use of a system with improved technical capacity, change in behaviors, and all this packaged in a sustainable model.</p>	<p>Uganda</p>	<p>Complete</p>

Name	Description/Abstract	Country	Status
Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2022	Doreen Tuhebwe (Makerere University School of Public Health) : Out puts from a disaster Resilience Leadership trained practitioner: A short term leadership training program resulted in tangible leadership actions in East Africa. EA RILab	Ghana	Complete
Abstract on the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2023	(WA RILAB)Niagia Santuah (School of Medicine and Health Sciences, University for Development Studies, Tamale): Changing the climate of resilience: How communities are coping with the activities of nomadic herdsman in Ghana and Burkina-Faso. WA RILab	Ghana	Complete

Name	Description/Abstract	Country	Status
<p>Pathways to Resilience III Conference Abstract</p>	<p>Background:</p> <p>Multiple people in Uganda are increasingly at risk for adverse climate events with Albertine, Teso and Mt.Elgon regions reporting a high risk. There are recurrent climatic events that have rendered the same damage to livelihoods and infrastructure despite predictability, millions of aid in response and attempts at mitigation which implies wide-scale lack of resilience and negative coping. In Bududa and Butalejja, landslides and floods almost occur annually with partial resettlement from high risk zones but some returned and others settled higher risk areas. Studies have showed an asymmetry between community and government expectations rendering policies unsuccessful and warnings unheeded</p> <p>Objective:</p> <p>To determine whether community opinions on key policy options can change when better informed about policy with a hypothesis that plugging key information gaps, community opinions on climate-centered development policies can change substantially</p> <p>Methodology:</p> <p>Using a Deliberative Polling® approach, desk review/consultations to identify policy options, pros and cons was done. A random representative sample was selected and baseline opinion polls conducted in Bududa and Butalejja. The same sample was invited to a facilitated deliberation and thereafter, a post deliberation opinion poll conducted. Qualitative documentation of community concerns was done and the same questionnaire was used at baseline and in the post survey. Policy options was rated on ordinal attitude scales from 0= completely unacceptable to 10=completely acceptable and statistical differences in means tested using the paired test.</p> <p>Results:</p> <p>Fifteen of 36 policy options changed with deliberation and changes were in the direction of increased support for policy options. Some of the hindrances to policy support included land ownership in the resettled areas, fear of land being gazetted as forests and family planning myths.</p> <p>Conclusion:</p> <p>Community opinions about policy can change with sufficient participatory dialogue and policy process can be greatly enhanced by employing ‘human-centered design</p>	<p>Uganda</p>	<p>Ongoing</p>

## APPENDIX II.E. Hubs - FY15 Annual

Name	Description	Country	Status
----- No Entries -----			

## APPENDIX II.F. Knowledge Sharing/Collaborative Platforms - FY15 Annual

Name	Description	Country	Status
1st RIC4ACE Webinar held on August 21, 2014	This is a recording of the Webinar where RAN answered questions the applicants had about the RIC4ACE open challenge	Uganda	Complete
Video of Ethio Manual Oxygen Pump	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Ethiopia	Complete
Video of Dduka Landslide Early Warning system	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Uganda	Complete
Video of The Asthma Grid Medical Digital Device	RAN supported the student to prepare this video for showcasing at 2014 Techcon	South Africa	Complete
Video of Hydroponic Fodder solution	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Uganda	Complete
Video of Grain Amaranth	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Uganda	Complete
Video of K Free Mobile App	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Uganda	Complete
Video of Earthworms Domestication	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Uganda	Complete
Video of Phototherapy Units	RAN supported the student to prepare this video for showcasing at 2014 Techcon	Ethiopia	Complete
Module 1: Introduction to Need Finding	This MKITS introduces the process of gathering deep human insights that can be used to explain a problem and used to design a solution	United States	Complete

Name	Description	Country	Status
Module 2: Establishing a personal connection	This MKITS explains the first principle of needfinding that helps break barriers between interviewer and interviewee	United States	Complete
Module 3: Assume a beginner's mindset	This MKITS explains the second principle of needfinding, assuming a beginner's mindset, through being open-minded.	United States	Complete
Module 4: Ask "why?" multiple times	This MKITS explains the third principle of needfinding and aims to understand the root cause of the problem	United States	Complete
Module 5: Find underlying phenomena	This MKITS explains the fourth principle of needfinding based mainly on two tools: observation and interviewing.	United States	Complete

## APPENDIX II.G. Major Events - FY15 Annual

Name	Description	Country	Status
Deliberative Polling Event	Deliberators assembled at the University for development studies to discuss 39 policy options and issues that affect their everyday life	Ghana	Complete
RAN Kampala Launch of state of resilience report	RAN presented the report findings from qualitative community consultations conducted in target communities to stakeholders in Makerere University main hall, Kampala, Uganda. The event attracted 468 participants. Details <a href="http://www.ranlab.org">www.ranlab.org</a>	Uganda	Complete
RAN Nairobi Launch of state of resilience report	RAN presented the report findings from qualitative community consultations conducted in target communities to stakeholders in Nairobi, Kenya. The event attracted 111 participants. Details <a href="http://www.ranlab.org">www.ranlab.org</a>	Kenya	Complete

## APPENDIX II.H. Workshops/Trainings/Capacity Building - FY15 Annual

Name	Description	Country	Status
Fundamentals of Needfinding Workshop	2 day workshop focused on building the mindsets and technical skills needs to do needfinding, a critical piece of the human-centered design methodology. Innovators and some RAN staff took part.	Uganda	Complete
Managing Innovation Workshop	2 day training to RAN staff on how to strategically manage the innovation labs, address challenges, and support innovator teams using the framework of impact potential	Uganda	Complete
Training Workshop to Synergize Dimensions of Community Consultations	Training Workshop to Synergize Dimensions of Community Consultations.The Outcome of this was to Bring Faculty members up to speed with dimensions of the Community Consultations and to further come up with tools for Quantitative Study.	Ghana	Complete
Training of Moderators for Deliberative Polling Event	Training Workshop for Moderators to Conduct DP in Tamale Ghana.  This was on 7-8 Jan 2015.	Ghana	Complete
Intervention Strategy Workshop	Conducted ISW.  Participants go through ISW process to come up with three intervention Parthways	Ghana	Complete
Collaborative Resilience Innovation Design (CRID)	The Collaborative Resilience Innovation Design (CRID) workshop was conducted at Tamale, Ghana March 26-27, 2015 in collaboration with RAN Secretariat to generate platform project to address the resilience challenges that were identified in the WA RILab intervention strategy workshop in March 23-25, 2015	Ghana	Complete
Collaborative Resilience Innovation Design (CRID) workshop	The Collaborative Resilience Innovation Design (CRID) workshop was conducted at Addis Ababa, Ethiopia from February 5-6, 2015 in collaboration with RAN Secretariat to generate platform project to address the reilience challenged that were identified in the HoA RILab intervention strategy workshop in FY 14.	Ethiopia	Complete
Ignite innovator series (Creating an enabling ecosystem for resilience innovations)	The Ignite Innovator Series is an interactive session hosted by the Lab to bring together a community of resilience role models, innovators, agriculturalists, environmental experts, students, faculty, social scientists, policy makers, engineers, behavioral scientists, public health specialists and anthropologists to foster development of creative approaches and practices to address communities' most pressing challenges.	Uganda	Ongoing

Name	Description	Country	Status
Peer to peer Outreach	Peer education is when children, young people, or adults educate others of similar age, background, culture, or social status, including those from disadvantaged social groups. The approach can take different forms, but in many cases entails providing academic support, enhancing communication and interpersonal skills, or counseling. For this particular activity, the outreach team took this approach by inviting already existing local innovators to inspire their fellow students and faculty staff to join or support them in their efforts to sustainably transform their societies. The approach is based on the premise that people, especially young people, are more likely to listen to and respond to information when it comes from their peers .	Uganda	Ongoing
Joint Workshop for M&E Officers and Innovation Officers on Impact Potential Management.	The Joint M& E Officers and Innovations Officers workshop on Impact potential Management was attended by the Rilab innovation Officer together with the M & E Officer from the 3rd – 8th August 2015 at the RAN office in Kampala. The six days workshop was really an eye opener for all Rilab staff who Attended. During the six days the M&E Team spent the first two days discussing the M&E Plan and also best ways to do reporting in order not to miss out vital information during reporting. The rest of the days was used for the joint session during which the M&E Officers together with the innovation Officers were made to understand that in order to be successful as a Network there was the need to complement each other’s effort at the Rilab level and not to segregate roles.	Uganda	Complete
Needs finding	Needs finding and Ethnography methodology for innovators	South Africa	Complete
Induction workshop for innovators	Induction for SA RILab innovators	South Africa	Complete
Manuscript writing workshop	A two day manuscript workshop was held to get participants to draft manuscripts from the qualitative data collected last year. The other aim was to get feedback from each other on the focus and content of the paper	South Africa	Ongoing
USAID rules and regulations (Co-operative Agreements and Grants ) Training	The lab administrator attended a USAID Training organized in Accra for agencies that are working with the USAID. The aim of this training was to help staff to understand the rules and regulations of USAID Agencies, as the theme for the training was USAID rules and regulations (Co- operative Agreements and Grants)The training took place from 5th -8th July 2015 at the coconut grove reagency hotel in Accra.	Ghana	Complete
Research Assistants training for Upcoming Quantitative study.	The training for research assistants towards the quantitative study also took place in this quarter from 29th – 30th September 2015. This brought together 21 participants in all out of which 5 were females. 3 Faculty members who would serve as leaders in each study site, the Quantitative Study Consultant, 9 Research Assistants, 3 Supervisors and also 5 WARILab staff. The aim of this training was to discuss the quantitative study tools, the methodology for the quantitative study and finally the strategy to adopt in collecting the data.	Ghana	Complete

Name	Description	Country	Status
Quantitative Survey Training for Data Collectors	The team in Uganda did run a 3-day training of research assistants in preparation for the RAN quantitative survey in Uganda. The training attracted over 60 participants and was conducted at the RAN office premises in Kololo between the 16th-18th September 2015.	Uganda	Complete
Quantitative workshop workshop for EA & HoA RILabs	Quantitative survey planning workshop was conducted from 24-26 October 2014	Uganda	Complete
Quantitative workshop workshop for SA RILab	Quantitative survey planning workshop was conducted from 5-7 December 2014	South Africa	Complete

## APPENDIX II.I. Other Outputs - FY15 Annual

Name	Description	Country	Status
Elgon Region, Eastern Uganda, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Elgon Region. The process takes into account the content latent analysis principles. The data set comprises of data collected from three districts of Bududa, Butaleja and Manafwa during community consultations. The data set is structured in form of the meaning unit (Verbatim statements from the raw data), condensed meaning unit, Interpretation of the underlying meaning, sub dimension and the Dimensions.	Uganda	Ongoing
Albertine Region, Western Uganda, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Elgon Region. The process takes into account the content latent analysis principles. The data set comprises of data collected from three districts of Hoima, Kasese and Peder during community consultations. The data set is structured in form of the meaning unit (Verbatim statements from the raw data), condensed meaning unit, Interpretation of the underlying meaning, sub dimension and the Dimensions	Uganda	Ongoing
Borana Zone, Community Consultations	The data set outlines the data that was collected in the qualitative rapid assessment conducted in two districts of Borana Zone, Arero and Dhahas, in August 2013. A grounded theory approach was used to guide the development of a theory and for understanding resilience dimensions. The data were collected from different population groups (adult men and women, community/informal leaders and Key informants at various levels) through FGDs and KIIs. The aim of the study was to undertake rapid qualitative assessment to gain a deeper understanding of the variability of resilience factors to recurrent droughts in the Borana Zone as a basis for informing development of resilience dimensions and metrics. In each study district, two pastoralist communities were selected, making a total of four study communities. Additionally, 36 key informant interviews were conducted with representatives of institutions or organizations involved in resilience programming from community to national/central levels	Ethiopia	Ongoing
Beitbridge District, Community consultations	The data set outlines the data that was collected in the qualitative rapid assessment conducted Rural Community in Beitbridge District, Matabeleland South Province in Zimbabwe. The study involved consulting with the community as partners in order to have a full understanding of the vulnerability factors, risk factors and adaptive strategies used in sustaining livelihoods within the context of high burden of HIV and AIDS. Data was collected using a focus group discussions Key Informant Interviews as well as observation of livelihood activities, natural resources and infrastructure in Beitbridge district. A total of 6 focus group discussions (3 with females and 3 with males) were held with 22 men and 40 women. Fourteen key informant interviews with community level and district level stakeholders were conducted	Zimbabwe	Ongoing

Name	Description	Country	Status
Chikwakwa district, Community Consultations	The data set outlines the data collected to inform the Rapid Appraisal of Resilience Factors to Drought and Floods among HIV and AIDS-Affected Households of Chikwawa District, Southern Malawi. The qualitative assessments (Focus Group Discussions and Key Informant Interviews) were conducted to explore causes, effects, vulnerability factors, and adaptive strategies with regard to the priority resilience theme related to livelihoods and living with HIV/AIDS. This data set covers 18 interviews seven of which are Focus Group Discussions (FGDs). The FGDs comprised of HIV/AIDS affected households male-headed, HIV/AIDS affected households female male-headed, Households with other vulnerable groups e.g. orphans; female-headed disabled and with other community members. The Key Informant Interviews (KIIs) comprised of Government and District Council Staff, representatives of Non-Governmental Organizations that work in the communities and Traditional leaders.	Malawi	Ongoing
Limpopo, Community Consultations	The data set outlines the data collected to determine resilience factors in Dikgale rural community of Limpopo province, South Africa. This data set covers data from 8 Focus Group Discussions (FGDs) and nine Key Informant Interviews conducted in the Dikgale community. The FGDs comprised of women, elderly people, youth and people living with HIV. Key Informant interviews were conducted with community based organizations, members of academia, police officers, and members of a drop-in centre, religious leaders and the youth organizations.	South Africa	Ongoing
Teso Region, Eastern Uganda, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Teso region Eastern Uganda. To further understand the variability of underlying drivers of vulnerability and adaptation (resilience factors) in the target communities, EA RILab conducted qualitative data collection using Focus Group Discussions and Key Informant Interviews in Teso region to identify causes, effects, vulnerability factors, vulnerable populations and adaptive strategies to recurrent floods, and disease epidemics in the region. The data set comprises of data collected from three districts of Soroti, Amuria and Katakwi during community consultations. The data set comprises of 6 FGDs and 9 Key informant interviews. The FGDs comprised of representatives of the youth, representatives from women group, local opinion leaders, local cultural leaders, local political leader and community members affected by floods in the region. Key Informant Interviews comprised of District Technical Officers, NGO/CBO representatives working in the domain of floods and disease outbreaks as key disasters and Political/Opinion/Religious leader at district level who is knowledgeable about key disasters.	Uganda	Ongoing

Name	Description	Country	Status
Northern Uganda, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Northern Uganda. To further understand the variability of underlying drivers of vulnerability and adaptation (resilience factors) in the target communities, EA RILab conducted qualitative data collection using Focus Group Discussions and Key Informant Interviews in Northern Uganda to identify causes, effects, vulnerability factors, vulnerable populations and adaptive strategies to slow pace of recovery after a 20 years conflict in the region. The data set comprises of data collected from three districts of Lira, Pader and Lamwo during community consultations. The data set comprises of 6 FGDs and 9 Key informant interviews. The FGDs comprised of representatives of the youth, representatives from women group, local opinion leaders, local cultural leaders, local political leader and community members affected by the conflict in the region. Key Informant Interviews comprised of District Technical Officers, NGO/CBO representatives working in the domain peace and recovery programs and Political/Opinion/Religious leader at district level who is knowledgeable about key issues that surrounded the 20 years conflict and livelihood options in the region.	Uganda	Ongoing
RIC4FIG RFA document	A request for Applications that highlighted key challenges on food insecurity and income generation in southern Africa was put out to the public to solicit for innovative solutions to address the challenges	South Africa	Complete
RIC4FIG Concept note Application Template	A document to guide applicants to write a concept note in response to the RIC4FIG RFA	South Africa	Complete
RIC4FIG judging and selection toolkit	A set of guidelines for the judges at the different phases until the final selection of applicants of the RIC4FIG RFA	South Africa	Complete
Collaborative Resilience Innovation Design toolkit	A set of tools to collaboratively craft innovation projects with experts	United States	Complete
RAN mentorship Guide	A guide to the mentor/mentee at RAN in innovation development	Uganda	Complete
RAN Guide to developing MKITs (MKITs tip sheet)	This was to guide RAN staff and the innovators on techniques to develop good quality MKITs	Uganda	Complete
NeedFinding Guidelines for Innovators	This document guides innovators to finding out the user's needs and developing an innovation that is user-centric	Uganda	Complete

Name	Description	Country	Status
The draft community engagement strategy	The document highlights that approach innovators should take in order to engage the community in their innovation activities	Uganda	Ongoing
Tamale Metropolitan District, Ghana, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Ghana. The process takes into account the content latent analysis principles. The data set comprises of data collected from Tamale metropolitan District during community consultations.	Ghana	Ongoing
Navrongo province, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Ghana. The process takes into account the content latent analysis principles. The data set comprises of data collected from Navrongo province during community consultations.	Ghana	Ongoing
Ashaiman, Accra Ghana, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Ghana. The process takes into account the content latent analysis principles. The data set comprises of data collected from Ashaiman province during community consultations.	Ghana	Ongoing
Flood and Landslide prone regions, Northern and Western Rwanda, Community Consultations	The data set outlines the data that was collected in the qualitative rapid assessment conducted in northern and western Rwanda.	Rwanda	Ongoing
Refugee populations, Community Consultations	The data set outlines the data that was collected in the qualitative rapid assessment conducted in refugee populations in Rwanda.	Rwanda	Ongoing
North and South Kivu Provinces, DRC, Community Consultations	The data set outlines the data that was collected in the qualitative assessment conducted in North and South Kivu provinces in the Democratic Republic of Congo.	Democratic Republic of the Congo	Ongoing
Pyramid communities, Gauteng, SA, Community Consultations	The data set describes the process of formulation the resilience Dimensions from Pyramid communities in Gauteng, South Africa community consultations.	South Africa	Ongoing

## APPENDIX III. Partners - FY15 Annual

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
United Nations Development Programme (UNDP)	High	Other development actor	Uganda	RAN signed an MOU with UNDP in Uganda with a focus on implementing a Post-graduate Professional Certificate Course in Disaster & Climate Resilience. The MOU also included the award of 4 research grants to students or individuals whose work focuses on resilience to climate change and effects of chronic conflict in Uganda. This funding to RAN was awarded as part of implementing a larger Project entitled 'Integrated Climate and Disaster Risk Management in Uganda. The Team at UNDP had another meeting with the RAN Team on 17th September 2015 to renew the partnership to train district officials in climate resilience and also to explore ways of how the alumni the students of the previous course can participate in the Resilience, Research and Innovation conference in Djibouti	Non-USAID federal government support
Massachusetts Institute of Technology Comprehensive Initiative on Technology Evaluation (MIT-CITE)	High	Higher Education Institution/ Research Organization	United States	A partnership between MIT CITE and Makerere University School of Public Health Resilient Africa Network (RAN) to facilitate field research for MIT CITE's Post-Harvest Food Storage Project in Uganda in January through Spring 2015. The research activities will be conducted in two districts: Agago district located in Northern Uganda and Jinja district, located in eastern Uganda. Students and staff from MIT CITE will team up with students and faculty at Makerere University to implement this project.	Leverage (other than cost-share)
Bridgespan	High	NGO	United States	RAN is collaborating with Bridgespan on a Capacity Building Grant to help our innovators build in scalability right from the early stages of development of their ideas, as well as build their capacity to engage with the communities to test and refine prototypes of their products.	Leverage (other than cost-share)

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Mozilla Uganda	High	NGO	Uganda	<p>Mozilla Uganda is a non-profit community promoting an open and free web, free tools, fun activities inspiring individuals to be web maker. Mozilla inspires and gives an opportunity to people to innovate and create the web through activities intended towards development of add-ons that simplify their daily web activities, localization to enable everyone access the internet in the language they understand best and developing components of the browser and to enhance the internet experience. Mozilla Uganda is a branch of the Mozilla Foundation located in California, USA. The Mozilla Foundation is aimed promoting a free and open web , free software, websites, content like videos, downloads, creating and promoting free apps, add-ons, software like Popcorn for making videos, browsers like Firefox, Aurora, education such as P2PUniversity, WebGL, etc. Mozilla has localized content into local communities and languages they host several fun events such as the Hack Jam, Bar-Camp, Community meet-ups, and so many more. RAN is in final stages to sign an MOU with Mozilla Uganda and to intensify on some planned innovation activities like Hackathons, Design meet-ups and also to ride on the Mozilla Student clubs to introduce RAN student club activities as well as expand in multidisciplinary departments since Mozilla clubs are active in Technology disciplines</p>	
RAND Corporation	Low	Multi-lateral institution	South Africa	<p>The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. It is a nonprofit institution that helps improve policy and decision making through research and analysis. Following the meeting with RAND corporation held at RAN we hope to establish a partnership to work on resilience-related issues by leveraging on the expertise from both parties. RAND's research and analysis addresses issues that impact people around the world including security, health, education, sustainability, growth, and development. This research is carried out on behalf of public, private grantors and clients.</p>	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Global Obesity Prevention Center (GOPC) at Johns Hopkins University School of Public Health	High	Multi-lateral institution	United States	GOPC is the first Center to focus on systems and computational approaches to the global obesity epidemic, nutrition, and physical activity. They have an extensive network of international partners and has extensive knowledge and experience in developing computational models, tools and integrative platforms for decision makers, engineering, epidemiology, health policy, marketing statistics, geospatial sciences and international health. GOPC is a core partner with the systems and complexity MERL team on the Monitoring, Evaluation, Research and Learning Innovations Program	
Global Knowledge Initiative (GKI)	Medium	Other development actor	United States	Global Knowledge Initiative helps to build global knowledge partnerships between individuals and institutions of higher education and research. GKI is guided by the mission to help build, optimize and measure the effectiveness of global networks to tackle challenges relevant to innovation, science and technology. GKI is well positioned to aid systems and complexity MERL team in developing a tool set that can equip USAID decision makers to fully content with and analyze systems such that they can make well-informed, forward-looking decisions to potimize project investments and achievement	
LINC	Medium	Multi-lateral institution	United States	LINC is a US-based small business that assists local and international organizations to design effectively, increase institutional capacity, forge lasting partnerships, and measure impact. They have developed ground breaking tools to map organizational networks, measure social capital and employ systems-based approaches. LINC will participate on the MERL project as a core partner they will lead the intergration of social organisational network analysis into the project activities and toolkit development	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Agh-Khan Foundation	Low	Multi-lateral institution	Kenya	<p>The Agha-Khan Foundation includes private, international, non-denominational development organisations working to improve the welfare and prospects of people in the developing world; Asia and Africa. Its projects encompass determinants of the quality of life, including the natural and built environments in both urban and rural areas, food security, health, education, access to financial services and economic opportunity, cultural areas of traditional music, architecture and art. Matt, a Member of the Global Team that sits in Nairobi visited RAN and we discussed potential areas of collaboration which include connecting RAN to partners that can develop a platform to host our MKITs contact considering the Learning Management Systems (LMS) they are using in Agha-Khan foundation. We also discussed potential linkage to the Foundation in East Africa. RAN could also benefit from the funds-entrepreneurial funding through Agakhan businesses since it will largely be a private Partner</p>	
University of Coimbra - Physics department , Portugal	Medium	Higher Education Institution/ Research Organization	Portugal	<p>RAN together with the Innovators of the Matibabu Innovation (Non invasive Malaria Diagnosis Kit) had a meeting with members of the physics department led by Prof Carlos Correias at the University of Coimbra in Portugal in septmber 2015 during the Design visit in Portugal. The purpose of the meeting was to discuss the magnetic component of the project. It was noted that the magnetic component is very key in the project so as to concentrate hemozoin parasites in one place during malaria tests. This will increase the chances of detecting malaria among patients with low concentration of malaria parasites and hence increase the efficiency and accuracy of the innovation</p>	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Exatronic Manufacturing Company, Aveiro - Portugal	Medium	Commercial Enterprise	Portugal	RAN and Matibabu Innovators had a meeting with the CEO Exatronic Company Eng Nuno Gomes in Aveiro - Portugal to discuss the electronic components of the device and the requirements for the invasion. Exatronic is a manufacturing industry for assembling and manufacturing electronic devices. The company started in 1994. The Team visited the manufacturing industry to ascertain the capacity of the industry to manufacture the final devices once the final product is ready for deployment. Specifically, this company will be responsible for ;Manufacturing and engineering of the electronics required for the prototypes and final products. They will be responsible for certification of the developed products and any value addition to the product as deemed necessary by the design studio	
IMM at University of Lisbon - Portugal	Low	Higher Education Institution/ Research Organization	Portugal	RAN and Matibabue innovators had a meeting with Prof Thomas, a Professor of Hemozoin ,Prof Maria Mota, a professor of Molecular Biology and a malaria expert at the University of Lisbon. They advised that the magnetic component should be well studied to ascertain the number of parasites that can be detected in comparison to the invasive diagnosis techniques like microscopy.	
Pedro Gomes design studio - Portugal	High	Other development actor	Portugal	RAN and Matibabu had a meeting with the designer and creative Director of the design studio in Aveiro - Portugal. They discussed design issues for the product, branding and communication. All these are to be incorporated in the design development process. This company coordinated the preparatory activities for the trip to portugal by the Matibabu Innovators and RAN team. The role of this company in this partnership will be to coordinate all the partners identified in Portugal, to handle the design issues in consultation with Matibabu and other partners -	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Uganda Communications Commission (UCC)	Medium	Non-US government	Uganda	EA RILab and the EDAD (Electronic Dollar A Day) Innovations team had a meeting with Uganda Communications Commission on 3rd September to follow up on the earlier applications that EDAD had submitted to be issued with the Unstructured Supplementary Service Data (USSD) code. UCC is a Telecom Regulator in Uganda, UCC is in charge of the administration of the short code numbering resource so as to promote growth and development of the communications sector in Uganda	
Medecins Sans Frontiers (MSF) in support of the Ebola Tent	Medium	Multi-lateral institution	Uganda	RAN had meeting with Médecins Sans Frontières (MSF)/Doctors Without Borders to discuss key considerations in the design of the Ebola Tent on 26th August 2015. RAN had also engaged MSF during the World Health Organization's (WHO) Consultation Meeting in Geneva, Switzerland, in March 2015 where MSF promised support in developing ETUs. MSF is an independent international humanitarian organisation that delivers emergency medical aid to people affected by armed conflict, epidemics, natural and man-made disasters or exclusion from health care in more than 60 countries.	
Kampabits Digital Design School	Medium	Higher Education Institution/ Research Organization	Uganda	RAN is hosting 4 student interns from kampabits for three months from August 17th – November 17th 2015. Kampabits is a Digital design school established in Kampala Uganda and involves the empowerment of vulnerable youth with ICT/multimedia, entrepreneurship, sexual reproductive health and life skills in order to position them to benefit from opportunities offered by the growing ICT market in Uganda and East Africa, while enabling them to mitigate immediate social challenges surrounding them and preparing them to be independent and self reliant citizens.	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Bank of Uganda (BOU)	Medium	Commercial Enterprise	Uganda	EDAD innovation team under EA RILab engaged The Bank of Uganda (BoU) as a pertinent stakeholder and as a Regulator of financial institutions. The purpose of the meeting was to get a clearance letter to enable the innovators to open box collection accounts in any regulated commercial bank, and to obtain a supportive perception of EDAD as a mobile money intermediation service rather than placing it under the agency banking category. BoU is the Central Bank of the Republic of Uganda and owned by the Government of Uganda but is not a government Department. Bank of Uganda conducts all its activities in close association with the Ministry of Finance, Planning and Economic Development(MoFPED). BoU is responsible for monetary policy and maintaining price stability.	
Innovation Consortium	Medium	Commercial Enterprise	Uganda	RAN is collaborating with the innovation consortium group of engineers with practical experience in human and technology-based networks. The Innovation consortium provides support to RAN innovation projects that have engineering challenges to address. The group is hosted at RAN EARILab once a month and each month RAN identifies innovation projects to co-solve their engineering challenges with the innovation consortium group.	Non-USAID federal government support
College of William and Mary AidData Center for Development Policy	High	Higher Education Institution/ Research Organization	United States	AidData is one of the eight HESN development Labs that makes information about international development assistance more accessible, so that anyone can see how much is being spent, where, and on what. Using detailed information on project activities, AidData pinpoints their specific locations so that users can analyze gaps in service and identify duplication of efforts with interactive maps. AidData has been building capacity of Makerere University Students to Geo code and analyse Geo spatial data. They engaged 12 students during the academic semester from Feb - April 2015 to work on a Maternal Health Aid project. This will contribute to the students' semester academic credit units. The also engaged Makerere students in geocoding training and a hackathon in July 2015.	Leverage (other than cost-share)
United Nations Population Fund (UNFPA)	Medium	Multi-lateral institution	Uganda	UNFPA is a UN agency that expands the possibilities for women and young people to lead healthy and productive lives.	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Radio 91.1 FM	Medium	Commercial Enterprise	Uganda	The push and pull project project was offered a one hour radio program in Iganga district on the regional radio station to air their innovation to the general public. This offer was given by the office of the Resident District Commissioner Iganga district for the purpose of sensitizing the public on the dangers of striga weed and maize stalk borer while providing the public with a suitable solution through the push and pull approach.	Cost-share.
Makerere University	High	Higher Education Institution/ Research Organization	Uganda	This is one of the HESN Lab hosted at Makerere university to coordinate RAN. It also hosts the EA RILab of RAN.	Cost-share.
Tulane University	High	Higher Education Institution/ Research Organization	United States	This is a core partner with the responsibility of providing support to address RAN's objective one.	
Center for Strategic & International Studies (CSIS)	High	Higher Education Institution/ Research Organization	United States	This is a core partner with the responsibility of providing support to address RAN's objective one.	
Stanford University	High	Higher Education Institution/ Research Organization	United States	This is a core partner with the responsibility of providing support to address RAN's objective two and three.	

<b>Partner Name</b>	<b>Level of Engagement</b>	<b>Partner Type</b>	<b>Partner Location Country</b>	<b>Partner Description</b>	<b>Support Type</b>
Jimma University	High	Higher Education Institution/ Research Organization	Ethiopia	This is the host of RAN's HoA RILab	Cost-share.
University of Pretoria	High	Higher Education Institution/ Research Organization	South Africa	This is the host of RAN's SA RILab	
University for Development Studies (UDS)	High	Higher Education Institution/ Research Organization	Ghana	This is the host of RAN's WA RILab	
Benadir University	High	Higher Education Institution/ Research Organization	Somalia	This is a network plus University under RAN's HoA RILab	
Africa University	High	Higher Education Institution/ Research Organization	Zimbabwe	This is a network plus University under RAN's SA RILab	

<b>Partner Name</b>	<b>Level of Engagement</b>	<b>Partner Type</b>	<b>Partner Location Country</b>	<b>Partner Description</b>	<b>Support Type</b>
Lilongwe University of Agriculture and Natural Resources	High	Higher Education Institution/ Research Organization	Malawi	This is a network plus University under RAN's SA RILab	
Gulu University	High	Higher Education Institution/ Research Organization	Uganda	This is a network plus University under RAN's EA RILab	
National University of Rwanda	High	Higher Education Institution/ Research Organization	Rwanda	This is a network plus University under RAN's EA RILab	
University of Kinshasa	High	Higher Education Institution/ Research Organization	Democratic Republic of the Congo	This is a network plus University under RAN's EA RILab	
University of Dakar	Low	Higher Education Institution/ Research Organization	Senegal	This is a network plus University under RAN's WA RILab which is yet to be engaged	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
University of Bamako	Low	Higher Education Institution/ Research Organization	Mali	This is a network plus University under RAN's EA RILab which is yet to be engaged	
University of Nairobi	Medium	Higher Education Institution/ Research Organization	Kenya	This is a network plus University under RAN's HoA RILab which is yet to be engaged	
Muhimbili University of Health and Allied Sciences	Medium	Higher Education Institution/ Research Organization	Tanzania	This is a network plus University under RAN's EA RILab which has just been added.	
University of Limpopo	High	Higher Education Institution/ Research Organization	South Africa	This is a network plus University under RAN's SA RILab	
Addis Ababa University	High	Higher Education Institution/ Research Organization	Ethiopia	This is a network plus University under RAN's HoA RILab	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Bule Hora University	High	Higher Education Institution/ Research Organization	Ethiopia	This is a network plus University under RAN's HoA RILab	
Response 2 Resilience and the Global Disaster Preparedness Center	High	Other development actor	Ghana	Provided funding to WA RILab to carry out disaster preparedness and resilience small research study	Leverage (other than cost-share)
Response 2 Resilience and the Global Disaster Preparedness Center	High	Other development actor	Ghana	Provided funding to WA RILab for Ebola study in Ghana and Burkina Faso	Leverage (other than cost-share)
Grameen Foundation	Low	Other development actor	Uganda	<p>Grameen Foundation Partners invited to co-facilitate a practical session in the Needfinding Workshop. They discussed key aspects on how their organizations are using Needfinding to advance their work and why it is valuable in the product design and development process.</p> <p>Grameen Partners did a follow-up workshop with the EA RILab RIAP Teams on Developing Interview Guides and getting Prototype feedback during Needfinding on 6th March.</p> <p>They are available to offer continuous support to the Innovators on Needfinding</p>	Non-USAID federal government support

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Thoughtworks Kampala	Low	Other development actor	Uganda	<p>Business Analyst from Thoughtworks Kampala was invited to co-facilitate a practical session in the Needfinding Workshop. They discussed key aspects on how their organizations are using Needfinding to advance their work and why it is valuable in the product design and development process.</p> <p>They are available to offer continuous support to the Innovators on Needfinding</p>	Non-USAID federal government support

## APPENDIX IV. Classes & Disciplines - FY15 Annual

<b>Partner Name</b>	<b>Level of Engagement</b>	<b>Partner Type</b>	<b>Status</b>
----- No Entries -----			

## APPENDIX V. Fellowships & Practica - FY15 Annual

Name	Short Description	Host Organization	Total # Students	Status
USAID Research Fellowship	The fellow assisted the innovation officer with the preparation for the needs finding workshop and community engagement	SARILab	1	Complete
Host MIT Students	Hosted 2 MIT students at Makerere	RAN	2	Complete
2015 Third Internship Program (Graduate student in Mass Communication from Uganda Christian University (UCU))	The fellow is a student with a Bachelors Degree in Mass communication attached to the Communication and Engagement department at RAN.	EA RILab	1	Ongoing
2015 Second Internship program (Student interns from Kampabits Digital Design School)	EA RILab hosted 4 student interns from Kampabits Digital Design School, Kampala Uganda for three months from August 17 – November 17 2015 to improve their skills in video editing of short videos, web designing, web development, graphics and motion designs.	EA RILab	4	Ongoing

Name	Short Description	Host Organization	Total # Students	Status
2015 First EA Student Internship program (several universities)	EA RILab hosted 30 multidisciplinary student interns from various Universities in Uganda from June to August to apply and improve their skills in information technology, communication, video editing, web designing, web development and monitoring and evaluation.	EA RILab	30	Complete
AidData summer Fellows	EA RILab hosted AidData Summer fellows who trained the RAN interns on the basics of AidData geocoding and GIS in a half-day training session in July 2015. They also trained Makerere Students with more Geocoding experience in advanced techniques and analyses	EA RILab	8	Complete
Field experiences through EA RILab activities	Students were engaged in outreach activities, design thinking training, research, workshops and events, Grants contests, and video/photo competitions	EA RILab	2340	Complete
Field experiences through SA RILab activities	Students were engaged in research, workshops and events, and innovation contest	SA RILab	90	Complete
Field experiences through HoA RILab activities	Students were engaged in research, and workshops and events.	HoA RILab	25	Complete
Field experiences through WA RILab activities	Students were engaged in outreach activities, workshops and events, and research	WA RILab	148	Complete

## APPENDIX VI. Communications - FY15 Annual

Communication Title	Description	Location
Innovators asked to Strengthen Resilience Building Strategies	Innovators asked to Strengthen Resilience Building Strategies during the ISW	Ghana
Experts Develop Pathways to Focus Efforts and Resources.	Experts Develop Pathways to Focus Efforts and Resources during CRID Workshop	Ghana
West Africa Conducts Deliberative Polling (DP) Exercise “Community consultations to inform interventions”	The West Africa Resilience Innovation lab (WA RILab) hosted by the University for Development Studies (UDS) in Tamale, Ghana in collaboration with Makerere University/ResilientAfrica Network (RAN), conducted a Deliberative Polling® (DP) in the Tamale Metropolitan Area from January 10-11, 2015. The Tamale Poll was the first of its kind in West Africa and the second in Africa after Uganda’s Mt. Elgon region DP held in July 2014.	Ghana
Needfinding: A critical pillar of Innovation “As an innovator; it is not about you but about the end user. By prototyping, you learn through doing. Everything can be prototyped.	<p>RAN in collaboration with Stanford University-ChangeLabs, one of RAN’s core partners, conducted a two days engaging and exciting knowledge-building workshop focused on the human-centered approach to design resilience innovations.</p> <p>The objective of the “NeedFinding” workshop was to introduce participants to the philosophy, techniques and methodologies of incorporating a human-centered approach throughout the innovation process.</p>	Uganda
Makerere University wins award to develop a solution to the challenges faced in fighting Ebola in sub-Saharan Africa	<p>The United States Agency for International Development (USAID) launched Fighting Ebola: A Grand Challenge for Development and in just two months, innovators from around the world submitted over 1,500 ideas focused on helping frontline health care workers to provide better, more timely care and to contain this devastating virus.</p> <p>RAN’s proposed solution is a redesigned Ebola treatment tent that aims to substantially change the working environment for health care workers through its ergonomic design which allows for a significant increase in airflow and decrease in ambient temperatures in hot climatic conditions.</p>	Uganda

Communication Title	Description	Location
#Ignite Innovator Series “Creating an Enabling Ecosystem for Resilience Innovations”	The RAN’s Ignite Innovator Series, is an interactive session hosted by the Eastern Africa Resilience Innovation Lab (EA RILab) bringing together a community of resilience people from all walks of life. The evening of February 13th 2015 brought together over 100 such experts working to foster development of creative approaches and practices to address communities’ most pressing challenges	Uganda
MUSPH ResilientAfrica Network (RAN) in Gulu University. "Reaching out to the communities in Gulu"	The RAN Team visited one of RAN Eastern Africa Resilience Innovation Lab's network plus partner, Gulu University. The aim of the visit was to among others brainstorm and develop a theory of change (hypothesis) in consultation with targeted communities for one of the projects, RootIO. The guiding question was; "What resilience question must RootIO answer?"- information dissemination using a Radio Station in a bucket.	Uganda
Dissemination of results from the Deliberative Polling® exercise Innovating for and with the communities in the Mt. Elgon Region, Uganda	<p>It is not enough to engage the communities, consult them on various issues, write reports/books, individuals attain degrees and stop at that. RAN reached out to the Mt. Elgon region communities (Butalejja and Bududa districts) to establish the real life challenges in these communities to inform development of solutions through innovation.</p> <p>Here is an opportunity to hear back from the community- Deliberative Polling® (DP) results dissemination.</p>	Uganda
The Collaborative Resilience Innovation Design (CRID) A powerful alternative approach to developing system level innovations aligned to RILab Intervention Pathways	The Collaborative Resilience Innovation Design (CRID) approach brings together teams of experts who are facilitated to develop system level projects. Implementation of these projects will then involve competitive bidding to identify qualified ‘Resilience Fellows’ and host organizations to lead the testing of the concepts. Here, stakeholders and experts use the Design Thinking approach to design Meta Pathway Projects (MPPs) and Platform Projects (PPs).This approach was first implemented in the Horn of Africa Resilience Innovation Lab in Jimma University, Ethiopia.	Uganda
Managing Innovation Workshop	RAN partners convened a discussion to plan on the best strategies and approaches to ensure operational, successful and impactful RILabs, with respect to incubating and supporting innovator teams.	Uganda

Communication Title	Description	Location
Student Engagement at RAN	<p>RAN hosted Massachusetts Institute of Technology (MIT) - IDIN students from the D-Lab who were in Uganda for 1 month pilot in Soroti - Eastern part of Uganda.</p> <p>Additionally, MIT – CITE (Comprehensive Initiative on Technology Evaluation) students jointly worked with our team of students from Makerere University to do a study on post-harvest handling techniques.</p>	Uganda
MakSPH ResilientAfrica Network (RAN) accelerating Girl Child participation in Science and Technology “Educate the Girl Child and Build the Nation”	<p>2015, a year of great partnership as we work towards positively impacting African communities using innovative solutions. One of the key partnerships within RAN is with the College of Engineering, Design, Art and Technology (CEDAT) to host Uganda National Technovation Challenge. The Technovation Challenge is a 12 Week Program in which teams of girls and young ladies are tasked to develop mobile apps to solve development challenges within their communities. For this year, the teams shall also be introduced to the Resilience Innovation Challenge 4 Advance Climate (RIC4ACE) challenges as a source of additional challenges they could consider.</p> <p>RAN’s participation in the Uganda National Technovation Challenge is one of the flagship activities under the RAN4Girls Initiative.</p>	Uganda

Communication Title	Description	Location
<p>The ResilientAfrica Network's (RAN) first "State of African Resilience" Report launched in Washington D.C "Understanding Dimensions of Vulnerability and Adaptation"</p>	<p>The bright afternoon of Wednesday March 11, 2015 in Washington D.C saw David Ferguson, Director, Center for Development Innovation, U.S Global Development Lab, United States Agency for International Development (USAID) officially launch RAN's first ever "State of African Resilience" Report. The report identifies major dimensions of resilience from the perspective of more than a dozen vulnerable communities across sub-Saharan Africa. The highlights in this report range from; How communities in Uganda are contending with the effects of climate variability and post-conflict recovery? How communities in South Africa are addressing the link between HIV/AIDS and poverty? to How urban populations in Ghana are addressing the economic and public health challenges associated with rapid urbanization among others. The event attracted over 150 participants including dignitaries from the Embassy of the Republic of Uganda in Washington D.C, USAID top management, representatives from the Management Sciences for Health, Makerere University top management, Tulane University's Disaster Resilience Leadership Academy management, Center for Strategic and International Studies (CSIS), multi-disciplinary students, faculty, the business community operating in the USA, private practitioners, RAN's Southern Africa and West Africa Resilience Innovation Lab among others.</p>	<p>United States</p>
<p>Strengthening resilience building strategies in West Africa, Ghana</p>	<p>The Intervention Strategy Workshop (ISW) held March 23-25, 2015 in the West Africa Resilience Innovation Lab hosted by University for Development Studies (UDS), Tamale Ghana attracted 23 participants drawn from the central region of Ghana, government, private sector, the academia and the ResilientAfrica Network (RAN) West Africa Resilience Innovation Lab (WA RILab) participating communities including Senegal. Discussions at the ISW focused on the thematic area of the RILab, rapid urbanization as a resilience challenge. This ISW was aimed at reaching a common understanding in relation to the intervention pathways appropriate for addressing issues related to the RILab's resilience challenge.</p> <p>The possible intervention Pathways identified from the ISW were further developed during the Collaborative Resilience Innovation Design (CRID) workshop held March 26, 2015.</p>	<p>Ghana</p>

Communication Title	Description	Location
Strengthening partnership with the International Health Sciences University (IHSU) in Kampala, Uganda	A Team from ResilientAfrica Network (RAN) visited the International Health Sciences University (IHSU) in Kampala, Uganda on March 11, 2015 as one of the outreach activities in the region aimed at building the capacity of students and faculty to innovate. The RAN team facilitated a 3 hour seminar that attracted approximately 40 Public Health students and faculty from this University. The seminar discussions were guided by the theme "Ideas in a Box".	Uganda
RAN MKITs Challenge:Video and Photo Contest	RAN called for educational and inspiring Videos, artworks, graphics and photographs through the MKITs challenge. Thematically, submissions could address any themes of solutions that address community challenges which may include innovative approaches or technological innovations addressing effects of climate change and climate variability manifesting as floods, landslides, drought disease epidemics including HIV and AIDS, food insecurity, environmental protection, livelihood diversification, financial inclusion, entrepreneurial activities, sustainable development, rapid urbanization and the associated effects water and sanitation among others and many more areas . Submissions could portray or illustrate innovation, economic potential, cultural wealth, and use of indigenous knowledge in a creative and non-stereotypical way.	Uganda
Partnership for Health & Sustainable Development	<p>Makerere University School of Public Health ResilientAfrica Network (RAN) joined the other development partners including; the American University of Beirut Lebanon and Chatham University USA in a Steering Committee and Partners meeting for the joint establishment of a Global Master's program in Health and Sustainable Development.</p> <p>The meeting hosted by Earth University, Costa Rica February 23rd -27th, 2015, focused on establishing joint efforts to globally achieve Health and Sustainable Development. Makerere University School of Public Health, ResilientAfrica Network (RAN) as a partner will make available the learning communities that integrate environmental awareness and community outreach in the education syllabus as well as an entrepreneurial focus that combines production, processing and commercialization of agricultural products. Additionally, RAN will avail Global fellows with mentors and offer the fellows Design Thinking (DT) training during their field project design.</p>	Costa Rica

Communication Title	Description	Location
Student Innovation Contest	An online contest to engage South African students to be part of the ecosystem of innovation that SARILab is creating within the University of Pretoria and South Africa as a whole.	South Africa
A real Garage Experience in an Innovation Lab: The second Innovation Garage at RAN	During the Innovation Garage held July 31 2015, the team hosted RootIO – Community Radio and brainstormed around designing a low cost Radio Tower for the RootIO team bringing down the cost from \$3000 to approximately \$500 and increasing the length of the tower from 12 to 25 centimeters. The entrance to the Upper Lab Innovation Space was labelled “The Garage is in Progress, watch your steps!”	Uganda
RAN hosts 2nd GIS Hackathon in collaboration with AidData-HESN Lab	On Thursday 30th July 2015, Makerere University School of Public Health – ResilientAfrica Network (RAN) in collaboration with AidData Center for Development Policy (AidData – USA); Partner Development Lab under the Higher Education Solutions Network (HESN) hosted the Second Annual Geographical Information Systems (GIS) Hackathon at the Makerere University Innovation Lab. The hackers were engaged from 7:30 am to 6:30 pm EAT.	Uganda
EA RILab Engages the Innovation Advisory Board Members	“Each one of us comes in with a value add to the Innovation Pipeline for the benefit of the vulnerable communities” Prof. William Bazeyo, Dean Makerere University School of Public Health and RAN Chief of Party/Lab Director. On 22nd July 2015, the Eastern Africa Resilience Innovation Lab (EA RILab) inducted the Innovation Advisory Board Members. Members constitute dignitaries from Government, the Academia and Private Sector who will play a key role in steering the RI Lab’s activities with a focus to push forth Innovation for the benefit of the vulnerable.	Uganda
HESN Labs Working together for Community Driven Innovation	During the afternoon of Tuesday July 21, 2015, the Makerere University School of Public Health ResilientAfrica Network (RAN) Team hosted Kofi Taha, Associate Director and International Development Innovation Network (IDIN) Innovation Center Coordinator at the Massachusetts Institute of Technology (MIT)-IDIN. He highlighted the importance of involving the community right from innovation project inception and walk the talk with the community for not only sustainability purposes but also ability to gather community knowledge to the same.	Uganda

Communication Title	Description	Location
Ms Ann Mei Chang, ED U.S. Global Development Lab visits RAN	Ms. Ann Mei Chang the Executive Director of the U.S. Global Development Lab at United States Agency for International Development (USAID) visited the ResilientAfrica Network (RAN) during the mid-morning of Friday July 17, 2015. Ms. Leslie Reed, US Mission Director and Ms. Erin Wroblewski, USAID/Uganda Program Officer accompanied Mei to RAN. Prof. Barnabas Nawangwe, Makerere University Deputy Vice Chancellor in-Charge of Finance and Administration and RAN Patron joined Prof. William Bazeyo, Dean Makerere University School of Public Health and RAN Chief of Party/Lab Director, RAN multidisciplinary Innovator teams and the RAN Team to interact, appreciate and discuss innovation in relation to strengthening resilience.	Uganda
Discussing the first annual State of African Resilience Report in Nairobi, Kenya	During the engaging discussion of the first annual “State of African Resilience” Report that brought together 111 participants from all over the world, H.E. Ambassador (Eng.) Mahboub Maalim, Executive Secretary of the Intergovernmental Authority on Development (IGAD) commended the work being done by Makerere University School of Public Health ResilientAfrica Network (RAN) with support from the United States Agency for International Development (USAID). He noted; “I love the ResilientAfrica Network, in this report, they have provided data in 16 African communities, around various pressing issues that can help inform policy makers, donors, and implementers”.	Uganda
UNFPA ASRH Design Challenge and Mobile Hackathon	On 21st July 2015, young people from around the world, along with innovators, developers, partners and United Nations Population Fund (UNFPA) experts gathered for a three-day hackathon. The Hack For Youth was a collaborative event where participants developed mobile app solutions to promote young people’s access to sexual and reproductive health and rights. Sponsored by UNFPA’s Innovation Fund, the hackathon was a response to a growing commitment to leverage information and communication technologies to empower young people, complimenting UNFPA’s ongoing work and empowering young leaders so they can be pivotal agents for the health and wealth of society. The hackathon is an outgrowth of the large number of proposals submitted to the Innovation Fund in the area of using ICT to promote the health of young people, and specifically designing mobile apps to engage with young people in order to improve access to SRH information and referral to services.	Uganda

Communication Title	Description	Location
MIT-CITE Engages Mak- students	<p>MIT- CITE Team Engages Makerere University -COBAMS Students through RAN in Evaluating Post-harvest Storage Technologies in a Supply chain contract elicitation Exercise This summer of 2015, The Comprehensive Initiative for Technology Evaluation (CITE) at MIT, a USAID supported initiative, engaged 40 students from Makerere University College of Business and Management Sciences (CoBAMs) to run a one-day seminar and exercise. Students from this college were selected because of their coursework and background experience in Business and Entrepreneurship. The goal was to explore the last-mile and artisanal Ugandan crop storage sector with the students. CITE conveyed learnings about risk sharing in supply chains, manufacturing before receiving orders, and having excess inventory after a sales period. The exercises attempted to have Makerere students reflect on these learnings in the context of last-mile and artisanal firms, and convey their own individual approaches to risk sharing agreements in supply chains, as noted by Mark Brennan on the Research Team from MIT- CITE Through the summer they will process the data from the exercise, and use the results to help inform change in the private post-harvest storage sector.</p>	Uganda
Joint Innovation, Monitoring and Evaluation Workshop at the RAN Secretariat	<p>The Joint Innovation Management, Monitoring and Evaluation workshop took place August 3-8, 2015 at the Makerere University School of Public Health ResilientAfrica Network (RAN) Innovation Lab in collaboration with one of RAN's core partners ChangeLabs, Stanford University in the USA. The workshop's primary purpose was to review the RAN Impact Potential Methodology with a focus on its implications for innovation management and RAN/Higher Education Solutions Network (HESN) indicators to which it contributes.</p>	Uganda
The 2nd Intervention Strategy Workshop (ISW)	<p>One of the key objectives of RAN is to identify and support the development of innovative solutions that will strengthen the resilience of communities affected by natural and man-made stresses. RAN is working through four resilience Innovation Labs (RI Labs) established across Africa to meet its objectives. The Eastern Africa RI Lab is focusing on addressing challenges of chronic conflict, climate change and their effects on livelihoods. Given the complexity of issues surrounding chronic conflict, RAN planned and held an Intervention Strategy Workshop (ISW) guided by the objective; to determine where best RAN can intervene and identify innovative solutions that have the potential to strengthen the resilience of communities affected by chronic conflict in East African region.</p>	Uganda

Communication Title	Description	Location
1st Stakeholders Forum for Bringing Back Traditional Grains to the Dinner Table Project	<p>On August 18, 2015, one of the Innovation projects under incubation in the Makerere University School of Public Health ResilientAfrica Network (RAN) Eastern Africa Resilience Innovation Lab held their first Stakeholders Forum at the Golf Course Hotel, Kampala Uganda. This meeting attracted 40 participants of all walks including farmers, nutritionists, faculty, students, chefs, veterinary doctors, medical doctors, the media, and business entrepreneurs among others. Participants deliberated upon the different ways in which we can all be part of the noble cause of bringing back traditional grains to the dinner table as a way to increase resilience of community though crops that are only more drought tolerant also very nutritious and well suited to agro ecological conditions of Uganda.</p>	Uganda
RAN Participates at the 41st GHACOF in Dar es Salaam, Tanzania	<p>Makerere University School of Public Health - ResilientAfrica Network (RAN) participated in the 41st Greater Horn of Africa Regional Climate Outlook Forum (GHACOF 41) held in Dar es Salaam, Tanzania, at the Kunduchi Beach Hotel. RAN was represented by Dr. Julius Ssentongo, the Program Coordinator Eastern Africa resilience Innovation Lab and Jude Mukundane one of the lead innovators under the RootIO community radio project. The team delivered a succinct joint presentation entitled “Connecting grassroots to early warning information through innovations: A case of RootIO”.</p>	Uganda
ISW/CRID Workshop on Internal Displacement in Somalia	<p>RAN’s Horn of Africa RI Lab is currently focusing on addressing challenges of internal displacement as a result of the conflict in Somalia. The ISW/CRID Workshop held August 24-28, 2015 in Crowne Plaza, Nairobi Kenya focused to design high impact innovation pathways to address the challenge of Internal Displacement in Somalia. Given the complexity of issues surrounding this challenge, RAN planned to hold this Intervention Strategy Workshop (ISW) followed by a Collaborative Resilience Innovation Design (CRID) Workshop so as to objectively determine where best to intervene and identify innovative solutions that have the potential to strengthen the resilience of communities affected by internal displacement in Somalia.</p>	Uganda

Communication Title	Description	Location
Enhancing knowledge sharing with the RAN Student Interns	The Social-Media training session was conducted using an interactive kind of approach to practically demonstrate the vast functionalities of the different social media platforms. The intention of this was for the attendees to showcase their skills in the different social media platforms to their fellow counterparts. Stepping out of the crowd as volunteers for the Twitter and Facebook run-throughs were Byomuhangi Owen, Okello Emmanuel respectively and Lorna Maria leading the blogging session.	Uganda
RAN Innovation Garage getting bigger!	The 3rd RAN Innovation Monthly Garage was successfully held on Friday August 28, 2015 starting 3:00pm – 6:00pm at Makerere University School of Public Health - ResilientAfrica Network (RAN) Innovation space. The interactive, knowledge creation and sharing opportunity attracted 33 participants. The garage hosted innovators of the RAPID Solar Agricultural produce Dryer under incubation in the Eastern Africa Resilience Innovation Lab.	Uganda
Meet the Innovator - Dr. Eng. Bainomugisha	It is enriching being part of the trickle-down effect. Collaboration is key in the success of any business, initiative and institution among others. Makerere University School of Public Health - ResilientAfrica Network (RAN) is proud to bring you Dr. Engineer Bainomugisha, an Associate Professor of Computer Science at the School of Computing & IT – Makerere University, the recipient of the a one-year Spring 2015 Development Impact Lab (DIL) Innovate Grant award to support the project entitled “Participatory Road Infrastructure Monitoring”. Opportunities like the DIL Innovate Grant are extended to the wider Higher Education Solutions Network (HESN) development labs which the ResilientAfrica Network (RAN) is part of.	Uganda

Communication Title	Description	Location
<p>Leveraging capabilities of collaborative research team from MIT, D-Lab &amp; RAN to conduct a study on sustained adoption of Clean Cooking products in Soroti – Uganda”</p>	<p>Massachusetts Institute of Technology (MIT), Department of Mechanical Engineering and D-Lab collaborated with RAN to execute a study on; “Sustained adoption of clean cooking products through a market-based intervention in Soroti, Uganda” from 10th August 2015 – 4th Sept 2015. The premise of the study was to investigate motives and behavior change required to achieve sustained adoption of improved biomass cooking products (cookstoves and briquette fuels) and their impact on indoor air quality. In sub-Saharan Africa, over 80%, or nearly 728 million people, depend on solid fuels such as charcoal and firewood for cooking, more than any other region in the world . Most of these people cook on open fires, which burn poorly and lead to low fuel efficiency and high pollution emissions. Improved biomass cookstoves have long been identified as a promising option to reduce the negative impacts of cooking with traditional open fires. They offer benefits like decreased household air pollution (HAP) and lower fuel costs. However, it has been found that in many cases households that uptake improved cookstoves (ICS) reduce the usage and revert back to traditional methods in the long run.</p>	<p>Uganda</p>
<p>RAN Innovation Garage hosts the Malaria Control System Project</p>	<p>The 4th Monthly Innovation Garage successfully took place on Friday, September 25, 2015 at the RAN Lab office premises on Plot 30, Upper Kololo Terrace, Kampala Uganda. The Innovation Garage in partnership with the Innovation Consortium aids bringing innovation to life. The Garage, guided by the theme; “Catalyzing Engineering solutions” drives deep thinking by attendees through interactive brainstorm sessions and experimentation to pursue the best prototypes and solutions. This monthly event (held every last Friday of the Month) is open to multi-disciplinary persons, students, faculty and the communities at large because at RAN, we realize and appreciate that each discipline contributes significantly to the quality of the Innovation. The Garage is a great platform to support home grown engineering solutions and through these monthly sessions RAN supports local solutions directed towards transcending nations. “We would like to see technologies developed in Africa by Africans being launched on the global market” shared Belinda Nabudde, Innovation Consortium Team Member. The Garage brings together students, faculty, researchers, scholars, innovators and the community who come together to join the radical group working on inventing game changing solutions.</p>	<p>Uganda</p>

Communication Title	Description	Location
<p>Business Modeling and Planning Workshop for the EARILab Grantees</p>	<p>In trying to increase the impact potential of the incubated innovations, the Eastern Africa Resilience Innovation Lab (EA RILab) sought to equip innovators by gear-shifting their conscience from only technically appreciating these innovative projects to envisioning them as sustainable businesses. This aspect guided the workshop as the main objective. The Lab therefore with the support of the RAN Secretariat organized and delivered a one day business modeling workshop where Innovators used the Business Model Canvas and systematically worked on segments that included Value Proposition, identifying customers, key partners needed, resources, distribution channels, costs and revenues streams with the goal of creating a competitive advantage of their innovations as well as looking into the future and strategizing on the sustainability of the projects. The workshop brought together ten innovator teams (The Solar Pump, Bringing Back Traditional Grains to the Dinner Table, Village Egg Bank, Mushrooming Livelihoods, Better Farming Better Me, Matibabu, RAPID Solar Dryer, Maize Thresher, EDAD and the Push and Pull Technology) with at least three members per team. The facilitators included; Brian Ndyaguma, Ronald Kayiwa, Deborah Naatujuna and Harriet Adong. Participants engaged in active brainstorming, intra and inter-team interactions, and open criticism among other mindset changing presentations. At the end of the day, innovator teams were capable of delineating their ideas to potential funders and also have strategies directed towards sustaining the projects beyond the “push-start” funding.</p>	<p>Uganda</p>

Communication Title	Description	Location
Quantitative Survey by the EA RI Lab, Uganda	<p>It was yet another competitive opportunity receiving over 1,300 applications for the position of Research Assistants to carry out Makerere University School of Public Health Resilient Africa Network's (RAN) Quantitative Survey in Uganda. Out of these applicants, 60 were shortlisted for interviews at the RAN Office premises from which 40 were selected. The survey activities have started off with an intensive 3-days training of the Research Assistants and Pretesting of Study tools to be conducted in Kawempe Division, Kampala Uganda. Thereafter the research teams will travel to the different survey areas for data collection in the Districts of Bududa (10 research assistants), Amuria (10 research assistants), Lamwo (06 research assistants) and Hoima (14 research assistants) to benchmark the status of resilience in these communities. Also, in attendance for this 3-days training are the RAN community Focal Persons. Training facilitators include; Dr. Simon Kasasa (Consultant), Mr. Nathan Tumuhameye, Dr. Julius Ssentongo, Dr. Roy William Mayega, Christine Muhumuza and Ms. Grace Bua. It is during this training that participants shared an overview of the project and study protocol; objectives of the project, survey organization &amp; sampling of participants; the Role of Research Assistants, Supervisors &amp; qualities of a good interviewer/Research Assistant; Review of English questionnaires (Content); use of the Local languages and teams also reviewed the questionnaires in Luo, Ateso, Lumasaba &amp; Runyoro (small groups; Role play in English &amp; Local language) taking care of the ethical issues. Feedback from the Pre-test exercise will inform review of the tools and planned protocol adjustments in preparation for the actual data collection exercise.</p>	Uganda
EDAD and the EDAD Mobile Money Saving Box	<p>A team composed of two researchers from EDAD visited Kasese District for a duration of one week - with the aim of initiating an awareness drive to sensitize the local communities of Kasese District towards the application of the EDAD Mobile Money Saving Box for saving money using the telephone. This was part of the mini piloting phase of the EDAD project in the District. The main target of the awareness drive activity was the unbanked and financially excluded members of the community resident in Kasese District. The awareness message aired on both TV and Radio, was designed to bring out the fact that much as many people have already been saving by using traditional boxes and other money hiding places to keep their savings, they can now apply mobile telephone technology to ease their activities and eliminate the risks attached to using the traditional means, let alone the inability of such means to earn them interest on their savings. This is one of the projects under incubation in the RAN Eastern Africa Resilience Innovation Lab.</p>	Uganda

Communication Title	Description	Location
Launch of the first Community Radio-RootIO in Oyam District, Northern Uganda (Luganda).	ROOTIO launched their first radio station dubbed 'Aber Community radio 'airing on 103.8 FM on Saturday, May 23rd 2015 in Aber sub-county, Oyam district. The event attracted 365 potential beneficiaries of the community radio	Uganda
Makerere University 65th Graduation ceremony		Uganda
Makerere University Bulletin	Makerere University School of Public Health ResilientAfrica Network (RAN) contributed content to this Bulletin and supported the design and printing of the same. Projects with in the School of Public Health including RAN were highlighted in this Bulletin for further knowledge sharing and publicity. The Bulletin was shared during the 65th Graduation with faculty, students and the community participating in the graduation ceremony.	Uganda
Communications attachments	These are communication attachments for Q3	Uganda
Communications attachments	These are communication attachments for Q4	Uganda
Improved Push and Pull Dissemination Exercise	This Dissemination exercise was conducted in Iganga district where the Push and pull project had the opportunity to demonstrate their approach to the community members. There were 230 potential endusers in attendance.	Uganda
"RAN SA RILab Grants call RIC4FIG is now open"	Advert publicizing the Resilience Innovation Call for Food Security and Improved Income Generation (RIC4FIG) call for applications in the Mail and Guardian newspaper(print and online)	South Africa
"RAN SA RILab Grants call RIC4FIG is now open"	Advert publicizing the Resilience Innovation Call for Food Security and Improved Income Generation (RIC4FIG) call for applications in the Sunday Times Newspaper(print)	South Africa
Interview with HoA RILab Director	An audio-visual interview with HoA RILab Director has been was conducted.	Ethiopia

Communication Title	Description	Location
<p>Celebration of the International Day for Disaster Reduction-October 13, 2014</p>	<p>Makerere University joined the Office of the Prime Minister in Uganda, United Nations Development Program (UNDP) and Makerere University School of Public Health ResilientAfrica Network (RAN) to celebrate the International Day for Disaster Reduction-October 13, 2014.</p> <p>This celebration was crowned with the Innovation and Knowledge Management Exhibition held in Makerere University Main Hall on Tuesday October 14, 2014. The event was aimed at showcasing and sharing knowledge and the application of digital technology in promoting resilience, disaster and climate risk management in the country. The exhibition attracted over 250 participants of which about 15 exhibitors doing work in relation to Innovation and Knowledge Management shared their ideas, concepts and prototypes with the public. The exhibitors included; The United Nations Children’s Fund (UNICEF), Makerere University School of Public Health ResilientAfrica Network (RAN), Makerere University College of Computing and Information Technology, Department of Geography in Makerere University, Root IO, International Institute for Rural Reconstruction (IIRR), Food and Agricultural Organization (FAO), Global Eye, Agency for Technical Cooperation and Development (ACTED), NECOC, Geo Gecko and Strengthen Climate Information and Early Warning Systems- United Nations Development Program (UNDP) among others.</p>	<p>Uganda</p>

Communication Title	Description	Location
<p>Makerere University (Mak) Team wins at TechCon 2014</p>	<p>Great Potential for Innovations in Makerere University!</p> <p>“Leading innovations in the Higher Education Solutions Network (HESN)-Connecting to accelerate Global Development”</p> <p>This year, the second annual technical convening TechCon2014, held on November 8-10 2014 in the Bay Area – California, showcased more than 40 innovations emerging from USAID’s Higher Education Solutions Network (HESN) Development Labs and partners. TechCon2014 was proudly hosted by the University of California Berkeley in the United States of America. TechCon2014 offered a variety of both group and one on one discussions, networking opportunities, conference sessions, and talks by leading voices in development. Additionally, TechCon2014 uniquely convened researchers, students, entrepreneurs, innovators, field practitioners and private/public sector professionals focused on creative approaches to solution ideation, testing, and scaling for international development.</p>	<p>United States</p>
<p>Call for Research Fellowship Applications in Disaster &amp; Climate Resilience</p>	<p>Makerere University School of Public Health (MakSPH) with funding support from the United Nations Development Programme (UNDP), in collaboration with the ResilientAfrica Network (RAN) and the Strengthening Leadership in Disaster Resilience Program (SLDRP) Uganda, invited research fellowship applications from young researchers and/ or faculty with in Makerere University to conduct research in one of the following thematic areas:</p> <ol style="list-style-type: none"> <li>1) Resilience Leadership</li> <li>2) Resilience Practices</li> <li>3) Resilience Training</li> <li>4) Disaster Risk Management life cycle</li> </ol>	<p>Uganda</p>

Communication Title	Description	Location
Resilience Innovation Challenge 4 Food Security and Improved Income	<p>Are you working towards strengthening the resilience of target communities by building their agency to promote life and entrepreneurship skills, diversify to profitable enterprises, and improve farming skills while taking more control of the agricultural value chain in ways that are sustainable and expand financial inclusion? Then the ResilientAfrica Network (RAN) Resilience Innovation Challenge 4 Food Security and Improved Income Generation (RIC4FIG) grants were for you.</p> <p>Submit your concept note now! The call ran from December 1, 2014 to January 30, 2015, 5:00pm CAT.</p> <p>The Southern Africa RILab will identify and fund projects in three priority intervention pathways for resilience building around improved life and entrepreneurship skills, diversified local economy for resilience and transformed agricultural practices and markets for resilience.</p> <p>Grant Amounts range from US\$ 15,000 to US\$ 35,000 in Phase 1, US\$35,000 to US\$ 65,000 for Phase 2 and US\$ 75,000 to US\$ 125,000 in Phase 3.</p> <p>See more at: <a href="http://grants.ranlab.org/">http://grants.ranlab.org/</a></p>	South Africa

Communication Title	Description	Location
Advertisement-Multimedia Developer Position	<p>ResilientAfrica Network (RAN) was looking for a competent and experienced Multimedia Developer.</p> <p>Interested applicants must have filled out the online application form before 17th December 2014.</p> <p>Applicants also email copies of their CVs and copies of their Academic &amp; Professional certificates to info@ranlab.org by the same date.</p> <p>Shortlisted candidates were invited for a competency-based interview that was conducted on 18th December 2014 from 9.00am at RAN's premises in Kololo.</p>	Uganda

## APPENDIX VII. Travel - FY15 Annual

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
South Africa	2	Innovation teams	Innovators induction	Knowledge of financial compliance, Theory change and the use RAN's template for M and E strategy.	Innovators must have their workplan, budget and M and E strategy.
Portugal	2	EA RILab	To engage with a partner who will support the MATIBABU innovators as they develop their prototype		
Kenya	12	Secretariat and HOA RILab	Somalia ISW-CRID Workshop	Designed high impact innovation pathways to address the challenge of Internal Displacement in Somalia	
South Africa	7	SA RILab	RIC4FIG Need Finding Workshop and Manuscripts writing	1. Participants now understand needs finding and ethnography methodology in the context of the community where they will be working. 2. Better understanding of needs finding and ethnography methodology Draft manuscripts from the qualitative study	1. To go into the various communities to conduct needs finding 2. To help innovators in needs finding and to publish the manuscripts.
Uganda	3	Secretariat and EA RILab	EA RILab CRID Workshop on Conflict		
United States	1	Tulane	Staff Strategy Meetings - Deb Elzie traveled to New Orleans for staff meetings to provide support on all DRLA's projects, including developing the coming Y4 Workplan strategy.	TU/DRLA finalized its Y4 workplan and budget and submitted to RAN / USAID for review.	Begin implementing the Y4 workplan in October 2015.

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Uganda	7	All RILabs, Secretariat and Stanford	A Joint Workshop of all RILab Innovation Officers and M&E Officers on RAN Impact Potential Methodology	(1) Successful knowledge transfer and creation of an action and concept implementation plan for each of the 4 Labs and RAN overall. (2) Better understanding of M and E reporting and online reporting system. Understanding of a business model and impact potential	(1) Continued collaboration and support to ensure effective application of the the key learning concepts (2) To incorporate things learnt into innovation and M&E
Kenya	12	Secretariat, Tulane, EA RILab and HOA RILab, Ministry of Agriculture of Uganda and IGAD's IDDRSI Steering Committee	Launch of the RAN State of African Resilience Report	Secured confirmation from IGAD that it would host the RAN Report launch during its Boarderlands Workshop in July. Gained a greater understanding of RAN's work in the region and some of the participants expressed interest in future collaborations	RAN will continue to collaborate with regional partners to help facilitate future report launches and organize RAN's first annual Resilience Conference in 201
United States	3	RAN Secretariat, Stanford, ????	Multi-day Workshop - The top priority areas are: A) Structure and details for M&E for Innovation; B) Managing Innovation including CRID programs; and C) Laying out the pathway for the Scaling workshop		
Ghana	1	WA RILab and DP stakeholder advisory committee.	Professor James Fishkin met for one and a half days with stakeholder advisory group from the Tamale, Ghana Deliberative Poll (DP). The group reviewed all results of the DP.	Plan developed for release of results and policy implementation.	Prepare report and briefings of DP results for release.

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	1	RAN Secretariat and ?????	MERLIN Collaboration Workshop (Monitoring, Evaluation, Research and Learning Innovations (MERLIN) Program to co-create, co-design, and possibly co-invest in specific projects for achieving MERLIN objectives)		
United States	1		Ky Luu traveled to Washington DC for a day of meetings with USAID's Tom Beck (Director of Resilience Secretariat) and Tom Staals (AA/DCHA)	Discussed the RAN's Resilience research and report launch in Nairobi in July.	
South Africa	5	SA RILab	Shortlisted participants from Malawi and Zimbabwe travelled to Pretoria to attend the Workplan and Budget Writing workshop for shortlisted RIC4FIG applicants	Workplans and Project briefs drafted for submission to RAN Secretariat and USAID.	Documents have been submitted for review by USAID with approvals also anticipated next quarter
South Africa	3	Secretariat, SA RILab	RIC4FIG Pitching Session organized by the Southern Africa RILab		

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Uganda	25	RAN Secretariat, EA and SA RILabs	Annual RAN Partners Forum and the launch of the State of African Resilience	(1) Defined Deliberative Polling activities that had happened thus far in Year 3. (2) Advancement of the MKITs strategy and innovation management (Impact Potential) framework (3) Brought all Stakeholders up to speed with RAN Activities	(1)Preparation of reports on Deliberative Polling results from Tamale, Ghana and Mt. Elgon, Uganda. (2) Continued collaboration with RAN to operationalize (3) Draft report from the findings of the Resilience Workshop and prepare a second launch of the RAN Report in Nairobi, Kenya for July 2015 (4) Draft report from the findings of the Resilience Workshop and prepare a second launch of the RAN Report in Nairobi, Kenya for July 2015. Following Apollo's M&E meetings, he will work with Harriet to finalize the revision of RAN's M&E plan, specifically regarding the definition of innovations and the different stages in the pipeline. They also revised the goal indicators to reflect the fact that RAN will not measure population level program outcomes via surveys.
United States	5	RAN Secretariat	Lab Directors' Convening		
United States	2	RAN Secretariat and Tulane	Attend Gates Partners Meeting and field visit to Tulane		

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United States	1	RAN Secretariat	attended the 'Innovation on the Edge: Accelerating Solutions in the Fight Against Ebola'		