

28th May, 2015

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Dear Dr Klein,

Invitation to the ICSU ROA Science Plan Review Workshop

To ensure that the voice of African scientists influences the international science agenda and that scientists from the continent are fully involved in international research guided by continental priorities, ICSU Regional Office for Africa (ROA) coordinated workshops of African scientists to develop science plans on issues of priority to the research agenda of the continent. The resulting four science plans were published and widely distributed. The science plans are in the areas of Sustainable Energy, Hazards and Disasters, Health and Human Well-being, and Global Environmental Change (including Climate Change and Adaptation). In the process of compiling the Health and Human Well-being science plan, African scientists from within and outside the continent were guided by the continent's priorities, the Millennium Development Goals and the AU/NEPAD Science and Technology Consolidated Plan of Action. Since its publication, ICSU ROA has been working with a consortium of Health and Human Well-being scientists and major stakeholders in the region to develop and implement projects from this science plan.

The African Science Plans Steering Committee (ASPS), at its maiden meeting in March 2014, recommended that each ICSU ROA science plan be reviewed and updated to reflect current/emerging trends in scientific research at global, regional and national levels. The review process of the Health and Human Well-being science plan which commenced electronically a few months ago will end with a two-day workshop that will be held on **9 – 10 June 2015**.

This workshop will be involving the original authors of the science plan as well as other identified active Health and Human Well-being scientists from within and outside the continent. Reviewers are expected to revise and update the science plan with the aim of aligning it with new developments in the global research agenda and the new thinking of promoting transdisciplinary collaborative research as well as new international programmes, especially the Future Earth initiative. The review is also expected to take into consideration the post Rio+20 Agenda, the Sustainable Development Goals, and the Science, Technology & Innovation Strategy for Africa 2024 (STISA 2024).

As the Executive Director, Integrated Research on Disaster Risk | IPO, we hereby invite you to the above mentioned workshop, which will be held at the Manhattan Hotel¹ in Pretoria, South Africa.

Looking forward to your participation in this important workshop.

Sincerely yours,



Dr. Edith Madela-Mntla
(ICSU ROA Regional Director)

¹ <http://www.manhattanhotel.co.za/>

Review of ICSU Regional Office for Africa Science Plans

To ensure that the voice of African scientists influences the international science agenda and that scientists from the continent are fully involved in international research guided by continental priorities, International Council for Science (ICSU) Regional Office for Africa (ROA) coordinated the development and publication (in 2007 and 2008) of science plans in the following thematic areas: Sustainable Energy; Hazards and Disasters; Health and Human-being; and Global Environmental Change (including Climate Change and Adaptation). These documents were developed by African scientists from within and outside the continent who were guided, in this process, by the continent's priorities, the Millennium Development Goals, and the AU/NEPAD Science and Technology Consolidated Plan of Action.

Since the publication of these documents, ICSU ROA has been working with international consortia of scientists and major stakeholders to develop and implement projects from them. It has become necessary to review and update the science plans to reflect current/emerging trends in each thematic area at international, regional and national levels. The review process which has been proposed will be carried out in two phases: an electronic consultation and a physical workshop. The electronic consultation phase is meant to reach out to and get input from a wider range of scientists, including those who will not necessarily be attending the workshop. The workshop will consolidate all the electronic contributions to come up with an updated version of each science plan, which will be aligned with the ICSU Strategic Plan 2012–2017, the new developments in the global research agenda, the new thinking of promoting transdisciplinary collaborative research and new international programmes, especially the Future Earth initiative.

After the workshops, the thematic area coordinators (TACs) of each science plan will prepare a preliminary document that will be finalized electronically with any further input from other scientists. ICSU ROA will facilitate finalization of each draft revised science plan under the leadership of the relevant TACs to be submitted for printing by the end of July, 2015.

The new science plans should be aligned to the ICSU Strategic Plan 2012–2017, the new developments in the global research agenda of each thematic area, and the Future Earth Initiative. Moreover, they should take cognisance of the post Rio+20 Agenda, the Sustainable Development Goals, and the Science, Technology & Innovation Strategy for Africa 2024 (STISA 2024). In addition, it is proposed that the revised Global Environmental Change science plan for Africa accommodates ideas from both the current ICSU ROA Global Environmental Change and the AfricanNESS science plans.

**Swedish/Africa Consortium-Building Workshop
31-October-2014
Eklundshof, Uppsala, Sweden**

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Swedish/Africa Consortium-Building Workshop (Eklundshof, Uppsala 31 October 2014)

**Reducing the Risk of natural and human-induced hazards and
disasters for Africa's Sustainability**

Genene Mulugeta

(SAUNET)

Richard Glover

(ICSU-ROA)



Summary

A one-day consortium building workshop was organized by the Sustainable University Network (SAUNET) of the Baltic University Programme (BUP), Uppsala University and the ICSU Regional Office for Africa (ICSU-ROA) on 31 October, 2014 at Eklundshof, Uppsala under the theme "Reducing the Risk of Natural and Human-induced Hazards and Disasters for Africa's Sustainability with sponsorship from the Swedish Secretariat for Environmental Earth System Sciences (SSEESS). The workshop brought together 26 researchers, and academics from Sweden and Africa (see list, Appendix A).

The workshop was organised by the Sustainable Africa University Network (SAUNET) in partnership with the International Council for Science, Regional Office for Africa (ICSU ROA). It provided a platform for the exchange of knowledge and information between African and Swedish institutions necessary for the understanding, prediction, assessment and mitigation of hazards and disasters impacting Africa. The workshop attempted to discuss perspectives and tasks involved in consortium building through specifying major objectives, assigning roles and responsibilities of project partners, as well as preparing

participants for the ICSU-ROA project launching phase, aimed at advancing the predictive science of natural and human-induced hazards and disasters, including the integration of science with hazard risk assessment and management. This is necessary in order to reduce avoidable losses of life, property and livelihoods.

The workshop marked a step change in the implementation of the ICSU-ROA Science plan on hazards and disasters, in that it facilitated the formation of a N-S interdisciplinary research consortium within Global Change Research in which one of the priority areas for Sub Saharan Africa is Natural and Human-Induced Hazards and Disasters. In addition, the planning workshop aimed at consolidating the Swedish/Africa hazards and disasters consortium essential for building partnerships and establishing a common ground between the various actors in Sweden and Africa involved in sustainability/vulnerability research.

Background

The International Council for Science, Regional Office for Africa (ICSU-ROA) hazards and disasters research program is a regional scientific initiative that aims to provide science based solutions to combat the risks posed by hazards and disasters in Sub-Saharan Africa (SSA). The African Regional Office of ICSU (ICSU-ROA) endeavours to ensure that the collective voice of African scientists influences the international science agenda and that scientists from Africa are fully involved in international research programmes guided by regional priorities. The Office also promotes the participation of African scientists, organisations and institutions in the programmes and activities of the ICSU family and its partners on the continent. In its initial phase, the initiative drafted a science plan¹, which proposed the establishment of a research and capacity building programme aimed at reducing the risk of hazards and disasters and for building resilience of African society. The main focus of the science plan is the development of a truly regional and inter-disciplinary approach to the understanding, prediction, assessment and mitigation of hazards and disasters, through the collaborative effort of the African & international scientific community that will enable science to benefit society.

The Swedish/Africa consortium workshop is intended to facilitate and accelerate the implementation of the ICSU-ROA Science Plan on hazards and disasters. The workshop is a follow-up to the ones held in Pretoria in 2012, the Dakar workshop Of 26-29 September 2012, and the Global-Regional Integration Workshop on Hazards and Disasters in Kuala Lumpur held on 13-14 September 2012. At the Pretoria workshop of 19 - 20 September 2013, the SAUNET

coordinator Genene Mulugeta was delegated to spearhead this process and was mandated to seek funding from Swedish Secretariat for Environmental Earth System Sciences (SSEESS) to arrange a first workshop in Sweden, for developing the draft proposal to a joint project proposal for targeting calls from SIDA and other research and development funding agencies. This workshop is the outcome of that initiative.

Introduction

Africa is a vulnerable continent to natural and human-induced hazards and disasters; such as drought, floods fires, epidemics, earthquakes, landslides, volcanic eruptions, epidemics and pest infestations, air and water pollution, and technological hazards. Since some years back, African researchers have been engaged in identifying priorities, themes as well as designing a strategy for the implementation of the ICSU-ROA Science Plan. Another aim of the Swedish/Africa consortium building workshop is to engage universities involved in the consortium in a dialogue to enable participation in the proposed ten year Future Earth programme. Future Earth is an international research program launched in June 2012, at the UN Conference on Sustainable Development (Rio+20) intended to provide critical knowledge to face the challenges posed by global environmental change and to identify opportunities for a transition to global sustainability. The new 10-year international research initiative for global sustainability is being established by a partnership including researchers, funders and users of knowledge. A unique global Alliance: ICSU, ISSC, Belmont Forum, UNESCO, UNEP, UN University (UNU) and the WMO as observer.

It is anticipated that the proposed consortium will actively participate in the Future Earth research program for the purpose of reducing risks and vulnerabilities impacting African society. ICSU-ROA has already identified three overarching research themes as being very important to reduce the risks and vulnerabilities of SSA. Each research theme is intended to facilitate interdisciplinary research collaboration, and together fulfil ICSU's strategic goal for studying the causes and consequences of natural and human-induced hazards and disasters in SSA. These concern:

- 1) Reducing risk from geohazards; such as seismic (earthquake), volcanic, and landslide hazards.
- 2) Reducing risk from hydro-meteorological hazards, such as floods/droughts, fires (including bushfires), heat waves, cyclones and dust storms, and

- 3) Integrated assessment of vulnerabilities to hazards and disasters, including coastal hazards and forensic investigation of hazards above.

To facilitate implementation of the programme ICSU-ROA has already set up three working groups, one for each of the themes outlined.

Objectives

The main objectives of the Africa/Swedish Hazards and Disasters Consortium workshop are to address the challenges posed by natural and human-induced hazards and disasters, find science based solutions to reduce disaster risk, and identify future potential on the promise of sustainable development, through facilitating interdisciplinary research collaboration among consortium institutions.

The consortium building initiative has the following specific objectives:

- To network, link and coordinate interdisciplinary research and capacity building activities between Swedish and African researchers, for reducing the risks posed by hazards and disasters.
- To organize regular South-North workshops as part of the activities of the consortium.
- To establish teacher and student exchange programs between Swedish and African universities participating in the consortium.
- To explore various avenues of funding opportunities from within and outside Sweden.

The workshop

The workshop brought together 26 participants, from Sweden and Africa amongst a total of 31 registered (Appendix 1) from both the natural and social sciences. The workshop was moderated by Rebecca Oliver, Coordinator of the Future Earth initiative at the Royal Swedish Academy of Sciences, Stockholm. At the outset, Genene Mulugeta the organizer of the workshop welcomed all workshop participants to discuss key issues on consortium-building and the

implementation process. Furthermore, he outlined the main objectives of the workshop.

The agenda of the workshop included presentations, and discussions organized into four sessions, as follows: 1) International and Institutional Networking Initiatives, 2) Presentations on Research and Research initiatives, 3) Short presentations of the Centre for Sustainable development at Uppsala University (CSD-Uppsala), 4) Panel Discussion- Swedish/Africa Consortium Building. More detailed summaries of the presentations are provided below:

Session 1: International and Institutional Networking Initiatives.

a) A welcome note by the Swedish Secretariat for Environmental Earth System Sciences

Neda Farahbakhsha from the Swedish Secretariat for Environmental Earth System Sciences (SSEESS) in a welcome note outlined the activities of her organization. Prominent among this was research capacity building in environmental issues and global environmental change by linking Swedish institutions with developing country institutions, such as ICSU ROA for the implementation of its Science Plans, particularly in hazards and disaster risk management. She underscored the importance of the SSEESS small grants programme for organizing networking meetings as well as providing travel grants for attending these meetings in Sweden or elsewhere. She announced the next call date for SSEESS grant application as December 1, 2014, based on the four thematic areas of ICSU's Science Plans. She expressed the hope that the workshop would result in the implementation of ICSU ROA's projects in hazards and disasters risk management.

b) Prospects and Challenges for implementing the Science Plans of ICSU-ROA

Edith Madela Mntla, Director of ICSU-ROA recounted the history of the creation of the ICSU Regional Office for Africa (ICSU ROA) and the ICSU Regional Committee for Africa (ICSU RCA). ICSU's aim is to strengthen science for the benefit of society, through ensuring that the voice of developing countries influences the research agenda and that scientists from developing countries are fully involved in the research outcomes. Furthermore, she provided background information on the ICSU strategic plan 2006-2011 as well as the four priority areas of ICSU ROA and their science plans, such as: Sustainable Energy, Hazards and Disasters, Health and Human well-being, and Global Environmental Change. She outlined the challenges and the way forward for implementing the science plans. She mentioned that implementation of the

science plans started in 2009, through a series of workshops to establish task teams that developed proposals to be submitted to funders. However, there was a change in the implementation strategy in 2011 which involved invitation of scientists from outside Africa to be fully involved in developing joint proposals through establishing research consortia. ICSU ROA coordinates such activities and engages participating scientists with funders and publishers. She concluded by highlighting the weakness of scientific capacity in Africa, and expressed the need to produce more PhD graduates on the continent.

c) Aims and goals of the Africa/Swedish Consortium-Building Initiative

Gene Mulugeta, the SAUNET and H&D Consortium Coordinator highlighted the negative impact of the major hazards and disasters for Africa's sustainable development. He noted that Africa is the most vulnerable of all the continents to hazards and disasters and that policy makers do not give the necessary attention to address the issue. He presented the three major research themes, as outlined in the introduction and invited the workshop participants to discuss these recommendations and propose mutually beneficial strategies and concrete projects to start implementing the ICSU ROA science plan on Natural and Human-induced hazards and disasters.

d) The Baltic University Programme (BUP) as a model for building university partnerships

Lars Ryden presented the Baltic University network which involves more than 200 universities covering the Baltic Sea Drainage Basin. Since 1991, the programme is coordinated by a secretariat at Uppsala University and focuses on sustainable development, environmental protection and democracy. The secretariat is involved in developing university courses and projects in cooperation with civil authorities, municipalities and others; as well as arranging regular teacher and student conferences. Furthermore, he outlined the many advantages of networking, including internationalization of education, in pooling resources for research and administration. So far the programme has produced more than 40 books available in the internet, in addition to film clips and TV programmes, available on YouTube.

e) The Future Earth Initiative for global sustainability.

Rebecca Oliver (Royal Academy of Sciences) summarized the visions and objectives of the Future Earth initiative which is a global platform to provide the knowledge base required for societies to face risks posed by global environmental change and to seize opportunities in a transition to global sustainability. She outlined current priorities of Future Earth which include among others, establishing Future Earth governance and attracting new

resources. She outlined the two key aims of the programme which are scientific integration and co-production of research to address societal grand challenges: such as feeding nine billion people, valuing and protecting biodiversity and ecosystem services, facilitating transitioning to low-carbon economy, adapting to and mitigating climate change; as well as coping with disasters. She mentioned that for the Future Earth initiative three research themes are proposed; namely: i) Dynamic Planet, ii) Global Development, and iii) Transformations to sustainability. Future Earth will be led by an executive director and will be comprised of five global hubs in Canada, France, Japan, Sweden and the United States of America. At present Kungliga Vetenskaps Akademien (KVA) has initiated the search for the Director for the Swedish Global Hub of the Future Earth Secretariat.

f) The Centre for Natural Disaster Science (CNDS)

Sven Halldin, Uppsala University outlined the activities of the Centre for Natural Disaster Science (CNDS), which is a joint initiative between five research units; namely, Karlstad University, Swedish National Defense College, and three units at Uppsala university, involving the earth, social and technological Sciences, The main intention of the centre is to address societal security and emergency problems, coordinate inter-disciplinary research at the intersection of the natural, social, economic, health and engineering sciences. The Centre launches various projects to address and meet the challenges posed by climate change and unsustainable development.

g) The International Science Programme

Ernst van-Groningen, Uppsala University presented the International Science Program (ISP), which was established to strengthen research capacity and post graduate education in developing countries in the physical, chemical and mathematical sciences. He mentioned that the programme provides support to research groups and networks at partner universities. The type of support include, among others include equipment, consumables, and information technology. He also specified the mode of operation of the programme which involves exchange and training of students, researchers and technicians with long-term commitment. Focus countries for Swedish support in Africa since 2007 include: Burkina Faso, Ethiopia, Kenya, Mali, Rwanda, Tanzania, Uganda, and Zambia. However, supported networks can have nodes in almost every country, as long as one or more focus countries are involved. During a five year period (2003-2007), the ISP programme supported 45-50 research groups and 19-21 networks, for a total cost of €12 million. Furthermore, he suggested the need to foster collaborative research work in geo-hazards and seismic risk by

attracting and involving seismologists in the consortium, as well as the need for mapping landslide prone areas in the continent

Session 2: Presentations of Research and Research initiatives

The research presentations were as follows:

a) The African Monsoon Multidisciplinary Analysis (AMMA)

Konare Abdourahmane, Laboratoire de physique de l' Atmosphere, Université de Cocody presented the multidisciplinary AMMA project for analysing and understanding the monsoon system in the Sahel. The objective of the project is to study and understand the causes for the rainfall deficit observed in the last century in the region. In particular, for prediction of climate variability in the region, which is a major challenge for food security and socio-economic development. The rationale for the AMMA programme is to improve seasonal and climate forecasts for environmental monitoring in the region.

Another aim is to identify strategies for environmental monitoring in developing research and weather forecasting and climate impacts in the region; however, the programme requires evaluation and improvement of the models, and maximizes the use of satellite data. Some consequences of climate change are already being observed in the Sahel; such as a decrease of rainfall at the beginning of the monsoon season in the western Sahel and an increase of rainfall at the end of the monsoon in the central eastern Sahel. Furthermore, he mentioned that the predictability of climate variability and predictability of impacts on agriculture is a major challenge for food security and socio-economic development.

b) Building resilience to climate change and variability in rural livelihoods of Zambia

Mitulo Silengo, from the Disaster Management Training Centre, Mulungushi University, Zambia. discussed the effects of rainfall variability on agriculture in Zambia, which is the main stay of the population, accounting for 80% of households. He mentioned that crop yields in the country have been affected by late onset and early withdrawal of rainfall. Because of climate change hydro-meteorological hazards such as floods and droughts have increased in intensity and frequency leading to widespread crop failure, outbreaks of human and animal diseases, displacement of human populations and destruction of property and infrastructure. In addition, he informed that challenges of disaster risk reduction at the community level include: Inability to link climate change impacts to disaster risk, inadequate data and information on mitigation and

adaptation, Poor Early Warning Systems (EWS), focus on Relief rather than on resilience building, and lack of Adaptive Capacities. He informed that these challenges are being addressed by the disaster management training centre, through providing capacity building in disaster risk management, facilitating staff exchange programmes and collaborative research and providing training in climate change adaptation and resilience-building.

c) Future climate initiatives for Africa

Phillia Restiani made a presentation of the Stockholm International Water Institute (SIWI). Established in 1991, SIWI is a policy institute that contributes to international efforts to combat the world's escalating water crisis. The institute works extensively with multi-and-bilateral donors and international organizations/agencies. SIWI's field of activities span from international discourse and policy shaping to addressing water related challenges at the local level. Field of thematic areas concern: water governance, trans-boundary water management, water and climate change, food and energy, water and economics. Project areas include: the lower Jordan valley, Nile, Okavango, Niger, Tigris and Euphrates, and Mekong River Basins. The institute also acts as a host for other initiatives; such as MDG-F, UNDP water governance facility, alliance for global water adaptation, shared water programmes, and the Swedish textile water initiative. A Current interdisciplinary research initiative, based on the SSEESS planning grant involves Science for East African Resilience to Climate Change (SEARCH). SIWI **also** proposed the need to bridge the gap between the scientific community and other actors through simple publications such as the "Waterfront" magazine of SIWI, for further outreach.

d) Hazards, disaster monitoring and climate change in Africa

Beneah Odhiambo, MOI University, Kenya argued for the need for a sub-regional ICSU-ROA Centre for hazards and disasters monitoring in the region to operationalize the implementation of the ICSU-ROA science plan which advocates through mobilizing multi-and-transdisciplinary international teams of researchers, as the vastness of Africa and other uncertainties pose major challenges for implementation of the set goals. The African continent has 52 cities with populations of one million and by comparison the percentage of people that live in cities is higher than in India and is expected to reach 50% by 2030. In consequence, he motivated the need for developing ICSU-ROA regional centres for alleviating poverty, and for monitoring and mapping disaster prone areas as well as undertake research on climate change that trigger

hazards and disasters.

e) Capacity Building for Water and Food Security in Ethiopia and the DRC

Kevin Bishop, Uppsala University & SLU made a presentation on Forests, Water and Security with special focus on Ethiopia and the Democratic Republic of Congo. Agriculture is the mainstay of Ethiopia's economy; however, despite its importance food security is a challenge for the country, where land degradation, erratic rainfall, drought, and poverty pose a serious threat to the country's economy. Based on World Bank data, Kevin Bishop showed the close link between rainfall variability, subsistence agriculture and Gross Domestic Product (GDP). As Ethiopia's highlands suffer from degradation and deforestation, he posed the question if planting new forests is part of the answer? In addition, he mentioned that in Ethiopia perception of land use on rainfall variability is complex and differs between different communities and watersheds. He concluded by presenting the 2014 research exchange activities between Sweden and the African countries which involved three Congolese Alumni and two from the Ethiopian Institute of Water Resources (EIWR) to Sweden and five senior researchers and one M Sc student to EIWR.

f) Navigating in the midst of uncertainties-DRR policies in Mozambique.

Jenny Koivisto, Centre for Climate and Safety, Centre for Natural Disaster Science, Karlstad University addressed Disaster Risk Reduction (DRR) policy in Mozambique to shed some light on the challenges faced by the actors involved in the DRR policy process. Mozambique, which is one of the least developed countries, i.e., ranking 178 out of 187 countries is impacted by recurrent hazards, such as floods, drought, storms i.e., numbering 47 excluding epidemics within the past 20 years. Thus, better management and Disaster Risk Reduction (DRR) and recovery is of major importance. However, the issue is complicated and national policy is not well developed to address DRR. The profile of the Karlstad centre is multidisciplinary research, societal collaboration and innovation in DRR and climate change adaptation, mainly in the Swedish context. The centre collaborates with a number of institutions, such as the Centre for Natural Disaster Science (CNDS), Myndigheten för Samhälls Beredskap (MSB), South Africa Nordic Centre (SANORD), South African Society for Disaster Reduction (SASDiR), African Centre for Disaster Studies, Eduard Mondlane University, Mozambique, University of Swaziland, and University of Botswana.

Session 3- Short presentation of the Centre for Sustainable development at Uppsala University

Gloria Gallardo and Lars Rudebeck Presented ongoing research & capacity-building programmes at the centre for sustainable development Uppsala University. The Centre is established, based on a cooperation between the Swedish University of Agricultural Sciences (SLU) and Uppsala University. The Center houses three programs; namely, the Baltic University Programme (see Lars Ryden's presentation), CEMUS and the Uppsala Water Centre. CEMUS is a unique student led and run programme which provides interdisciplinary education and a venue to stimulate deeper discussion and knowledge on environment and development. The Uppsala Water Centre uses the unique expertise of Uppsala University on water issues to meet societal needs. The Centre aims to be a catalyst to promote research and education on Sustainable Development (SD), facilitates research cooperation between various institutions and acts as a forum for critical dialogue to promote knowledge locally, regionally and globally. The CEFO research school also arranges regular seminars and courses organized by PhD students. Currently, it is co-coordinating a sustainable marine fisheries future with funds from SIDA and SSEES, also with additional seed-funding from the international social sciences council (ISSC).

Panel Discussion on Swedish/Africa Consortium Building

At the outset, participants at the workshop received information on the objectives and the rationale for an integrated and interdisciplinary approach to minimize the impact of hazards and disasters on African society. The panel discussion brought to the fore several opportunities for collaboration between Swedish and African participants in various aspects of hazards and disasters research. The consortium identified and discussed these issues in order to devise science based solutions. However, given the complexity of the proposed hazards and disasters research themes the workshop discussed the need to facilitate consortium activities, in a truly participatory manner by pulling efforts together; as a first step in the implementation process.

In addition, consortium participants were informed by the consortium coordinator, G mulugeta that ICSU-ROA was in the process of preparing a consolidated proposal under the broad theme of "An integrated approach for building resilience to the risks posed by hazards and disasters in Sub-Saharan Africa". This was to be carried out by integrating the three research themes already outlined and developed at previous ICSU-ROA workshops; namely, 1)

Reducing Risk from Geo-Hazards; such as Seismic (Earthquake), Volcanic, and Landslide hazards, 2) Reducing Risk from Hydro-Meteorological Hazards, such as Floods/Droughts, and 3) An Integrated Assessment of Vulnerabilities to Hazards and Disasters. The proposed research themes are intended to advance understanding of the fundamental processes associated with specific natural hazards, such as geo- and- hydrometeorological hazards, essential for improving capabilities for forecasting or predicting hazards, so that these do not develop into disasters. These should be linked to vulnerability analysis essential for building resilience and adaptive activities in vulnerable communities.

Moreover, it was suggested at the workshop that a successful implementation of the research proposals requires development of coordination mechanisms, through an institutionally owned and led participatory process that involves different perspectives and actions and a multi-stakeholder composition, necessary to provide science based solutions to reduce the vulnerability of African societies to disaster impacts. In this respect it is the duty of ICSU-ROA working Groups to involve Swedish institutions participating in the consortium to communicate and develop joint research proposals that arise in response to research calls. Other activities suggested by ICSU-ROA involved arranging regular workshops to enable communication of research outputs; as well as to establish teacher and student exchange programmes as essential components of the consortium. For example, some of the exchange programmes which can be accessed in Sweden include: Erasmus Mundus, Linnaeus-Palme and the Swedish Research link program.

Swedish GEC research institutions that participated at the consortium workshop, namely; BUP, SAUNET, CNDS, ISP, SIWI, SEI, University of Gothenburg, the Swedish International Agricultural Network Initiative (SIANI), the Royal Institute of Technology (KTH), Karlstad University opted to collaborate with ICSU ROA in the proposed hazards and disasters research and capacity-building initiative. Some of these organizations have already been presented earlier, (see Consortium Sessions 1 and 2). SIANI is a networking platform involved in promoting Food Security and Nutrition in developing countries. At the Department of Chemistry and Molecular Biology, University of Gothenburg, one of the research focuses is on investigating air quality in different urban environments in Africa. In addition, it was noted that all projects should align with the FORIN programme of the Integrated Research on Disaster Risk (IRDR) and should also include DATA studies. During the workshop, some of the consortium participants already proposed to team-up and seek SSEESS planning Grant for drafting project proposals, as well as for initiating exchange visits between African and Swedish Institutions.

Outcomes and Recommendations

As mentioned above, an overarching goal of the consortium is for facilitating an integrated and interdisciplinary approach for reducing the impact of hazards and disasters on African society. This is to be carried out through collaboration among consortium members; i.e., involving both the natural and social sciences. In this respect, the proposed consortium may prove to be effective in pooling together resources for promoting communication and collaboration between African and Swedish GEC researchers. This is essential to ensure the long-term outcomes and sustainability of the project, with the aim to:

- Improve research capacity in relation to the ICSU Regional Office for Africa's Science Plans that can ultimately be communicated to decision makers.
- Increase collaboration between Swedish and African scientists within the framework of ICSU's grand sustainability Challenges.
- Enhance the scope of implementation of ICSU's regional Science Plans, through the proposed consortium.

Concerning the immediate activities of the consortium, it was noted that the next SSEESS Call for networking would be coming out on December 1 and will emphasize priority research areas for Africa-Swedish collaborations based on the four themes of ICSU ROA's Science Plans. It was further noted that research grants were more crucial for promoting project implementation activities as compared to networking grants like the SSEESS Grant. Participants were also informed that a bilateral Tanzania/Swedish research partnerships aimed at strengthening of institutional capacity and development of human resources had been initiated and a call for proposals had been announced.

At present, scientists involved in the Swedish/Africa hazards and disasters consortium are drafting proposals on the thematic research proposals outlined above.

The workshop ended with an expression of appreciation to all participants by Genevieve Mulugeta, the SAUNET Coordinator/Workshop organizer.

Future Perspectives

The International Council for Science, Regional Office for Africa (ICSU-ROA) hazards and disasters research program is a regional scientific initiative that

aims to provide science based solutions to combat the risks posed by hazards and disasters in Sub Saharan Africa (SSA). In its initial phase the initiative has drafted a science plan by identifying risks and delivering measures to mitigate these. ICSU-ROA is now moving towards implementing its science plan on hazards and disasters through establishing a common implementation strategy based on the science plan of Integrated Research on Disaster Risk (IRDR), as well as the science plans of the other Regional offices of ICSU, as decided at the Dakar workshop held between 26-29 September. This strategy was in turn based on the outcomes of the Global-Regional Integration Workshop on Hazards and Disasters in Kuala Lumpur held on 13-14 September 2012. However, building Africa's capacity for reducing the impact of hazards and disasters requires networking and international cooperation for strengthening sustainability/vulnerability research in the continent, as well as for developing human resources beyond the critical mass. This in turn will require the participation of dedicated scientists and sustained funding.

Another impetus for the consortium building is to involve African researchers in international research calls, such as in the proposed ten year "Future Earth" programme intended to provide critical knowledge to face the challenges posed by global environmental change and to identify opportunities for a transition to global sustainability. To this end, ICSU-ROA is actively participating in promoting the build-up of the formation of Future Earth in Africa

The year 2015 is a crucial year for facilitating three United Nations (UN) led processes on sustainable development. These concern, the replacement of the Millennium Development Goals (MDGs) with the sustainable development goals (SDGs), the Post 2015 Framework on Disaster Risk Reduction (March 2015), and the new Climate Change Agreement (December 2015). There is therefore an urgent need to examine the critical link between climate change, disaster risk and sustainable development, through enhanced international research collaboration and dialogue, and can be facilitated within the framework of the proposed consortium.

References

¹<http://www.icsu.org/africa/publications/reports-and-reviews/icsu-roa-science-plan-on-hazards-disasters/roa-science-plan-on-hazards>.

Acknowledgements

We would like to acknowledge SSEESS for providing the funding which enabled

participation in the workshop. We would also like to thank the workshop participants who took on the enormous task of representing and presenting their respective disciplines at the workshop.

Appendices

Appendix 1. List of Workshop Participants

S/No.	Name	Affiliation/Institution	E-mail
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15	Abdourahamane Konare	Université Felix Houphouet-Boigny, Abidjan, Ivory Coast	konarea@yahoo.com
16	Sven Halldin	Centre for Natural Disaster Science	sven.halldin@hyd.uu.se

		(CNDS), Uppsala University	
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Comment [RG1]: These cannot then be considered as 'participants'?

^x unable to attend the meeting

Appendix 2. Workshop Agenda

08:30-09:00 **Sandwich, coffee**

Moderator: Rebecca Oliver (KVA)

9:00-9:05 **Welcome and Introduction to the workshop (9:00-9:10)**

[Skriv text]

Sida 18

G.Mulugeta: Baltic University Programme-Centre for Sustainable Development(BUP/CSD)

- Session- I International and Institutional Networking Initiatives.**
- 9:05-9:15 A welcome note by the Swedish Secretariat for Environmental Earth System Sciences.
Neda.Farahbakhsha:Swedish Secretariat for Environmental Earth System Sciences (SSEESS)
- 9:15-9:25 Prospects and Challenges for Implementing the Science Plans of ICSU-ROA. *Edit Mntla: Director of ICSU-ROA.*
- 9:25-9:35 Aims and goals of the Africa/Swedish consortium-building Initiative. *Genene Mulugeta-SAUNET/ICSU coordinator*
- 9:35-9:45 The Baltic Universtiy Programme (BUP) as a model for building university partnerships- *Lars Ryden-BUP*
- 9:45-9:55 The Future Earth Initiative for global sustainability?
Rebecca Oliver KVA
- 9:55-10:05 The Centre for Natural Disaster Science (CNDS): *Sven Halldin, Uppsala University*
- 10.05-10:15 The International Science Programme (ISP): *Ernst van Groningen, Uppsala University.*
- 10:15- 10: 45 Coffee Break**
- Session-II Presentations of Research and Research initiatives**
- 10:45-10:55 The African Monsoon Multidisciplinary Analysis (AMMA).
Konrea Abdourahmane, Laboratoire de physique de I'Atmosphere, Universite de Cocody.
- 10.55-11:05 Building resilience to climate change and variability in rural livelihoods. *Mitulo Silengo: Disaster Management Training Centre,Mulungushi University, Zambia.*
- 11:05-11:15 Future climate initiatives for Africa. *Philia Restiani. SIWI*

11:15-11:25 Hazards, disaster monitoring and climate change in Africa:
Beneah Odhiambo, MOI University, Kenya.

11:25-11:35 Capacity Building for Water and Food Security in Ethiopia
and the DRC: *Kevin Bishop, Uppsala University, SLU.*

11:35-11:45 Navigating in the midst of uncertainties-DRR policies in
Mozambique: *Jenny Koivisto: Karlstad University.*

11:45-12:00 General Session Discussion

12:00-13:00 Lunch Break

**Session-III Short presentations of research & capacity-building
programmes at Uppsala University.**

13:00-13:30 (CEMUS,CEFO, SWEDESD.)

Session-IV Panel Discussion: Swedish/Africa Consortium Building

**13:30-14:30 How to facilitate research-and-capacity-building in
an inter-disciplinary framework**

(This will be a panel discussion to articulate what would be required to successfully facilitate the consortium. What partner capacity is available for interdisciplinary research and capacity building. What is further required? (Participants from ICSU-ROA, SSEESS, Uppsala University, Stockholm University, Stockholm Environmental Institute)

14:30-15:00 Coffee Break

**Session-V Prospects and challenges of the SWEDISH/AFRICAN
consortium-building Initiative**

**15:00-16:00 Networking activities and time-planning related to
interdisciplinary research, N-S workshops, Student-
Teacher Exchange programmes, funding)**

(Participants from ICSU-ROA, SAUNET, SSEESS, SAUNET, followed by general discussion)

16: 00

End of Workshop

Genene Mulugeta,
Project coordinator
Edith Mntla,
ICSU- ROA Director.

REPUBLIQUE DE CÔTE D'IVOIRE

 Union - Discipline – Travail



**Natural and Human-Induced Hazards and Disasters Consortium Project Proposals
 Consolidation Workshop
 Yamoussoukro, Ivory Coast
 2 – 4 December 2014**

REPORT

Executive Summary

Five core scientists of the Hazards and Disasters Consortium and the Programme Specialist responsible for the Hazards and Disasters Science Plan of ICSU ROA participated in a 3-day project proposal consolidation workshop in Yamoussoukro, Ivory Coast from 2 to 4 December, 2014. The workshop formed part of the activities of the 15th International Conference on Science and Technology (QIST) organised by the Directorate-General of Scientific Research and Technological Innovation (Department of Scientific Research and Technological Innovation) of the Ivory Coast under the broad theme “Future Earth”.

Prior to leaving for the workshop in Yamoussoukro, the scientists and Programme Specialist participated in the Open-Day activities of the QIST at the Bingerville Campus of the Université Felix Houphouët Boigny (UFHB), Abidjan which provided the opportunity for an exposition on the programmes and activities of ICSU ROA and interaction between consortium members and a cross-section of the scientific community of the Ivory Coast.

During the workshop, participants reviewed the existing project proposals in the sub-thematic areas of geological and hydrometeorological hazards, agreed on areas of concentration to be integrated with vulnerability and risk assessment studies, and packaged under one broad title “Resilience to hazards and disasters in Africa” to be submitted in response to the Sida Grant call. Definite timelines were set to achieve this goal.

Background and Objective of the Workshop

The International Council for Science, Regional Office for Africa (ICSU-ROA) hazards and disasters research program is a regional scientific initiative that aims to provide science based solutions to combat the risks posed by hazards and disasters in Sub Saharan Africa (SSA). In its initial phase, the initiative drafted a science plan¹, which proposed the establishment of a research, capacity building and outreach programme aimed at reducing the risk of disasters and for increasing resilience. The main focus of the proposal, as outlined in the science plan,

is the development of a truly regional and inter-disciplinary approach to the understanding, prediction, assessment and mitigation of hazards and disasters, through the collaborative effort of the African scientific community that will enable science to benefit society. Several workshops have been held over the years to attain this goal, the last being in Pretoria in September 2013 aimed at producing a proposal on “Reducing risk to natural and human-induced hazards and disasters in sub-Saharan Africa” that integrated three research components namely, a) reducing risk from geo-hazards such as earthquakes, volcanoes, and landslides, b) reducing risk from hydro-meteorological hazards such as floods, droughts and fires, and c) an integrated assessment of vulnerabilities to these hazards and disasters. This proposal was to initially target the call from the Sida Grant proposal being developed by ICSU, but that could also be modified appropriately to meet the requirements of other calls as and when they came.

With the Sida Grant Call soon to come out, the main objective of the Yamoussoukro workshop was to discuss and agree on the content of the consolidated proposal on “Reducing risk to natural and human-induced hazards and disasters in sub-Saharan Africa” and set definite timelines for coming out with same in readiness for submission to grant calls, particularly the Sida Grant Call. It was also to finalize arrangements for the publication of the book on hazards and disasters. Another objective of the workshop was to set into motion modalities for the review of the science plan on hazards and disasters to reflect emerging trends.

¹<http://www.icsu.org/africa/publications/reports-and-reviews/icsu-roa-science-plan-on-hazards-disasters/roa-science-plan-on-hazards>

Opening

Opening the workshop on behalf of the chair of presidents of universities in the Ivory Coast, and the Ivorian Government, Prof. Adama Coulibaly, President of Péléforo Gon Coulibaly University, Korhogo said the Ivory Coast was honoured by the visit and participation of the consortium members in the QIST. He indicated that the long-standing association of Prof. Konare with ICSU was better highlighted by the interaction with the consortium members and the exposition on ICSU’s programmes activities during the opening ceremony of the QIST. This has better informed and enkindled the interest of the government and scientific community of the Ivory Coast in the activities of ICSU, prompting the Director of Cabinet of the Ministry of Scientific Research to call for further support for Prof. Konare’s involvement with ICSU. While wishing the meeting well, he hoped the network being developed between ICSU and Ivorian scientists will take on board the interest of Ivorian institutions as well, to benefit all.

In his response, Prof. Mulugeta, the Consortium Leader expressed appreciation to the government of the Ivory Coast and Prof. Konare in particular for this generous gesture of hosting the workshop, since funding for hosting African workshops usually comes from outside, never from Africa. He commended the Ivory Coast for taking this impressive lead for other African countries to follow. Prof. Mulugeta also commended the QIST programme, particularly its involvement of young school children.

Overview of workshop objectives

Consortium leader Prof. Mulugeta, in his overview of the objectives of the workshop made particular reference to the need to address evolving epidemics like Ebola on the continent. He therefore underscored the importance of including health professionals in the consortium to provide this missing link. He said the Yamoussoukro workshop should set the mode of operation of the consortium for the years to come. He lamented the lack of commitment on the part of some experts from the hydrometeorological hazards group. Prof. Mulugeta called for an enhanced networking to yield concrete outputs which should not only be proposals but activities to show to funders. This, he said, could be achieved through facilitating and implementing research proposals. He stressed the need to reduce focus on foreign donors who have strings attached to their funding packages and seek funding from African nations as well, for project proposals.

Updates on follow-up activities and meetings

Respective individuals gave updates on follow-up activities and meetings attended on behalf of the consortium over the period. The included:

- i) The IRDR Conference 2014 on **Integrated disaster risk science: A tool for sustainability** and The 11th Scientific Committee Meeting of IRDR (Beijing, China, 7th to 11th June 2014)- reported by Prof. S. Ayonghe
- ii) 1st and 2nd Preparatory Meetings (Prep Com 1 and 2) of the World Congress on Disaster Risk Research (WCDRR) (Geneva, Switzerland, 14-15 July and 17-18 November, 2014)-reported by Profs. Mulugeta and Ayonghe
- iii) Swedish/Africa Consortium-building Workshop, (Uppsala, 31 October, 2014)- reported by Prof. Mulugeta
- iv) Consultative Meeting of IRDR National Committees (London, UK, 11-12 November, 2014)-reported by Prof. Mulugeta
- v) Africa Array Programme –(Impending Workshop on Seismology- Johannesburg, January 2015)-reported by Prof. Durrheim

Key recommendations and outcomes

Participants discussed the objectives of the current workshop against the recommendations of the last workshop held in Pretoria as well as updates on the follow-up activities and meetings involving individual consortium members and made the following recommendations:

1. Project proposals to be in one package titled “Resilience to hazards and disasters in Africa” but with two separate components, Geohazards and Hydrometeorological hazards, integrated with vulnerability risk assessment and having separate budgets. The proposals will be developed in line with the Science Plans of the other ICSU Regional Offices and Integrated Research on Disaster Risk (IRDR). This is necessary to avoid duplication of efforts, as well as build synergies among the different actors.
2. Proposals in response to the Sida Grant, will tackle Earthquakes and Volcanoes (Geohazards) with a focus on Mount Cameroon, but involving scientists from other

- African countries where volcanic eruptions pose a risk; and Droughts and Floods (Hydrometeorological hazards) with a focus on the Volta River basin, but involving scientists from other African countries where flooding poses a risk.
3. Proposals to be developed on landslides and fires for future calls
 4. Proposals are to be inter/multi-disciplinary and regional in character and streamlined according to the budgets
 5. Components shall be harmonised, detailing counterpart support and sustainability measures
 6. First version of proposals to reach consortium leader-Prof. Mulugeta mid-January
 7. Final version to reach ICSU ROA latest end of February
 8. Consortium's activities should be linked up with the Future Earth Initiative to take advantage of the big grants that will be made available under this initiative in coming years.
 9. Participants called on ICSU ROA to intensify engagement with African governments and development agencies such as the AfDB to see the need to support activities of scientists financially and materially and reduce dependence on external funding which is often not reliable and comes with strings attached.
 10. Participants also realised the potential of Francophone countries in supporting scientific research on the continent, the Ivory Coast being an example where the autonomy enjoyed by its universities and research institutions provides an enabling environment for collaborative research activities and called for enhanced networking among African scientists to harness all potentials on the continent.
 11. Participants lauded the scientific research agenda of the Ivory Coast as outlined for the 15th International Conference on Science and Technologies (QIST) under the broad theme "Future Earth" noting that the country is also planning a workshop on Future Earth next year. They therefore recommended that the Ivory Coast be considered one of the potential candidates in the ongoing search for a regional hub for Future Earth in Africa outside the MENA region.
 12. Furthermore, at the meeting it was agreed that plans for developing and sustaining active networks with experts, regular meetings and workshops as well as databases will be detailed, as part of the consortium activities. It is envisioned that a Steering Committee, comprising experts from the region and Swedish Scientists will guide and support ICSU-ROA in managing the regional programme and oversee its activities.

Science Plan Review

The draft list of proposed participants in the science plan review activity was beefed-up with the addition of three names:

- a) Prof. Deolall Daby, a health professional from the University of Mauritius who was part of the original team of authors
- b) Prof. Jean-Jacques Kouame, a social scientist from the Ivory Coast
- c) Prof. Emmanuel Yenshu Vubo, a sociologist from Cameroon

Prof. Ray Durrheim also offered to solicit the contacts of some more health professionals from the *Medicin sans Frontieres* group to augment the list.

The consolidated list is to be compiled by the Programme Specialist and sent through to the Consortium Leader by the end of December 2014. The latter is to initiate the electronic review process subsequently until the physical meeting in May or June.

Book Project

The last two chapters are being reviewed for publication to start.

Wrap-up and Closing

Prof. Konare expressed his delight at hosting his colleague consortium members and was happy that the objectives of the workshop had largely been realised as a group, giving him personally, a clearer insight into the way forward. He intimated that his government had backed him to host the workshop, having seen it as worthwhile and beneficial and expressed the readiness of his colleagues in Ivorian universities to collaborate in ICSU activities.

Prof Mulugeta the Consortium Leader once again expressed his personal appreciation and on behalf of the consortium to Prof Konare. He posited that it was a positive step to have support from an African government for the consortium's activities for science to take root in Africa and translate into the 10-year Future Earth Initiative.

At the end of the workshop, the participants visited the three National Polytechnique Institutes of the Ivory Coast to familiarise themselves with the programmes of these institutes. On the way back to Abidjan on 5 December, they were guests of honour at a half-day exposition on activities of the Geophysical Station of LAMTO to students of technical institutions and pupils of elementary schools. On 6 December team returned to Abidjan and attended an exhibition on the industrialisation of research and technology and a ceremony to honour leading innovators held at the University of Nangui Abrogoua.