PEACE, PROSPERITY AND REGIONAL INTEGRATION

REGIONAL FRAMEWORK FOR MAINSTREAMING

Disaster Risk Management And Climate Change Adaptation In Education/School Curricula in the IGAD Region

Intergovernmental Authority on Development (IGAD)

IGAD Climate Prediction and Applications Centre (ICPAC) Disaster Risk Management Programme

GFDRR Global Facility for Disaster Reduction and Recovery

Building Disaster Resilience in Sub-Saharan Africa

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Acronyms

AfDB	African Development Bank
CCA	Climate Change Adaptation
CERD	Center for Study and Research (Djibouti)
CERD	Center for Study and Research (Djibouti)
DfID	Department of International Development (UK)
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
HFA	Hyogo Framework for Action
ICPAC	IGAD Climate Prediction and Applications Centre
IGAD	Intergovernmental Authority on Development
ILO	International Labor Organization
MEFCC	Ministry of Environment, Forest and Climate Change (Ethiopia)
NCCR	National Center for Curricula and Educational Research (Sudan)
NDRMC	National Disaster Risk Management Commission
PoA	Program of Action (for implementation of SFDRR in Africa)
SDG	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
UNISDR	United Nations International Strategy for Disaster Reduction

Executive Summary

The ever increasing frequency and magnitude of natural and human made disasters have galvanized the international community to take a serious interest in the matter. The Kyoto Protocol was held in 1997 to tackle the adversities of climate change. Since then, a flurry of activities, conferences, and conventions have been held at global, regional, state and local levels to advance knowledge of disasters and associated risks—i.e., how to predict, prepare for and effectively respond to them. The Hyogo Framework for Action (HFA) and the Sendai Framework for Disaster Risk Reduction (SFDRR) are the latest of such global regimes. Both stress on the need to increase disaster risk knowledge/information and building a human culture of safety and social resilience.

This framework is a regional (IGAD) adaptation of these international regimes. As such, it aligns with the goals and principles of these global enunciations. Its main aim is to help guide the IGAD member states on how to mainstream Disaster Risk Management and Climate Change Adaptation (DRM/CCA) through education/school curricula. This mainstreaming approach—a sort of a "front loading" strategy--emphasizes on prediction and preparedness. However, the Framework also deals with post-disaster response and reconstruction.

The Framework is a small portion of a main project titled, "Building Disaster Resilience to Natural Hazards in Sub-Saharan Africa Regions, Countries and Communities" that came as a result of a cooperation between the European Union (EU) and the African, Caribbean and Pacific (ACP) Countries on Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA). In this parent project, the EU fund is channeled through the World Bank to five African Regional Economic Communities (REC) including IGAD for East Africa. The stakeholders of this project, therefore, include the European Union, the African Union Commission (AUC), the IGAD member states, the Secretariat of IGAD, multilateral organizations, local Non-governmental Organizations (NGOs), and ultimately the local communities who directly benefit from it.

The Framework is a regional guideline for the process of integrating DRM/CCA education into the IGAD region's school curricula. The Framework is based on the so-called "new curriculum," which is needs-, value- and skill-based. Generally speaking, the new curriculum is a spiral one. The depth and extent of the coverage of the subjects increase with the age and grade level of the student. Accordingly, the DRM/CCA education also spirals upwards. Depending on the unique circumstance of the local schools, DRM/CCA can be taught either thematically, as a topic within a subject, as readings, or as a learning area. Likewise, these can be delivered/taught formally, informally or non-formally.

Tackling disaster risks through education is a growing international trend. Schools are the best channels to disseminate DRM/CCA education throughout society--as teachers teach students, students teach their families, and ultimately knowledge spreads throughout the community.Known as the cascade model, this approach is the most effective one in mainstreaming DRM/CCA through education. DRM/CCA knowledge increases peoples' capabilities to predict, prepare for, and survive disasters and associated risks. It promotes a culture of safety and bolsters social resilience. And herein lies the main efficacy of the Framework.

In addition to schools, the Framework identifies other platforms, whereby mainstream DRM/CCA can be realized. It can be accomplished in:

1. Meetings and networks of public officials, line ministries, DRM specialized agencies, commissions, international organizations and NGOs. Participants bring their specialized expertise to the table and accordingly teach their colleagues, who in turn teach their co-workers, then their families, and ultimately the wider community.

2. Local community gatherings, where pertinent community issues are often discussed and decided. These large gatherings provide excellent opportunities to mainstream DRM/CCA knowledge/information throughout society.

3. The Committee of Elders, which is the best entry point to mainstream DRM/CCA through education. For instance, in rural Kenya, the first contact of public officials with the local community is through the Committees of Elders, which every community has. Once the Elders buy-in the DRM/CCA message, they have the authority to facilitate the mainstreaming of DRM/CCA education through the local school curriculum.

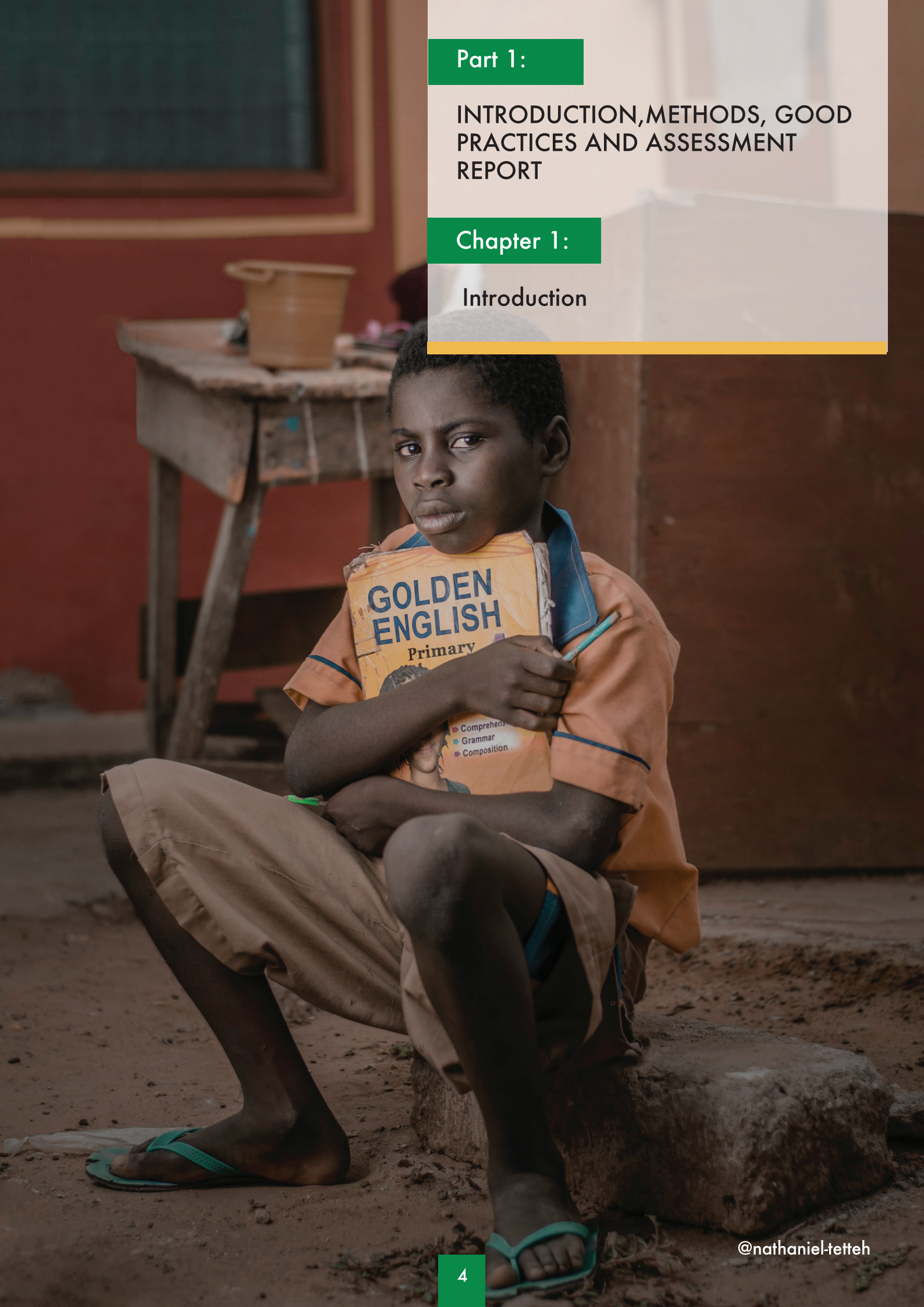
The Framework is organized into two main sections with chapters each representing an important aspect of the overall work. Section one includes introduction, methodology, good practices, country assessment reports, and provides the rationale for the whole work. Section two contains the regional framework for mainstreaming DRM/CCA through the region's school curricula. It is in this section where the technical guideline for integrating DRM/CCA (either as subjects, themes, topics, readings or learning areas) in the school curricula is fully developed. It is also here where existing challenges and opportunities are addressed. Additionally, the section includes the curriculum review process, the entry points for inserting new subjects, and the most appropriate method of delivery, depending on the age and grade level of the learners.

Part 1:

INTRODUCTION,METHODS, GOOD PRACTICES AND ASSESSMENT REPORT

Chapter 1:

Introduction



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1.1. Background

IGAD was initially created in 1986 as the Intergovernmental Authority on Drought and Development (IGADD) to coordinate the efforts of its member states to combat desertification and promote interventions to mitigate the adverse impacts of droughts. It also provided a regular forum for policy and decision makers of the member states to tackle desertification and drought issues as well as other emerging regional and international challenges. Recognizing the success of IGADD as forum for regional discussion and coordinated action on specific issues and its potential for involvement in other critical areas of regional interest, the Extraordinary Summit of Heads of State and Government, held in 1995, resolved to expand IGADD's mandate to also address regional, political and economic issues. IGADD was revitalized and renamed, in 1996, as the Intergovernmental Authority on Development (IGAD) with new mandate focusing on, among other things: Agriculture and Environment, Economic Cooperation and Peace and Humanitarian Affairs among its Member States. IGAD is one of the regional economic communities of the African Union.

The IGAD region has a population of over 300 million characterized by high growth rates. The region stretches over an area of 5.2 million km2 comprising the countries of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. The region has great variety of climates and landscapes including cool highlands, swamp areas, tropical rain forests and other features typical of an equatorial region. About 70 percent of the region is arid and semi-arid lands (ASALs), and 80 percent of the region's population are pastoralists and smallholder farmers. Two years of successive droughts can decimate a significant section of the population and reverse decades of national development. Faced with these mega threats, that no single state could solve alone, the regional states resolved once more to form a regional specialized institution for monitoring/prediction of climate changes through a regional organization, the current IGAD Climate Prediction and Application Centre.

Despite these great socio-ecological complementarities, the peoples of IGAD member states are susceptible to recurrent disasters--both natural and human-made. Chief among the natural hazards that impact the region are droughts, floods, landslides, forest fires, earthquakes, volcanic eruptions, and a variety of pestilences that afflict humans, plants and animals. Principal among the human-made hazards are global climate changes, inter- and intra-state conflicts, and excessive use/misuse and waste of natural resources.

IGAD has responded to these challenges since 2004 by implementing the Regional Disaster Risk Management Program (DRM). The program approach is to mainstream DRM in the overall development planning of member states, including sectoral plans and programs of action as common government practices.

As it relates to Disaster Risk Management (DRM) and Climate Change Adaptation (CCA), the creation of the two kindred units/parts in the region represents a major regional policy shift. Instead of dealing with the issue reactively, the IGAD member states are now poised to address it proactively. This "front loading" approach is in line with current international standard practices, particularly as stipulated in the Hyogo Framework for Action (HFA) and the Sendai Framework for disaster risk reduction.

Despite the gallant efforts of the regional authorities to reduce disaster risks in their respective countries, these calamities continue to haunt the region. This regional framework, which sketches out the process and the requisite activities to integrate Disaster Risk Management and Climate Change Adaptation (DRM/CCA) into the school curricula is one of the many innovative initiatives they are employing to tackle disaster risks in the IGAD region.

1.2. Evolution of Global Disaster Risk Reduction Regimes (DRR)

The IGAD/ICPAC member states are fully committed to the existing international regimes and conventions, especially the Hyogo Framework for Action and Sendai Framework for disaster risk reduction. This is demonstrated in the number of legislations, policies and programs of action that they have enacted--not to mention the number of ministries, specialized offices, agencies and commissions that they have established--since the Kyoto Protocol was adopted in 1997.

Both HFA and SFDRR emphasize the importance of DRR education. For instance, Hyogo instructs: "Use knowledge, innovation and education to build a culture of safety and resilience at all levels." Likewise, Sendai stipulates, "To promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training." Due to these authoritative regimes, the importance of teaching DRM/CCA in schools is universally recognized. Therefore, addressing disaster risks through education is consistently brought up in every DRM/CCA related conference—be it international, continental, regional, or even local. Schools are recognized as the best institutions to package DRM/CCA knowledge and disseminate it throughout society, as teachers teach students and students teach family members and the latter the wider community. The following gives a glimpse of what have been said about the subject in these forums, as well as in the general academia.

1.3. International Conferences and Regimes on DRR through Education

In May 1994, the Yokohama Conference, amongst other disaster risk reduction issues, posited: "Education and training programs and facilities for people professionally involved and the public at large have not been sufficiently developed with a focus on ways and means to reduce disasters."[1] Years later, after noting lack of progress in the implementation of Yokohama, the UN created an implementing agency, the UN International Strategy for Disaster Reduction (UNISDR).
The Hyogo Framework for Action (HFA) and Sendai Framework (SF) represent the latest global initiatives to coordinate and mainstream disaster risk reduction (DRR) through education/school curricula down to the sub-national levels. Under Priority 3, HFA calls upon the signatory states to "use knowledge, innovation and education to build a culture of safety and resilience at all levels." Implementation of HFA entails the expansion and dissemination of DRR knowledge, inclusive of the basic science underlying hazards, risks, vulnerabilities and capabilities within each country.

At the core of HFA is value- and skill-based education/knowledge. In Activity 2, HFA authoritatively advocates the mainstreaming of DRM knowledge through schools: "Promote the inclusion of disaster risk reduction knowledge in relevant sections of school curricula at all levels and the use of other formal and informal channels to reach youth and children with information; promote the integration of disaster risk reduction as an intrinsic element of the United Nations Decade of Education for Sustainable Development (2005-2015)." The gist of this stipulation is the employment of knowledge/education to predict, prepare for, effectively respond to, and survive disaster risks.
Mainstreaming DRM/CCA through education/school curriculum means at least five things:

1. Integrating DRM/CCA study modules into the school curriculum;

2. Developing the capacity of teachers in DRM/CCA;

3. Developing, publishing and rolling out of DRM/CCA textbooks, booklets, readings, cards, as well as teaching manuals;

4. Constructing schools that are structurally resilient to disasters; and

5. Retrofitting existing schools with (and adding to future ones) WASH facilities, permanent energy supply (preferably, renewable energy), emergency exists and supplies--such as first aid kits, fire extinguishers, food banks, and communication infrastructure.

Sendai Framework for Disaster Risk Reduction, which superseded HFA, reiterates the international commitment to address disaster risks through education: "To promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, recovery, response and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training."[2] Adopted at the third United Nations World Conference on Disaster Risk Reduction in 2015, the Sendai Framework sketches out a multi-sectoral approach to disaster risks, which includes sectoral relevant actors and institutions at the international, regional, national and sub-national levels.

In Priority 1 (Understanding Disaster Risk), the Framework emphasizes the importance of knowledge (traditional or scientific) in combating disaster risk, stating: "Such knowledge can be leveraged for the purpose of pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate preparedness and effective response for disasters." At the center of SF is the creation, expansion, dissemination and use of knowledge/education. Of the fifteen activities under Priority 1, four specifically mention education, while ten refer to knowledge/information as essential factors in DRM. It is therefore important to include DRM/CCA education and knowledge/information in the national development policies, strategies, plans and programs. The following four excerpts from the Sendai Framework suffice the point:

a) "To promote the collection, analysis, management and use of relevant data and practical information and ensure its dissemination, taking into account the needs of different categories of user, as appropriate."

b) "To develop, periodically update and disseminate, as appropriate, location-based disaster risk information, including risk maps, to decision makers, the general public and communities at risk of exposure to risk in an appropriate format by using, as applicable, geospatial information technology."

c) "To build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning."

d) "To ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programs of specific sectors, with cross-sectoral approach, which should be tailored to localities and to the context."

[1] http://www.preventionweb.net/files/8241_doc6841contenido1.pdf
[2] http://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

The African Commission's Extended Program of Action (PoA) for the Implementation of the African Regional Strategy for Disaster Risk Reduction (ARSDRR), as amended in 2010, stresses the importance of DRM knowledge/education in the Continent's education system: "Sustain the effort of knowledge management, capacity development and research throughout the continent, and multiply training activities at different levels, to improve the expertise, promote best practices and contribute to mitigate disaster risks and build resilient communities."[3] Further, the PoA for the Implementation of Sendai Framework 2015-2030 in Africa, in November 2016, adds: "The African Union Heads of State and Governments express their strong commitment to the implementation of the Sendai Framework as a means of sustaining the momentum generated by the Extended Program of Action." In line with the international regime, the PoA also identifies the implementing organs and agencies at international, continental, regional, state and sub-state levels, and assigns them the responsibility to implement risk reduction along with poverty reduction and sustainable development.[4]

1.4. Project Context and Deliverables

The Hyogo Framework for Action (HFA) strongly enunciated the need to "Use knowledge, innovation and education to build a culture of safety and resilience at all levels." Based on this recommendation, the IGAD Secretariat, in partnership with the member states, relevant regional and international organizations, has issued this consultancy assignment to develop a framework to inform each member state's action plan to integrate DRM/CCA into their school curricula. As part of IGAD's broader strategy, "Building Resilience to Disasters through Risk Management and Climate Change Adaptation Project," this project aims the following outcomes:

a) Raise the importance of mainstreaming DRM/CCA through education/school curriculum.

b) Provide the technical knowhow to integrate DRM/CCA in national education/school curriculum.

c) Advice on the delivery mechanism of DRM/CCA education in schools and community learning centers.

d) Highlight the roles of international partners in mainstreaming DRM/CCA in education/school curricula.

As it relates to mainstreaming DRM/CCA in education/school curricula in the IGAD region, some states have already met some of the recommendations of HFA and are now in the process of implementing the Sendai Framework and the AUC's Regional Strategy for Disaster Risk Reduction. Kenya, Ethiopia, and Uganda are some of the countries in the forefront in mainstreaming DRM/CCA in education.

Even these three trail blazers have not achieved complete mainstreaming, but have implemented some aspects of it. Other countries in the region, while further behind, are in the process of complying with the international and regional regimes.

1.4.1. Rationale of the Framework

The IGAD region is prone to recurrent disasters—both natural and human-made. In recent years, the frequency and the destructive magnitude of these disasters have considerably increased. Their impacts have repeatedly disrupted the economic and social development of the countries of the region. The mounting cost motivated the states in the region to comply and align their policies and strategies with the existing international DRR regimes and global good practices. The issuance of this project is based on this rationale. Its main aim is to develop a framework to guide the integration of DRM/CCA education in the region's school curricula.

Public institutions are apt channels for mainstreaming public policy. The inclusion of DRM/CCA policies and strategies in all sectors of national development planning, especially in the education system, guarantees the wide dissemination of DRM/CCA knowledge/information. A long sustained mainstreaming creates an informed society that is resilient to disasters. It equips people with the ability to predict, prepare for, and survive the onset of disasters. It is this realization that underlies the commitment of the IGAD member states to mainstream DRM/CCA in the region's education/school curricula.

[3] http://www.droughtmanagement.info/literature/UNISDR_africa_regional_strategy_disaster_risk_reduction_2011.pdf
[4] http://www.preventionweb.net/files/49455_poaforsendaiimplementationinafrica.pdf

Chapter 2:

Methodology of the Study

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2. Methodology

The purpose of this framework is to guide the countries in the region to mainstream DRM/CCA through their education system. In order to bring this project to fruition, we are proposing the following methodology, which consists of` a combination of four (4) data collection instruments selected for their reliability and suitability for the task. Taken together, these can shed light on the relevant factors that build up to the framework. These instruments are:

1. Review of relevant literature To construct this framework, we have reviewed both primary and secondary sources. We have used the information from these documents to assess the effectiveness of IGAD/ICPAC member states' strategies and policies to mainstream DRM/CCA through education/school curricula. Additionally, we use this information to see if a country's approach to DRM/CCA is in line with the existing international regimes and good practices.

In the latter case, we have done a comprehensive literature review on the subject matter we came across good practices that would inform the IGAD Regional Framework that we aim to develop, and also to avoid the pitfalls encountered from the efforts of DRM/CCA integration in the education/school curricula elsewhere. These sources are produced by international, regional and sub-regional conferences and evaluations of practices in DRM/R and CCA. In addition we were guided by international and regional frameworks and guidelines amongst these are the Yokohama Conference, the United Nations International Strategy for Disaster Reduction (UNISDR), the Sendai Framework, the Hyogo Framework for Action (HFA), and the Global Platform for Disaster Risk Reduction.

At the regional level, we have examined the African Union Commission's Declaration on Disaster Risk Reduction, the New Partnership for Africa's Development (NEPAD), the East African Community Strategic Plan and IGAD's Regional Perspective in Disaster Risk Reduction.

Building on the above, we reviewed evaluation/assessment documents undertaken by major actors such as UNICEF and the NGOs and also regional/country level reviews undertaken in different parts of the world, notably Asia and Latin America & other parts of Africa.

2. Structured Interviews These are oral, face-to-face interviews with focal persons in curriculum offices in Ministries of Education (MoE) in IGAD countries, sectoral relevant line ministries, specialized agencies, as well as the countries' specialized DRM/CCA institutions. To collect relevant data and information, we have devised a series of inter-linked questions that we will pose to focal persons in the ministries of education (MoE), sectoral line ministries, public agencies, and experts in the field.

These question are divided into three categories, namely general questions that can be posed to any relevant focal person, questions for public officials in DRM/CCA institutions, and questions for international partners in the country. These questions are triangulated for analysis. The various responses of these officials is compiled and analyzed to garner a clear picture of a country's level of mainstreaming (or the lack thereof) DRM/CCA education in their system of education.

3. Observation Country visits offer a unique opportunity to observe what is happening on the ground. However, since we cannot visit all IGAD/ICPAC member countries, we limit ourselves to those countries that have achieved a certain level of integrating DRM/CCA in their education system to gauge lessons learned both from the practice and find out existing limitations. This has given us the opportunity to appreciate and compare the level of mainstreaming DRM/CCA education in the school curriculum.

4. Case-studies Case studies reflect real life situations. They present facts about the experiences of a particular practical experience. In this study, we use case-studies to gather data regarding the practice of mainstreaming of DRM/CCA education in the region's school curricula. We use this information also to identify challenges and opportunities that the regional states face in integrating DRM/CCA in the education/school curricula. Finally, we use the data from case-studies to propose an alternative, suitable solution.

The final stage of this assignment is to produce draft regional framework to guide IGAD member states in mainstreaming DRM/CCA in education/school curricula. The draft framework will be validated in a regional stakeholders meeting. This submission will also include a list of terminologies, acronyms, concepts and a succinct definitions of terms

Chapter 3:

Good Practices and Country Assessment Reports

3.1. Good Practices

3.1.1. Mobilization of Resources

The idea of tackling disaster risks through education is strongly enunciated in the Hyogo Framework for Action (HFA). Since then, most countries heeded the call devising (some with the help of Non-governmental organizations (NGOs) and regional associations) creative ways to mainstream DRM/CCA education in the national school curricula. Based on these country experiences, the process involves the following resources:

3.1.2. Human Resources

a) Cadre of DRM/CCA Educators: The mainstreaming process starts with the development of a cadre of educators, who are well-versed in DRM/CCA education. The process follows the cascade model, starting with the training of trainers (ToT), such as school principals and head teachers at the national level. After the completion of training, these educators return to their schools, where they teach the classroom teachers, who in turn teach their students, and through them engage the family and the wider community in DRM/CCA learnings and activities. [5]

b) Government Leaders: The role of government leaders in the development and execution of the regional curricula is indispensable. To begin with, functional integration requires the political will of the regional leaders. [6] Equally importantly, the involvement of political leaders confers sorely needed legitimacy to the whole process.

c) Leaders of the Education Sector: The school principals, head teachers, classroom teachers, and members of school district boards constitute the frontline forces of public education. More significantly, in rural Africa, they usually transcend the confines of their profession. Many of them are community leaders. In addition to their invaluable experience in the education field, their inclusion in the process facilitates consensus building.

d) Representative of National and International Organizations: At any given period, there are many education specialist organizations in every IGAD country. At the international level, the most notable are UNESCO, UNICEF and the International Bureau of Education (IBE). Their tentacles (particularly UNESCO and UNICEF) reach every country in the world, and the region is no exception. They possess knowledge of the education sector and the local idiosyncrasies. Their contribution to the process is also essential.

e) Leaders of the Beneficiary Communities: The involvement of these leaders is the best antidote for paternalism. Before executing curriculum changes, a community-wide inquiry and consultation are necessary. Known as PAR (participatory action research), the process is both revealing and empowering. Leaders of the vulnerable communities possess organic knowledge of their environment; and, given the chance, they can contribute valuable insight into the process.

3.1.3. Material Resources

a) Financial Resources: Disaster riskreduction/management is a resource intensive program. It is even more so when it comes to integrating it in anation's education system. The process involves the empaneling of curriculum experts, political leaders, international organizations, and the school community. The planning, organizing and holding their meeting is logistically expensive. In addition, the cost of the expert services is prohibitively too high for developing countries.

b) Regional Platform: Once the parties settle on the Framework which guides the curriculum development incorporation DRM/CCA, the next step is to create a regional platform for periodic consultations, assessments and revisions. This makes the regional framework a living documents that adjusts to the challenges of the era. Although it must be difficult at times, the regional platform must be shielded from the local politics.

3.2. Good Practices: Country Experiences

The mainstreaming of DRM/CCA in any country is a complex process requiring specialized expertise and resources that most developing countries cannot afford. UNICEF and UNESCO, the two leading international organizations in the education sector, have developed a seminal framework to help these countries articulate the HFA recommendations into their national DRR education policies and programs. The system, as developed by the two organizations, comprises five major, interlinked dimensions

1. Understanding the science and mechanisms of natural disasters;
2. Understanding risk drivers and how hazards can become disasters;
3. Learning and practicing safety measures and procedures;
4. Building community risk reduction capacity; and
5. Building an institutional culture of safety and resilience. [7]

The compliance and the level of alignment with these good practices vary from country to country. Based on a country's specific needs, values and circumstances, there is a difference in the level of mainstreaming (i.e., pre- and primary, the middle, secondary and post-secondary levels), the entry point for mainstreaming, the learning contents (values, skills or academic subjects as themes, topics, or learnings), the carrier subjects, as well as the method of delivery (whether formally, informally or non-formally. The table below illustrates the point.

[5] For the cascade model of training, see: http://www.directions.usp.acfj/collect/direct/index/assoc/D1064942.dir/doc.pdf
[6] For the application of the neo-functionalist theory, see Ernest B. Hass, The Uniting of Europe: Political, social, and Economic Forces (University of Notre Dame Press, 2004).
[7] http://unesdoc.unesco.org/images/0021/002194/219412e.pdf

Country	Entry Point (s)	Mainstreaming Level	Coordinating Authority	Supporting Partners
Turkey	Curriculum	National Well-developed example of a structured interdisciplinary approach to primary level DRR curriculum Thorough and systematic approach to teacher training that led to a reformed primary curriculum with cross cutting DRR dimension	Ministry of National Education	Stakeholders
Philippines	Young people activism for DRR	Regional/Local Letter writing campaign by students led to relocation of schools from high risk landslide area to safer grounds Education of community enhanced	Provincial Department of Education	Stakeholders
Cuba	Curriculum/ Non-formal and formal education	National/Municipal/People's Council/Constituency An example of DRR issues addressed through application of environmental education to the national curriculum	Ministry of Education	UNESCO Community
Armenia	Curriculum	National Teachers trained on DRR Specific lessons on DRR and emergency preparedness integrated to school curriculum and training materials	Ministry of Education	UNESCO Community
Kazakhstan	Non formal curriculum	National Security plan developed for schools and DRR knowledge and skills of children enhanced	Ministry of Education	UNICEF
El-Salvador	Schools, young people and DRR curriculum	National Children represented on community and municipal DRR committees Integration of DRR into school teaching and protection plans	Ministry of Education	Plan International
Ethiopia	Extra-curriculum/ DRR clubs	Regional Awareness raising and advocacy Peer educators	World Vision	Community
Australia	Communication/ Social Media	National Real time accurate trustworthy and timely information on floods relayed to communities, families and friends	Queensland Police Service	Community
Indonesia	Curriculum development and integration	National/Regional/Local Infusing DRR into formal curriculum using a local content curriculum Decentralized curriculum framework allows for locally driven DRR curriculum that are specific to local needs and contents	Ministry of Education	Community
Kenya/Uganda/ South Sudan	DRR livelihoods and Peace building	Regional/National Committees trained on conflict resolution and managing grazing land Installation of boreholes Treatment of animals	National Governments	Community

3.3. Country Assessment Reports

The consultancy team has visited six IGAD member countries to gather baseline data on mainstreaming DRM/CCA in the national education system. This section is constructed from information acquired during these country visits, mainly through structured interviews and consultative meetings with relevant policy makers, educators, community leaders, and specialized international organizations and NGOs. Since the regional states are at different levels of mainstreaming, there is a great opportunity for lateral transfer of knowledge and resource sharing among the IGAD member countries.

3.3.1. Mainstreaming in Djibouti

Djibouti is highly susceptible to a number of disaster risks emanating from a variety of natural and human-made hazards.[8] In a bid to tackle these calamities, Djibouti has taken deliberate steps to mainstream its disaster risk management program in multiple fronts, establishing a DRM/CCA legislation and a programs of action that serve as a basis for mainstream DRM/CCA education/knowledge through the country's education system. The state has promulgated a national policy for DRM, established an institutional framework to guide national interventions, and also developed a National Adaptation Program of Action (NAPA), as well as a national DRM coordination agency, SEGRC. Additionally, The Government of Djibouti has leveraged the support of relevant line ministries, agencies, commission and institutions, including the Djibouti Center for Study and Research (CERD), the Executive Secretariat for DRM, the Ministry of Habitat, Urbanization, Environment and Land Management (MHUEAT), the Meteorology Division of the Airport and the University of Djibouti.

An Education Action Plan is in place to improve the quantity and the quality of education services throughout the country. According to Djibouti's Vision 2035, education is a key pillar predicated on investing in human capital through building a hardworking, healthy and educated workforce. The President of Djibouti decreed compulsory education for six to sixteen years old. Also the nation has an active policy to institute gender parity in the education system. Nomadic families are also encouraged to send their children to school. Upon entry, textbooks are provided to school children and currently each primary school student has at least three textbooks in French, Arabic and Math. The new entrants to primary school are each provided with tablets, whereas Secondary and University students are given laptops to acquire ICT skills. School infrastructure was developed throughout the country with special focus on the rural areas. International partners such as Global Partnership for Education, USAID, UNICEF, the French Development Agency and the World Bank have invested heavily in educational development in Djibouti.

In Djibouti the curriculum review process is normally carried out in ten year interval. Currently the curriculum review process is being undertaken from grade one to nine and the same is expected to be completed by the end of April, 2018. A lot has already been accomplished in terms of infusing various aspects of DRM/CCA and integrating them into the school curriculum. Refugee education program with civil and moral learnings has been developed.[9] The new curriculum containing DRM/CCA has already been validated and is ready pending printing and rolling out. In Science subjects prevalent diseases are taught as part of DRM/CCA lessons. Lessons on WASH, health sciences and disease prevention are given separately and allotted…. DRM/CCA education has also been integrated into the English subjects for grade six to nine curricula. In grades ten, eleven and twelve DRM/CCA lessons have already been introduced and used in schools. CCA is also taught as topics through Geography, History and French

The current curriculum review process is in session. This provides an apt entry point for comprehensive integration of DRM/CCA education, knowledge, learnings, skill or values in the nation's school curriculum. The curriculum developers/authorities may seize the moment. They may use the technical insight captioned in this framework to integrated DRM/CCA in education/school curriculum. The assistance of the international partners, who have substantially invested in Djibouti's education system, such as Global Partnership for Education, USAID, UNICEF, the French Development Agency and the World Bank may contribute to the development of a "disaster proofing curriculum" in Djibouti.

Despite strong national commitment to mainstream DRM/CCA in education/school curriculum, Djibouti faces few challenges. Like other IGAD member states, there is a shortage of DRM trained personnel, who can handle its multiple dimensions. Moreover, there is little or no popular awareness on disaster risks, climate change and social vulnerabilities. Finally, there is a weighty financial burden to train DRM/CCA teachers and school staff, to develop contents, print textbooks, booklets, cards and readings, and to roll them out throughout the country. However, with a political commitment at the highest echelons of power, there is reinvigorated mind-set embracing the mainstreaming of DRM/CCA education in schools and throughout the country.

3.3.2. Mainstreaming in Ethiopia

a) Disaster Risk Management Profile (Major hazards & institutions)

The major disaster risks in Ethiopia are identified as droughts and floods posing a threat to several thousands of people in the country. Ethiopia is one of the most disaster-prone countries in the world. It is not a coincidence, therefore, that the nation has DRM/CCA policy, legislation, and institutions. In this country, DRM/CCA is treated as a cross-cutting issue.

[8] The natural hazards include recurrent droughts, flash floods, earthquakes, volcanic eruptions, and wild fires. The most common human-made disasters are social conflicts, inter-state wars, and politically motivated insurgencies.

[9] In Ali Adde and Holhol, Djibouti hosts refugees from Somalia, Ethiopia and Eritrea.

Accordingly, all relevant line ministries, specialized institutions, universities, the Office of Prime Minister, even the armed forces are involved. The Ethiopian National Disaster Risk Management (NDRMC) coordinates the activities of all these institutions. The NDRMC) is the lead institution for the Disaster risk management activities and programs in the country. Ethiopia has a national disaster risk management policy which is a comprehensive document highlighting the key strategies and priorities in disaster risk management in the country. The document details the key principles, policy directions, organizational structures and operational modalities towards addressing the agenda of disaster risks reduction in the country.

b) Progress on Mainstreaming DRM/CCA in education/school curricula

The Ministry of Environment, Forest and Climate Change has developed the National Climate Change Adaptation Plan. From this Plan was developed the Framework for mainstreaming DRM/CCA in Ethiopia. In terms of mainstreaming DRM/CCA through the country's education system, the Ministry of Education (MoE) takes the lead in the implementation process. However, other relevant line ministries, institutions and international organizations, as well as Non-governmental organizations (NGOs), can initiate the mainstreaming process, and contribute resources, information and technical knowledge. However, the whole DRM/CCA process is coordinated by the National Disaster Risk Management Commission (NDRMC).

In another major front, the Commission has also finalized a national framework for mainstreaming DRM in the development planning process and in other sectors including education. The framework identifies key institutional structures and stakeholders for the mainstreaming DRM in the development planning process and in key sectors of the state. In this framework, the NDRMC has a focal person in all relevant line ministries, agencies and specialized Non-governmental organization, who is mandated to activate the DRR response in their host institutions.

The Ministry of Education has also 'education in emergency' platform which is meant to identify and report on disasters that can hamper the normal undertaking of the teaching and learning process. The platform was supported by different partners including UNICEF. On the other hand, the MEFCC has initiated the process of mainstreaming Climate Change Adaptation (CCA) into the national curriculum and has approached Ministry of Education and proposed contents which have been under review before it is finally endorsed.

During the visit to several institutions including Ministry of Education (MoE), Ministry of Environment, Forest and Climate Change (MEFCC), Addis Ababa Education Bureau, it was clear that efforts of mainstreaming can be initiated by any governmental institution, as well as Non-governmental organizations (NGOs). One of the woks of mainstreaming DRM in to school curriculum was undertaken by a joint efforts of World Vision Ethiopia and Addis Ababa Education Bureau. The joint venture was successful to mainstream DRM into the school curriculum in some selected schools in Addis Ababa city which can be up-scaled to regional and national levels.The publication from this collaboration emphasizes the importance of teaching children at young age, including out of school ones, about disasters and associated risk for a successful and sustainable disaster risk reduction program. [10]

c) Identifying Key Entry Points for Mainstreaming

The woreda is one of the key entry points for mainstreaming DRM/CCA in Ethiopia. The process starts with the woreda compiling, storing and distributing local risk profile. With almost 116 indicators, the risk profile deals with all relevant local sectors. It is created with the help of over 400 focus groups from each woreda. In the process of creating these profiles, the focus groups are educated in the nature of local disasters and associated risks, and are, at the same time, sensitized to the existing social vulnerabilities. This knowledge is passed on to the regional and national authorities. Once the woreda reports an ensuing disaster (or an impending one), the DRM/CCA actors at the higher levels spring to action, availing themselves of its risk profile. Based on this information, they mobilize line ministries, sectoral relevant institutions, international and national NGOs. Mainstreaming is therefore realized in the mobilization of this large number of people, including the NDRMC, the Woreda functionaries, local focus groups, and data analysist, international organizations, and NGOs, who are all proficient in DRM/CCA knowledge and skills.

d) Challenges and Opportunities

In mainstreaming DRM and CCA in school curriculum there are several challenges identified by the different offices that we have visited and almost all of them agrees on one common problem--weak collaboration across sector and line ministries. This has hampered synergies and working towards an integrated and effective disaster risk reduction. To tackle the problem, the interviewees suggested the following remedies:

1. Legal framework on DRM/CCCA for IGAD;
2. Creation of a regional platform to exchange knowledge and pertinent information;
3. Networking opportunities;

[10] https://europa.eu/capacity4dev/resilience_ethiopia/document/towards-building-culture-disaster-resilience-early-age-2013-world-vision-international-earo

4. Decentralization of resources;

5. Capacity building for DRM/CCAA personnel in member countries; and

6. Decentralization of the early warning system.

The recent framework developed by NDRMC provides a perfect opportunity (once successfully implemented) for mainstreaming and also decentralizing the major tasks of disaster risk assessment, monitoring and early warning to the line ministries with the central coordination of the NDRMC. In addition, this regional framework being developed by IGAD can also be taken as an input to further refine the process of mainstreaming DRM and CCA is school curriculum in member countries.

3.3.3. Mainstreaming in Kenya

a) Disaster Risk Management Profile (Major hazards &institutions)

Over the years, Kenya has been exposed to a variety of disasters such as recurrent droughts, floods, pest, fires, landslides, earthquakes, volcanic eruptions, industrial accidents, inter-ethnic conflicts, terrorism and HIV/AIDS. In order to reduce the recurrence of these disasters whose frequency and intensity have increased, the government has developed a National Disaster Management Policy (NDMA final draft 2010) which is awaiting approval. The overall coordination of DRM in the country is through the Ministry of Interior and Coordination of National Government under the Office of the President which has structures cascading to the grassroots level. Through these administrative structures DRM committees are found from the national, sub-national to the local levels where awareness to hazards is being coordinated.

b) Progress on Mainstreaming DRM/CCA in education/school curricula

Kenya has a well-developed DRM/CCA infrastructure. Virtually all sectoral relevant ministries and institutions have a specialized DRM/CCA offices. In terms of mainstreaming DRM/CCA through education/school curriculum, the country has made significant strides. In the education sector coordination of DRM is done through the National Education Working Group (NEWG), which is replicated at the county level as the County Education Working Group (CYEWG) and at the school district level as the School Education Committee (SEC).

In this country, the Kenya Institute of Curriculum Development (KICD) is responsible for setting the vision and guidelines for the nation's education system. The issue of DRM/CCA is included in the Basic Education Curriculum Framework, which serves as a guideline for curriculum

The Framework requires the auditing of the curriculum for societal needs, values and skills before making any curriculum changes. These is ascertained by national survey and a desk review of the existing curriculum. In the last survey (2016), parents and other stakeholders emphasized the need to teach children necessary values and skills to manage hazardous situations, limit their vulnerabilities, and survive.

In Kenya, DRM/CCA is considered as a pertinent and contemporary issue (PCI). These are recurrent hazards that require immediate attention, such as HIV-Aids, cholera, jaeger, etc. Given their predictability, they are fast tracked into the new school curriculum. After the national survey, the Institute has empaneled technical experts to develop a matrix showing the link between these topics, the contents, the delivery mechanism, and the appropriate grade level. Before proposing changes, the Panels sat with the curriculum designers, parents, teachers and other stakeholders to

1. Sketch out the themes, topics and learnings;

2. Develop the contents of the learning areas;

3. Identify the suitable carrier subjects; and

4. Propose an appropriate delivery mechanism, i.e., formally, informally or non-formally

In the education matrix, DRM/CCA is placed under the broad area, Education for Sustainable Development--part of the National Sustainable Development Goals (SDGs). Under this heading it is treated as a new learning area emphasizing socially prized values and skills. It is thematically taught in Weather and Environmental Education. These two subjects are the best host for DRR learning areas. English is another suitable carrier subject for DRR. Through essays and comprehension, one can teach the whole gamut of DRM/CCA—i.e., predication, preparedness, survival, recovery, reconstruction and rehabilitation.

The new curriculum in Kenya is founded on societal needs and values. At the core of all learning areas are eight values—i.e., respect, peace, love, unity, patriotism, integrity, social justices and responsibility. These are taught in a culturally appropriate manner throughout the country. In the classroom, the instruction can be formal, informal and non-formal across all learning areas, as well as all school grades. However, the complexity of the learning area increases in spiral fashion as one moves up the grade levels. For instance in the Early Years of Education (pre-K to grade 3), children are taught under Learning Activities Area, which consist of four interconnected themes:

a) How to be safe at school;

b) How to be safe at home;

c) How to be safe from home;

d) How to be safe from school.

In Middle School Education, comprising Upper Primary (grades 4, 5, 6) and Lower Secondary (7, 8, 9), students are required to conduct disaster mapping in the four areas above. In addition, they are required to identify other dangerous things that can cause disasters, such as matches, switches, wild animals, cracks in the toilet, rivers, etc. From this point on, they are asked to come up with disaster risk reduction activities. In the case of drought, students are asked to plant trees in school compounds and outside.

In mainstreaming DRM/CCA in the education sector, Kenya Institute of Curriculum Development (KICD) has developed a primary school curriculum for DRM/CCA. Some of the activities accomplished include:

a) The development of School Manuals on infrastructural development to ensure safety;

b) A Teachers Resource Manual to support teachers in delivery of DRM contents in schools;

c) A pupils Resource books for class one, two and three containing pertinent and contemporary issues on DRM/CCA

The materials have been published and are ready to be rolled out in the schools. The other remaining textbooks, booklets, readings and cards are in the pipeline. The Institute has adopted a fit-for-purpose education. This is a value, skill-based, holistic type of education.

At the moment KICD has embarked on a countrywide dialogue with the various communities on the quality of education, and in order to monitor the success of the piloting of the new curriculum. This augurs well for the mainstreaming of DRM/CCA and its full integration in the national education system.

c) Challenges and Opportunities

Despite the strenuous efforts in mainstreaming DRM/CCA in school curriculum, there are myriad challenges encountered. Key among them being the haphazard and weak coordination, interventions and lack of cooperation among line ministries and NGOs, who seem oblivious to building synergies towards achieving the DRM agenda. Lack of capacity and inadequate financing also affect DRM/CCA mainstreaming in school curriculum. To overcome these challenges an Education Sector Disaster Management Policy has been developed and offers an apt opportunity for mainstreaming and also devolving the major activities of disaster risk assessments, monitoring and early warning to the field offices with the overall coordination vested at the headquarter. Further there is optimism that the anticipated regional framework being developed by IGAD will infuse new energy to the national effort to mainstream DRM/CCA at the national level, and resolutely entrench the mainstreaming of DRM/CCA in school curriculum in the country.

3.3.4. Mainstreaming in the Sudan

The Republic of the Sudan, like the other regional states, suffers from a number of recurrent natural and human made disasters. The country's disaster risk profile lists floods, droughts, epidemics, pests and conflicts. Some of the exacerbating factors include landmines, food insecurity, poverty, and a large number of IDPs caused by violent social disruptions. These calamities disproportionately affect the most vulnerable section of society, particularly women, children and the elderly populations. Due to this fact, the Sudan has one of the most expansive DRM/CCA policies, legislation, plans and programs of action, as well as the relevant institutions to implement them.

In the Sudan, mainstreaming DRM/CCA is inclusive of both the hardware and software aspects.

a) Safe Schools Program in the Sudan

The Republic of the Sudan is in compliance of the safe school program as stipulated by the international regimes and global good practices. A safe school is structurally disaster resilient, has emergency exists, fire resistant (or has fire extinguishers), first aid kits, stable electricity, non-perishable food reserves, and WASH facilities. [11] The Sudan, in cooperation with the African Development Bank (AfDB), has constructed disaster proof schools and infrastructures in several states. The country is also in the process of retrofitting old schools to make them safe school program compliant.

b) Mainstreaming DRM/CCA through Institutions in the Sudan

The Government of the Sudan treats disaster risk as a cross-cutting issue, and is addressing it in all its phases and manifestations. In this country, DRM/CCA is mainstreamed in public and private sectors as specialized actors. Private corporations, sectoral relevant line ministers, specialized institutions, agencies and commissions are required by law (and as a matter of policy) to raise the proficiency of their employees (and by extension their communities) in the nature and science of recurrent calamities.

In the education sector, the process of mainstreaming DRM/CCA through education is needs driven. Before any action is taken to review the curriculum, the National Center for Curricula and Educational Research (NCCR), in collaboration with the Ministry of Education (MoE) and international partners, conducts Needs Assessment, holds consultative meetings, workshops, and seminars to evaluate the merit of the changes in consideration. Some of the factors that may necessitate curriculum review include:

- To fill the gap of skills needed by the labor force;
- To make the curriculum more relevant to students and social needs;

[11] Some UN agencies assisted the Sudan to make their schools WASH compliant, including those in remote areas.

- To address new challenges (drugs, DRR, unemployment, poverty, and climate changes);
- To enhance the efficiency of the education system.[12]

In its drive to mainstream DRM/CCA through education, the country has introduced two new curricula for Basic Education through grade six. DRM/CCA is mainstreamed in these curricula by emphasizing on safety measures and traffic education. Both Basic Education curricula focus on the necessary knowledge, values, skills and attitudes to:

- Understand and participate in prevention measures and activities;
- Deal with risks facing them at home and school street;
- Increase student knowledge and skills to contribute positively in preparedness and prevention activities at local communities; and
- Contribute positively in protecting the property. [13]

The contents of the Basic Education curricula comprises two three types of safety education, general safety education, traffic safety education, and mines and explosives education. Each one of these has four main units:

General Safety

- Unit One: Safety at home;
- Unit Two: Safety out of home;
- Unit Three: Negative behavior that threaten our safety; and
- Unit Four: Participate with Community.

Traffic Safety

- Raise children's awareness to use the roads in a proper way;
- Train them to contribute in reducing traffic accidents;
- Contribute in reducing the impacts of traffic accidents; and
- Contribute in raising the community awareness.

Mine and Explosive Education

Mine and explosives education is integrated in the Basic and Secondary Schools curricula. The learning material includes safety messages about the existence of a threat from explosive devices in the environment, particularly in conflict zones. Children are taught:

- The impacts of explosives;
- The types of explosive, landmines, unexploded shells, and other remnants of war;
- To develop capacities to manage the risks from unexploded ordinances; and
- How to teach their families and, by extension, their communities.

The NCCR has published textbooks, activities books, and teachers' guide for general safety and traffic education, and mine and explosive device risks. These educational materials were rolled out in 2008, and are current in use in the classroom.

c) Mainstreaming through Education in Emergency

DRM/CCA education is also mainstreamed in the Sudan's Education in Emergency Program. For this the MoE has launched a compressed school curriculum (a sort of crash program) that reduces learning period from eight to four years. It is reasoned that the probability of the recurrence of conflict is greater in eight year than four years. This compressed curriculum is, therefore, meant to ensure continuity of learning in conflict ridden environments.

d) Entry Point for Mainstreaming

The entry point for mainstreaming DRM/CCA education in the national school curriculum is the Needs Assessment activity periodically conducted by the NCCR. The latter may be motioned either by their own professional assessment, by government instruction (say MoE), or by interested international partners, such as UNICCO, UNICEF, UNIDO, IGAD, etc.

e) Contexts and Constraints in the Sudan

In the Republic of the Sudan, mainstreaming DRM/CCA in education/school curricula is a national priority. The number of policies, legislations and programs of action—not to mention the number of public and private institutions leveraged—attest to this fact. Despite all these efforts, there is a gap between where the program is currently at and where it needs to be at this stage. Some of the shortcomings are common in the region:

- Shortage of DRM/CCA trained teachers;
- Limited fund/resources to develop the contents, print textbooks, booklets, cards and readings and roll them out throughout the country; and
- Effective coordination of all the DRM/CCA programs in the country

[12] Presentation by Dr. Mubarak Yousif and Hafsa Ahmed at the Consultative Meeting held on 28-29 November, 2017, Nairobi, Kenya.
[13] Presentation by Dr. Mubarak Yousif and Hafsa Ahmed at the Consultative Meeting held on 28-29 November, 2017, Nairobi, Kenya.

3.3.5. Mainstreaming in the United Republic of Tanzania

In the United Republic of Tanzania, the Commissioner of Education is the Chief Academic Officer. His office is located within the Ministry of Education (MoE). The Commissioner is responsible for up to the A-Level Secondary Education as well as the Education Colleges and Programs. In this capacity, he instructs the Tanzania Institute of Education (TIE), and supervises the curriculum review process.

The current curriculum is competence-based. Before implementation, the Institute pilots new subjects in relevant disciplines. Both the contents and teacher guidelines are piloted first. Presently, there are five carrier disciplines for DRM/CCA with learning competences. These are Environmental Conservation, Geography, Social Studies, Science and Technology, and Civic and Moral Education. These have subjects within which to study DRM/CCA. In these subjects, DRM/CCA is taught as a competence thematically or as a topic. Geography syllabus already has topics such as Water Management and River Basin Management. Competence in Science and Technology entails knowledge in the status of the environment. Students are tested in these DRM/CCA competences.

a) Entry Point for Mainstreaming DRM/CCA

The initiative to integrate DRM/CCA in the school curriculum is triggered by public demand. Before action is taken, it is important to know what cross-cutting issues have been proposed by the school community. The main stakeholders are school communities, teachers, academicians, NGOs, colleges of education, consultants, etc. Before any curriculum review is undertaken, the Tanzania Institute of Education (TIE) first conducts Needs Assessment. This includes content development, delivery method, workshops, etc. Based on the finding, the Institute carries out policy and curriculum review. It is at this stage that DRM/CCA can be integrated into the school curriculum. The main aim, though, is to improve the existing curriculum, not to develop a new one.

The Institute's international partners, such as UNESCO, ILO, Aga Khan, DfID, USAID, UNICEF, RRT, etc. lend resources and expertise to the process. They helped develop Teacher's Education Manual and story books on DRM/CCA. Education in Emergency is in the manual, though not yet approved. UNICEF, which is the interested party runs the Program.

The organization works with the Ministry of Education, Office of the Prime Minister and the PO-RALC. They also train education officers to train the school population and the community at large. Under the umbrella of District Education Plan, UNICEF teaches head teachers, village executives, vice directors and vice chairpersons.

In each region, the organization operates clubs for Education in Emergencies. At the school level, UNICEF trains the school population on how to prepare and respond to disasters. They use simulation and drills in emergencies.

b) Mainstreaming DRM/CCA in Tanzania

Since DRM is a cross-cutting issue, mainstreaming it is done at multiple levels and platforms. Because it is a cross-cutting issue, it is multi-sectoral, touching on environment, health, infrastructure, education, agriculture, the economy, etc. This means all sectoral relevant line ministries, Office of the Prime Minister (OPM), specialized public institutions, agencies and commissions are exposed to it. In addition, international organizations, like UNESCO, UNICEF, Save the Children, ILO, Aga Khan, DfID, USAID, RRT, World Bank, World Vision International, Plan International, etc. are also involved in mainstreaming DRM/CCA in Tanzania. Given the many DRM/CCA specialized organizations and public institutions, mainstreaming in this country occurs at many levels and in different sectors.

Presently, DRM/CCA is not integrated into the school curriculum as a subject, but is taught as a competence within certain disciplines. Despite this shortcoming, DRM/CCA is taught as a theme or as a topic in Basic Education, from Pre- to Primary and Lower Secondary education, which takes 11 years. This means, from an early age, children are given a dose of DRM/CCA education. With a spiral curriculum, the depth and scope of these competences increase along with the children's age and grade levels.

In Tanzania, DRM/CCA is usually taught as a competence within a discipline. In Pre- and Primary Education Kiswahili is used as a carrier subject. Each grade has a textbook. DRM/CCA is in the textbook. The Tanzania Institute of Education is responsible for the development of these textbooks. These competences, whether as a theme or as a topic, are examined throughout the year. They are also examined in the National Examination in Standards 4 and 7. However, no evaluation of children's competence level is done, though this is supposed to happen.

c) Contexts and Constraints

The United Republic of Tanzania has many institutions and organization working in the education sector. Although each actor is making commendable contribution in its chosen field, there is little cooperation among them. Since DRM/CCA is a cross-cutting issue, each institution or organization must have a focal person to report to the National Disaster Risk Management Commission (NDRMC). For the system to work effectively, a legislation to compel cooperation (as happens in Ethiopia) may be needed.

In addition, in Tanzania, there is a glaring shortage of:

- DRM/CCA educated personnel to teach in all schools;
- Financial resources to training new teachers and retool old ones to teach, not only DRM/CCA, but also culturally sensitive subjects, like HIV-AIDS;
- Lack of technical experts to develop the contents of DRM/CCA textbooks, booklets, cards and readings;
- Funds for publishing and rolling out these educational materials;
- Public awareness and leadership support.

3.3.6. Mainstreaming in Uganda

In Uganda, like in many other IGAD countries, disasters frequently disrupt the tempo of economic and social development. Natural and human made disasters repeatedly strike this country. [14] To address the problem, the nation has adopted a multi-sectoral approach. The Government of Uganda treats disaster risks as a cross-cutting issue invariably affecting all public and private sectors in the economy and society. Based on this understanding, Kampala has mobilized all relevant line ministers, specialized agencies, commissions, international organizations, and NGOs, and embedded them with the requisite policies, legislations, strategies, and programs of action, which are aligned with the latest international regimes and good practices around the globe. Disaster risks, emanating from human conflict or climate changes, is addressed in multi-track fronts.

The Office of the Prime Minister (OPM) is the highest coordinating unit of all aspects of DRM/CCA activities in Uganda. The Disaster Risk Management Commission (DRMC), which operates under the OPM, serves as clearing house and for streamlining information coming from all relevant actors and local DRM/CCA institutions. The OPM is assisted by Inter-Agency Technical Committee (IATC) to line up the sectoral relevant ministries, specialized institutions, private organizations and international organizations and NGOs to address both potential and actual disaster risks. IATC ensures that these teams are trained regularly and are prepared to act in tandem during disaster emergencies.

Uganda's DRM/CCA education benefits from the United Nation's Education for Sustainable Development, which was launched in 2004. The country's National Policy for Disaster Preparedness and Management (NPDPM), emphasizes the role of education in disaster risk reduction. The Program aims to enhance social capacity in disaster risk management, climate change adaptation, poverty reduction, and the preservation of biodiversity. This lifesaving knowledge is mainstreamed through schools and communities by a combination of formal, informal and non-formal teaching techniques.

The quest to mainstream DRM/CCA through education spurred awareness at different national and international levels. In relation to mainstreaming and teaching DRM/CCA in schools, two key strategies are adopted: a) Supporting the on-going efforts to integrate DRM/CCA learnings in the school curricula from the primary to the tertiary level; and b) Assessing the impacts of DRM/CCA education among different institutions and communities at national, sub-national and local levels. These strategies ensure the establishment of and sustainability of the mainstreaming program in the country. In this country, DRM/CCA is not treated as a fleeting episode, but as a recurrent issue that must be included in the national development planning.

In Uganda, Mainstreaming occurs in three stages:

a) First it occurs at national institutions, such as the sectoral relevant line ministries, specialized institutions, such as the Curriculum Development Center, the Center for Education Standards, Department of Climate Change and Meteorology, Conflict Disaster Management Commission, and the Office of the Prime Minister. The vast resources and personnel of these institutions are mobilized to help mainstream DRM/CCA in all aspects of national development planning, including the education system.

b) Second, DRM/CCA is mainstreamed at the international fora, where it is treated as a fact of life that must be factored into the national development plan. Uganda is in the forefront in aligning with the Hyogo Framework and the Sendai Framework for Disaster Risk Reduction. The number of international organizations that assist in this regard include the UN CC: Learn Partners, the United Nations Institute for Training and Research (serving as its Secretariat), the Government of Switzerland, and the Royal Danish Embassy, UNESCO, UNICEF and OPEIC (Organization to Protect Education in Insecurity and Conflict) UNISDR, Save the Children, and Danish Church Aid. This multi-partner, multi-sectoral approach makes Uganda's mainstreaming approach one to emulate in the region.

c) Finally, in Uganda DRM/CCA is mainstreamed through Education in Emergency. Aptly called Conflict and Disaster Risk Management (CDRM), the country's program deals with both natural and human made disasters. Due to its wider scope, the country's CDRM program also applies to refuge education. [15] The refugee school curriculum is predominantly Education in Emergency. The schools in these camps, as well as some in the Northern regions, where inter-ethnic conflict recurs, and where Joseph Kony's outlawed militia, the Lord's Resistance Army, operates, teach young children the critical values and skills necessary for peaceful coexistence, as well as how to manage (or altogether) avert conflict in the school and community. This is one of the many ways Uganda is mainstreaming CDRM knowledge, values and skills through education.

[14] *Some of the natural disasters that strike Uganda are draughts, flash floods, earthquakes, landslides, wildfires, epidemic diseases, while those human made are influx of refugees, inter-ethnic conflicts, politically motivated rebellions and insurgencies.*

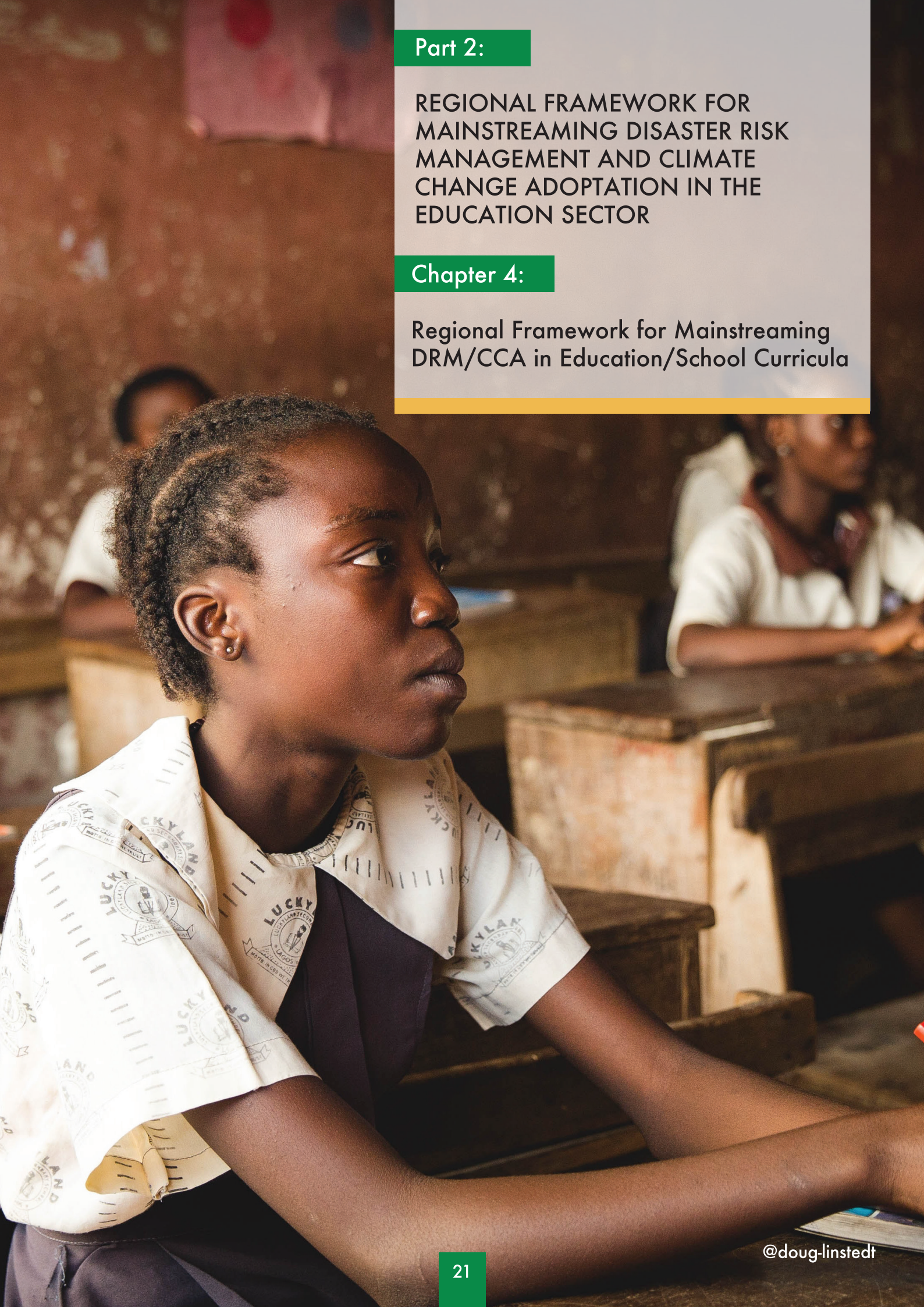
[15] *Uganda hosts refugees from Burundi and South Sudan.*

The total effect of Education for Sustainable Development in mainstreaming DRM/CCA in Uganda is hard to asses. However, it is clear though that it has raised awareness of DRM/CCA at different government ministries, specialized institutions, international organization and NGOs. Obviously, this awareness raising has paved the way for mainstreaming DRM/CCA education in the national curriculum. It is, for instance, documented that in 2012 UNISDR, in partnership with the Ministry of Education, National Curriculum Development Centre and Danish Church Aid, have supported DRM/CCA curriculum development for lower secondary pupils, aged 13-17. The Governing Council of Uganda, the National Curriculum Development Centre (NCDC), and the Ministry of Education and Sports, have also approved two Climate Change Readers for use in primary schools nationally. The curriculum developed with the support of UNESCO, UNICEF and OPEIC (Organization to Protect Education in Insecurity and Conflict) also addresses the risk of conflict and disaster on education, as well as the role of CDRM education to ameliorate the situation.

a) Contexts and Constraints

The Ministry of Disaster Management Preparedness under the Office of the Prime Minister and the Ministry of Water and Environment are committed to translating DRM/CCA policies into practical curriculum development project. In this regard, Uganda has made great strides in mainstreaming DRM/CCA in the national education system. Despite these commendable successes, Uganda's DRM/CCA program lacks sufficient funding. Therefore, teacher's training and curriculum development are not carried out. Teacher's manual, textbooks, booklets, cards and reading are not published in sufficient numbers, and those that are published are not yet rolled out.

Moreover, there is a lack of strong national coordination mechanism for DRM/CCA education throughout the country. Most of the activities are located in urban areas, where there are skilled workforce, stable electricity and modern life amenities. National universities are only focused on development of their teaching and research activities without translating it into actionable DRM/CCA agenda that shields the national development plan from disaster risks



Part 2:

REGIONAL FRAMEWORK FOR MAINSTREAMING DISASTER RISK MANAGEMENT AND CLIMATE CHANGE ADOPTATION IN THE EDUCATION SECTOR

Chapter 4:

Regional Framework for Mainstreaming DRM/CCA in Education/School Curricula

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4.1. Guiding Principles of the Framework

This regional framework on mainstreaming disaster risk management and climate change adaptation is in line with the growing international recognition of the critical role public education should play to promote a culture of DRM/CCA-a culture of safety and resilience building. The mainstreaming of DRM/CCA education—i.e., as subjects, themes, or topics within an existing subject--in the IGAD member countries school curricula is, therefore, the primary aim of this framework.
As it relates to the objective of the project, the new regional framework/guideline for mainstreaming DRM/CCA in the schools curricula needs to be:

- Purpose-driven (i.e., skills and values that the community prizes);
- Contextually appropriate (i.e., culture, language, occupation, and the physical environment;
- Cost-effective (i.e., mainstreaming DRM/CCA in the school curricula must not be cost-prohibitive); and
- Ingrain socially transferrable DRM/CCA skills and values.

These principles, as will be shown below, are all rooted in the local reality. Although the impact of these disasters is felt across the region, the solution is neither instantaneous, nor cost-free, nor a one-size-fit-all proposition. Rather, it is a long-term exercise, culture sensitive and resources intensive undertaking. [16]

IGAD is a regional organization and as such it does not operate at national or sub-national levels. In the absence of a regional framework to impel common action, they resort to "implementation by proxy." Therefore, the quest to have a regional framework on mainstreaming DRM/CCA through education/school curricula is a priority and entrusted with the member states/countries.

The IGAD member states are fully committed to the implementation of the global initiative to mainstream Disaster Risk Management and Climate Change Adaptation (DRM/CCA) through education/school curricula. However, the states in the region have attained different levels of progress toward mainstreaming DRM/CCA through education. Three main factors account for this variation:

Institutional Structure

Each country has several DRM/CCA offices and institutions. These are spread throughout the country--down to the local levels. In most of the IGAD countries, there is no central office/unit to coordinate the activities of these offices and institutions. Worse yet, some countries have yet to enact a unifying legislation, policy or program of action.

Technical Capacity

The DRM/CCA offices and institution of the IGAD member states/countries have a low institutional capacity. Much of this is due to lack of resources. The training of trainers (ToT), awareness raising, the development of DRM/CCA literature, printing of textbooks, booklets, readings, DRM/CCA cards are resource intensive requiring substantial technical and financial investment. And without these essential products, there is no capacity to speak of. In some cases, the countries in the region reach out to international organizations for technical and financial support. Some of the partners that are responsive to these requests include UNESCO, UNICEF, UNDP, Save the Children, and World Vision International. Unfortunately, none of these organizations has offered any country adequate financial and technical support.

Political Commitment

Virtually all IGAD countries are committed to the implementation of the international regimes, especially the Hyogo Framework for Action (HFA) and Sendai Framework and current global good practices. However, in some cases, the process is hampered by turf wars between leading officers of DRM/CCA offices and institutions. There is a discernable lack of will or commitment on the part of the national leaders to supervise the process, assign clear roles and responsibilities, and loosen up the process. This is why the mainstreaming program in the region is lagging behind other regions of the world.

The purpose of developing this regional framework is, thus, to build up on and accelerate the efforts of the member states in streamlining their approaches and ensure coherence and coordination at a regional level. By so doing the frameworks is believed to facilitate cross fertilization of good practices and mutual learning among member states.

4.2. Components of the Framework

The regional framework for mainstreaming disaster risk management and climate change adaptation in education/school curricula comprises the following four main parts:

1. Key Priority Areas for Action: This refers to the core pillars that are required for a successful mainstreaming DRM and CCA in to education/school curricula. There are three key priority areas for action that are framed as pillars to the mainstreaming process. These are:

- Understanding Disaster Risk Management and Climate Change Adaptation through Education;
- Mainstreaming Safe Schools; and
- Governance and Institutional Mechanisms for Disaster Risk Management

[16] See principle # 6 of Yokohama Strategy and Plan of Action for a Safer World: http://www.preventionweb.net/files/8241_doc6841contenido1.pdf

2. Strategic Goals: This are the general goals identified to achieve the Key Priority areas for action.

3. Indicators: This is a specific target which measures key objective that is required to achieve the goal.

4. Key Activities: This section lists the main activities that are instrumental in achieving the goals as measured by the indicators.

These topics are all derived from the current mainstreaming literature and empirical experiences around the globe on disaster risk management and climate change adaption. Taken together, they build up into this framework.

Key Priority Area-1:

Understanding Disaster Risk Management And Climate Change Adaption In Education

This framework addresses both natural and human made disasters that strike the IGAD region. In this framework, the word "disaster" is defined as an extraordinary event with varying degrees of severity that disrupts the ordinary rhythm of life in a community [17] *The aim of this framework is to guide the regional effort to reduce the impact of these hazards on the socio-economic and spatial aspects of life. To achieve this goal, we need to take the following steps:*

- *We must understand the nature and science of both actual and potential disasters, as well as the necessary activities to abate their impacts;*
- *We must be able to predict, prepare for, and survive the onset of any disaster, especially recurrent and slow onset ones;*
- *We must learn from previous experiences and global good practices; and*
- *Establish a robust response and recovery mechanisms to restore the socio-economic and socio-ecological balance that sustain the affected community's way of life.*

To operationalize the mainstreaming aspect of this project, we have identified three key priority areas for action and have established several composite indicators and activities for constructing the framework.

Compliance with the International Regimes and Adopting Good Practices

Preface

"Promote the inclusion of disaster risk reduction knowledge in relevant sections of school curricula at all levels and the use of other formal and informal channels to reach youth and children with information; promote the integration of disaster risk reduction as an intrinsic element of the United Nations Decade of Education for Sustainable Development (2005-2015)."

Hyogo Framework for Action (HFA)

At the core of HFA is value and skill-based education/knowledge. In Activity 2, HFA authoritatively advocate the mainstreaming of DRM knowledge through schools: "Promote the inclusion of disaster risk reduction knowledge in relevant sections of school curricula at all levels and the use of other formal and informal channels to reach youth and children with information; promote the integration of disaster risk reduction as an intrinsic element of the United Nations Decade of Education for Sustainable Development (2005-2015)."

Compliance with the current international regimes entails reforming the school curricula to make space for the mainstreaming of DRM/CCA subjects, themes, topics and learning areas. These regimes emphasize the importance of value and skill-based education that the community prizes. Unlike the traditional education, whereby "students are drilled to produce perfect answers to potential question…," often far removed from their lived experience, value and skill-based education is derived from needs of the community. Rooted in the local reality, this type of education problematizes the local condition. Students are taught pertinent values and skills to solve every day problems in their schools and communities. This type of education liberates society from the grip of "culture of inaction," as it simultaneously stimulates a "culture of safety and social resilience." From this problem solving perspective, the regional curricula are deficient.

Compliance with the Hyogo Framework's value and skill-based education requires at least five strategic goals:

1. Integrating DRM/CCA study modules into the school curriculum;
2. Developing the capacity of teachers in DRM/CCA;
3. Developing, publishing and rolling out of DRM/CCA textbooks, booklets, readings, cards, as well as teaching manuals;
4. Constructing schools that are structurally resilient to disasters; and
5. Adding new emergency facilities to existing schools, such as water, first aid kits, fire extinguishers, food banks, etc.

Strategic Goal 1.1:

DRM Curriculum: Conducting Needs Assessment

Establishing a modern curriculum that is responsive to the needs and values of the community. The curriculum design process starts with a needs assessment that ascertains the values, skills and competencies that the local school community prizes.

[17] Words like hazards and calamities are used interchangeably with disasters

Core Indicator 1.1.1: Conduct a Needs Assessment Study to Ascertain Local School Community Needs

In the design of the new curriculum, the needs and values of the local school community predominate the process. In terms of DRM/CCA education/knowledge, the input of the community is sifted through a needs assessment and incorporated in the school curriculum.

Key Activities

Needs assessment is the first step in the process to develop a modern curriculum. Its main aim is to ascertain the values, skills and competencies that the local school community prizes. To do so, the needs assessment study, must:

a) Align with the laws and policies of the country;

b) Ascertain the educational expectation of the local school community;

c) Serve as a guideline for the national education policy; and

d) Update and enrich the contents of the school curriculum.

Strategic Goal 1.2:

Raising Public awareness for mainstreaming DRM/CCA in Education/School cirricula

Raising a robust and stable grassroots awareness in favor of mainstreaming DRM/CCA in education/school curricula in the IGAD region.

Core Indicator 1.2.1: Developing and implementing strategies, policies and programs to raise public awareness for mainstreaming DRM/CCA

Awareness raising strategies, policies and programs for mainstreaming DRM/CCA through education exist at national, regional and local levels in every IGAD member country. Public awareness campaigns are carried out to prepare the public mind for the integration of DRM in the region's school curricula.

In the IGAD region, certain initiatives to raise public awareness for DRR have existed quite some time. Most countries in the region have a good communication infrastructure to reach the public. For instance, radio, television, internet, and print media are available in every country. In the IGAD region, both the governments and NGOs, using mainly radios and television, carry out various public awareness campaigns. In Tanzania alone, there over forty community radios that publicize different hazards, including newly emerging ones.

Despite the availability of these communication outlets, as well as the immense national and international interest to publicize the mainstreaming of DRM through education, the regional states have yet to roll out public awareness campaigns for mainstreaming DRM into the school curricula.

Key Activities

In the IGAD member countries, there is a clear need to raise public awareness for mainstreaming DRM/CCA through education. To publicize the issue far and wide in the region, the following activities are necessary:

a) Develop and implement policies, strategies and programs that are specifically designed to raise grassroots awareness in favor of mainstreaming DRM/CCA through education;

b) Clearly articulate the direct link between mainstreaming DRM education and instigating a culture of safety/action at the national, regional and local levels;

c) Employ the mass media, use traditional tools, such as poetry, songs, dances, plays, etc. to publicize the efficacy of mainstreaming DRM/CCA through education;

d) Establish mechanisms to package the DRM information to have the necessary impact; and

e) Create a coordination system that facilitates information sharing

Strategic Goal 1.3:

Designing a Curriculum that is based on the Needs of the Local School Community

Curriculum design, as a process needs to take in to consideration all the relevant aspects and a modern curriculum that is based on the needs and values of society; one that mainstreams DRM as a "common core" learning goal, and spirals in depth and breadth in correspondence to the age and grade level of the student. The contents also needs to be context specific and with appropriate scoping and sequencing. All structural and instructional aspects of the curriculum needs to be considered during the design.

Core Indicator 1.3.1: DRM is taught as a "common core" learning goal with spiralling depth and breadth

A needs-based curriculum with DRM as a "common core" that escalates in terms of depth and breadth with the age and grade levels of the learners; one that aligns the academic expectations of the IGAD region's school communities.

In most IGAD countries, DRM is mainstreamed through the education system. However, DRM is not treated as a "common core," the learning goal. Depending on their age and grade level, students learn:

a) The hazards in their environment—i.e., what they are, where they are, and how they can harm them:

b) How every day hazards can become disasters, such as "fire as the good friend/bad friend";

c) The applied DRM terminologies and definitions, so that they can discuss them with their teachers and peers;

d) The scientific knowledge and the natural mechanisms that make every day hazards disasters; and

e) How to predict, prepare for, and survive the onset of disasters.

Key Activities:

Currently, most IGAD member states mainstream DRM in their education system. DRM is commonly taught either as a value, skill or competence throughout the region. However, DRM is not yet viewed or treated as a "common core"
learning goal. To address the issue, the following activities are needed:

a) Design a contents for DRM/CCA in the curriculum

b) Integrating DRM into the school curriculum as a "common core" learning goal;

c) DRM education must escalate in terms of depth and breadth in correspondence to the age and grade level of the student; and

d) Align the academic expectation of the local school community.

Strategic Goal 1.4:

Community needs-based Curriculum

The needs and values of society (needs to) determine the contents of the school curricula in the IGAD countries. Regional states adopt modern curricula that are based on the values and skills that the community prizes. The community decides both the contents and delivery mechanism. Known as participatory learning, this type of education has the best opportunity for local acceptance. The community decides what to teach their children and how to teach them.

Core Indicator 1.4.1: The Local School community participates in the Development and Implementation of the DRM/CCA school curriculum.

The school population and their community must have an input in the development of the school curricula. The latter must reflect their values and respond to their needs. Known as participatory learning approach, this guarantees the alignment of the education system with the values and skills that the community needs to develop. In terms of DRM/CCA education, they want their children to learn the essential values and skills to predict, prepare for, and respond to disasters and associated risks.

In Kenya, for instance, the curriculum is founded on societal needs and values. At the core of all learning areas are eight values—i.e., respect, peace, love, unity, patriotism, integrity, social justices and responsibility. These are taught in a culturally appropriate manner throughout the country. This is essentially a "fit-for-purpose" curriculum.

Key Activities:

The local school community must participate in the development and implementation of the school curriculum. The latter must reflect the needs and values of society, and at the same time contain the skills and competencies that the local school community prizes. To realize a "fit-for-purpose" curricula, the following activities are essential:

a) The local school community must be represented in the curriculum design process;

b) MoE, sectoral relevant line ministries, school administrators, specialized international organizations and NGOs, must be consulted;

c) The values and the basic skills necessary to predict, prepare for and respond to disaster risks are incorporated into the school curricula;

d) The developers of the new curriculum include all the elements that drive up the local hazards, and teach them either as a theme, stand-alone subject, a topic within a subject, or as a learning area; and

e) Traditional knowledge that is tried and tested by time, should be integrated into the new

Strategic Goal 1.5:

DRM Curriculum with Inclusive Education

A DRM curriculum that accommodates the different learning abilities and interests of all sections of society; one that benefit all learners.

Core Indicator 1.5.1: All students benefit from the curriculum without any limitations due to their physical, Psychological or other factors.

Developing and implementing a barrier-free curriculum. The choice of learning area, the delivery method, the assessment method, and the use of teaching materials are designed to give equal opportunity to learn.

In the IGAD member states, inclusive education is most wanting. Although most states have adopted a universal primary education (UPE), girls and special needs students are seriously underrepresented. A variety of impediments, caused by different circumstances, affect these students differently. To realize inclusive education, these barriers must be either reduced or altogether removed.

Key Activities:

Depending on the gender, physical, social or psychological status of the child there are conditions that limit their opportunities to learn and actualize their full potential. Due to these conditions, these students have diverse needs to attain both equity and equality. To realize these needs, the following activities are needed:

a) Assign teachers who are trained in inclusive education;

b) Present lessons with the learning ability of the student in mind;

c) Encourage creativity and classroom participation;

d) Provide the necessary learning tools; and

e) Strengthen their self-esteem.

Strategic Goal 1.6:

Mainstreaming DRM/CCA in Education/ School Curricula in the IGAD Region

IGAD states adopt the principle of "prospective disaster risk management." [18] In terms of mainstreaming, every child learns basic DRM/CCA knowledge and survival techniques according to his/her age and grade level. At minimum, every student knows the nature of recurrent disasters and associated risks in their locality; and, if mature enough, the basic science and the underlying natural mechanisms driving these calamities, how to predict them, prepare for them, and survive their onset.

In mainstreaming DRM/CCA through education, it is necessary to sketch out the special and temporal dimensions of disasters in the study materials. Certain disasters recur in certain in geographic areas; and likewise certain disaster sensitive populations are concentrated in certain geographic areas in each country. Because of this, two events with similar magnitude tend to have different degrees of impacts. Therefore, depending on the learning capacity of the student, the spatial and temporal patterns of disasters and their associated risks must taught in the region's schools.

Core Indicator 1.6.1: The Development and Implementation of Disaster-proofing Curricula in the IGAD Region

The IGAD member states/countries are fully committed to mainstreaming DRM/CCA education through their school curricula. This is clearly demonstrated both in the number of mainstreaming initiatives that they have carried out since the Kyoto Protocol was adapted—i.e., curriculum reforms, pilot projects, production of textbooks, booklets, readings, cards, teachers' guide, retrofitting of schools and higher learning institutions, etc. However, DRM/CCA education is not yet fully integrated in the region's school curricula. This framework sketches out the technical approach to achieve this end.

Key Activities:

Before attempting to integrate DRM/CCA in the region's school curricula, the following key activities must be carried out:

a) The Curriculum Centres and relevant specialized agencies and institutions are empowered to include DRM/CCA in the design of the school curricula;

b) The DRM/CCA must include both the spatial and temporal dimensions of disasters and associated hazards;

c) The public must be sensitized to the importance of integrating DRM/CCA in the school curricula;

d) The technical and financial resources necessary for mainstreaming must be mobilized;

e) The political and social resistance against the mainstreaming project must be mollified; and

f) Ensure that curriculum overloading does not occur

Strategic Goal 1.7:

Intergrating DRM/CCA Into School Curricula

DRM/CCA is integrated into the IGAD region's school curricula either by infusion/permeation or by holistic approach. From Pre- to Primary, Secondary, to tertiary levels. Schools in the region teach DRM/CCA as a "common core" learning goal either thematically, as a topic within a subject, or as a stand-alone subject. This DRM common core escalates in terms of depth and breadth along with age and grade levels of the learners.

Core Indicator 1.7.1: DRM/CCA is mainstreamed in the school Cirricula

In most IGAD countries, DRM/CCA is mainstreamed in the education system. However, they differ in terms of what is taught, emphasis/concentration, delivery methods, entry points, publication of learning materials, and rolling them out. In Tanzania, for instance, DRM/CCA is usually taught as a competence within a discipline. Each student is provided a textbook, and is examined throughout the year.

Key Activities:

The insertion of any new subject in the school curriculum is a technical undertaking--following a systematic, a step-by-step procedure. The following activities are necessary to integrate DRM/CCA education in the region's school curricula:

a) The Curriculum Department takes the lead in the integration process;

[18] The concept views disasters as part of life. It emphasizes on pre-disaster policies and preparations to reduce their impacts. See: "2009 UNISDR Terminology on Disaster Risk Reduction," UNISDR, Geneva, Switzerland (May 2009

b) The insertion of DRM/CCA education in the curricula must be well-timed to the curriculum review cycle

c) New vitally important values or skills may be authorized within the curriculum cycle by the curriculum authorities, possibly as an extracurricular activity or as a non-formal education; and

d) Once approved for inclusion, the curriculum authorities may determine the delivery method of DRM/CCA education. Given the frequency and magnitude of natural and human made disasters in the IGAD region, the policy makers and curriculum development officials must aim at a "disaster-proofing curricula" that integrates all the elements that drive up local disaster risks. DRM/CCA must be treated as "a common core" subject or learning area that is taught in all the schools in the region.

Strategic Goal 1.8:

Intergrating DRM/CCA Study Materials into the School Cirricula in the IGAD Region

DRM/CCA is a cross-cutting issue. As such, it beckons the attention of diverse sections of society. Therefore, to develop the contents of the study materials, a team of education experts from a wide spectrum of the academic disciplines—i.e., linguistics, social studies, geography, education, agricultural science, physical science, environmental science, theatre and arts, etc.—must be empaneled. Depending on the nature of local hazards, social mores, and availability of resources, these experts will develop the study materials, propound their contents, and devise the appropriate method of delivery—i.e., formal, informal or non-formal.

Core Indicator 1.8.1: Study Materials with DRM/CCA Contents are Developed and Rolled Out in the Schools in the region

In the IGAD region, DRM/CCA study materials are not well-integrated in the school curricula. Presently, only Kenya, Uganda, Sudan and Ethiopia have developed and rolled out some DRM/CCA study materials, especially for pre- and lower primary schools. However, other states are following suite.

Key Activities:

Depending on the age and grade level of learners, the following tentative study materials may be integrated into the DRM/CCA education/school curricula:

a) Risk identification and mapping, and how to be safe at home, on the road and at school;

b) Basic definitions and terminologies of DRM/CCA, and how they may manifest in real life situations;

c) Understanding the basic science and mechanisms that cause disasters and associated risks, and how to predict, prepare for, and manage them; and

d) The appropriate delivery method—i.e., whether to teach it formally, informally and non-formally.

Strategic Goal 1.9:

School Population and Wider Community are well - versed in Disaster Risk Reduction Education (DRRE)

All schools in the IGAD regions must have a well-designed, widely promulgated Disaster Risk Reduction Education that teach the school community disaster prediction, preparation and response mechanisms. This knowledge, which is derived either from local experiences, and the activities that go along with it, must be periodically updated and drilled in the whole school population and their community.

Core Indicator 1.9.1: DRRE stimulates Culture of safety and Resilience in the School Population and the Wider Community

The Software aspect of DRM/CCA in safe schools program involves Disaster Risk Reduction Education (DRRE). The latter must be a salient feature in the hazard-proofing of the school environment. It should include resilience guidelines and contingent plans, as well as a detailed learning outcomes and competencies that the whole school community must possess. School officials should provide the guidelines for teaching school safety—i.e., formally, informally or non-formally. At minimum, the school population must have at their disposal early warning facilities, know the nature of the hazard, its frequency and magnitude, and have comprehensive safety measure that is periodically updated, simulated and drilled in the school population and the wider community.

To address the problem, most IGAD countries have integrated disaster risks education into the school curriculum. The main aim is to bring up a generation with the necessary skills and values to recognize the adverse effects of disasters, and who can predict, prepare for, and survive calamities in all its dimensions and manifestations. In Uganda, DRM/CCA is integrated into the school curriculum. Teachers' training manuals have full-fledged teaching materials that are prepared for children. Those in lower primary schools from grade 4 to 8 are taught thematically (say, in environmental and health science topics), using charts, cards and readings that illustrate the causes, and impacts of disasters, and how to manage them. For upper primary pupils, aged 8 to 13, educators employ readings and plays to hold in school or community theatres.

Key Activities:

a) The school population and their community must have at their disposal the latest information on disaster risks in the area, and have operationalized response down to the local level;

b) Schools improvise national or local DRM/CCA policy to fit their particular circumstances;

c) The school population and their community must be well-versed in the DRRE, as well as the foundational policy and activities that go along with it;

d) Schools must hold periodic drills and simulations to keep the community knowledge current

Strategic Goal 1.10:

Developing the Capacity of Teachers

The African Commission's Extended Program of Action (PoA), as amended in 2010, instructs member states: "Sustain the effort of knowledge management, capacity development and research throughout the continent, and multiply training activities at different levels, to improve the expertise, promote best practices and contribute to mitigate disaster risks and build resilient communities." [19] In the IGAD region, there is a considerable infrastructure and willingness to implement the AU's PoA. In addition to year-round seminars, workshops and conferences organized by governmental and NGOs, there are many online DRM/CCA programs, pre-college education institutions, and colleges of education in every IGAD member county. In terms of candidates for DRM/CCA training, there are five categories of teachers and education officials to be trained:

a) Pre-career teachers, such as those in the first two years of education programs in colleges;

b) New teachers, who are hired to teach DRM/CCA;

c) Mid-career DRM Teachers, who need updating or retooling;

d) DRM/CCA specialized officials from the MoE, sectoral relevant line ministries and agencies; and

e) Curriculum developers.

Core Indicator 1.10.1: Sufficient Number of DRM/CCA Educators are Available in the Region

The new value, skill-based education requires a cadre of educators and trainers, who are competent to teach students, head teachers, school administrators and staff. Once DRM/CCA education takes hold in the school population, it could be easily transmitted to the wider community. Known as the cascade model, this approach ensures the wide dissemination of DRM/CCA knowledge throughout the country.

Education is the surest ways to strengthen human agency and bolster people's resilience to disasters. One way to increase people's capabilities is to mainstream DRM/CCA education through the school curricula. This would certainly equip the community with the tools to predict, prepare for, and manage disaster risks. It would substantially reduce their vulnerabilities and simultaneously increase their resilience.

Key Activities:

Developing the sufficient number of DRM/CCA educator is a cardinal requirement for a robust DRM/CCA education system. To achieve this end, the following activities are necessary:

a) Incentivize the learning and teaching DRM/CCA throughout the community;

b) Establish linkages and networks between local DRM/CCA teacher and relevant line institutions and organizations to train new teachers and reinforce the importance of DRM/CCA education in those who are already teaching;

c) Periodically hold DRM/CCA conferences and workshops to recruit new teachers and update the knowledge of existing ones; and

d) Publish and roll out of DRM/CCA textbooks, booklets, readings, cards, as well as teaching manuals. Consider online trainings where appropriate.

Strategic Goal 1.11:

Developing Publishing and Rolling Out "Common core" DRM Education Materials

IGAD member countries develop, publish and roll out DRM readings/learning materials --i.e., teachers' manuals, textbooks, booklets, readings, cards, etc.—throughout the schools in the region. DRM is taught as a "common core" learning goal without compromising the national character of the school curriculum.

Core Indicator 1.11.1: DRM Learning Materials are Developed, Published and rolled out in the Schools and in the Local School Community

The curriculum developers, school administrators, and specialized agencies and institutions lead in the development of the DRM readings/learning materials as well as their distribution in schools. They also determine the contents of this learning area, and ensure that these are contextually (i.e., social/cultural, age and grade levels) appropriate.

Key Activities:

IGAD member countries have embraced the idea of mainstreaming DRM through education. In terms of developing publishing and distributing readings and learning materials, most states have not closed the loop. To ameliorate the situation, the following activities are needed:

a) Legitimate authorities, such as DRM specialists, curriculum developers, school administrators, and specialized agencies and organization must lead the development of the contents, the delivery mechanism, and oversee the publication and the timely distribution of these materials;

[19] http://www.droughtmanagement.info/literature/UNISDR_africa_regional_strategy_disaster_risk_reduction_2011.pdf

b) The commitment of national and community leaders at all levels to support these efforts must be secured;

c) Civil societies, grassroots activists and specialized NGOs must be agitated for material and non-material support; and

d) Adequate resources must be allocated for the success of the project.

Key Priority Area-2:

Mainstreaming School Safety/Safe Schools

Preface

In the existing global DRM/CCA regimes, schools figure in five major ways that include both the "hardware" and "software" aspects of school safety and disaster risk reduction mechanism. These are:

a) Making the physical structures of schools resilient to disasters;

b) Ensuring that the internal school environment is hazard proof;

c) Sheltering the school population and their community from disasters;

d) Ensuring the safety of the roads and paths to and from schools; and

e) Producing and disseminating life-saving knowledge/ education for the benefit of the community.

The concept of safe schools also needs to take in to consideration the selection of appropriate sites for schools which are not prone to disasters. Availability of some of the services like WASH has an important role in preventing diseases.

Strategic Goal 2.1:

The hardware: Constructing Schools that are Structurally Resilient to Disasters

Schools in the IGAD region comply with international school construction standards. This requires the construction and retrofitting structurally resilient schools. The IGAD region is disaster prone. Schools in the region are particularly vulnerable to both natural and human-made hazards. Schools, where children are heavily concentrated, should be comprehensively protected. This requires both hardware and software changes. According to UNESCO, comprehensive school safety rests on three pillars:

a) Safe Learning Facilities;

b) School Disaster Management i.e., policies, regulations and programs of action); and

c) Risk Reduction and Resilience Education.

Core Indicator 2.1.1: All Existing Schools are Structurally Retrofitted, and future Ones Resiliently Designed, to Make Them Disaster Resilient

All the IGAD member states/countries are committed to the school construction specifications as stipulated by the international regimes, especially the Hyogo Framework for Action (HFA) and Sendai Framework (SF). Some states in the region have already retrofitted some schools and learning centres for disaster resilience, while others are in the process of doing so.In Uganda, after the flood of 2015, the Ministry of Education, Science, Technology and Sports (MoESTS) has adopted a policy framework, the Conflict and Disaster Risk Management Guidelines for Educational Institutions (CDRM), to direct the national education strategy in emergency and disaster situations. In this regime, education appears in two major ways, namely as a hardware and as a software parts:

a) **The Hardware:** Schools are vital institutions that must be shielded from disasters. The government of Uganda has made safe schools a national priority. Some schools are retrofitted with lightening arrestors and conductors, while others are structurally modified to withstand strong hail and gusty winds that often blow off school roofs. Some schools are also remodeled to double as community shelters in the event of disasters. For instance, when the 2015 El Nino hit the flood prone regions in the West, the displaced communities were sheltered in local schools and public health facilities.

b) **The Software:** Disasters, apart from causing physical damages to school structure and facilities, as well as impacting children's homes, disrupt teaching and the learning process. Realizing the direct correlation between vulnerability and education, a significant number of the schools in the region are now teaching DRRE. The main aim is to teach people the nature of recurrent disasters, their frequency and magnitude. DRRE helps them predict, prepare for, and manage disasters and associated risks, whether potential or actual. In addition, the program teaches how to recognize stress (physical and emotional) and how to deal with it effectively.

The Republic of the Sudan has a robust safe school program that is well in compliance with the international regimes and global good practices. The country's schools are structurally resilient, and are fitted has emergency exists, fire resistant (or has fire extinguishers), first aid kits, stable electricity, non-perishable food reserves, and WASH facilities. [20] The Sudan was assisted in its safe school program by the African Development Bank (AfDB).

Key Activities:

The construction of safe schools include both hardware and software aspects. The necessary instrumental activities include both the hardware and software school safety:

a) The physical structure of existing school must be disaster resilient;

b) The construction of new schools must be designed according to the specifications of international regimes;

[20] Some UN agencies assisted the Sudan to make their schools WASH compliant, including those in remote

c) For natural disasters, all schools must have "safe chambers" that are resistant to earthquakes, aftershocks, flash floods, as well as designated assembly points and emergency exits;

d) For human made disasters, the region's schools must have "safe chambers" that can shelter the school population from violent break-ins;

e) Train sufficient number of safety committee within the school population and in the wider community;

f) Teach and inculcate WASH principles and habits;

g) The whole school population must taught DRRE, either formally, informally or non-formally;

h) Emergency contingency plans and activities must be developed and taught the school population and their community with periodic drills and simulations; and

i) DRRE must include coping disaster coping techniques, such as how to recognize and handle physical and mental stress.

Strategic Goal 2.2:

Ensuring that Internal School Environment is Risk Free

Children are among the most vulnerable population to disasters. They are protected from all kinds of hazards at school, at home, in the community, and on the roads and paths to and from school. Inside the school, children are protected from exposed live electric wires, school fires, fall from school balcony, rusty iron bars and broken shovels in construction debris, cracks in the sewage and drainage tanks, to name just a few.

In addition to these physical dangers, children, especially those in rural areas, must have WASH facilities. While each WASH component (water, sanitation and hygiene) is essential on its own right, their combination makes them a critical part of school safety. These are some of the reasons why most schools in the region are not "child friendly."

Core Indicator 2.2.1: Internal School Environment is Safe for Children to learn and Play

Most schools in the IGAD region are not internally hazard-proof. Some are very old and are not renovated or remodeled for decade to add modern school amenities. To some public officials and school administrators making schools "child friendly" is not a priority. Budgets are rarely allocated to make the schools internally danger free. The majority of schools in the region are left to their own devices; and what they do to make their schools internally safe is rather measly--to say the least. In some cases, when budget is allocated, school authorities may spend it on more pressing issues. Worse yet some administrators may even refuse to spend the money altogether—perhaps to keep it as a safety net.

The IGAD region has its share of conflict. People fight over resources, political power, ethnic/tribal chauvinism, etc. Yet, most of the schools in the region do not teach conflict prevention and resolution. Only Uganda has a comprehensive conflict prevention and resolution and integrated it into the DRM education.

UGANDA has by far the most comprehensive Conflict Disaster Risk Management Program (CDRM). This national program evolved from UNICEF's Peace Program. However, OCHA has jump started the program. After OCHA was phased out, after Uganda was declared non-emergency country, the Forum for Education NGOs, an education cluster, took over the program. The prominence of conflict in the program was prompted by the rise of Joseph Koney's Lord's Resistance Army (LRA), which ravaged the northern part of the country.

The mainstreaming of CDRM in Uganda started when UNECO, which chaired the education cluster, started training teachers in peace education. This training became the entry point for mainstreaming the CDRM in Uganda. From this point onward, the program was scaled up through school clubs all over the country. Currently, the Ministry of Education leads the mainstreaming of CDRM through the education system, though not yet integrated into the school curricula.

In Kenya the National Drought Management Authority deals with school conflict under the Peace and Security Pillar. NDMA has established peace committee throughout the regions where they operate, especially in the Arid and Semi-arid Lands (ASALs). The entry point for mainstreaming DRR conflict prevention/resolution is these local Peace Committees. The committees are trained, empowered and provided early warnings.

Key Activities:

Making schools child friendly is a global trend. It is brought up in every international conference and adopted in every convention. To bring the IGAD region in line with these growing international conventions, the following activities are necessary:

a) Making schools child friendly should be a core priority for the school population, their community, public officials and specialized public and private organizations;

b) Sufficient fund must be allocated to renovate and remodel old school to install basic essential amenities;

c) Daily monitoring and inspection the school environment for hazards;

d) Conflict prevention/resolution must be taught in the schools in the region; and

e) Make DRRE a daily reminder

f) Avail psychosocial support, peer support and

Strategic Goal 2.3:

Ensuring the Safety of the Roads, Vehicles, Boats and Paths Children Traverse Daily to and from Schools

Throughout the world, the roads and paths that children traverse to and from school is part of the comprehensive school safety plan. In the IGAD region, school roads should be hazard-proof. School official and policy makers must demarcate the space for children, especially those in rural areas, to be safe from wild animals, traffic accident, and related. Additionally, they must be protected from marauding armed militias who kidnap them for child soldering and sex concubines.

Core Indicator 2.3.1: The Roads and Paths Children Traverse Daily to and from Schools are Free from Physical Hazards

The roads and paths that children traverse to and from school are normally incorporated into the comprehensive school safety plan. In the IGAD region, school roads are littered with all kinds of potential and actual hazards. These hazards are both natural and human made. It is essential to ensure that the roads and paths children traverse daily are free from physical hazards, such as wild animals, snakes, rushing waters, rickety bridges, and armed gangs who kidnap children.

Key Activities:

a) The roads and paths children traverse to and from schools should be included in the comprehensive school safety plan;

b) Sufficient budget should be allocated for paving the roads, mending bridges, and periodically inspecting them;

c) Children must be taught risk mapping and asked to list the dangerous things they encounter to and from school;

d) Accidents and incidents that cause injury or instill fear on the school population should be taken seriously, investigated and registered for future reference and statistical records;

e) All mishaps on the road that affect the school population should be publicized in the media, especially the social media, where most young adults get their news.

f) Putting up all the necessary protective measures including securing the school environment by putting up perimeter walls.

Strategic Goal 2.4:

Sheltering the School Population and their Community from Disasters

Throughout the world, schools double as community shelters during and after the onset of disasters. Depending on the local conditions, school shelters can be either temporary or a long term residency. In poor regions, where reconstruction can be delayed by lack of resources, local schools must be prepared for long term occupancy. In such cases, the school's education in emergency program must automatically kick off. As is normally the case, such programs designate a section of the school or a nearby structure, even open grounds, as makeshift learning facilities.Regardless, disaster contingencies must be integrated into the school design.

A comprehensively designed school has core essential features. In addition to disaster-proof structures, it has wide open spaces covered from the elements; basic essential facilities, such as washrooms, sleeping quarters, kitchen facilities, and play grounds for children, etc. Most importantly, it is sufficiently safe for residents.

Core Indicator 2.4.1: Schools Doubling as Disaster Shelters to Accomodate School Population and their Community

Existing schools are retrofitted and future ones designed in such a way as to double as community shelters during and after the onset of disasters. Schools are structurally disaster resilient. They have wide covered spaces equipped with essential facilities to accommodate the school population, displaced families and their valuables. They must have spaces designated for education in emergency, preferably within the school compound. The schools in the region have "safe chambers," that are resistant to earthquakes, subsequent aftershocks, flush floods, wild fires, violent break-ins by armed militias, etc

Key Activities:

Before they can be certified as disaster shelters, schools must be audited for the following credentials:

a) Around the clock security services
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b) Schools must have basic essential facilities to accommodate school population and displaced people;

c) Funds must be allotted to stablish safe school shelters; and

d) Education in emergency should be integrated into the school safety plan.

e) Continuity of education (i.e., education in emergency facilities);

f) Economic benefits that the school shelters provide;

g) Geographic proximity to the community towns, villages or hamlets;

h) Constant energy supply; Reliable communication facilities

Strategic Goal 2.5:

Schools with Basic Essential Emergency Provisions

In every country, schools double as emergency shelters during and after the onset of disasters. In addition to the structural adjustments mentioned above, the schools require sufficient emergency provisions, such as water (for drinking, cooking, and sanitation), well-stocked non-perishable food items, infant formula milk and cereals, first aid kits, fire extinguishers, and first aid clinic, and a well-trained first aid personnel on the premise.

Core Indicator 2.5.1: Schools with Sufficient Emergency Provisions in Stock

In the IGAD region, disasters are not isolated incidents. Rather, they are recurring, though not always predictable. Prospective conception of disaster management emphasizes the imperative of preparedness. In terms of school provisions in emergencies, this means well-stocked schools with non-perishable food products, water reserves, first aid kits, fire extinguishers, etc. Along with this is a school staff that is proficient in DRM education, education in emergency, first aid, sanitation, hygiene, and culinary science.

In Kenya, at least three public institutions are involved in the provision of essential resources, such as food and water. The Ministry of Water and Irrigation ensure that schools are WASH compliant. The Ministry budgets for school water services under the auspices of the Water Services Sector Trust Funds. In budgetary shortfall, the Ministry reaches out to international charity organizations for financial assistance. In some cases, where the community runs out of water, they are allowed to tap into the school water.

The National Drought Management authority (NDMA) operates within the Framework for Ending Drought Emergency of 2015. The Framework consists of six pillar: 1) Peace and Security; 2) Climate-proof Infrastructure; 3) Sustainable Livelihoods; 4) Drought Risk Management; 5) Institutional Development and knowledge; and Human Capital. All pillars are done from DRR perspective. NDMA provides secondary services to all pillars. Since education fall within the Human Capital, it is done by everyone.

Key Activities:

Most schools in the IGAD region are not designed with disaster emergency in mind. This is particularly so in old schools and those in the rural areas, where people are most vulnerable to disaster risks. To address the problem, the following key interventions are needed:

a) The school population and their community are sensitized to conditions of their schools;

b) Schools must be remodeled and retrofitted with basic essential facilities;

c) Schools must be fairly habitable during and after the onset of disasters;

d) Water, emergency medicine and non-perishable from stuff must be stocked in the school; and

e) The awareness of the school population and their community must be raised to such a level that they can lobby public officials, international organizations, specialized NGOs and concerned Private Corporation for assistance

Key Priority Area-3:

Governance and Institutional Basis of Mainstreaming DRM/CCA in Educational/ School Cirricula

Preface

"Countries that develop policy, legislative and institutional frameworks for disaster risk reduction and that are able to develop and track progress through specific and measurable indicators have greater capacity to manage risks and to achieve widespread consensus for, engagement in and compliance with disaster risk reduction measures across all sectors of society."

Hyogo Framework for Action (HFA)

The IGAD member states are fully committed to the mainstreaming of DRM/CCA in education/school curricula.This is clearly demonstrated in the substantial progress that they have made in integrating DRM/CCA knowledge in all levels of formal, informal, and non-formal education, not to mention the number of legislations, programs and policy pronouncements, as well the number of offices and personnel that they have devoted to the issue.

Natural and human-made disasters frequently impact the IGAD region. In the absence of a common legal and policy framework, the member states are addressing the issue in terms of country specific policies, legislations and programs of action. These foundational institutions, if correctly implemented, will reduce the impact of disaster risks and prevent future ones. These policies, legislations and programs of action prohibit risky living conditions and substandard constructions. Additionally, they assign roles and responsibilities and allocate resources to relevant line actors. In this section, we will examine the existing institutions on mainstreaming DRM/CCA in education/school curricula.

Strategic Goal 3.1:

Estabilishing and Promulgating Institutional Regimes to Mainstream DRM/CCA through Education/School Curricula

The IGAD member states to enact and promulgate legislations, policies and programs of action of mainstreaming DRM/CCA in education/school curricula. Mainstreaming DRM/CCA education in the region's education system requires foundational laws and policies to guide the process and the requisite activities that go along with it. These laws and policies must look at the issue from all angles—social, economic, environmental, geographical, demographical, etc.

Core Indicator 3.1.1: The Foundational Institutions to Mainstream DRM/CCA Educational Are Entacted, Promulgated, and Implemented

Each IGAD member state has enacted, promulgated and implemented the foundational institutions necessary to mainstream DRM/CCA in education/school curricula. In addition, they have established ministries, commissions and specialized offices to motivate and set the direction for legislative interventions. This is clearly demonstrated in the substantial progress that these countries have made in mainstreaming DRM/CCA education in all levels of formal, informal and non-formal education. Despite these commendable legislations, policies and public pronouncement, the current regional mainstreaming process is in its formative stage. As such, it is still inchoate, uncoordinated, fragmented and often localized. Three main reasons may account for this:

1. Coordination Mechanism The coordination mechanism in the IGAD states/countries is loose. In most cases, each DRM/CCA office or institution, though competent in its own sphere, functions in administrative isolation. This is even more so in the peripheral areas of the country. To address the problem, it is essential to establish a coordination office/unit to harmonize the activities of relevant line ministries, specialized offices and agencies, as well as actively involved international organizations and NOGs.

2. Adequate Resources Mainstreaming is a resources intensive undertaking. It needs both skilled personnel and material resources. The IGAD region is not well-endowed in either. In some cases, the mainstreaming effort in the region is hampered by lack of funds. The publication and distribution of textbooks, booklets, teachers' guide, readings and cards consume vast resources. Although the regional states/countries occasionally seek and receive financial assistance from international organizations and specialized NGOs, having adequate funds is always problematic.

3. Technical Capacity The project also needs a significant number of technical experts to:

a) Develop the contents of the DRM/CCA education;

b) Determine how to integrate it into the school curriculum—i.e., as a theme, topic within an existing subject, or as a stand-alone subject;

c) Determine the appropriate grade to teach; and

d) Sketch out the most suitable delivery mechanism—i.e., formally, informally or non-formally.

e) It also requires a sufficient number of trainers who can train school principals, head teachers and selective staff. Sometimes, this phase of the project may consume all the available funds before a single teacher makes it to the

4. Political Commitment Curriculum reform is a politically charged process. In the IGAD, the Ministries of Education (MoE) tend to insulate the national curriculum from gratuitous revisions. Curriculum overloading is a serious concern in most countries in the region. Though this is a reasonable concern, it should not hamper the integration of DRM/CCA into the region's school curricula. Policymakers need to find a balance between the need to protect the curriculum and the timely integration of new values, skills and learning areas, such as DRM/CCA education.

Key Activities:

Although it has popular support, the mainstreaming program is slowly progressing in the IGAD region. To address the problem, the following instrumental activities are needed:

a) Commit adequate financial resources;

b) Streamline the coordination process;

c) Domesticate the program;

d) Leverage government authority to acquire nternational technical support;

e) Mobilize national, sub-national and local resources to implement the integration of DRM/CCA in education/school curricula; and

f) Discourage entrenched interest to bottle neck the process.

Strategic Goal 3.2:

The Establishment of DRM/CCA Mainstreaming Institutions that Assign Clear lines of Roles and Responsiblites among Relevant Line Actors

In Priority B (1), the Hyogo Framework for Action (HFA) instructs signatory states to, "Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation." The regional policies, legislations and plans of action must detail the roles and responsibilities of all relevant line responders, i.e., ministries, public and private agencies, and specialized local and international non-governmental organizations.

In addition, they must designate a coordinating office/unit, while allowing for local decision making. Equally importantly, every citizen must be required to know these DRR institutions, and periodically undergo civil defense training. They must be trained to know the various stages of emergency preparedness and response, as well as who is doing what.

Core Indicator 3.2.1: Relevant Line Ministries, Specialized Offices, and other Actors Fullfiling Their Roles and Responsiblities as Mandated by the DRM/CCA Institutions

The national governments in the IGAD region clearly recognize the indispensability of sub-national and local governments, as well as the important role of specialized agencies and NGOs, in implementing DRM/CCA legislations, policies and programs in their respective areas of operation. To have a successful mainstreaming programs, all levels of government in the country should work in tandem.

In Ethiopia, for instance, the Disaster Risk Management Commission closely works with the "Woreda" authorities in all regions. Since the latter have the firsthand knowledge of the local situation, the Commission authorizes them to trigger national action in terms of prediction, preparation and response. After the Woreda, the issue goes to the regional, then to the national levels. However, the NDRMC can initiate action without waiting the lower levels asking for help.

Key Activities:

The DRM/CCA mainstreaming institutions in the region have low capacity. Due to this fact, the IGAD organizations must address these institutional weaknesses by:

a) Allocating adequate resources;

b) Providing capacity building;

c) Lending the good offices of the national government to solicit international support;

d) Mobilizing national support on their behalf

Strategic Goal 3.3:

Enhanced flow of Information

Disaster risk reduction programs are information intensive activities. In every country, there are ministries, specialized offices, commissions, multilateral organization, and local Non-governmental organizations (NGOs) that are widely dispersed throughout the country. They need to share pertinent and timely delivery of information—i.e., forecasting, early warning, predication, preparedness, response, recording, etc.--to effectively carry out their functions. Compartmentalization or sequestration of information in any one office or locality is antithetical to good DRM/CCA practices.

In Priority 1 (c), the Sendai Framework authoritatively affirms the point: "To develop, periodically update and disseminate, as appropriate, location-based disaster risk information, including risk maps, to decision makers, the general public and communities at risk of exposure to disaster in an appropriate format by using, as applicable, geospatial information technology.

Core Indicator 3.3.1: DRM/CCA Ministries, Specialized Offices Commissions and Relevant Line Responders Generate, Record Share and disseminate Life Saving Information

The states in the region operate sizable public and private DRR offices and institutions, as well as specialized international and local NGOs. All of them are committed to the generation, recording and sharing of information on DRR, as stipulated by the international regimes. In Priority B (2), the Hyogo Framework charges the signatory states to, "Support the development and improvement of relevant databases and the promotion of full and open exchange and dissemination of data for assessment, monitoring and early warning purposes, as appropriate, at international, regional, national and local levels." Likewise, in Priority 1 (a), the Sendai Framework instructs: "To promote the collection, analysis, management and use of relevant data and practical information and ensure its dissemination, taking into account the needs of different categories of users, as appropriate."

In terms of information sharing, there are both structural, legal and policy gaps. In the IGAD region, most of the infrastructure and facilities for DRM/CCA are concentrated at the national level. Even at this level, they are mostly located in major cities and towns, where the nation's skilled personnel is concentrated, electricity is most reliable, and relevant line institutions and specialized NGOs have branch offices. Thus, information production and management are inadvertently compartmentalized and sequestered at the national level.

Key Activities:

The development and technical capacity of sub-national and local responders to generate, record, disseminate, even receive DRM/CCA information is permanently stunted. To ameliorate the situations, the following steps may be necessary:

a) Sub-national and local DRM/CCA institutions, as well as specialized NGOs, should be sufficiently capacitated and resourced to be able to generate, store, manage, disseminate, even receive life-saving information,

b) DRM/CCA facilities, such as weather stations and early warning instruments, must be strategically located, not only in major cities and towns, but where they are deemed most productive;

c) Working in remote, rural areas should be incentivized for skilled workers to relocate.

Strategic Goal 3.4:

DRM/CCA Institutions produce and disseminatelife saving knowledge/ education for the benefit of the whole community

The Sendai Framework charges the signatory states: "To promote the collection, analysis, management and use of relevant data and practical information and ensure its dissemination, taking into account the needs of different categories of user, as appropriate." Likewise, the African Commission's Extended Program of Action (PoA), as amended in 2010, stipulates: "Sustain the effort of knowledge management, capacity development and research throughout the continent, and multiply training activities at different levels, to improve the expertise, promote best practices and contribute to mitigate disaster risks and build resilient communities." [21] If operationalized at the ground level, this type of information can save lives.

The contents and delivery mechanism of this knowledge must be tailored to the local culture, language and age grade of the recipient population. Issues of adaptation, coping mechanism, and intervention are culture contingent. Culture tends to facilitate communication and social trust between the disaster responders and the at risk population. This is how traditional knowledge is often incorporated into the more modern DRR activities. Cultural approach to DRR increases community participation, their commitment to the issue, and sparks their sense of ownership. These are all necessary conditions for successful disaster risk management.

Core Indicator 3.4.1: Intergrated Data Collection Facilities That serve All Users Upon Request

The contents and delivery mechanism of this knowledge must be tailored to the local culture, language and age grade of the target population. Issues of adaptation, coping mechanism, and intervention are culture contingent. Culture tends to facilitate communication and social trust between the disaster responders and the at-risk population. This is how traditional knowledge is often incorporated into the more modern DRR activities. Cultural approach to DRR increases community participation, their commitment to the issue, and sparks their sense of ownership. These are all necessary conditions for successful disaster risk management.

Key Activities

DRM/CCA is a cross-cutting issue. Many sector, agencies and institution at all levels are involved. To effectively play their role, they need:

a) Decentralized information and other vital resources;

b) Decentralized decision making;

c) Clear lines of communication;

d) Clear lines of authority.

Strategic Goal 3.5:

Stakeholder Support: Who Benefits from this Framework

This framework is a public property. All its stakeholders have unfettered access to it. However, its primary beneficiary is its sole benefactor, the European Union. Other stakeholders of this project are the African Union Commission (AUC), the African Development Bank, and the Regional Economic Community (IGAD), the regional states, the peoples of the region, who are vulnerable to disasters, and ultimately researchers and academicians.

Core Indicator 3.5.1: The Efficacy of the Framework

The contents and delivery mechanism of this knowledge must be tailored to the local culture, language and age grade of the target population. Issues of adaptation, coping mechanism, and intervention are culture contingent. Culture tends to facilitate communication and social trust between the disaster responders and the at-risk population. This is how traditional knowledge is often incorporated into the more modern DRR activities. Cultural approach to DRR increases community participation, their commitment to the issue, and sparks their sense of ownership. These are all necessary conditions for successful disaster risk management.

Key Activities

To reap the valuable benefits of mainstreaming DRM/CCA through education, a country needs to do the following:

a) Comply and align your DRM/CCA policies, legislation, strategies and programs of action with the current international regimes and global good practices;

b) Invest in all relevant DRM/CCA institutions, such as schools, universities, and curriculum development centres;

c) Establish and maintain a robust awareness raising programs; and

d) Leverage all your resources and international connections and influence to mobilize the resources and expertise to predict and prepare for the next calamities.

[21] http://www.droughtmanagement.info/literature/UNISDR_africa_regional_strategy_disaster_risk_reduction_2011.pdf

4.3. Monitoring and Evaluation

Monitoring and Evaluation mechanism is another important part in implementation of the regional framework for mainstreaming DRM/CCA in schools' curricula of member states of IGAD. Monitoring entails routine and periodical collection of data to answer the question of how is it going? Whereas evaluation entails critical assessment of the key objectives of this framework to see whether they are being achieved as planned and the impact it has caused over time. Therefore, an effective monitoring and evaluation mechanism is required for implementation of this framework in order to ensure that the key priority areas of action, strategic goals and key activities remain relevant.

The key indicators developed in each strategic goal will be tracked to ensure that the activities and interventions developed by member states in mainstreaming DRM/CCA conform to the key priority areas of the IGAD regional framework for mainstreaming Disaster Risk Reduction and Climate Change Adaptation in schools' curricula.

Chapter 5:

Conclusions

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5.1. Conclusions

In the IGAD region, the mainstreaming of DRM/CCA through education/school curricula is subsumed under the national disaster risk reduction package. This has the effect of it being overshadowed by more glaring, urgent actual threats to life and property. To address the problem more effectively, it is therefore necessary to separate this aspect of DRM/CCA through education from this multi-hazard package. Simply stated, mainstreaming DRM/CCA through education/school curricula should be treated as a stand-alone program.

Tackling disaster risks through education is a regional commitment. However, some states are more advanced in this course than others. Kenya, Ethiopia and Uganda have registered some progress in mainstreaming DRM/CCA through education/school curricula. Most other countries in the region are just now gearing up to the program.

Mainstreaming DRM/CCA through education/school curricula is a resources intensive, technically complicated, and politically sensitive undertaking. It seems that the more developed a country is, the more progress it can achieve in mainstreaming DRM/CCA through education/school curricula. Kenya, which is the most developed country in the IGAD region, is also most advanced in mainstreaming DRM/CCA through education/school curricula.

Lack of resources is a major constraint in mainstreaming DRM/CCA through education/school curricula in the IGAD region. In most countries in the region, this aspect of DRM/CCA is subsumed under the general umbrella of disaster recovery and response. The mainstreaming of DRM/CCA through education/school curricula has no separate budget allocation. The financial gap is often covered by international partners, such as UNESCO, UNICEF, UNDP, World Vision International, Save the Children International, Plan International, etc. Unfortunately, none of these organization has ever proffered sufficient funds for mainstreaming DRM/CCA through education/school curricula throughout the country.

The mainstreaming of DRM/CCA through education/school curriculum is treated as an important aspect of national disaster risk intervention that deserves a separate budget allocation.

None of the IGAD member states/countries treats the mainstreaming of DRM/CCA as a separate sector that deserves a separate and adequate funding. This is so, because society is not yet sufficiently sensitized to the issue. To address the problem, a well-organized, grassroots level activism is needed. People from learning institution can spearhead this activism at national and sub-national levels.

Civil society, specialized NGOs and international organizations can amplify the call for treating this aspect of DRM/CCA as an important sector in national disaster risk interventions. Policy makers at all levels of government will eventually see the need to allocate adequate funds for mainstreaming DRM/CCA through education/school curricula.

Disaster risk management is multi-sectoral and trans-communal. This means a concerted effort from all sectors and communities is needed to forge a social bulwark against disasters and associated risks. In some cases, a particular community may not have the necessary skills--such as community organizing, fundraising, media publicity, etc.—to deal with actual or potential disasters. In such a case, the aid of partner organizations and specialized NGOs for enhanced capabilities is indispensable.

A well-designed, well-resourced, multi-sectoral platform that can accommodate the traffic of communication and discourse is operational.

A properly functioning platform, where people can exchange information, is indispensable to disaster risk interventions. The size and level of sophistication varies from country to country, and sometimes within a country. A platform my take the shape of a group network or may be an established body with regular meeting and participants.

NOTES

PEACE, PROSPERITY AND
REGIONAL INTEGRATION

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