

Assessment report on mainstreaming and implementing disaster risk reduction in West Africa



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Assessment report on mainstreaming and implementing disaster risk reduction in West Africa

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Acronyms and abbreviations

AfDB	Africa Development Bank
AMESD	African Monitoring of the Environment for Sustainable Development
CAA	climate change adaptation
CAA/UNDAF	Common Country Assessment/United Nations Development Assistance Framework
DRR	disaster risk reduction
ECA	Economic Commission for Africa
ECOWAS	Economic Community of West African States
EIA	Environmental Impact Assessment
EM-DAT	OFDA/CRED International Disaster Database
EWS	early warning system
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
HDI	Human Development Index
HFA	Hyogo Framework for Action
ICC	Interdepartmental Coordinating Committee
IRDR	Institute for Risk and Disaster Reduction
ISDR	International Strategy for Disaster Reduction
NADMO	National Disaster Management Organisation
NEEDS	National Economic Empowerment Development Strategy
NEMA	National Emergency Management Agency
NEPAD	New Partnership for Africa's Development
NGO	non-governmental organization
NPDRR	National Platform for Disaster and Risk Reduction
OCHA	Office for the Coordination of Humanitarian Affairs
PDNA	post-disaster needs assessment
PRSP	poverty reduction strategy paper
UNDP	United Nations Development Programme
UNISDR	United Nations International Strategy for Disaster Reduction
VCA	vulnerability capacity analysis

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The report was prepared under the overall guidance of Fatima Denton, Director of the Special Initiatives Division (SID) of ECA, and Sharon Rusu and Pedro Basabe, current and former Head of UNISDR Regional Office for Africa, respectively. Isatou Gaye, Chief, Green Economy and Natural Resources Section of SID, provided substantive guidance and supervision in the preparation of the report.

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Executive summary

Introduction

Globally, African countries are amongst the most vulnerable to the impacts of natural disasters. In 2013, United Nations International Strategy for Disaster Reduction (UNISDR) estimates put economic losses from 147 recorded disasters, over the previous two years at about US\$ 1.3 billion (UNISDR, 2013). However, disaster risk reduction (DRR) measures continue to be inadequately integrated into the framework of development policies and strategies at various levels, while poor implementation of those that do exist has grave consequences for food security, economic growth, poverty reduction, attainment of the Millennium Development Goals and overall sustainable development.

Disaster reduction policies and programmes must be designed to rebuild societies with increased resilience to hazards, and ensure that development activities do not unwittingly increase vulnerability to such hazards. Governments will have to find effective means by which a much more comprehensive and multisectoral approach can be adopted. This should include incorporating participation by professional disciplines as well as harnessing public interest to contribute to disaster risk reduction through appropriate political commitment and local community participation.

Increasingly, Governments, organizations and the general public around the world no longer accept that disasters are unpredictable, unavoidable events beyond human control. This is due to a growing awareness that disasters are generally linked to problems of human development. This understanding precipitates recognition of the

need to mainstream DRR into the development agenda by addressing risks that emanate from natural hazards and human development policies, programmes and strategies. The emerging issue of mainstreaming DRR in development programming is noted as a plausible way to implement the needed links between DRR, climate change adaptation (CCA) and sustainable development, thus providing avenues for practical action for both Governments and other actors.

This assessment report on mainstreaming and implementing DRR measures in West Africa was prepared within the framework of the United Nations Development Account project on mainstreaming DRR in national and regional development strategies in support of efforts to meet the Millennium Development Goals and the attainment of sustainable development goals in Africa. This project was jointly conceived by the Economic Commission for Africa (ECA) and UNISDR. Key partners in project implementation included the Southern African Development Community, the Economic Community of West African States (ECOWAS), the African Union Commission and the United Nations Development Programme (UNDP).

Findings on the assessment of progress and experiences in mainstreaming the planning and implementation of DRR measures as part of national and subregional development strategies, plans and programmes in the West Africa Subregion are presented within the report. The assessment was commissioned jointly by ECOWAS, ECA and UNISDR.

This report provided input towards preparation of the regional assessment report. It also served as a key resource for the subregional DRR capacity development workshop, which, within its agenda, showcased and promoted good practices to scale up both mainstreaming and implementation of DDR measures as part of development frameworks.

Socioeconomic and human development attributes of West Africa

In West Africa, it is widely acknowledged that poverty, weak socioeconomic development, high urbanization growth and population density, environmental degradation, diseases (particularly malaria and HIV/AIDS), poor governance, wars, conflicts, violence and other such threats are cumulative underlying factors that contribute to the fragility of communities in the subregion (ProVention Consortium, 2008). For example, 86.7 per cent of the 15 most vulnerable countries in the world are situated in Africa, with seven of them situated within the ECOWAS subregion, with the Niger being the second most vulnerable country in the world. Similarly, 3 of the 15 most susceptible countries globally are from the subregion.

The low levels of human development in the subregion compounds the vulnerability and hazard risk situations in most ECOWAS member States, resulting in low adaptive and coping capacities to disaster events such as flooding, storms, epidemics and droughts. The rapid population and urbanization trends in the last 50 years have led to haphazard development in most cities and towns, mostly due to poor urban planning and violation of planning and building codes. The poor are often at the greatest risk, inhabiting slums and high-risk zones. The impact of disasters on the poor is profound, as most lose their entire livelihoods to

disaster events due to their locations. They are also unlikely to benefit from appropriate mitigation measures, such as flood and fire insurance.

Social protection systems seek to provide assistance, support, protection and build the resilience of vulnerable groups against hazard and livelihood risks. However, most ECOWAS protocols, resolutions and decisions on sociopolitical development are geared towards transportation, energy, customs and migration, with less emphasis on social protection concerns. Social protection intervention for the poor is a major challenge in West Africa. Nonetheless, with the divergent socioeconomic and environmental risks plaguing the subregion, member States are now developing various national social protection measures (policies, plans and strategies) to address the social risk, social exclusion, natural disaster risk and vulnerability and others focusing on health related risks.

Hazard risk profile in West Africa

Climate change is expected to increase drought conditions, coastal erosion and affect the vegetation patterns in the subregion, while tidal waves and storm surges are likely to intensify. Arising from the inherent poor human development-vulnerability indices and unpredictable climate, the Sahel countries of Burkina Faso, Mali and the Niger have experienced severe drought occurrences with devastating population displacement. However, there has been some stability in the mortality and disaster impact due to improved adaptive and coping capacities in the Sahel region.

Over the past 30 years, the level of mortality due to disease epidemics seems to be on the decline in West Africa. However, the increase in frequency of disasters and the severity of their impact on the population is due to very weak human development and socioeconomic indices.

Relatively, the impact of storms in West Africa in the last 30 years is not as pronounced as in other subregions, such as Eastern and Southern Africa. Although available information on storms is relatively scanty, despite increase in frequency of occurrence, the impact of these events seems to be on the decline, which is probably due to improved resilience at the local and national levels. With climate change issues on the rise, there is need for efficient early warning systems in the subregion to improve preparedness and response.

Over the last three decades, West Africa, along with East Africa, has experienced an increase in technological disasters, with higher mortality figures, whereas Southern and North Africa subregions have experienced more accidents and damage to public assets and critical infrastructural facilities, with its attendant consequences probably due to their relatively higher level of technological development and activities. Regrettably, in the last 10 years, Nigeria accounted for a significant proportion of the disaster occurrences (324) in the subregion, with attendant mortality of 15,492 persons, 9.34 million people impacted and about US\$ 690 million in assets and livelihood destroyed.

Despite development efforts made by member countries and development partners in West Africa in areas such as social and physical infrastructure, environmental sustainability, poverty reduction, food security and attempts towards attaining the Millennium Development Goals, enduring development had been elusive in the subregion due to high poverty levels; rapid population growth and urbanisation; infrastructure decay; fragile ecosystems; conflict over resources; political instability; the HIV/AIDS pandemic; and worsening vulnerability and hazard risk situations among member states in the subregion (ECOWAS, 2006).

Strategic and institutional frameworks for disaster risk reduction in the ECOWAS subregion

A cursory look at the philosophy and the emerging frameworks for disaster risk reduction over the years establishes some form of convergence with earlier developmental agenda, as well as with sustainable development philosophy. The World Conference on Disaster Reduction, 18-22 January 2005, Kobe, Hyogo, Japan drew on guidance set by the Yokohama Strategy and Plan of Action for a Safer World (1994) and the International Strategy for Disaster Reduction (ISDR) and made a commitment to DRR through the Hyogo Declaration and the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (ISDR, 2005)

At the subregional level, in response to increasing incidence of disasters and resulting vulnerabilities, triggered by natural and man-made hazards over the last decades, the ECOWAS policy on Disaster Risk Reduction was developed and adopted by the Authority of Heads of State and Government at the 31st Ordinary Summit in Ouagadougou on January 19, 2007 to facilitate sustainable integration and development of DRR capabilities within West African States.

In order to facilitate the mainstreaming of DRR into sustainable development activities in West Africa, the ECOWAS DRR division under the Humanitarian and Social Affairs Department proceeded with the development of programmes focusing on developing institutional capacities for disaster forecasting, prevention, early warning, mitigation of effects and rebuilding for future risk reduction. Similarly, the department also began establishing relevant frameworks and strengthening existing institutions within the Commission. In addition, it reinforced initiatives in member States, such as the creation of viable National Platforms,

mainstreaming of DRR into development strategies, including poverty reduction strategy papers (PRSPs), the ECOWAS Interdepartmental Coordinating Committee (ICC) and the establishment of effective DRR structures downstream within member States.

In collaboration with its international partners and in line with the Hyogo Framework for Action (HFA) and provisions in the ECOWAS policy on disaster risk reduction, the ECOWAS Commission has embarked on several activities to build the resilience of its population to disasters. In this study the interventions are evaluated in details according to the progress made on the five priorities of HFA.

These are:

- (i) Ensure that DRR is a national and local priority with a strong institutional basis for implementation;
- (ii) Identify, assess and monitor disaster risks and enhance early warning;
- (iii) Use knowledge, innovation and education to build a culture of safety and resilience at all levels;
- (iv) Reduce the underlying risk factors;
- (v) Strengthen disaster preparedness for effective response at all levels.

An analysis of National HFA progress reports on DRR implementation in selected countries were carried out for Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, the Niger, Nigeria and Sierra Leone .

In summary, while there is some level of progress on DRR implementation at the national level, there are limitations at the lower level of governance and communities. Similarly, DRR activities have not been fully mainstreamed into the development plans, policies and PRSP documents of most ECOWAS member States, with the exception

of Ghana, Nigeria and Senegal; while countries such as Gambia and Sierra Leone have neither an autonomous statutory and disaster management agencies nor national DRR Platform. The subregion is beset with challenges such as ineffective early warning systems, poor coordination among the various stakeholders in DRR, non-existent DRR legislation and poor or no budgetary allocation for DRR activities. The reduction of disaster risk is yet to be seen as a priority in the ECOWAS subregion.

A strategic programme was launched in 2010 by ECOWAS member States to develop and strengthen the resilience and adaptability of the subregion to climate change and extreme weather events in accordance with the HFA goals. The objectives of the programme are essentially to: strengthen the scientific and technical capacity of the subregion to reduce vulnerability to climate change; promote the integration of climate change aspects into development policies, strategies, programmes and projects at subregional and national levels; and support, develop and implement subregional and national programmes and projects on adaptation to climate change. For example, with recent climate extremes and severity, infrastructure "engineering" would need to review and adapt public infrastructure building standards to the current hazard risk profile in the subregion and support local adaptation strategies.

Mainstreaming and implementation of disaster risk reduction measures, programmes and activities in West Africa

There are several policies that have been adopted at the subregional and national levels that have elements of DRR mainstreamed into them. Each of these development policies, plans and strategies are assessed on the basis of their coherence and extent of DRR integration, multisectoral link-

ages and resource availability in light of the five HFA priorities. The outcomes of the assessment of DRR mainstreaming and implementation into the development initiatives at the ECOWAS subregion are also discussed.

The main tools and approaches used by the ECOWAS Commission, member States and their development partners to mainstream and implement DRR activities at the subregional and national levels include: training and capacity building; advocacy and public awareness raising; environmental impact assessments; post-disaster needs assessments (PDNAs), vulnerability capacity analysis (VCA), development of national platform on DRR and enhanced collaboration.

In consideration of all of the above, the integration/mainstreaming of DRR measures into most of the ECOWAS subregional and member states' development policies, plans and strategies cannot be said to be significant. This is because most of the DRR elements observed in the development documents of the ECOWAS Commission and its member States do not adequately present the seriousness of the pressing need to tackle the negative impacts relating to human development and their associated hazard risks or the general vulnerability of the subregion.

Good practices in mainstreaming and implementing disaster risk measures, programmes and activities.

Significant disaster risk management and reduction interventions have been identified and described to be showcased as good practices for replication. This section described the circumstances relating to the initiatives; the results of the exercise; qualifications for being a good practice; lessons learnt; the challenges faced and the potential for replication. The programmes and projects highlighted include:

- Guinea-Bissau: improving rice varieties and production
- Senegal: reinforcing beneficiaries' skills in disaster risk management (DRM)
- Liberia: reducing flood risk through a job creation scheme (Mercy Corps)
- Nigeria: collaborations of the National Emergency Management Agency (NEMA) with six Nigerian universities.
- Nigeria: NEMA/World Bank Post-disaster needs assessment (PDNA) and VCA
- Burkina Faso: protecting degraded dry-land forest: Tiogo Forest Reserve
- Ghana: inter-sectoral collaboration and heightened education to reduce epidemic mortality
- Togo: framework for consultation and co-ordination on risk and disaster reduction: National Platform for Disaster and Risk Reduction (NPDRR)
- Togo: community early warning system (EWS) from the Togolese Red Cross

Recommendations for effective integration, mainstreaming and implementation of disaster risk management activities in West Africa

The pervasive low human development index in the subregion compounds the vulnerability and hazard risk situations in most ECOWAS member States, resulting in low adaptive and coping capacities to disasters like flooding, storms, epidemics, drought etc. Its rapid population growth further compounds the situation, along with urbanisation trends in the last 50 years or more which has led to haphazard development patterns in most cities and towns. The HFA has been the bedrock of disaster risk management for almost a decade and has played a decisive role in the mainstreaming of DRR into the developmental policies, plans and strategies across international, regional,

subregional and national landscapes. However, DRR mainstreaming and implementation in West Africa is still a far cry from the UNISDR agenda to build local and national resilience to disaster by the globally community according to the guidelines laid out in HFA for the decade 2005-2015.

Recommendations

The following recommendations are made to fast track effective mainstreaming and implementation of DRR activities as part of cooperation and development frameworks at the subregional and national levels of West Africa:

- Capacity-building and training in DRR should be carried out in order to enhance awareness of relevance to development and scale-up efforts being made to mainstream and implement DRR
- Strategic DRR Data Centres should be established to enhance storage and retrieval of DRR information
- Advocacy and public enlightenment on DRR should be stepped up. Moreover, appropriate legislation should be promulgated; and competent DRR desk officers be designated in ministries, departments and agencies for effective DRR mainstreaming and follow up
- EWSs should be strengthened and mechanisms for information sharing and early warning between meteorological services and DRR experts should be established to give appropriate alerts to prevent or mitigate risk and ensure adequate preparedness in the subregion
- DRR/DRM agencies such as NEMA and the National Disaster Management Organisation (NADMO) in Nigeria and Ghana respectively, should be established by all ECOWAS member States through appropriate partnership with government and development partners, national private sector and civil society organizations to ensure effective implementation of DRR related policies, plans and programmes
- ECOWAS member States should embark on decentralization of DRR activities to the local communities and the populations that are at the frontier of disasters
- Countries should enact appropriate legislations to institutionalize DRR funding at all levels of government
- ECOWAS member States should embark on the process to mainstream DRR elements into their basic education curriculum and enlarge the frontier for undergraduate/postgraduate studies and in-service training. Ghana and Nigeria provide good practice cases that could be emulated by other countries
- Member states and subregional organizations should promote collaboration and sharing of sensitive DRR information among the academic/research institutes, hydrological and meteorological agencies, planning and decision-makers so as to ensure effective DRR delivery.

Selected terminologies in disaster risk reduction

Adaptation

The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Biological hazard

Process or phenomenon of organic origin or conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Building code

A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.

Climate change

- a) The Inter-governmental Panel on Climate Change (IPCC) defines climate change as: “a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use”.

- b) The United Nations Framework Convention on Climate Change defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.

Contingency planning

A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.

Coping capacity

The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.

Critical facilities

The primary physical structures, technical facilities and systems which are socially, economically or operationally essential to the functioning of a society or community, both in routine circumstances and in the extreme circumstances of an emergency.

Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affect-

ed community or society to cope using its own resources.

Disaster risk

The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

Disaster risk management

The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster risk reduction

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Disaster risk reduction plan

A document prepared by an authority, sector, organization or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.

Early warning system

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

Emergency management

The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

Emergency services

The set of specialized agencies that have specific responsibilities and objectives in serving and protecting people and property in emergency situations.

Environmental degradation

The reduction of the capacity of the environment to meet social and ecological objectives and needs.

Environmental impact assessment

Process by which the environmental consequences of a proposed project or programme are evaluated, undertaken as an integral part of planning and decision-making processes with a view to limiting or reducing the adverse impacts of the project or programme.

Exposure

People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.

Geological hazard

Geological process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Hazard

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Hydrometeorological hazard

Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

National platform for disaster risk reduction

A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multisectoral and interdisciplinary in nature, with public, private and civil society participation involving all concerned entities within a country.

Natural hazard

Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Preparedness

The knowledge and capacities developed by Governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Prevention

The outright avoidance of adverse impacts of hazards and related disasters.

Resilience

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Response

The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected

Risk

The combination of the probability of an event and its negative consequences.

Risk assessment

A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.

Risk management

The systematic approach and practice of managing uncertainty to minimize potential harm and loss.

Risk transfer

The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.

Susceptibility

The likelihood of harm, loss and disruption in an extreme event triggered by a natural hazard.

Technological hazard

A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury,

illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Vulnerability

The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

World Risk Index

This determines the risk of becoming a victim of a disaster as a result of a natural hazard.

It is calculated by combining the four individually calculated components of exposure, susceptibility, lack of coping capacities and lack of adaptive capacities.

(Source: United Nations Office for Disaster Risk Reduction, 2009)

1. Introduction

1.1 Background

The significant impact of natural disasters on Africa's core development sectors such as agriculture, energy, health, infrastructure, education and environment strongly affect development patterns through loss of lives, damage to physical, natural and environmental assets, losses in human and financial wealth, erosion of social capital and governance systems. In 2008, there were 96 disasters recorded in sub-Saharan Africa. They included 44 floods and nine droughts that affected 16.3 million people. The resultant economic losses incurred were estimated at one billion dollars (UNISDR, 2009). Similarly, 18 million people were affected by drought in 2012 and 8.8 million were affected by floods across sub-Saharan Africa. Economic losses from 147 recorded disasters over the last two years were put at US\$ 1.3 billion (UNISDR, 2013). African countries are amongst the most vulnerable to the impacts of natural hazards.

Nevertheless, DRR measures continue to be inadequately integrated into and poorly implemented within the framework of development policies and strategies at various levels. The consequence is that every disaster occurrence results in enormous setbacks on food security, economic growth, poverty reduction, progress towards achievement of the Millennium Development Goals and overall sustainable development.

Structural solutions, including concrete implementation actions, are therefore needed to minimize the enormous economic losses, loss of lives and livelihoods, reversals in development gains and other impacts associated with natural disas-

ters. As such, effective DRR measures need to be formulated and successfully integrated into and implemented within the framework of development strategies and programmes at regional, sub-regional and national levels.

This assessment report on mainstreaming and implementing disaster risk reduction measures in West Africa presents findings on the assessment of progress and experiences in mainstreaming the planning and implementation of DRR measures as part of national and subregional development strategies, plans and programmes in the West Africa subregion. The assessment was commissioned jointly by ECOWAS, ECA and UNISDR.

Specifically, the report:

- (a) Identifies, documents and analyzes the main disaster risks, and where applicable documents any disaster events in the subregion and provides quantitative and qualitative analysis of the social, economic and environmental damage and loss associated with the disasters in the subregion
- (b) Identifies and analyzes past, on-going and planned DRR interventions by the ECOWAS Commission and its main partner organizations
- (c) Identifies and reviews key ECOWAS strategy, policy, plan and programme documents, including those of its partner organizations, and assess the extent to which disaster risk reduction interventions are integrated or mainstreamed into these documents, including at the implementation stage

- (d) Identifies, documents and analyzes the following, with a view to promoting mainstreaming and implementation of DRR activities as part of development frameworks:
 - (i) Main tools and approaches applied/ used by the ECOWAS Commission and its partners to mainstream and implement DRR activities at subregional level
 - (ii) Synergy/complementarity and integration of DRR and climate change adaptation interventions/ frameworks
 - (iii) Good practices as well as success factors and lessons learned in mainstreaming and implementing DRR interventions at subregional level
- (e) Provides recommendations to scale up effective integration/mainstreaming and implementation of DRR activities as part of cooperation and development frameworks at subregional and national levels

1.2 Conceptualizing disaster risk reduction

Within the context of instituting development that does not sacrifice the future for present demands on existing natural resources, there is need to realize that disasters are not isolated events, but rather are outcomes of processes of risk accumulations deeply embedded in contemporary and historical development decisions. Thus, disasters result from a combination of hazards which are potentially damaging events or processes; and from people's vulnerability to those hazards. In other words, we need to appreciate the relationship between hazards and disasters and how they affect the development process.

Twigg (2001 p. 6), a world-renowned expert on disaster management, assisted in this task when he wrote that:

"Strictly speaking, there is no such thing as a natural disaster; but there are natural hazards, such as cyclones and earthquakes. The difference between a hazard and a disaster is an important one. A disaster takes place when a community is affected by a hazard (as we have seen, it is usually defined as an event that overwhelms that community's capacity to cope). In other words, the impact of the disaster is determined by the extent of a community's vulnerability to the hazard. This vulnerability is not natural. It is the human dimension of disasters, the result of the whole range of economic, social, cultural, institutional, political and even psychological factors that shape peoples' lives and create the environment that they live in."

It is evident that the underlying conditions of disaster risk are generated by unsustainable development practices. The challenge therefore in reducing disaster risk, especially in Africa, is essentially a developmental question. ISDR defines disaster risk reduction as "the systematic development and application of policies, strategies and practices to minimize vulnerabilities and disaster risks throughout a society; to avoid (prevent) or to limit (prepare and mitigate) adverse impacts of hazards, within the broader context of sustainable development" (ISDR, 2004; 2005; Department for International Development, 2004). It entails a paradigm shift from an undue emphasis on disaster response to disaster risk management through the factoring of prevention and disaster reduction into sustainable development (see figure 1.1). DRR policy is a wise investment. There is no gainsaying that disaster reduction is cheaper and better than responding to emergencies that in the first place could be anticipated and prevented.

Disaster reduction policies and programmes must be conceived with a resolve to build societies that are resilient to hazards, and to ensure that development activities do not unwittingly increase vulnerability to these hazards. Consequently, for sustainable development and sustainable livelihoods to be achieved, disaster risk in the context of reducing vulnerability and enhancing resilience should constitute a new approach to disaster management.

Its success is premised on partnership building between Governments, non-governmental organizations (NGOs), international organizations, academic institutions, the media as well as other relevant disaster reduction stakeholders.

DRR is based on a continuous strategy of vulnerability and risk assessment and aims to motivate societies at risk to be more involved in the conscious management of risk and reduction of vulnerability in their various communities. A system of comprehensive risk assessment and analysis, based upon detailed and accurate information on hazards and people's vulnerability to them, is prerequisite to an adequate and successful disaster reduction strategy. The challenge for Governments will be to find effective means by which a much more comprehensive, multisectoral approach can be developed, involving participation from professional disciplines and engaging public interest to actively contribute to disaster risk reduction. The accomplishment of this goal requires political commitment, as much as public understanding to motivate local community involvement.

1.3 Mainstreaming disaster risk reduction into sustainable development

Since the late 1990s, there has been increasing recognition by both Governments and donors of

the need to mainstream DRR into development – that is, to consider and address risks emanating from natural hazards in medium-term strategic development frameworks; in legislation and institutional structures; in sectoral strategies and policies; in budgetary processes, in the design and implementation of individual projects; and in monitoring and evaluating all of the above (Benson and Twigg, 2007).

The view that disasters are unpredictable, unavoidable events beyond human agency is increasingly being discarded by people, Governments and organizations around the world, on the basis of the increasing understanding that disasters are unresolved problems of development. In response, there is growing recognition of the need to mainstream DRR into development programming, policies, strategic frameworks, institutional structures, mechanisms and individual projects by addressing risks emanating from natural hazards and human development (Trocaire, 2009). The emerging issue of mainstreaming DRR into development programming is considered a plausible way of implementing the necessary links between DRR, CCA and sustainable development, providing avenues for practical action for both Governments and other actors. Describing the mainstreaming of DRR into the sustainable development agenda, Trocaire (2009) notes:

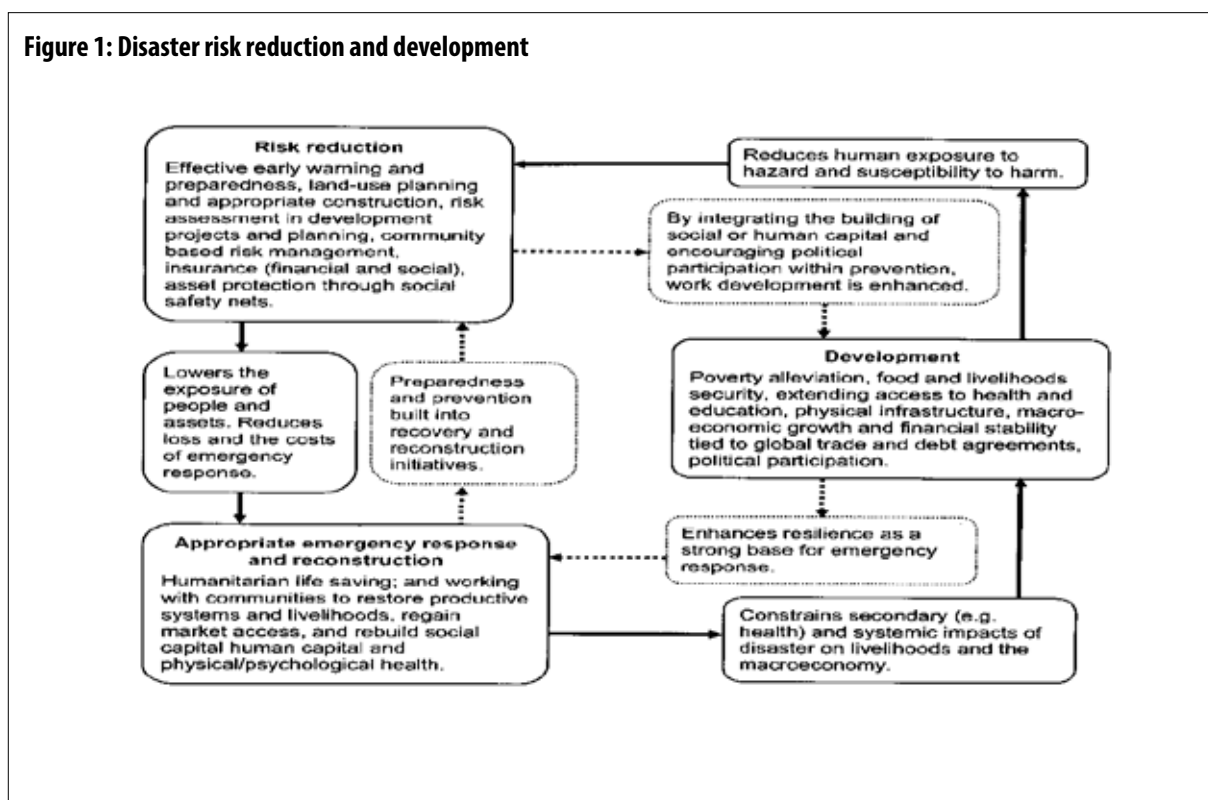
“Mainstreaming DRR is presented as a ‘win-win’ solution for securing sustainable development, reducing poverty and strengthening hazard resilience. This can only be achieved by incorporating DRR strategies and measures within the overall development framework, viewing DRR as an integral component of the development process rather than as an end in its own right. Such integration must be consistent and absolute; disaster risk can never be safely ignored by any Government, relief or development organisation.”

According to Ayeni (2006), the strategy for mainstreaming involves the conscious and systematic incorporation of DRR issues into all national development processes in terms of policy formulation, institutional arrangement and dialogue. Mainstreaming is most effective if it is considered at all levels of project evolution including policy, legislative, institutional and organizational levels (see figure1).

Guidelines for the mainstreaming of DRR assessment in development published by the African Development Bank (AfDB), the Commission of the African Union, the New Partnership for Africa's Development (NEPAD) and the Africa Office of the UN International Strategy for Disaster Reduction (UN/ISDR Africa) in 2004 to promote the integration of DRR in development, highlight the following seven key principles:

- (1) Political commitment, strong institutions and appropriate governance are essential to integrating risk issues in development processes and to reducing disaster risks.

- (2) The integration of disaster risk reduction in development is based on sound knowledge of disasters, risk and risk reduction.
- (3) Awareness of risk and risk reduction measures conveys knowledge about disaster risk reduction solutions.
- (4) Effectively incorporating risk considerations in development decision-making requires synergies between sustainable development and disaster risk reduction.
- (5) Sound development investment in the face of hazards depends on consideration of risk issues.
- (6) Achieving the objectives of mainstreaming disaster risk reduction depends on enhancing compensatory risk management to help reduce the legacy of accumulated risk.
- (7) Disaster risk reduction is a multi-thematic and multisectoral process; mainstreaming it in development involves its integration in development themes or sectors.



Mainstreaming is the effective and uniform integration and consideration of all issues that are concerned with specific activities in the understanding that the collapse of any of the subsets will adversely affect a successful utilization of the others. Mainstreaming DRR is important because:

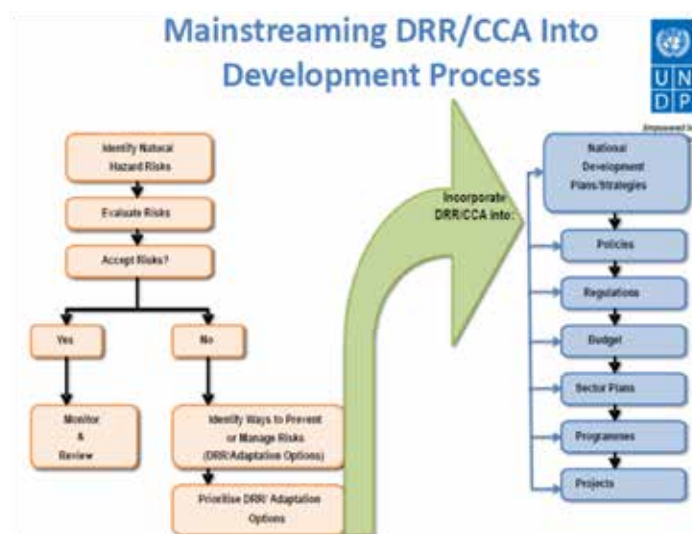
- Significant proportions of development policies, plans, programmes and projects in many countries have been implemented without incorporating DRR measures. For example, most roads, irrigation, housing and industrial projects are embarked upon without adequate consideration for their ecological, sociocultural and health impacts.
- The consequences of disasters are severe, and result in loss of lives and properties, loss of livelihoods, environmental pollution and degradation.
- Poverty reduction, human development, and governance conservation are mutually dependent. Although Governments have taken actions that include legal and

financial commitments to tackle the twin problems of poverty and disaster risk, the problems persist.

Despite the progress and gains in mainstreaming DRR into all phases of programme cycles, some criticisms have been levelled at the strong focus on disaster response rather than prevention and mitigation of risks.

The challenge of creating meaningful actions based on the process of mainstreaming DRR can be overcome by institutionalizing DRR to ensure that organizational practice enforces DRR objectives throughout the programme cycle. Institutionalizing DRR for an organization is a practical way of mainstreaming DRR and ensures that DRR is an integral part of organizational strategy, procedures and culture, with measurable indicators of institutionalization at all levels.

Figure 2: Mainstreaming disaster risk reduction into the development process



Source: UNDP, 2013

1.4 Methodology

The methodology for the preparation of this report takes into account the conceptualization of DRR presented in the preceding section. It comprised the following: (a) Comprehensive desk review, (b) Key informant interview, (c) Data analysis, (d) Preparation of reports and (e) Presentation of the report at a subregional capacity-building workshop.

(a) Comprehensive desk review

An extensive desk review was conducted to collect data and information relevant to the assignment. Documents acquired and reviewed for this process included:

- ECOWAS Subregional policy and strategy on disaster risk reduction
- Programme of action for the implementation of the ECOWAS policy for disaster risk reduction 2010-2014
- Disaster reduction in Africa, ISDR Informs, 2010 – mid 2011 issue
- ECOWAS Environmental policy
- African monitoring of the environment for sustainable development (AMESD)
- ECOWAS Agricultural policy (ECOWAP/CAADP)
- ECOWAS Regional strategic plan 2011-2015
- Subregional strategic programme to reduce vulnerability and adaptation to climate change
- ECOWAS Guidelines for the establishment and strengthening of national platforms for disaster risk reduction in West Africa
- Review of current and planned adaptation action in West Africa, Adaptation Partnership, International Institute for Sustainable Development, 2011

- Progress towards Sustainable Development in West Africa by the Economic Commission for Africa, 2012
- Programme of action for the implementation of the Africa regional strategy for disaster risk reduction (2006-2015)
- Africa regional strategy on disaster risk reduction, 2004
- National reports/strategies/plans/programmes on DRR and development in member States and in especially from reports of the in-depth national assessments carried out in selected ECOWAS member States of Nigeria and Togo.

In particular, the following parameters were examined in the review:

- The extent of integration/mainstreaming of DRR into development frameworks at subregional and national levels
- The extent of integration/mainstreaming of DRR into development cooperation frameworks at subregional and national levels and
- Analysis of tools and approaches used to mainstreaming DRR and implementing DRR measures

(b) Key informant interview

Additional information regarding past, current and planned interventions was gathered through appropriate consultations and interviews with officials in the ECOWAS Commission and its various DRR related partners. Semi-structured questionnaires were forwarded electronically to ECOWAS member States and relevant development agencies while data gathering visits were made to some DRR related ministries, departments, agencies and development partners in Abuja, Nigeria (see Annex).

(c) Data analysis

Data for this report was collected from the following main sources: literature review on DRR mainstreaming and implementation; content analysis of legal, policy, strategy, programme and project documents; country assessment reports for Nigeria and Togo; and questionnaires and informant interviews. Data analyses included assessing trends in disaster occurrence and their related impacts. Where appropriate charts, tables, maps and simple descriptive statistics have been used to present and describe data.

1.5 Organization of the report

This report is structured into six chapters. Chapter two discusses the prevalence and implication of disasters in the ECOWAS subregion with a focus

on salient socioeconomic variables, the vulnerability and hazard risk profiles in the subregion. Chapter three examines the strategic and institutional frameworks for DRR in the ECOWAS subregion as well as the progress on HFA priorities made by ECOWAS and its member states. Chapter four assesses the extent of mainstreaming and implementation of DRR measures into the developmental frameworks in the ECOWAS subregion and member states. Chapter five presents the best practices in DRR mainstreaming and implementation in the subregion and among member states, and chapter six of the report proposes recommendations for effective mainstreaming and implementation in the ECOWAS subregion.

2. The prevalence and implications of disasters in West Africa

2.1 The ECOWAS subregion

The West Africa subregion extends from the Sahelian countries of Burkina Faso, Cabo Verde, the Gambia, Guinea-Bissau, Mali, Mauritania, the Niger and Senegal, and Gulf of Guinea countries: Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone and Togo. The region contains diverse ecological zones ranging from tropical coastal areas to savannah landscapes to the Sahel. It includes three landlocked countries – Burkina Faso, the Niger and Mali – and the island state of Cabo Verde. It has an area extent of about 5.6 million km² and a population of over 300 million people, with 60 per cent of its population dwelling in rural areas and 40 per cent in urban areas. English, French and Portuguese are the official languages spoken (see figure 3).

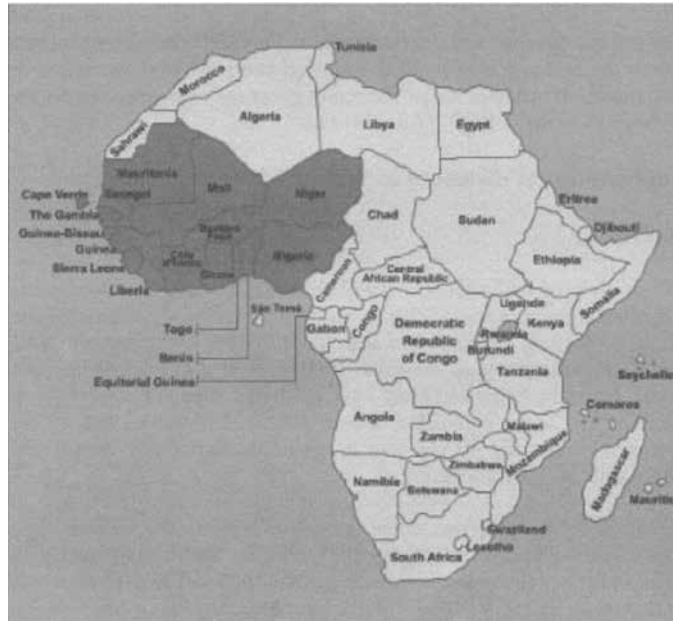
ECOWAS was established when 15 West African countries signed a treaty for an Economic Community of West African States (Treaty of Lagos) on 28 May 1975, with the main aim of promoting co-operation and development in all fields of economic activities in member States. These 15 countries were Benin, Burkina Faso (then known as Upper Volta), Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, the Niger, Nigeria, Senegal, Sierra Leone and Togo. Two years later, in 1977, Cabo Verde became the sixteenth member of ECOWAS. On July 24, 1993, the 16 members of ECOWAS signed a revised treaty. The treaty also formally as-

signed the Community with the responsibility of preventing and settling regional conflicts.

A subsequent extraordinary ECOWAS summit in December 1997, held in Togo established a Mechanism for Conflict Prevention, Management, Resolution and Security. However, in December 1999, Mauritania announced its withdrawal from ECOWAS. As a result of its disagreement with some of the decisions taken at the Summit (ECOWAS, 2002)

The ECOWAS institution fulfils two separate but related mandates within the regional community. The first is in the area of economic and monetary integration, where the institution provides a forum and framework for sustainable economic development and poverty reduction. The second function focuses on political stability and the promotion of regional peace through dialogue and conflict resolution (ECOWAS, 2010). This provides support for effective political and institutional governance and creates the enabling environment for the implementation of domestic policies. Of all the 16 countries in the region, only Cabo Verde, Côte d'Ivoire, Ghana and Nigeria are not classified as least developed countries. As such, the West Africa region has among the highest concentration of least developed countries in the world, many of which are experiencing a range of economic, social, ecological and climatic stresses. These circumstances increase the vulnerability of West African countries to the impacts of disaster and climate change.

Figure 3: Economic Community of West African States



Source: ECOWAS (2002)

2.2 Socioeconomic and human development attributes of West Africa

It is commonly acknowledged that in West Africa poverty, weak socioeconomic development, high urbanization growth and population density, environmental degradation, diseases (particularly malaria and HIV/AIDS), poor governance, wars, conflicts, violence and other such threats are underlying factors that build up to make communities in the subregion more fragile (ProVention Consortium, 2008).

According to the World Risk Report (2012), 86.7 per cent of the top 15 most vulnerable countries in the world are situated in Africa, including seven countries within the ECOWAS subregion. The vulnerability ranking index designated the

Niger as the second most vulnerable country in the world, with six other ECOWAS nations: Sierra Leone, Liberia, Guinea, Mali, Nigeria and Togo being placed in the range of sixth to fifteen positions among the most vulnerable nations globally (see table 1).

Similarly, of the 15 countries worldwide categorised as most susceptible, three ECOWAS member States: Liberia, the Niger and Sierra Leone ranked fourth, fifth and ninth respectively. Furthermore, three ECOWAS member States; the Niger, Côte d'Ivoire and Guinea-Bissau are ranked tenth, eleventh and twelfth among the world 15 countries with the least coping capacity globally. Similarly, seven of the top 15 countries with the least adaptive capacities worldwide are from the ECOWAS subregion: the Niger, Mali, Sierra Leone, Guinea, Burkina Faso, Liberia and Benin (see table 2).

Table 1: 15 most vulnerable countries in the world

Rank	Country	Vulnerability index (%)
1	Eritrea	75.35
2	Niger	75.17
3	Chad	74.74
4	Afghanistan	74.32
5	Haiti	73.54
6	Sierra Leone	72.20
7	Liberia	71.74
8	Mozambique	71.37
9	Guinea	71.05
10	Central African Republic	70.69
11	Ethiopia	70.21
12	Mali	69.76
13	Burundi	69.32
14	Nigeria	68.70
15	Togo	68.39

Source: World Risk Report (2012)

Table 2: Hazard risk and vulnerability index

Country	World risk rank N=173	World risk index(%)	Exposure (%)	Vulnerability (%)	Susceptibility (%)	Lack of coping capacities(%)	Lack of adaptive capacities (%)
Benin	27	11.42	17.06	66.93	53.91	83.88	63.00
Burkina Faso	41	9.74	14.32	68.00	54.81	84.86	64.32
Cabo Verde	32	10.88	20.26	53.72	36.13	70.64	54.39
Côte d'Ivoire	44	9.00	13.67	65.84	47.34	88.55	61.64
Gambia	23	11.84	19.29	61.41	44.40	82.19	57.63
Ghana	45	8.85	14.48	61.12	47.12	79.06	57.16
Guinea-Bissau	17	13.34	19.65	67.88	55.49	88.48	59.68
Guinea	49	8.55	12.03	71.05	58.08	90.16	64.91
Liberia	60	7.86	10.96	71.74	65.11	85.88	64.22
Mali	46	8.76	12.55	69.76	56.57	82.87	69.85
Niger	22	11.93	15.87	75.17	64.87	88.73	71.93
Nigeria	53	8.28	12.06	68.70	55.46	88.00	62.63
Senegal	29	11.08	17.57	63.07	46.97	82.47	59.76
Sierra Leone	35	10.58	14.65	72.20	62.48	87.48	66.64
Togo	34	10.64	15.56	68.39	56.15	86.52	62.51

Source: World Risk Report (2012)

With the very high vulnerability and susceptibility indices accompanied with very low adaptive and coping capacities for hazard risks generally, the ECOWAS subregion can be rightly described as a subregion prone to disasters, especially with the general lack of DRR institutional support to prevent, mitigate and respond to disasters.

High risk index figures are recorded for most ECOWAS member States in table 2, with Guinea-Bissau, the Niger, Benin, Senegal, Sierra Leone and Togo being ranked 17th, 22nd, 27th, 29th, 35th and 34th respectively. This is expected considering that almost all the countries in the region have credentials of low human development indices such as high poverty, poor health status, discriminatory gender attribute and a highly degraded environment as shown in table 3. The exceptions are Cabo Verde and Ghana, who both have medium Human Development Index (HDI) ratings. The low human development attributes culminate in high vulnerability and susceptibility profile with low adaptive and coping capacities for hazard risks such as flooding, storms, epidemics, drought etc (see table 2).

2.2.1 Urbanization profile

The high vulnerability profile of West Africa has been further compounded by intense urbanization since 1950. The average urbanization growth rate in the subregion rose sharply from 7.5 per cent in 1950 to 32 per cent in 2000, impacting greatly on countries like the Niger and Senegal, with growth rates of 16 per cent and 46 per cent respectively. The average urbanization growth rate for the subregion is projected to rise beyond 35 per cent by 2020. Similarly, the urban population of the subregion had increased 10 fold between 1950 and 1990, and by 20 fold between 1950 and 2010 (SWAC/OECD, 2011, AfDB, 2013). Nigeria, followed distantly by Ghana, had the highest urban population growth in 1950 and still maintains this lead, with Cote d'Ivoire, Senegal and Benin

also experiencing some significant increases over the decades (see table 3). In summary, the urban population of West Africa had increased in leaps and bounds from merely 4.66 million in 1950 to around 97.75 million in 2010, with a projected rise to 124 million by 2020 (Africapolis, 2009). This trend is supported by the AfDB (2013) figures for urban population increases (per cent of total population) for West Africa of 32.9 per cent in 1990, 38.6 per cent in 2000 and 46.1 per cent in 2012.

The number of urban centres with populations of 10,000 and above and has risen from only 125 in 1950 to over 1,000 in 2013. This phenomenal growth has major implications for socioeconomic development, land use management, environment sustainability, hazard risk situations as well as ramifications on issues of local and national resilience in West Africa (see figures 4 and 5).

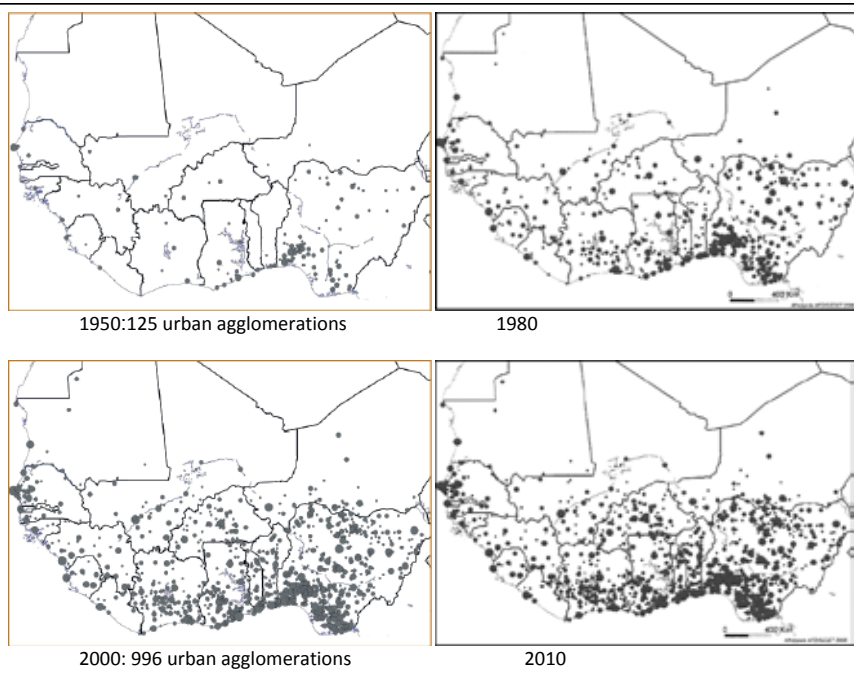
In general, the urban environment in most West African countries is beset with haphazard urbanization, with the poor living in high-risk areas, often in violation of requisite town planning ordinance and building codes, and without proper recourse to the environmental consequences.

The picture of generally high vulnerability-susceptibility and low coping-adaptive capacities with poor human development indices explains the low resilience of communities and countries in ECOWAS member States to hazard risks such as flood, epidemics, fire, storms and drought.

2.2.2 Population in poverty

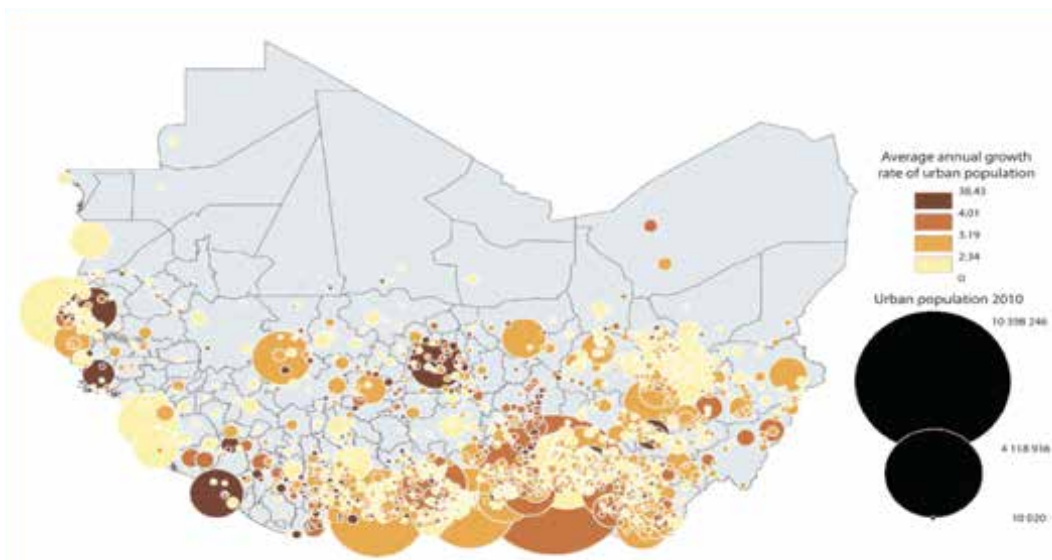
In addition to the high vulnerability and the rapid urbanization trend in the subregion, with their consequences discussed above, the majority of the people in the subregion are poor (see table 5). According to the MDG report of 2013, only Guinea in West Africa has achieved the MDG target of halving the proportion of people whose income is less than US\$ 1.25 a day by 2015, while Senegal

Figure 4: Urban population trends in West Africa (centres with population over 10,000 inhabitants)



Source: Africapolis (2009)

Figure 5: Centres with population over 10 000 inhabitants



Source: SWAC/OECD (2011)

Table 3: Socioeconomy and human development indices in West Africa

Country	World category	HDI (2013)	Population on <US\$ 1/day	Under 5 mortality (per/1000)	HIV prevalence	GNI	Life expectancy	Pop. density	Urban slum dwellers	CPI Score=100	Female legislators (%)
Cabo Verde	Medium HDI	0.586	21.0	21.6	1.0	3,540	74.3	124	96	58	21
Ghana		0.558	28.6	63.8	1.5	1,410	64.6	110	40	46	8
Benin	Low HDI	0.436	47.3	122.5	1.2	780	56.5	82	70	36	8
Burkina Faso		0.343	44.6	149.6	1.1	580	55.9	62	-	38	15
Côte d'Ivoire		0.432	23.8	108.7	3.0	1,090	56.0	63	57	27	11
Gambia		0.439	33.6	94.1	1.5	500	58.8	178	-	28	8
Guinea-Bissau		0.364	48.9	182.7	2.5	600	48.6	55	-	19	10
Guinea		0.355	43.3	135.4	1.4	430	54.5	42	-	24	-
Liberia		0.388	83.8	108.0	1.0	330	57.3	43	68	38	10
Mali		0.344	50.4	175.0	1.1	610	51.9	13	66	28	10
Niger		0.304	43.6	145.1	0.8	360	55.1	13	82	34	13
Nigeria		0.471	68.0	141.9	3.7	1,280	52.3	178	63	25	7
Senegal		0.470	33.5	85.9	0.7	1,070	59.6	66	39	41	23
Sierra Leone		0.359	53.4	157.9	1.6	460	48.1	84	-	30	13
Togo		0.459	38.7	105.8	3.4	570	57.5	113	-	29	11

Source: WDI (2013), HDI (2013), AfDB (2013) and CPI (2013)

Table 4: Urban population pattern

Country	Urban population as % of total/population		Annual growth of urban population(%)			Population in the largest city				
	1990	2000	2012	1990	2000	2012	Cities	Pop. ('000)	As % of urban	
								2011	2000	2011
Benin	34.5	38.3	43.0	5.3	3.8	3.8	Cotonou	924	37.0	23.9
Burkina Faso	13.8	17.8	27.4	4.5	6.7	6.2	Ouagadougou	2 053	93.6	45.6
Cabo Verde	44.1	53.4	62.5	7.7	3.6	2.0	Praia	132	56.5	42.7
Côte d'Ivoire	39.7	43.5	52.1	4.2	3.6	3.6	Abidjan	4 288	59.4	41.5
Gambia	38.3	49.1	59.7	6.9	5.0	4.0	Banjul	506	79.5	48.4
Ghana	36.4	44.0	52.9	4.7	4.1	3.7	Accra	2 573	30.5	19.7
Guinea-Bissau	28.1	29.7	30.3	6.4	1.9	2.7	Bissau	423	...	90.6
Guinea	28.0	31.0	36.4	5.5	2.5	4.0	Conakry	1 786	69.0	48.7
Liberia	40.9	44.3	48.6	-0.7	5.7	3.6	Monrovia	750	59.4	37.7
Mali	23.3	28.3	37.4	3.7	5.4	5.1	Bamako	2 037	63.6	35.1
Niger	15.4	16.2	17.4	3.5	4.0	4.4	Niamey	1 297	73.4	46.8
Nigeria	35.3	42.5	51.2	4.5	4.1	3.9	Lagos	11 223	21.3	13.7
Senegal	38.9	40.3	43.0	3.4	2.9	3.4	Dakar	3 035	79.1	55.7
Sierra Leone	32.9	35.5	39.1	2.0	3.6	3.1	Freetown	941	63.9	40.5
Togo	30.1	36.5	44.8	4.6	4.9	3.6	Lomé	1 524	87.0	56.1
Subregion										
East Africa		20.1	23.9	5.0	4.3	4.2	n.a	n.a	n.a	n.a
North Africa		51.0	54.4	2.8	2.1	2.0	n.a	n.a	n.a	n.a
South Africa		40.4	45.9	4.3	3.1	2.9	n.a	n.a	n.a	n.a
West Africa		38.6	46.1	4.4	4.1	4.0	n.a	n.a	n.a	n.a

Source: AfDB (2013)

and the Gambia were very close, with about 5 percent points away. Similarly, Ghana, Mali and the Niger were about 10 percent points away, while Côte d'Ivoire and Nigeria are yet to meet the Millennium Development Goal target (ECA and others, 2013).

States has dire consequences for development and serves as the driving force for the high vulnerability and hazard risks profile in the subregion.

The impact of disasters on the poor is grave as most lose their entire livelihoods to disaster events

Table 5: Population below poverty line

Country	Population below poverty line (%)			
	Survey year	Rural	Urban	National
Benin	2007	36.1	28.3	33.3
Burkina Faso	2009	52.6	27.9	46.7
Cabo Verde	2007	44.3	13.2	26.6
Côte d'Ivoire	2008	54.2	29.4	42.7
Gambia	2010	73.9	32.7	48.4
Ghana	2006	39.2	10.8	28.5
Guinea-Bissau	2012	64.7	35.4	55.2
Guinea	2007	63.0	30.5	53.0
Liberia	2007	67.7	55.1	63.8
Mali	2010	50.6	18.9	43.6
Niger	2007	63.9	36.7	59.5
Nigeria	2004	63.8	43.1	54.7
Senegal	2011	57.1	33.1	46.7
Sierra Leone	2003	78.5	47.0	66.4
Togo	2011	73.4	34.6	58.7
Subregion				
East Africa	n.a	n.a	n.a	n.a
North Africa	n.a	n.a	n.a	n.a
Southern Africa	n.a	n.a	n.a	n.a
West Africa	n.a	n.a	n.a	n.a

Source: AfDB (2013)

Poverty levels are most critical in Liberia, Nigeria and Sierra Leone where 83.8 per cent, 68 per cent and 53.4 per cent of the national population live below the international poverty lines, while 63.8 per cent, 54.7 per cent and 66.4 per cent live below national poverty lines respectively for the countries (see table 5). A significant proportion of the poor live in rural areas of West African countries where development opportunities are most lacking. The current state of poverty in member

because of their human settlement locations in vulnerable environment and for lack of mitigation measures such as insurance cover against hazard risks. Usually, they lose their lives from the direct impact of disasters, consequent economic hardship and developmental challenges. The limited coping-adaptive capacity arising from governance issues further weaken the resilience of the people (ProVention Consortium, 2008)

Poverty and disaster outcomes are inextricably linked. Poverty increases the susceptibility of the people to disasters. The ability of a community to cope with and recover from external shocks to a large extent depends on the sustainability of the natural resources, basic services, physical infrastructure and financial resources available to the people (Carney 1998, SOPAC, 2009). Deprived groups typically have low health status, live in very low quality housing, have limited access to water and sanitation, often have lower savings and insurance, and have inadequate access to food and nutrition security. People living in such conditions generate a range of immediate 'unsafe conditions' which make the poor more exposed to disasters and further compound their poor economic status (White and others, 2004).

According to Stromberg (2007), disaster-related deaths per capita are four times higher in low-income countries than elsewhere. Poor people in urban informal settlements also have higher levels of everyday risk (UNISDR, 2009). Given limited income and limited financial savings (if any), the ability of the poor to respond to and recover from disaster is limited. Furthermore, poor groups cannot easily adapt to disaster by investing in options such as disaster-proof technology, relocating to less hazardous areas, replacing lost items or even taking out insurance (SOPAC, 2009).

2.2.3 Health status

Health is both a determinant and outcome of vulnerability and poverty. Health and health related events can be catastrophic and plunge people further into poverty due to loss of incomes and high health-care costs in the absence of adequate social protection measures. The lack of access on non-availability of functioning health systems increases the vulnerability to and impact of disasters, particularly for poor segments of society.

Although many countries in the subregion are making good progress—over a decade there has been a general decline in infant mortality and the number malnourished children in the subregion (see table 6), on preventable childhood illness, including polio and measles through increased immunization coverage—some hurdles still remain. Strengthening fragile health systems and addressing basic hygiene and health education are important in addressing health challenges and reducing risks and vulnerabilities. The current Ebola outbreak in the subregion, leading to thousands to deaths, is evident of the inherent weaknesses and fragility of the health-care systems in the subregion, and how vulnerable the majority of the population are.

2.2.4 Gender

The West Africa subregion has recorded progress in terms of women's empowerment. In the last 20 years or more, the number of women in the labour force had increased in most countries with West Africa trailing after East and Southern Africa.

The proportion of women in the total labour force between 1990 and 2012 in the subregion had risen from 37.9 per cent to 43.2 per cent, with Sierra Leone, Togo, Ghana, Gambia and Benin leading with 47 to 51 per cent, which is almost parallel to male counterparts (see table 7). Similarly, women in strategic sociopolitical decision-making positions like full/sub ministers, top civil servants and captains of industry had increased significantly in Cabo Verde, the Gambia, Ghana and Guinea-Bissau.

Despite the significant increase, much still needs to be done to accommodate the participation of women in the sociopolitical and economic spaces at both national and local levels in West Africa. Presently women in the subregion account for 43 per cent of the agricultural labour force, which is primarily subsistence.

Table 6: Health status in West Africa

Country	Underweight children < 5 years (%)				Incidence of tuberculosis (per/100 000)			% of population with access to				Immunization Against (%)	
	2000-2005		2005-2011		1990	2000		Health Services		Sanitation		Tuberculosis	Measles
	1990-2000	2000-2005	2005-2011	2000-2005	2000	1982-88	2000	1990	2010	2011	2011	2011	
Benin	26.8	21.5	20.2	20.2	128	86	70	42	5	13	97	72	
Burkina Faso	33.7	35.2	26.0	26.0	87	71	57	21	8	17	99	63	
Cabo Verde	17.8	15.1	16.6	16.6	112	310	243	.	...	61	99	96
Côte d'Ivoire	30.7	33.6	28.2	28.2	327	327	327	...	20	24	74	49	
Gambia	15.4	15.4	15.8	15.8	185	225	279	93	...	68	90	91	
Ghana	20.3	18.8	14.3	14.3	155	152	79	76	7	14	98	91	
Guinea-Bissau	21.9	21.9	17.2	17.2	158	192	238	40	...	20	93	61	
Guinea	29.1	22.5	20.8	20.8	247	234	183	80	10	18	93	58	
Liberia	22.8	22.8	20.4	20.4	199	242	299	39	...	18	73	40	
Mali	62.0	30.1	27.9	27.9	76	77	62	40	15	22	89	56	
Niger	43.6	43.6	39.9	39.9	358	191	108	30	5	9	61	76	
Nigeria	27.3	27.2	26.7	26.7	128	172	118	67	37	31	64	71	
Senegal	20.3	14.5	19.2	19.2	138	155	136	90	38	52	95	82	
Sierra Leone	24.7	28.3	21.3	21.3	207	377	723	38	11	13	96	80	
Togo	23.2	...	20.5	20.5	50	76	73	...	13	13	90	67	
Subregion													
East Africa	32.1	26.7	23.1	23.1	293	312	207	60	15	25	85	78	
North Africa	5.6	6.6	5.6	5.6	67	62	57	84	72	89	98	95	
Southern Africa	21.6	20.5	13.4	13.4	345	529	582	38	44	50	88	83	
West Africa	29.5	27.6	25.6	25.6	155	175	138	62	26	26	75	70	

Source: AfDB (2013)

Table 7: Women participation in decision-making in West Africa

Country	Women's share of total labour force (%)			Women in government (%)				Administrators and managers			
	1990	2000	2012	Ministerial level		Sub-ministerial level		Female (%)		Female/male ratio	
				1994	2010	1980	1995-2004	1980	2005	1980	1995-2004
Benin	42.5	46.4	47.7	10.0	13.3	5.0	13.3	5.7	10.5	0.1	0.1
Burkina Faso	48.7	48.3	47.6	7.0	17.9	9.0	11.9	14.0	14.8	...	0.3
Cabo Verde	37.7	38.8	39.0	13.0	53.3	10.0	8.3	23.0	18.8	0.3	0.3
Côte d'Ivoire	30.3	35.3	38.2	8.0	12.5	...	6.8	...	17.1	...	0.1
Gambia	45.1	47.4	48.3	...	31.3	2.0	19.0	16.0	20.0	...	0.2
Ghana	48.6	48.2	47.7	11.0	21.6	10.0	9.4	8.9	11.8	0.1	0.1
Guinea-Bissau	44.4	45.4	47.3	4.0	23.5	16.0	13.2	...	37.5	...	0.1
Guinea	45.0	44.5	45.2	9.0	16.1	...	11.5	...	15.4	...	0.2
Liberia	47.4	49.2	47.6	5.0	30.4	...	10.0	...	13.6	...	0.1
Mali	39.0	37.5	35.2	10.0	21.4	...	...	20.0	18.5	...	0.2
Niger	22.7	31.0	31.2	5.0	22.6	9.0	10.0	8.0	23.1	...	0.1
Nigeria	34.1	39.9	42.7	3.0	9.7	4.0	5.6	6.0	10.0	...	0.1
Senegal	41.4	42.9	43.9	7.0	12.9	...	4.2	...	20.6	...	0.0
Sierra Leone	50.9	53.6	50.9	...	8.0	5.0	6.5	...	13.0	...	0.1
Togo	45.2	49.1	50.4	5.0	14.3	...	...	8.0	20.0	...	0.1
Subregion											
East Africa	44.9	45.2	45.9	12.4	18.6	6.4	7.5	11.5	13.9	...	0.2
North Africa	23.1	22.0	24.0	4.0	8.5	2.8	5.2	12.5	7.7	0.2	0.1
Southern Africa	45.3	47.5	47.3	5.9	23.8	8.1	8.3	17.3	17.0	0.3	0.3
West Africa	37.9	41.7	43.2	7.5	21.7	7.1	7.0	12.8	18.0	...	0.1

Source: AfDB (2013)

Similarly, women in the subregion are more vulnerable than men to natural disasters and human-induced conflicts. Women are disproportionately impacted by poverty due to cultural barriers resulting in limited access to productive assets, credit and low education, which reduces access to decent job opportunities. While discriminatory customary land tenure systems in the subregion increase women's vulnerability to the impacts of climate-related disasters (FAO, 2011), women and children are also unduly exposed to violent civil conflicts in member countries within the subregion.

2.2.5 Social protection mechanisms

Social protection refers to a set of initiatives (both formal and informal) that provide social assistance, social services, social insurance and social equity measures in an integrated manner that address all aspects of poverty and vulnerability. It includes social welfare services and related legislation, which are increasingly seen as an important component of poverty reduction strategies and efforts to reduce vulnerability to shocks and stresses.

Social protection initiatives are designed to provide assistance, support, protection and build the resilience of vulnerable groups against hazard and livelihood risks. However, most ECOWAS protocols, resolutions and decisions on sociopolitical development are geared towards transportation, energy, customs and migration, with less emphasis on social protection concerns. An exception to this is the protocol, 'Mechanism for Conflict Prevention, Management, Resolution, Peace-Keeping and Security', where ECOWAS established an emergency fund to support member States devastated by disasters. A Regional Humanitarian Depot, located in Bamako, Mali, is currently being developed to serve the entire subregion in critical emergencies.

Social protection intervention for the poor is a major challenge in West Africa. It is increasingly being addressed within national PRSPs. Ten countries in the ECOWAS subregion explicitly identified social protection as critical solutions in their PRSPs. Given the divergent socioeconomic and environmental risks plaguing the subregion, member States are now developing various national social protection measures (policies, plans and strategies) to address social risk, social exclusion, natural disaster risk and vulnerability and health-related risks.

Increased interest in social protection mechanisms as a response to poverty has led Senegal and Mali to consider setting up cash-based safety net programmes targeted at helping the poorest. Cabo Verde, Ghana, Nigeria and Sierra Leone have successfully launched cash transfer and school feeding programmes, while smaller pilots have been launched in Burkina Faso and Mali, focusing on children, the elderly, extremely vulnerable people and the disabled (see table 8).

Some informal social protection mechanisms operate across the subregion, reducing the overall poverty headcount and poverty gaps, as well as supporting poor households to cope with all forms of risks. Ghana's kin-based support system, remittances, trade associations, faith-based support networks and credit societies are all examples of informal social protection mechanisms. However, deepening levels of poverty and economic hardship, accompanied by limited economic opportunities for the poor compounded by the growing urbanization, modernization and change in cultural values of solidarity tend to limit the positive impact of these informal mechanisms (UNICEF, 2009).

In summary, social protection mechanisms in West Africa are weak and grossly inadequate in scope, with coverage reaching only 2-4 per cent of the population. In most countries social security cov-

Table 8: Examples of formal social protection mechanisms in West Africa

Countries	Social Protection Measures	Remark
Ghana	<ul style="list-style-type: none"> Livelihood Empowerment Against Poverty (LEAP) National Social Protection (NSP) Strategy National Health Insurance Scheme (NHIS) 	LEAP, launched in 2008 was developed in response to the food price crisis and designed to reach one fifth of those below the extreme (food) poverty line and the NHIS, which aims to extend insurance coverage to the entire population
Sierra Leone	<ul style="list-style-type: none"> Social Safety Net (SSN) programme. National Social Security and Insurance Trust (NASSIT) 	The SSN launched in 2007 aims to reach extremely vulnerable households with elderly people.
Cabo Verde	<ul style="list-style-type: none"> Minimum Social Protection (MSP) Social Solidarity Pensions (SSP) NSP Strategy. 	The MSP and SSP established in 1995 and 1992 respectively provide transfers and free access to basic social services to the extremely poor, elderly and people with disabilities.
Nigeria	<ul style="list-style-type: none"> In Care of the Poor (COPE) NHIS 	COPE, implemented by the National Poverty Eradication Programme (NAPEP) provides cash to extremely poor and vulnerable households to keep their children in school and utilize health services.
Burkina Faso	<ul style="list-style-type: none"> National Plan of Social Action 	Launched in 2007 and developed a three-year implementation plan.
Mali	<ul style="list-style-type: none"> NSP Policy. National Health and Social Development Programme Compulsory Health Insurance Programme (AMO) Medical Assistance Fund (FAM) 	The NSP policy frames the National Health and Social Development Programme, and includes a strong focus on extending health insurance coverage through the AMO and the FAM, which support access to health insurance for the poor.
Senegal	<ul style="list-style-type: none"> NSP Policy. The Sesame programme. National Retirement Fund. Institute for Retirement Planning of Senegal Social Security Fund Health Insurance Institute. 	The NSP policy aims to extend health insurance to 50% of the population by 2015 and establish a system to insure rural populations against the risks of natural disasters. The Sesame programme, launched in 2006 provides free medical services to all persons over the age of 60.

Source: Compiled by the author (2014)

erage extends only to the formal sector workforce. Social assistance and welfare programmes are inadequate, fragmented and underfunded with many such programmes still in the stage of small pilot schemes. Social welfare services designed to address problems of violence, exploitation and abuse of children are weak across the region, with very limited resources, lack of trained social workers and poor coordination. In short, a huge challenge remains to build and implement a more inclusive social protection system that would address the multiple deprivations, vulnerabilities and risks facing children and their families across the region (UNICEF, 2009).

2.3 Hazard risk profile in West Africa

Over the years, increasing numbers of people in West Africa are faced with disaster risks associated with drought, desertification, floods, the spread of disease (as a result of unhealthy conditions and poor hygiene), desert locust plagues, food insecurity, coastal erosion, volcanic eruptions, earthquakes (tremors) and technological accidents, including transport and industrial accidents. The impacts of the hazard events are aggravated by increasing urbanization, population growth and lack of appropriate human and material capacities to prevent, mitigate and respond to disasters due to a high incidence of poverty (ProVention Consortium, 2008).

Table 9: Flood occurrences and impacts in West Africa

Country	Occurrence			Death			Affected '000			Damage (USD)'000		
	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013
Benin	3	7	8	61	37	85	1139	834.2	1213	4800	3315	0
Burkina Faso	3	2	10	16	28	101	35.40	68.10	469.5	0	0	150176
Cabo Verde	-	-	1	-	-	3	-	-	0	-	-	0
Côte d'Ivoire	1	1	4	0	28	24	7.000	0	8.875	0	0	0
Gambia	-	2	7	-	53	17	-	36.00	57.47	-	-	0
Ghana	1	3	12	7	202	200	2.800	3.024	832.6	0	33500	0
Guinea-Bissau	-	-	4	-	-	5	-	-	58.54	-	-	0
Guinea	1	1	9	0	0	19	5.000	6.060	365.4	0	0	0
Liberia	-	1	4	-	10	4	-	5.000	33.41	-	0	0
Mali	2	3	16	18	5	101	24.64	8.630	244.1	-	0	0
Niger	1	4	13	20	74	178	80.00	106.4	1240	10200	0	67474
Nigeria	2	6	33	130	134	1132	306.0	804.0	9171	8000	59	546922
Senegal	3	3	12	0	0	80	18.00	322.5	857.7	1406	0	50979
Sierra Leone	-	1	6	-	12	154	-	200.0	21.20	-	0	0
Togo	-	5	6	-	3	69	-	291.9	299.7	-	0	0
Subregion												
East Africa	25	51	219	296	4293	4786	2,614	6,067	17257	1600	84298	1246738
North Africa	9	30	70	396	1970	2177	2,690	1,961	2512	90000	531100	2204217
Southern Africa	6	10	39	661	322	498	257.1	46.1	1990	766305	36460	813804
West Africa	19	42	156	252	586	2225	1,628	5,732	15019	24406	103315	815551

Source: EMDAT (2014)

The increasing occurrence of disasters in West Africa is further aggravated by the impact of climate change. For several decades, the subregion has experienced significant changes in rainfall patterns and weather conditions that have translated into not only extensive droughts but also devastating floods in recent times, destroying lives, properties and livelihoods. As local climates become more unstable, farmers have greater difficulty knowing what to plant and when to harvest

crops, thus making local risk-coping strategies increasingly difficult and increasing the risk of livelihood failure (UNDP, 2004). This implies that rural livelihoods that are dependent on weather-sensitive activities such as agriculture and other natural resources have become more vulnerable to the effects of climate change, which invariably leads to lower agricultural productivity, hence pushing them further into poverty (UNISDR, 2009).

Table 10: Drought in West Africa

Country	Occurrence			Death			Affected '000			Damage (USD) '000		
	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013
Benin	1	-	-	0	-	-	2,100	-	-	651	-	-
Burkina Faso	2	3	2	0		0	1,450	2,696	2,850	0	0	0
Cabo Verde	1	2	1	0	0	0	0	10.00	30.00	0	-	0
Côte d'Ivoire	1	-	-	0	-	-	0	-	-	0	-	-
Gambia	1	-	2	0	-	0	500.0	-	428.0	0	-	0
Ghana	1	-	-	0	-	-	12,500	-	-	0	-	-
Guinea-Bissau	1	-	2	0	-	0	0	-	132.0	0	-	0
Guinea	1	1	-	0	12	-	0	0	-	0	0	-
Liberia	1	-	-	0	-	-	0	-	-	0	-	-
Mali	1	1	5	0	0	0	1,500	302.0	5,125	0		0
Niger	2	2	4	0	0	0	4,500	1,638	17,485	0	0	0
Nigeria	1	-	-	0	-	-	3,000	-	-	71103	-	-
Senegal	2	-	2	0	-	0	2,150	-	1,134	0	-	0
Sierra Leone	-	-	-	-	-	-	-	-	-	-	-	-
Togo	2	-	-	0	-	-	400.0	-	-	0	-	-
Subregion												
East Africa	25	26	54	401454	206	830	33886	57217	104061	1000	292200	0
North Africa	7	4	3	150000	0	12	11850	9,635	7500	0	900000	0
Southern Africa	9	8	10	500	0	0	3707	1,420	18,757	0	1052739	0
West Africa	18	11	21	0	12	0	20200	5,115	29,722	71754	0	0

Source: EMDAT (2014)

2.3.1 Floods

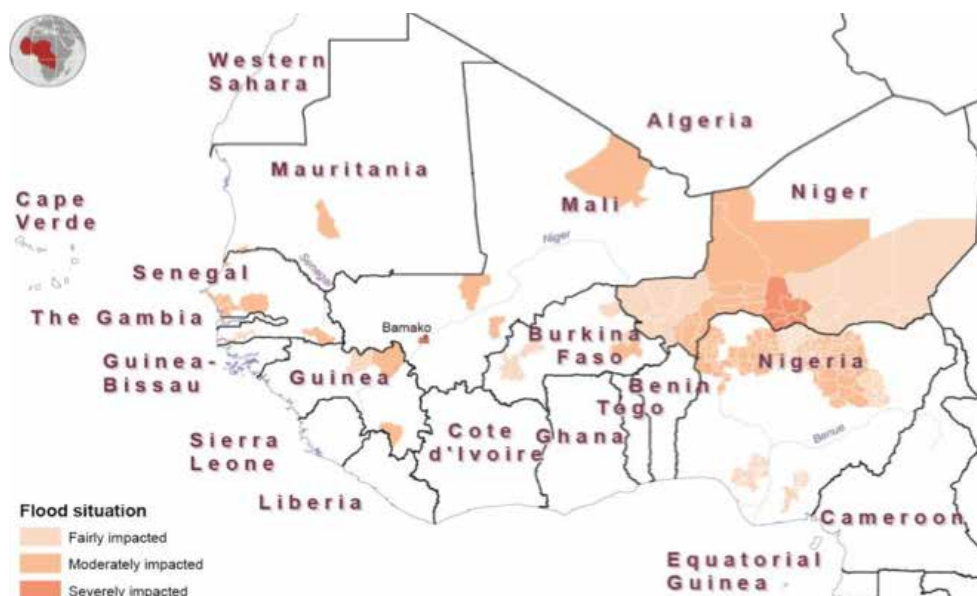
Floods and their associated impacts have been a recurrent issue over the decades in the subregion, with attendant increases in frequency of occurrence, severity of impact on infrastructure development and the related socioeconomic consequences. After East Africa, West Africa is the second subregion in Africa most impacted by floods. In the last 33 years, the subregion experienced a phenomenal rise in flood-related mortalities; impacting more people three times over and causing substantial damage to the social capital, livelihoods and the infrastructural facilities in member States.

Floods have increased in intensity and impact in the subregion within the last 30 years, and have been particularly severe in countries such as Benin, Ghana, Mali, the Niger, Nigeria and Senegal. For example, in the last 10 years, Nigeria recorded over 40 flood occurrences (33 floods in years 2000-2013 alone), 1396 deaths (1132 deaths over the period 2000-2013), 10.2 million displaced persons (9,171,000 persons in 2000-2013). Damage

to development and infrastructure by flooding totalled over 550 million dollars between 1980 and 2013. Similarly, the Niger and Benin have had increases in flood events, having experienced 18 occurrences, over 180 and 270 deaths respectively, over 1.3 million and 3.1 million displaced persons with damages worth over US\$ 77 million and 8 million respectively. Also of particular concern is the secondary impact of flood events such as disease epidemics, which intensify distress in the aftermath of a flood disaster.

That the escalating frequency of flooding has an overwhelming impact on the poor in Benin, the Niger and Nigeria, and indeed the entire subregion is not surprising, considering their low human development index ratings, accompanied by high incidence of corruption and poverty, where the majority have to survive on less than US\$ 1 a day. An environment of rapid population-urbanization growth combined with bad governance has resulted in high vulnerability indices in the ECOWAS member States.

Figure 6: 2013 Flood-affected countries in West Africa



Source: United Nations Office for the Coordination of Humanitarian Affairs (OCHA)2013

Table 11: Disease epidemics in West Africa

Country	Occurrence			Death			Affected '000			Damage (USD) '000		
	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013
Benin	3	4	15	293	199	844	2,814	1,000	20,000	0	0	0
Burkina Faso	4	5	12	1328	6472	8626	11,40	59,00	12,10	0	0	0
Cabo Verde	-	1	1	-	254	6	-	12,00	20,00	-	0	0
Côte d'Ivoire	-	2	10	-	166	429	-	2,000	4,800	-	0	0
Gambia	-	1	1	-	100	21	-	0,790	0,120	-	0	0
Ghana	3	7	8	118	548	274	1,657	6,700	19,50	0	0	0
Guinea-Bissau	1	4	3	68	2341	623	6,000	60,10	39,00	0	0	0
Guinea	1	2	10	18	323	745	0,030	24,00	11,90	0	0	0
Liberia	1	4	6	466	116	42	1,887	0,900	20,90	0	0	0
Mali	5	3	7	1683	1443	250	3,100	11,90	3,100	0	0	0
Niger	3	9	22	186	7057	2124	1,785	16,70	91,00	0	0	0
Nigeria	8	12	31	1632	13943	5081	1,561	57,00	98,80	0	0	0
Senegal	2	2	5	300	560	343	3,100	5,700	26,90	0	0	0
Sierra Leone	1	8	6	352	465	586	3,000	8,000	25,50	0	0	0
Togo	1	3	6	50	599	436	1,617	6,300	3,800	0	0	0
Subregion												
East Africa	20	78	162	12966	17543	14413	141,9	8,568	139,1	0	0	0
North Africa	3	11	22	2830	4189	2,937	38,81	28,70	56,83	0	0	0
Southern Africa	2	3	16	283	138	1042	14,62	4,100	150,6	0	0	0
West Africa	36	69	144	6572	34649	20485	44,70	423,8	510,3	0	0	0

Source: EMDAT (2014)

Table 12: Storms in West Africa

Country	Occurrence				Death				Affected '000				Damage (USD) '000			
	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	
Benin	-	-	1	-	-	0	-	-	0.800	-	-	-	-	-	0	
Burkina Faso	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cabo Verde	2	-	-	32	-	-	7,722	-	-	-	-	-	3000	-	-	
Côte d'Ivoire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gambia	-	-	4	-	-	5	-	-	16.80	-	-	-	-	-	0	
Ghana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Guinea-Bissau	1	1	1	1	0	0	3,703	1,700	1.700	0	0	0	0	0	0	
Guinea	-	-	1	-	-	4	-	-	0	-	-	-	-	-	0	
Liberia	-	1	1	-	0	0	-	2,000	3,500	-	-	-	-	0	0	
Mali	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Niger	-	-	1	-	-	4	-	-	1,300	-	-	-	-	-	0	
Nigeria	-	1	3	-	100	26	-	0	16.00	-	-	-	-	0	0	
Senegal	-	2	1	-	187	2	-	95.90	1,000	-	-	-	-	0	0	
Sierra Leone	1	1	-	60	13	-	-	0.003	-	-	-	-	-	0	-	
Togo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subregion																
East Africa	24	20	66	819	738	1458	965.1	4253	4,998	1222777	215315	823681				
North Africa	2	2	8	30	32	125	10.10	0.060	0.127	0	1,000	50				
Southern Africa	5	8	22	127	55	113	1,133	21.20	137.4	196152	583,000	39,041				
West Africa	4	8	13	93	305	41	11.40	100.1	39.67	3000	0	0				

Source: EMDAT (2014)

Table 13: Technological disasters in West Africa

Country	Occurrence			Death			Affected '000			Damage (USD) '000		
	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013	1980-1989	1990-1999	2000-2013
Benin	8	11	37	354	236	1332	3,243	855.2	1239	0	3315	0
Burkina Faso	11	10	43	1344	6500	9101	1,497	2824	3441	0	0	150176
Cabo Verde	4	5	5	32	263	66	7,722	28.6	50.1	3000	0	0
Côte d'Ivoire	4	10	27	99	344	934	7,070	2.34	119	0	0	0
Gambia	4	5	18	0	273	94	500.0	37.8	502.4	0	0	0
Ghana	7	15	41	196	984	1242	12,506	3031	852.5	0	33500	0
Guinea-Bissau	6	9	16	69	2558	792	12.33	65.3	230.3	0	0	0
Guinea	5	7	49	310	811	1416	26.47	30.2	378.3	0	0	0
Liberia	3	7	15	512	126	127	2,087	1007	557.8	0	47000	0
Mali	13	9	47	1752	1527	698	1,534	322.5	5377	0	0	0
Niger	11	17	49	377	7174	2421	4,585	1912	18817	26,200	0	67474
Nigeria	29	62	324	2682	17706	15492	3,315	862.3	9342	79103	68500	547922
Senegal	10	11	44	300	916	2059	122.1	424.5	2020	1,406	19500	50979
Sierra Leone	4	20	23	524	1280	1305	3,000	208	49	0	0	0
Togo	3	9	17	50	602	604	401.6	348.2	303.5	0	0	0
Subregion												
East Africa	137	285	758	417684	27919	31005	37675	84823	130352	1257077	707513	2302619
North Africa	70	146	388	157234	9970	16,164	15,548	14,363	10319	5292000	2716429	8415076
Southern Africa	46	80	198	2427	1905	3446	5112.6	1,496	21058	1030157	1672199	1312845
West Africa	131	219	782	8,679	41499	37988	30470	12,433	45969	115160	171815	816551

Source: EMDAT (2014)

Increasingly, lower and more variable rainfall and other climate-related issues during the last three to four decades have contributed to worsening desertification, food security, natural resource degradation and coastal vulnerability (OCHA 2013). Climate change factors are likely to worsen drought conditions, coastal erosion and change vegetation patterns with tidal waves and storm surges increasing. Since 11 September, 2013, 323,396 people have been affected by floods in the West African countries, with 40,445 completely displaced and 84 reported deaths as a result of devastating floods. An estimated 19,307 homes have reportedly been damaged or destroyed (see figure 9).

2.3.2 Drought

Drought and its peculiarly slow onset characteristics has been a perennial problem plaguing countries in the Sahel part of West Africa, with its undeniable adverse impact on food security, water resources, environmental sustainability, livelihoods and human migration. Although, the frequency of occurrence and mortality levels for drought across West Africa may be considerably low compared to other hazard events, the ultimate proportion of the population affected is colossal and only surpassed by East Africa, where more than 55 million people were affected by drought between 1980 and 2013 (table 10).

In West Africa, over the last 20 years the Sahel countries of Burkina Faso, Mali and the Niger have suffered several drought occurrences with devastating population displacement, but relative stability in the level of mortality and physical damage due to increasing adaptive and coping capacities in the Sahel region. The inherent human development and vulnerability indices in the Sahel region of West Africa and the rainfall dynamics have defined the extent and severity of droughts in the subregion (FAO, 2011). But unsurprisingly, the monsoonal coastal countries like Benin, Côte

d'Ivoire, Ghana, Liberia, and Sierra Leone have not experienced any significant drought over the same time period (see table 10).

2.3.3 Epidemics

The risk posed by disease epidemics, especially in the aftermath of a disaster, is usually as grave as the disaster itself, causing additional losses in life and affecting thousands of the displaced. The onset of disease epidemics can be quick, drastic and devastating, depending principally on the existing socioeconomic, political, health and environmental attributes of an area prior to and in the aftermath of a disaster.

In the last 30 years in West Africa, the level of mortality due to disease epidemics may be perceived to be on the decline in the subregion, but the frequency and impact on the population, which had been on the increase, are consistent with the aforementioned very weak human development and socioeconomic indices of the subregion. Figures show 60,000 deaths and 970,000 casualties arising from epidemics in the subregion. This trend portrays an increased level of vulnerability, an indication of the precarious conditions in urban and rural areas alike, with rapid and uncontrolled urbanization, poor congested housing, deteriorating sanitary, health and environmental conditions and abject poverty levels.

Burkina Faso, Mali, the Niger and Nigeria have the greatest number of occurrences, mortalities and people affected by disease epidemics than any country in the subregion, with the decade 1990-1999 proving to be the most fatal, especially for Nigeria (see table 11). Over the past three decades, West Africa experienced the highest number of disease epidemics in Africa, followed by East Africa, with Southern Africa recording the least in terms of the number of occurrences and deaths from disease epidemics.

In West Africa generally, frequency of disease occurrences and population affected are increasing significantly in countries such as Benin, Burkina Faso, Côte d'Ivoire, Guinea and Nigeria. However, mortality rates have been on the decline in countries across the subregion except for countries like Benin, Burkina Faso, Côte d'Ivoire, Guinea, and Sierra Leone where the numbers of deaths have been on the rise due to high incidence of poverty and low human development index over the years.

2.3.4 Storms

Storm, in this study, is an aggregation of the different meteorologically related activities of rainstorms, windstorms, sandstorms and ocean surges.

Relatively, the impact of storms in West Africa in the last 30 years has not been as pronounced as in some other subregions (East and South Africa). Table 12 gives information on how the ECOWAS region has been affected by storms over the last 30-year period. Although available information on storms is relatively sparse, the impact of these events seems to be on the decline, despite the increase in frequency of occurrence. Whether this is an indication of improved coping and adaptive capacities, or a general improvement in resilience at the local and national levels remains to be confirmed.

With climate change issues on the rise, appropriate information on human and material capacities, as well as the development of an efficient EWS in the subregion, would need to be accelerated to protect the population in West Africa.

2.3.5 Technological disasters in West Africa

In this study, technological disasters refer to incidents that are occasioned by technical failure, system breakdown or human error comprising of events like industrial accidents, fire outbreak,

building collapse, oil spillage and transport accidents etc. In the last 30 years, West and East Africa subregions have experienced increased occurrences of technological disasters, with attendant mortalities and more of the population being affected by the incidents. However, available statistics for the whole of Africa showed that South and North Africa subregions experienced more accidents and damage to public assets and critical infrastructural facilities with livelihood erosion than West and East Africa subregions. This is probably due to the relative higher level of technological development and operation in the earlier subregions (see table13).

Technological disasters and their impact in this decade (2000-2013) are much more significant compared to the previous two decades (1980-1999), with 782 disaster occurrences leading to 37,988 associated deaths, and about 46 million people affected, destroying critical assets and livelihoods worth about US\$ 816.6 million. Nigeria is found to account for a significant proportion of the disaster occurrences (324) and the attendant mortality (15,492), affected population (9.34 million) with about US\$ 690 million assets and livelihood destroyed in this decade alone. The picture depicted by Nigeria, and West Africa in general, is a mark of their human development, corruption perception and poverty indices, as well as an indication of governance and level of resilience in the communities and countries of the subregion in general.

2.4 Conclusion

The statistics in this chapter highlight the high level of vulnerability to natural and technological disasters in the subregion among the member States during the last 30 years or more. The vulnerability and hazard risk profiles of the subregion and member States are exacerbated by structural

factors such as poverty, low education levels, lack of access to basic services, political instability, conflicts, poor governance, high population and urbanization growth rates, rural exodus and weak economies which precariously depend on foreign markets. According to the 2006 Failed State Index, five countries in West Africa were listed in the alert category and nine in the warning category. By year 2010, the situation in West Africa had become more precarious, with eight countries listed in the alert category and seven respectively in the warning group. Similarly, out of 23 countries worldwide in the alert category in 2010, eight (35 per cent) were in West Africa, surpassed only by East Africa with nine (39 per cent) countries (ECA, 2012).

In spite of the development efforts made by member States and development partners in the West African subregion, in areas such as social and physical infrastructure, environmental sustainability, poverty reduction, food security as well as efforts to achieve the Millennium Development Goals, enduring development had been elusive. This impediment is largely due to high incidence of poverty, rapid population growth and urbanization, infrastructure decay, fragile ecosystems, conflicts over resources, the HIV/AIDS pandemic and worsening vulnerability and hazard risks among member States in the subregion (ECOWAS, 2006).

3. Disaster risk reduction frameworks and their implementation in West Africa

3.1 Disaster risk reduction: the strategic frameworks

The disaster risk reduction paradigm in the modern era draws its relevance largely from earlier contributions and previous practices (UNISDR, 2004). Towards the end of the twentieth century, pervasive occurrences of disasters had aroused mutual consciousness in numerous States of the need to tackle the challenges of disaster prevention, management and reduction (Olowu, 2010).

The following international development/sustainable development agendas have included DRR frameworks:

- c) United Nations International Decade for Natural Disaster Reduction
- d) Agenda 21
- e) International Strategy for Disaster Reduction and Yokohama Plan of Action
- f) 1996 Istanbul Declaration on Human Settlement
- g) (The Millennium Development Goals
- h) Johannesburg Plan of Implementation to put into practice the resolutions adopted at the 2002 World Summit on Sustainable Development
- i) New Partnership for Africa's Development (NEPAD)
- j) Hyogo Framework for Action 2005–2015: building the resilience of nations and communities to disasters
- k) Africa Regional Strategy for Disaster Risk Reduction and subregional strategies, including the strategy adopted by ECOWAS in 2006

United Nations International Decade for Natural Disaster Reduction

Given the increasing concern about the impact of disasters, the United Nations General Assembly declared 1990-1999 as the International Decade for Natural Disaster Reduction under the theme 'Building a culture of prevention', which led to greater awareness of the social and economic consequences of natural disasters (UNISDR, 2004).

"The importance accorded to socioeconomic vulnerability in disaster risk analysis informed the crucial role of human action in reducing vulnerability. At the same time, it is acknowledged that the achievement of disaster reduction as a social and economic imperative required a long-term perspective."(UNISDR, 2004b, p 13).

The Yokohama Strategy and Plan of Action

This was conceived at the First World Conference on Natural Disaster Reduction in 1994 where increases in magnitude, complexity and economic impact of disasters were observed with dismay. It noted that while natural phenomena causing disasters are in most cases beyond human control, vulnerability is generally a result of human activity. Recognition of the need for societies to adapt new ways to live with such risks as well as actions to prevent and reduce the effects of such disasters led to the 10 principles outlined in the Yokohama Strategy and Plan of Action. The Strategy comprises of elements such as risk assessment; disaster prevention and preparedness; integration of disaster prevention and preparedness into development policy; capacity-building development and strengthening; EWS; collective participation at all levels; appropriate education and training; tech-

nology sharing and technical cooperation; environmental protection consistent with poverty alleviation; and the need for each country to bear primary responsibility to protect their people, critical infrastructure, and other national assets from the impact of natural disasters.

The International Strategy for Disaster Reduction

The ISDR, the successor to IDNDR, adopted by the United Nations General Assembly in 2000 shifted the focus of DRR towards the processes of integrating disaster risk reduction into environmentally sustainable development. Building on the lessons of the International Decade for Natural Disaster Reduction, the ISDR provides a framework for action for reducing human, economic and environmental losses due to disasters triggered by natural hazard and related technological and environmental phenomena (UNISDR, 2004).

The World Conference on Disaster Reduction

This took place from 18-22 January 2005, in Kobe, Hyogo, Japan and drew on the guidance set by the Yokohama Strategy for a Safer World and made the commitment to DRR through the Hyogo Declaration and the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (UNISDR, 2005). Considering shortcomings in the Yokohama Strategy, the Hyogo Conference adopted three improved strategic HFA goals:

- (i) Effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.
- (ii) The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can sys-

tematically contribute to building resilience to hazards

- (iii) The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

The Conference also adopted the following five priorities to guide subsequent DRR mainstreaming and implementation:

- (i) Ensure that DRR is a national and local priority with a strong institutional basis for implementation.
- (ii) Identify, assess and monitor disaster risks and enhance early warning.
- (iii) Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
- (iv) Reduce the underlying risk factors.
- (v) Strengthen disaster preparedness for effective response at all levels.

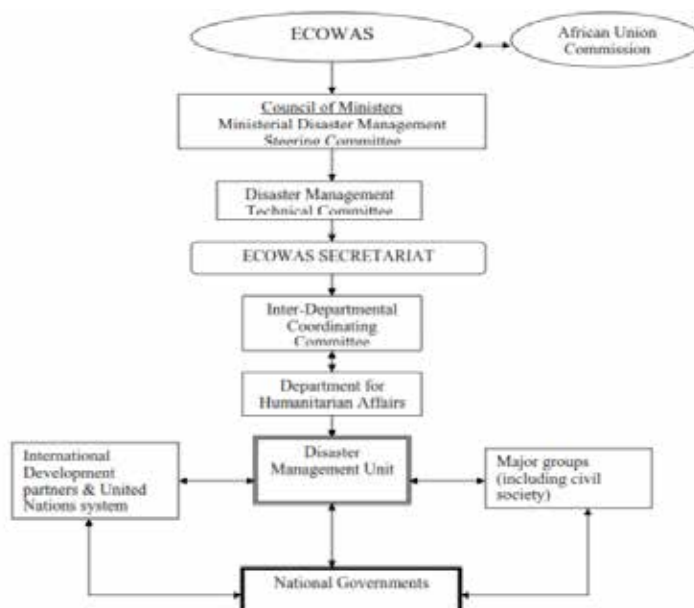
Over the last 10 years since the adoption of HFA, several Governments, the United Nations and regional organizations have been engaged in redefining national development plans and strategies through the mainstreaming and implementation of DRR.

A synoptic look at the various conferences held by or in association with the United Nations shows a form of convergence, as the essence of these various declarations and commitment points to building community resilience, poverty reduction and sustainable development in general.

Africa Regional Strategy on Disaster Risk Reduction

The Africa Regional Strategy on Disaster Risk Reduction aims to contribute to the attainment of sustainable development and poverty eradica-

Figure 7: Framework for implementing ECOWAS policy on disaster risk reduction



Source: ECOWAS (2006)

tion by facilitating the integration of disaster risk reduction into development through the following objectives:

- Increase political commitment to disaster risk reduction
- Improve identification and assessment of disaster risks
- Enhance knowledge management for disaster risk reduction
- Increase public awareness of disaster risk reduction
- Improve governance of disaster risk reduction institutions
- Integrate of disaster risk reduction in emergency response management.

The Africa Regional Strategy for Disaster Risk Reduction builds on existing disaster risk reduction institutions and programmes available in African countries and in the regional economic

communities and aims to mainstream them into development so that they can better contribute to DRR. The Strategy recognizes that some of these interventions are best undertaken at the national level. Hence it strives to facilitate initiatives by regional economic communities and countries to develop and implement their own strategies in harmony with the Strategy. The Strategy provides a broad range of strategic directions that RECs and countries can select from to suit their respective contexts and needs (African Union/NEPAD,2004).

3.2 ECOWAS Policy for Disaster Risk Reduction

As a result of the increasing incidence of disasters triggered by natural and man-made hazards over the last decades and the resulting high vulnerability of West Africans to socioeconomic losses and the slowing down of the process of sustain-

able development, the ECOWAS Commission has increasingly focused its attention on issues culminating in the establishment of DRR as an operational theme.

The ECOWAS Policy for Disaster Risk Reduction was developed and adopted by the Authority of Heads of State and Government at the thirty-first Ordinary Summit in Ouagadougou on 19 January 2007. It was designed to facilitate sustainable integration and development of West African States and Governments through promoting and supporting effective disaster risk management that helps create safer and resilient communities in social, economic and environmental terms (ECOWAS, 2006). The policy focuses on reducing disaster risks through development interventions. Its objectives are to:

- (a) Provide an intergovernmental framework for collaboration and partnership for ECOWAS member States in DRM
- (b) Promote integration of DRR into ECOWAS member States national development policies, plans and programmes
- (c) Facilitate ECOWAS member States to develop and strengthen institutions, mechanisms and capacities for building resilience to hazards
- (d) Promote incorporation of risk reduction approaches in emergency preparedness, rehabilitation and recovery programmes of ECOWAS member States
- (e) Enhance the contribution of disaster reduction to peace, security and sustainable development of the subregion.

The ECOWAS DRR policy offers strategic direction and the development of an Action Plan to achieve these objectives. The policy focuses on establishing departments, a framework and the strengthening of existing institutions within ECOWAS itself and in its member States. For ex-

ample, the creation of viable National Platforms, mainstreaming of DRR into development initiatives such as Poverty Reduction Strategy Papers (PRSPs), ECOWAS Interdepartmental Coordinating Committee and the establishment of effective DRR structures downstream within member States (ECOWAS, 2010).

3.2.1 ECOWAS disaster risk reduction plan of action

In response to the challenge of transforming the DRR policy, its objectives and guidelines into practicable actions for policy and decision makers, a plan of action was developed. The programmes were developed to facilitate the implementation process for mainstreaming DRR into sustainable development planning and activities in West Africa.

The ECOWAS Plan of Action on DRR highlights a number of strategic priorities and specific objectives for the development of capacities for DRR in West Africa, with focus on five thematic areas:

- (1) Enhancing disaster reduction by making it a development priority with the requisite institutional capacities
- (2) Reducing disasters by improving identification, assessment, monitoring and early warning of risks
- (3) Building safe and resilient societies by enhancing the use of knowledge
- (4) Reducing underlying risk factors by addressing priority development concerns through disaster reduction interventions
- (5) Improving effectiveness of response through stronger disaster preparedness

The ECOWAS plan of action emphasizes the development of institutional capacities for disaster forecasting, prevention, early warning, mitigation of effects and rebuilding for future risk reduction. The focus on institutional capacity is based on the

understanding that disasters are a governance and development challenge and as such, a systems approach is needed to resolve the underlying issues of vulnerability.

3.2.2 ECOWAS disaster risk reduction institutional framework

The various institutional actors responsible for implementing the ECOWAS policy on DRR include:

- (a) ECOWAS Council of Ministers
- (b) ECOWAS Disaster Management Technical Committee
- (c) ECOWAS Executive Secretariat
- (d) National Governments
- (e) Major groups, including civil society, private sector and the scientific community
- (f) African Union Commission
- (g) National platforms for disaster risk and national chapters of the ECOWAS Emergency Response Team
- (h) United Nations system
- (i) International development partners.

The capacity-building approach of the ECOWAS Commission is a function of the three broad strategic intervention measures identified by the Commission as key in the task of building resilient communities and reducing disaster risks. Based on the Programme of Action for the Implementation of the ECOWAS Policy for Disaster Risk Reduction 2010-2014, the broad strategic intervention measures are:

- The mainstreaming of disaster risk reduction through relevant departments of the ECOWAS Commission such as agriculture, water resources, environment, trade and infrastructure. These departments act as a value added factor in ensuring that the programs and activities of ECOWAS adequately take into consideration disaster risks as an unintended consequence of

development actions as well as prioritize disaster risk reduction as a development investment;

- Carry out disaster risk reduction by taking inventory of existing National Platforms in Member States and developing their capacities to coordinate all DRR programmes within the territory of the Member State and collaborate with a broad range of external partners.
- Direct collaborative intervention by ECOWAS Disaster Risk Reduction Division supported by development partners in the area of regional and multi-country hazard risks such as desertification, floods, drought, locust invasions, infestation, food shortages, wild fire; etc. The Division will also develop appropriate capacity for data and information management on DRR in the subregion and facilitate collaboration with partners in scientific research

3.3 ECOWAS Commission interventions in relation to the Hyogo Framework for Action priorities

In collaboration with its international partners, and in line with HFA and provisions of the ECOWAS policy on DRR, the ECOWAS Commission has embarked on several activities to build the resilience of its population to disasters. These interventions are evaluated below according to HFA priorities.

Progress on HFA 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

ECOWAS Commission and DRR Activities

The ECOWAS poverty-reduction, security and sustainable development agenda was incorporated into the revised 1993 treaty to strengthen disaster risk management institutions with the

establishment of hazard early warning systems and the provision of humanitarian relief during emergencies.

Between 2003 and 2004, ECOWAS ministers participated in the development of the Africa Regional Strategy document for DRR.

The ECOWAS Commission established an ECOWAS Technical Committee on Disaster Management, to recommend ways to operationalize a DRR strategy in the region.

In 2006, following the recommendations of the Technical Committee and with the support of UNISDR, ECOWAS Department for Humanitarian Affairs produced a regional policy for DRR, which was subsequently adopted by the ECOWAS Heads of State in 2007.

The first ECOWAS Ministerial Conference on DRR, which was held in May 2007 in Abidjan, was to agree on major gaps, challenges and a priority programme of action to reduce disaster risks in West Africa within the framework of the Africa Regional Strategy for Disaster Risk Reduction in general and the ECOWAS Policy for Disaster Risk Reduction in particular.

The Ministerial conference discussed how UNISDR, the World Bank, the African Union, ECOWAS and other development partners could assist countries in the subregion to mainstream and expand provision for DRR into their policies and development agenda including their PRSP documents.

In order to fully engage in the implementation of the regional DRR policy, a new Plan of Action (2010-2014) was developed by the ECOWAS Commission and adopted in October 2009 by member States in Ouagadougou.

ECOWAS Commission activities to strengthen national DRR platforms

The ECOWAS Commission developed and adopted new guidelines through its DRR division, for strengthening DRR platforms in its member States in recognition that many DRR national platforms in West Africa had difficulty functioning effectively.

To date, ECOWAS have embarked on a pilot project to strengthen national platforms in many of its member States including: Benin, Burkina Faso, Côte d'Ivoire, the Gambia, Guinea, Liberia, Mali and Sierra Leone.

In line with targets set in the action plan, several member States are yet to be supported to establish their national platforms and mainstream DRR measures into their national development strategies as the HFA 2015 deadline approaches.

Most member States have developed DRR related policies, strategies and action plans, however, some like Sierra Leone are yet to legislate and appoint DRR focal officers among stakeholder ministries, departments and agencies (MDAs) on the national platform.

A number of the States have mainstreamed DRR into their PRSP document and development plans; nonetheless more still needs to be done.

Most ECOWAS member States have designated a focal point institution for DRR and DRM related activities with high political commitment. Nevertheless, these countries are yet to give appropriate attention to DRR activities in their budgetary allocation.

With the high level of illiteracy and poverty in the subregion, most countries are yet to develop the administration of risk transfer facilities for mitigation of disasters.

It is apparent that collaboration between DRR related agencies has not been adequate and that role of the organized private sector is yet to be embraced in DRR activities among member States in the ECOWAS subregion.

Progress on HFA 2: Identify, assess and monitor disaster risks and enhance early warning

In collaboration with UNISDR and the World Bank Global Facility for Disaster Reduction and Recovery, the ECOWAS commission organized the first regional training workshop on risk identification and assessment in West Africa in November 2009. The main objective was to train DRR focal persons from member States on concepts of hazard assessment, risk analysis and vulnerability mapping in order to develop the understanding of the role of risk assessment within the national risk reduction process. Additionally, working with the UNDP Bureau for Crisis Prevention and Recovery Global Risk Identification Programme, the Commission supported a training workshop and the implementation of systematic inventory and evaluation for risk assessment methodologies.

In collaboration with the World Bank (WB)/Global Facility for Disaster Reduction and Recovery (GFDRR), a study was conducted on the impacts of trans-national floods in West Africa.

The Commission has put in place a very strong EWS called ECOWAS Early Warning and Response Network (ECOWARN) as an observation and monitoring tool for conflict prevention and decision-making. The EWS, which was initially meant for conflict prevention in the subregion, has now developed indicators related to natural hazard monitoring.

The actualization of this objective (relating to HFA priority II) is best described as varied, considering that not all ECOWAS countries have successfully carried out National Risk and Capacity

Assessments to determine the level of exposure to risks and hazards. Considerable effort has been made by some member States. Nigeria, for instance, has developed a multidisciplinary epidemic and flood EWS which is used by the Nigeria Meteorological Agency, among others. However the establishment and maintenance of EWS in many member States is still grossly inadequate and ineffective. Notwithstanding, ECOWAS has established the Regional Training Centre for Agrometeorology and Operational Hydrology and their Applications (AGRHYMET) – a sub-regional hydrometeorological centre for research and early warning dissemination on food security, water resource management, desertification and climate change impact, although the prospect for the establishment of specialized networks for sharing scientific and technical information in the areas of risk analysis and early warning is yet to be realized.

Progress on HFA 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

The commission encourages its member States to fully engage in developing the knowledge and skills required for effective DRR and the dissemination of risk information in the subregion.

A few States in the ECOWAS subregion have incorporated DRR into their curriculum for basic education. Nigeria and Ghana have taken a step further with the award of postgraduate degree in disaster management and development studies in six universities in Nigeria and one university in Ghana; while this is commendable, other countries in the region will also need to embark on DRR related capacity-building programmes in their tertiary institutions.

The ECOWAS Commission encourages its member States to develop and strengthen national instruments for information sharing, public enlight-

enment, sensitization, exchange of best practices, as well as other mechanisms to enhance coordination and collaboration among DRR stakeholders. This been enhanced as most member States now have operational websites to educate the public on DRR issues.

In a collaborated effort between UNISDR and WB/GFDRR, a hydro-climatic data sharing protocol agreement for ECOWAS member States was adopted during the first consultative meeting held in Lomé, Togo, in October 2010. Further to this, the ECOWAS Commission has facilitated exchange of best practices on DRR between Nigeria and Liberia, and between Ghana and the Gambia as a pilot phase. However, member States are yet to design mechanisms and activities with local communities to increase resilience including the development and use of toolkits.

Capacity to provide technical assistance on disaster reduction and climate change adaptation of specialized regional institutions in West Africa is currently being assessed and reviewed by the ECOWAS Commission in collaboration with UNISDR and the WB/GFDRR. This assessment will recommend ways for more cooperation between technical institutions and member States on implementing DRR programmes and activities at national and regional levels. Most member States are yet to develop disaster management associations and adopt business continuity plans in line with targets for this objective.

It is to be noted that only a few ECOWAS member States mainstreamed DRR into their education curriculum for basic education. There is a need to develop and strengthen national instruments for information sharing, public enlightenment, sensitization, exchange of best practices as well as other mechanisms to ensure decentralisation of DRR, to engage with local communities in order to increase both community and national resilience.

Progress on HFA 4: Reduce the underlying risk factors

The ECOWAS Commission has been working with regional partners to develop a subregional programme to reduce vulnerability to climate change in West Africa, in order to address climate related challenges and reduce the social, economic and environmental impacts.

Similarly, a regional framework for the adaptation of West African agriculture to climate change was also formulated as part of the ECOWAS Agricultural Policy (ECOWAP).

Reducing underlying risk factors in West Africa requires a concerted effort to combat poverty in the subregion in order to reduce people's vulnerability. In this regard, ECOWAS has developed an initiative to mainstream DRR into its regional strategy on poverty reduction in West Africa. The regional strategy seeks to refocus on poverty reduction programmes to benefit the poor, improve the visibility and usefulness of such programmes and make them the catalyst in the fight against poverty. The programme serves to strengthen national and regional strategies focusing on the key sectors of macroeconomics, trade and infrastructure among others.

These activities/strategies are in harmony with the ECOWAS DRR Plan of Action and the five HFA priorities. However, a fundamental challenge has to do with the high incidence of poverty in the subregion. Again, most member States in the subregion are yet to adopt and fully own the various hazard risk reduction initiatives and strategies, while there is very low implementation at the local level. To date, most member States are yet to identify and reinforce facilities that can be used for emergency safety shelters. Similarly, member States are yet to take appropriate inventory and measures to protect their critical infrastructure and communities from impact of hazard risks.

Progress on HFA 5: Strengthen disaster preparedness for effective response at all levels

The HFA Priority IV was given particular attention at the 33rd Ordinary Session of the ECOWAS Summit of Heads of State and Government held January 18, 2008 in Ouagadougou, Burkina Faso. The West African leaders discussed the security situation in the subregion and have since established an ECOWAS Emergency Response Team (EERT). This team contributes to strengthening regional capacity for emergency response to disasters and enables ECOWAS to intervene in cases of complex humanitarian emergencies. The EERT is working with member States by assisting and building capacities on emergency response.

At present, ECOWAS has developed a Regional Humanitarian Policy to enhance the capacities of ECOWAS member States to effectively deal with humanitarian issues and secure the welfare of the people in the subregion.

An emergency fund exists to support ECOWAS member States that are affected by natural hazards such as floods. Many countries in the subregion have already benefited from the fund following the devastating floods that affected the region in 2009, 2010 and 2012.

ECOWAS is currently working on the establishment of a Regional Humanitarian Depot in Bamako, Mali.

Most ECOWAS countries are yet to embark on appropriate National DRR baseline studies, VCA and emergency action plans for their local communities. Although a handful of countries in the

ECOWAS region like Burkina Faso, Nigeria and Sierra Leone have national disaster response plans and some form of contingency plans. However, they are yet to be tested through multi-stakeholder simulations and or interventions. Most States are yet to develop capacities for long-term disaster prediction alongside disaster prevention, preparedness, response, mitigation and DRR based recovery techniques. Most member States do not have the synergy and multi-stakeholding capacity to embark on PDNA. The only exception to this is Nigeria, which embarked on a PDNA after the devastating 2012 flood, but with adequate support from multilateral agencies like the WB and UNDP. It is desirable that member States acquire appropriate capacities to embark on baseline studies, VCA and PDNA in the near future, so as to build adequate resilience at the local level.

3.4 Progress at the national level on implementation of Hyogo Framework for Action priorities in West Africa

The summary of the national HFA progress reports below (table 14 to 18) on DRR implementation in Burkina Faso, Cabo Verde, Côte d'Ivoire, the Gambia, Ghana, Sierra Leone and Nigeria are extracted largely from the submitted biennial reports on DRR activities by countries to UNISDR. This is part of the global reporting mechanisms in the HFA process as agreed by 168 countries and various development partners at the World Conference on Disaster Reduction in Kobe, 2005.

Table 14: Progress on HFA 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

Country	Progress
Burkina Faso	<ul style="list-style-type: none"> • The National Council for Emergency and Rehabilitation serves as the multi- sectoral national platform for DRR comprising of twenty departments, NGOs and humanitarian associations. • Burkina Faso has developed an Emergency Response Plan and a National Disaster Management • DRR is included in the country's "National Development Plan: Strategy for Accelerated Growth and Sustainable Development (2010)". Appropriate sector policies, strategies and plans exist for Climate Change Adaptations, PRSPs, Common Country Assessments and United Nations Development Assistance Framework (CCA/UNDAF). • The act establishing CONASUR, an agency for disaster risk management is being reviewed to give room for appropriate decentralization of DRR. • There is no dedicated budgetary provision for DRR. However, there are some financial resources allocated for DRR related activities: <ul style="list-style-type: none"> - National fund for fight against epidemics - Fund for literacy and non-formal education - Funds allocated for post-disaster rehabilitation - National food security - Promotion of rural economy - National fire service - The National Solidarity Fund
Cabo Verde	<ul style="list-style-type: none"> • With increased risk of volcanic eruption, seismic activities and flooding, Cabo Verde established the Serviço Nacional de Protecção Civil in 1992 by the civil protection law 12/VIII/2012, which is mandated to prevent the occurrence of accidents, disasters and calamities; mitigate the risks of occurrence of these phenomena and limit their consequences; rescue and assist people in danger and contribute to the restoration of normalcy in affected areas. • DRR elements are included in Cabo Verde's national development plan, climate change policy and strategy, PRSPs, CCAs and UNDAF. • The country has established a national multisectoral platform for DRR launched in 2007 and has developed a Strategic Action Plan for DRR in collaboration with UNISDR in 2010 but due to financial problems, it is unable to continue its implementation. • Generally, the political support for DRR is weak with little or no budgetary appropriation.
Côte d'Ivoire	<ul style="list-style-type: none"> • There is a national strategy for DRR, although with no complimentary mechanism for effective DRR at the local level. • DRR is not fully mainstreamed into the PRSP document • A national platform for DRR has been established; however it is dysfunctional as it is beset with financial challenges and poor political support
Gambia	<ul style="list-style-type: none"> • The Gambia's National Disaster Management Agency was established by the Disaster Management Act of 2008, with a regional disaster management committee, district disaster management committee and village disaster management committee • The Gambia has focused on the public development of a national policy and action plan for disaster and climate risk management and is currently trying to incorporate DRR measures into its sector development plans and strategies. However, no proper guidelines for the mainstreaming of DRR into sector strategies have been developed. • The country has established its National Platform for DRR, with appropriate funding for DRR activities. • Robust community structures have been established in the form of village development committees and village savings and credit associations, which have significantly addressed the organizational and financial challenges of DRR, especially at the community level.
Ghana	<ul style="list-style-type: none"> • Act 517 of 1996 legally established the National Disaster Management Organization (NADMO) which is responsible for DRR at all levels of government. • The national platform for DRR and climate change adaptation has been established and functioning. Seven regional platforms have also been established out of the ten regions. District platforms are still yet to be established. • Through budgetary allocations, funds are made available annually for disaster management. In addition to this, some specific programmes are funded by multilateral and bilateral support. • NADMO was assisted by OCHA to prepare Disaster Management Plans in the three Northern Regions. Similarly, UNDP is assisting NADMO to prepare Disaster Management Plans for all the districts in the Greater Accra Region. • However, Disaster Risk Reduction is yet to be seen as a priority, since it does not have the required recognition and implementation level by MDAs and the organized private sector.

Country	Progress
Guinea-Bissau	<ul style="list-style-type: none"> Guinea-Bissau has no autonomous disaster management agency. It is yet to establish a national multi sectoral platform on DRR with appropriate legal framework and budgetary allocation that will enable government ministries, agencies and departments to mainstream DRR into their developmental policies, plans and programs. However, there exist a Climate change policy and strategy, Poverty reduction strategy papers, CCA and United Nations Development Assistance Framework (UNDAF), Due to poor political commitment, DRR activities are not seen as a priority at the national and local levels.
Niger	<ul style="list-style-type: none"> Over the years, the Niger has experienced recurrent risk of drought and perennial food crises and has thereby set up a <i>Système d'Alerte Précoce et de Prévention des Catastrophes (SAP/PC)</i> which is responsible for the coordination of disaster management activities in the country. In 2012, it established a multi sectoral national platform for DRR with appropriate legislation. The Niger also received financial support from UNDP under the Biennial Plan 2012–2013 for the “Prevention of Natural Disasters, Crisis Management and Recovery”. However, DRR activities are yet to be decentralized to the local level. DRR elements are being mainstreamed into the Niger National development plan, Climate Change Adaptation policy and strategy, CCAs and United Nations Development Assistance Framework (UNDAF). However, DRR is yet to be mainstreamed into the Poverty Reduction Strategy document. Although, some budgetary appropriations do exist for DRR activities, this allocation is relatively small due national financial constraints.
Nigeria	<ul style="list-style-type: none"> The National Emergency Management Agency (NEMA) was established by Act 12 as amended by Act 50 of 1999. In 2013, a DRR department was created One per cent of the national budget is allocated to mitigate Ecological Problems and the underlying risk factors. Twenty (20 per cent) of the fund is allocated directly to the Disaster Management Agency (NEMA) and remaining 80 per cent is appropriated to federal and local MDAs related to disaster risk reduction and mitigation,. However, the budget allocation is relatively small to meet the demand of disaster risk reduction and is generally tilted towards disaster response. The NEMA Act mandated all states to establish state emergency management agencies while local governments are to establish local emergency management committees. However, only 22 of the 36 states in Nigeria have emergency management agencies that are backed up by law. There is a multi sectoral and gender sensitive National Platform for Disaster Risk Reduction in Nigeria, established in 2008, made up of government Ministries, Department, Agencies, Civil Society groups, and Development Partners which is considered non active. In 2006, Nigeria developed a National Action Plan for DRR, which is not fully implemented and currently being reviewed. The country has developed a National Disaster Management Framework, which is a review of the National Disaster Response Plan. There are no sector strategies and plans but appropriate policies exists for climate change adaptation and strategies, poverty reduction strategy papers, common country assessments and United Nations Development Assistance Framework and post-disaster needs assessments (PDNAs). Mainstreaming of DRR into PRSP related document to enhance SME's performances.
Sierra Leone	<ul style="list-style-type: none"> There is no legal framework that will enable government ministries, agencies and departments to mainstream disaster risk reduction into their activities. Although there is a draft national disaster preparedness and response plan as well as a draft Disaster Management Policy, these documents are yet to be enacted into law and thus, DRR has not been fully integrated into development plans and poverty reduction strategies. Sierra Leone does not have an autonomous disaster management agency and no budgetary allocation for DRR activities. It is yet to launch its national platform for DRR.

Table 15: Progress on HFA 2: Identify, assess and monitor disaster risks and enhance early warning

Country	Progress
Burkina Faso	Assessment of vulnerable communities in urban areas like Ouagadougou was conducted.
Cabo Verde	<ul style="list-style-type: none"> • The Government of Cabo Verde has provided small grants for technical and scientific institutions to reduce volcanic risk. • Cabo Verde has carried out a gender disaggregated vulnerability and capacity analysis for schools and hospitals, with the development of a multi-risk assessment tool. • Cabo Verde has established the National Institute of Meteorology and Geophysics which is responsible for monitoring the weather situation in the country. It provides daily data to the various national institutions, particularly the National Service of Civil Protection and also the principal organs of social communication. • Installing a seismological network in the islands of Fogo and Brava. • Installation of a seismograph in a secondary school on the island of Fogo for research purposes. • A web based GIS programme is being developed to improve information dissemination on volcano monitoring and management of volcanic hazards. • Establishment of a geodetic network to assess erosion on the island of Fogo • Risk map of Fogo Island as well as the numerical modelling of different volcanic hazards is being concluded. • The SIERA (Inventory System and Assessment Risk) project embarked on by INMG, the CRS, the University of Cabo Verde, the Directorate General for the Environment, the National Institute for Agricultural Research and Development in collaboration with UNDP, is creating a database for major risks affecting Cabo Verde and developing its risk profile.
Côte d'Ivoire	<ul style="list-style-type: none"> • The National Directorate of Meteorology is responsible for early warning dissemination at the country level, although inadequacies exist.
Gambia	<ul style="list-style-type: none"> • There is a detailed hazard profile, risk and vulnerability analysis of the country.
Ghana	<ul style="list-style-type: none"> • Under the Northern Recovery Programme, the three regional offices of NADMO and three districts (in the Northern Region): Gonja East, Yendi and Gonja West have received internet connectivity through the assistance of UNDP to enhance communication and improve upon EWS.
Guinea-Bissau	<ul style="list-style-type: none"> • There is no national multi-hazard risk assessment and vulnerability analysis available to inform planning and development decisions. • Guinea-Bissau is yet to develop effective EWS. • But there are improvements in data collection, storage and dissemination of information by the National Weather Service through newsletters and radio stations as well as the rehabilitation of regional structures of the National Weather Service. • Guinea-Bissau has also established a disease surveillance system at all levels of her health system.
Niger	<ul style="list-style-type: none"> • The Niger has established and strengthened observatories for monitoring vulnerabilities at the local level with the Systèmes Communautaires d'Alerte Précoce et de Réponses aux Urgences (SCAPRU). This national strategy seeks to strengthen the capacity of locally elected officials and municipalities in preparation for emergency and DRR. • There is national multi-risk assessment data that inform planning decisions and development. The evaluation, archiving and dissemination of necessary information on hazards and vulnerabilities are regularly provided by the CC/SAP/PC. The process of setting up local DRR systems and data collection has been established, but much remains to be done to ensure better coverage. • The mandate of the coordination unit for EWS has been expanded to include the assessing of risks to disasters rather than being limited to food crises. • Early warning systems have been put in place at the central, regional, municipal and community levels through regional and subregional committees on prevention and management of disasters and food crises
Nigeria	<ul style="list-style-type: none"> • Baseline studies for six states have been carried out • Gender disaggregated vulnerability and capacity analysis for seven states in Nigeria with the development of a multi risk assessment tool have been embarked upon. • A multi-disciplinary epidemic EWS as well as a flood EWS have been created, with media being used to communicate to the population in several languages.
Sierra Leone	<ul style="list-style-type: none"> • There is a national multi-hazard risk assessment available to inform planning and development decisions

Table 16: Progress on HFA 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

Country	Progress
Burkina Faso	<ul style="list-style-type: none"> No tangible progress had been made for HFA 3, with available data also very scanty.
Cabo Verde	<ul style="list-style-type: none"> DRR action plan for Cabo Verde is not fully implemented due poor advocacy, public education, and lack of synergy among stakeholders. Information on volcano monitoring is continually disseminated through the media and internet.
Côte d'Ivoire	<ul style="list-style-type: none"> The Ministry of Interior, through the National Office of Civil Protection, disseminates public information on the hazard risk of flooding and landslides.
Gambia	<ul style="list-style-type: none"> No tangible achievement had been recorded to date on this priority
Ghana	<ul style="list-style-type: none"> The Journalist Club for Disaster Prevention continues to champion public awareness in DRR in the print and electronic media. Formation of School Disaster Prevention Clubs has been extended to many secondary and tertiary institutions.
Guinea-Bissau	<ul style="list-style-type: none"> In view of the low human development index and weak institutional capacity for DRR at all levels of government, Guinea-Bissau is yet to inform and motivate the citizens to appreciate a culture of prevention and resilience. Presently, disaster data collection, compilation and dissemination of hazard risk and vulnerability information are poor.
Niger	<ul style="list-style-type: none"> Public education and awareness on hazard risk and early warning information are disseminated through monthly newsletter on disasters.
Nigeria	<ul style="list-style-type: none"> Curricula for DRR for primary and secondary levels of education have been developed and incorporated into six subjects, although this has not been implemented. Award of Masters Degree in Disaster Risk Management and development studies in six Nigerian universities with NEMA support.
Sierra Leone	<ul style="list-style-type: none"> Sierra Leone has not made much progress in actualizing the priorities of the HFA and as such has not embarked on DRR activities related to HFA priority III

Table 17: Progress on HFA 4: Reduce the underlying risk factors.

Country	Progress
Burkina Faso	<ul style="list-style-type: none"> There exist appropriate national regulations for road safety, forest management, mining and town and country planning as well as land and agricultural reforms.
Cabo Verde	<ul style="list-style-type: none"> Cabo Verde has the highest human development index in the ECOWAS subregion which reflects it having the highest life expectancy; lowest under-5 mortality; and the highest number of women in strategic decision-making positions, with the least corruption perception index in the ECOWAS subregion
Côte d'Ivoire	<ul style="list-style-type: none"> Côte d'Ivoire has a national reforestation plan, national strategy against bush fire, the national program for agricultural investment and the programme for urban sanitation.
Gambia	<ul style="list-style-type: none"> No tangible achievement had been recorded to date on this priority.
Ghana	<ul style="list-style-type: none"> There is in place an integrated Dry-Land Development Programme under the Climate Change Adaptation/Africa Adaptation Programme. In Ghana, 24 districts have been assisted, trained and introduced to the above programme in all the three northern regions. Beneficiary districts are being assisted to incorporate this Dry-Land Development Programme into their Medium-Term Development plan.
Guinea-Bissau	<ul style="list-style-type: none"> Guinea-Bissau has a low HDI, high-risk index, low life expectancy and has the highest under-5 mortality in the subregion, with the poorest corruption perception index and low Gross National Income (GNI).
Niger	<ul style="list-style-type: none"> The Niger has the lowest HDI in the subregion, high-risk index, low life expectancy and is the second most vulnerable country in the World, with poor corruption perception index and the second lowest GNI.

Country	Progress
Nigeria	<ul style="list-style-type: none"> • There are relevant statutory ministries that have been established at all levels of government over the years that help to pre-empt, prevent and mitigate disasters, and guide sustainable development generally. The Ministries of Environment, Town and Country Planning, National Environmental Standards and Regulations Enforcement Agency and National Oil Spill Detection and Response Agency at the federal level have DRR inherent in their philosophies and strategies that help to control and preserve fragile ecosystem from pollution. • There are also relevant departments for primary and preventive medicine that assist in the monitoring and detection of epidemics at the early stage, with World Health Organization support. • Similarly, the ministries for agriculture at various levels, are embarking on food security related policies, forestry management and tree planting to ensure the building of resilient communities and to protect the citizens from hazard risks. • The National Security and Civil Defence Corp was recently statutorily admitted into the Federal Ministry of Interior to complement the Nigerian police and the Nigerian military authority's efforts to protect the country's critical infrastructure such as preventing pipe line vandalism. • Appropriate baseline studies on DRR and environment generally had been prepared to assist government and civil society organizations to guide development and enhance both national and community understandings and to build capacity for disaster prevention, mitigation, preparedness and response. • A national working committee on "Making cities resilience to disasters" was put in place to promote advocacy, public enlightenment and focused development of urban centres with their challenges and ever increasing population.
Sierra Leone	<ul style="list-style-type: none"> • Sierra Leone has not made much progress in actualizing the priorities of the HFA and as such has not embarked on DRR activities related to HFA priority IV.

Table 18: Progress on HFA 5: Strengthen disaster preparedness for effective response at all levels

Country	Progress
Burkina Faso	<ul style="list-style-type: none"> • The national and sectoral contingency plans are being revised for implementation. • Periodic simulation exercises are conducted on DRM. • Preparedness plans and contingency response plan for epidemics are being revised for implementation.
Cabo Verde	<ul style="list-style-type: none"> • A Special Emergency Fund has been established to enhance disaster response, but with little budgetary support for DRR. • Through Project Canary EMERNET, national emergency hotlines are being installed and a communication system for the operational centres of the Serviço Nacional de Protecção Civil has been established. • Periodic simulation exercises are conducted on DRR.
Côte d'Ivoire	<ul style="list-style-type: none"> • Côte d'Ivoire has not made much progress in actualizing the priority V of the HFA.
Gambia	<ul style="list-style-type: none"> • Gambia has developed a national contingency plan.
Ghana	<ul style="list-style-type: none"> • No tangible achievement had been recorded on DRR activities that relates to this priority
Guinea-Bissau	<ul style="list-style-type: none"> • Guinea-Bissau is yet to develop emergency response plans at the national and local level.
Niger	<ul style="list-style-type: none"> • A Système d'Alerte Précoce et de Prévention des Catastrophes was established to coordinate disaster risk management activities and respond to drought and perennial food crises. • Although, some budgetary appropriations do exist for disaster risk management activities, this allocation is relatively small due national financial constraints.
Nigeria	<ul style="list-style-type: none"> • At the Federal level, NEMA had created appropriate contingency plans for epidemics and also a national response plan for emergencies with different standard operating procedures (SOPs) for various hazard risks. • NEMA is advocating and supporting the state emergency management agencies in the 36 states of Nigeria to develop appropriate contingency plans for complementary purposes to national effort. Similarly, some states had directed their local governments to establish corresponding local emergency management units to address emergencies in their communities. • NEMA has a search and rescue department headed by a high-level military officer to work with the military in times of disasters. NEMA is developing appropriate capacity for emergency response and has strategic equipment for location of objects, such as missing aeroplanes during air disasters. • NEMA has a unit to cater for the physically challenged during emergencies.
Sierra Leone	<ul style="list-style-type: none"> • Sierra Leone has not made much progress in actualizing the priorities of the HFA and as such has not embarked on DRR activities related to HFA priority V.

3.4.1 Conclusion

Although progress has been made by some West Africa countries in embarking on DRR related activities in consonance with the HFA priorities, much remains to be done. The contents of the above tables, which are largely extracted from the progress reports submitted for the Global Assessment every two years, indicate that the subregion has a poor showing—especially with the actualization of key activities in priority IV (reducing the underlying risk factors) of the HFA. While DRR may have made significant progress at the national level, there are limitations at the lower levels of governance. In most cases DRR activities are not fully mainstreamed into the development plans, policies and the PRSPs of most ECOWAS member States, with the exception of countries like Ghana, Nigeria and Senegal. Similarly, countries such as the Gambia and Sierra Leone have no statutory and autonomous disaster management agencies and are yet to launch national platforms for DRR. Multi-hazard risk assessment and vulnerability analysis for vulnerable areas in most countries in the subregion have not been carried out. The subregion is beset with various challenges, including ineffective EWS, poor levels of coordination among the various stakeholders in DRR, nonexistent DRR legislation and poor/no budgetary allocation for DRR activities (as disaster management is tilted towards disaster response). Hence, disaster risk reduction is yet to be seen as a priority in the ECOWAS subregion.

3.5 Subregional strategic program to reduce vulnerability and support adaptation to climate change

The strategic programme was launched in 2010 by ECOWAS member States in order to develop and strengthen the resilience and adaptability of the subregion to climate change and extreme

weather events. The specific operational objectives stated below are in line with the goals and five priorities of the HFA, and include:

- (a) Strengthening the scientific and technical capacity of the subregion to reduce vulnerability to climate change.
- (b) Promoting the integration of climate change aspects into development policies, strategies, programmes and projects at subregional and national levels.
- (c) Supporting the development and implementation of subregional and national programmes and projects on adaptation to climate change.

Some potential obstacles have also been highlighted regarding the concrete application of the regional strategy. They include the low capacity of subregional institutions and organizations to adapt to climate change, the non-existence of a coordinated approach among countries and the difficulty to mobilize financial resources both at the regional and national levels. For example, the African Centre of Meteorological Applications for Development provides regular weather forecasts as well as flood bulletins for ECOWAS member States, but early alerts are rarely linked to early actions at the local level. There is a clear need to improve the climate products to be adapted to the needs of end users and to develop a range of strategies to support decision-making based on probabilistic models.

A related initiative to the above was embarked upon to reduce West Africa's vulnerability to climate impacts on water resources, wetlands and desertification. The West Africa Regional Office of the International Union for the Conservation of Nature, in collaboration with Permanent Interstate Committee for Drought Control in the Sahel and the West Africa Water Partnership, organized a regional dialogue on water and climate change in

West Africa from 2002 to 2004. This dialogue culminated in the formulation of a regional strategy and a plan of action in 2004. However, the various intervention identified in the resultant plan of action are yet to be implemented.

It is also relevant to note that most of the road infrastructure in the ECOWAS region, including bridges, is built according to standards and codes inherited from the colonial period. With recent climate extremes and severity, infrastructure engineering needs to be reviewed and public infrastructure building standards adapted to the current hazard risk profile in the subregion.

3.6 Multilateral support to ECOWAS in climate change adaptation

A number of regional adaptation projects and programs are currently underway in West Africa. They include initiatives in the following sectors: agriculture; freshwater; fisheries and coastal zones; and biodiversity/ecosystem conservation. Nearly all of these regional projects support research, capacity-building or knowledge communication. Examples include:

- (a) The West African Science Service on Climate and Adapted Land Use project, which is designing resilient land use systems, and Adapting Fishing Policy to Climate Change with the Aid of Scientific and Endogenous Knowledge, with the aim to improve fishing policies in the face of climate change and develop sub-regional strategies.
- (b) Projects with concrete adaptation actions at the field level include: the Water Supply, Sanitation and Hygiene Infrastructure Program, funded by the United States Agency for International Development and the Support Fund for Local Adaptation

Strategies, funded by the Climate Change Adaptation in Africa programme.

Although these regional projects are expected to address a number of shared vulnerabilities within the West African region, some gaps appear to exist. For instance, although many of the water resources in West Africa are shared, the single regional water programme identified to date appears to target infrastructure development in individual participating countries. The degree to which shared governance issues are integrated into this programme is not clear. Also, there appears to be an absence of joint programmes focused on livestock and pastoralist, even though this sector remains crucial to the economy of several countries and involves transnational migration. Furthermore, forestry, which is identified by eight countries as a priority sector for adaptation, does not appear to be addressed at the regional level. Limited attention has been given to human health concerns that may be associated with an increase in vector-borne diseases, declines in water quality and rising temperatures.

Project Supported by the Swedish International Development Cooperation Agency

The specific objectives and components of the project are as follows:

- (a) Strengthen ECOWAS Commission institutional capacity in climate change to co-ordinate the implementation of the project with the establishment of a climate change coordinating unit at the Directorate of Environment.
- (b) Strengthen the capacity of negotiators from the West African subregion involved in climate change (including United Nations Framework Convention on Climate Change negotiations and others).
- (c) Promote the mainstreaming of climate change aspects into policies, programmes

- and projects at subregional and national levels.
- (d) Enhance capacity of key organizations in the subregion to monitor climate change, climate change impacts and vulnerability.
 - (e) Strengthen the capacity of government departments responsible for meteorology, hydrology, environment and food security in the subregion to access, store and manage climate change data in a coherent and synergistic manner.
 - (f) Develop, share experiences and promote local adaptation strategies to enhance the resilience of people and ecosystems most vulnerable to the effects of climate change, climate variability and extreme weather events.
 - (g) Strengthen the communication and networking capacity for climate change adaptation among organizations, institutions and networks in the subregion.
 - (h) Mobilize funding for the implementation of the strategic programme and improve the subregion capacity to access international climate funding.
 - (i) Develop a global strategic programme on climate change and a wider programme activities budget for the implementation of the full strategic programme (adaptation and mitigation).
 - (j) Improve the subregion's institutional capacity to manage climate change concerns.
 - (k) Establishment and effective functioning of consultative structures: Programme Steering Committee; Scientific and Technical Advisory/Consultative Group.

4. Mainstreaming and implementation of disaster risk reduction measures, programmes and activities in West Africa

4.1 Disaster risk reduction mainstreaming in the ECOWAS subregion

There are several policies and plans adopted at the subregional and national levels that have elements of DRR mainstreamed into them. This chapter examines the extent to which DRR has been mainstreamed into and implemented as part of the developmental policies, plans and programmes at the subregional and national levels. Each of the development policies, plans and strategies in this chapter are assessed on the basis of their coherence and extent of DRR integration, multisectoral linkages and resource availability according to the five HFA priorities (HFA,2005):

1. Ensure that DRR is a national and local priority with strong institutions for implementation
2. Identify, assess and monitor disaster risks and enhance early warning
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels
4. Reduce the underlying risk factors
5. Strengthen disaster preparedness for effective response at all levels

The outcomes of the assessment of mainstreaming and implementation of DRR as part of the development initiatives in the ECOWAS subregion is presented below.

4.2 The ECOWAS environmental policy

The ECOWAS environmental policy was borne out of challenges that militate against the achievement of sustainable development and was developed with the overall objective to reverse environmental degradation and depletion of natural resources, ameliorate the quality of the living environment and conserve biological diversity. This is to ensure a healthy and productive environment; thereby sustainably improving the well-being of the ecosystem and the population of the subregion (ECOWAS, 2008). The conceptual backdrop of the ECOWAS policy on environment carefully takes into consideration the sustainable management of environmental resources.

The objectives and strategies employed in the policy contain some elements of DRR which are in consonance with three objectives of the Africa Regional Strategy for Disaster Risk Reduction (enhance knowledge management for disaster risk reduction; increase public awareness of disaster risk reduction; and improve governance of disaster risk reduction institutions) and HFA priorities I, II, III and IV.

The strategic drive of the environmental policy, divided into four units include to:

- (a) Strengthen environmental governance (setting up regional mechanisms) and build capacities, through the setting up of a high level standing mechanism for environmental policies and initiatives to consult, coordinate, monitor environmental change and improve partnership for subregional cooperation.

- (b) Promote sustainable management of resources for the improvement of the sub-regional economy in an environment-friendly manner, by enhancing management, conservation and sustainable development of forests, fauna and grazing lands; combating land degradation and drought while enabling the sustainable management of coastal, island and marine ecosystems.
- (c) Prevent environmental pollution and nuisance, urban waste and the control of trans-boundary movement of hazardous waste/products; through improved urbanization and urban management policies and careful consideration of the environmental aspects, while promoting innovative and participatory approaches to urban solid and liquid waste management, as well as developing and implementing a continuous programme in support of the management of hazardous wastes and products.
- (d) Promote environmental information, education and communication for a healthy environment within the subregion, by strengthening information and communication activities on environmental management and promote a subregional programme on environmental education while encouraging relevant initiatives and recognizing efforts of individual institutions.

From the foregoing, the strategy and programmes serve to promote the management, conservation and sustainable development of forests, fauna, grazing lands and coastal ecosystem, while resisting land degradation, drought and desertification. It encourages the mainstreaming of environmen-

tal education into the curriculum of universities to promote environmental consciousness and improve urbanization and urban management policies (ECOWAS, 2008).

Extent of disaster risk reduction mainstreaming into environmental policy

The environmental policy integrates elements that are in line with all the priorities except HFA Priority 5. It is designed to strengthen environmental governance and build capacities in the subregion through the setting up of a high level standing mechanism for environmental policies.

It prescribes the establishment of a regional observatory centre for environmental monitoring and assessment with a view to promoting the monitoring of environmental change and prevention of risks.

The policy seeks to promote environmental information, education and communication for a healthy environment within the subregion, by strengthening information and communication activities on environmental management and to promote a subregional programme on environmental education with its subsequent integration into school curriculum.

In ensuring sustainable management of resources, the environmental policy aspires to enhance the conservation and sustainable development of forests, fauna and grazing lands; combat land degradation, drought and the sustainable management of coastal, island and marine ecosystems.

It provides for appropriate town and country planning policies to manage environmental pollution, nuisance, hazardous and urban waste.

4.3 ECOWAS agricultural policy

The ECOWAS agricultural policy, termed 'ECOWAP', pursues a general objective to "contribute in a sustainable manner to satisfying the food needs of the population, promote economic and social development while reducing poverty in member States as well as addressing inequalities between territories, areas, and countries." This overall objective is divided into seven specific objectives:

1. Food security for the rural and urban populations
2. Reducing food dependency in a perspective of food sovereignty
3. Integration of producers into markets
4. Development of human capacities and creation of jobs that guarantee remunerative incomes to improve the living conditions of rural populations as well as the delivery of services in rural areas
5. Sustainable intensification of production systems while preserving natural resources and biodiversity
6. Reducing vulnerability of West African economies by limiting factors that lead to regional instability and insecurity
7. Adoption of appropriate funding mechanisms

The axes of interventions to attain the objectives of ECOWAP fall along three major themes: increasing the productivity and competitiveness of West African agriculture; implementing a trade regime within West Africa; and adapting the trade regime with regard to countries outside the region.

The first of these themes focuses on improving food security, increasing farmers' incomes, reducing poverty in the rural community, prevention of famine and the management of the effects of natural disasters, early warning of production shortfalls and extension of information systems. The

second and third themes are directed towards assuring access to regional and international markets in order to sell produce resulting from an increase in the supply side, made possible by the adoption of modern farming systems.

Extent of disaster risk reduction mainstreaming into agricultural policy

The ECOWAS policy on agriculture contains features designed to work in tandem with all priorities of the HFA. Thus, the agricultural policy promotes institution-building through the adoption of gender-sensitive approaches, support for the formulation of agricultural and rural policies and strategies and long-term funding for agriculture, which ultimately improves food security, human capacity, awareness and building of community resilience.

ECOWAP strives to prevent and manage food crises and other natural disasters through the establishment of EWS, crisis management systems and capacity-building for monitoring and evaluation of agricultural development projects in the subregion.

The policy aims to improve food security, develop the human capacities of rural populations and sustain intensification of production systems, while preserving natural resources and biodiversity. Issues of water and resource management are tackled with integrated water resource and sustainable management of natural resources including forestry and fishery resources.

It also promotes information sharing and communication among stakeholder and encourages the formulation of mechanisms for disaster-related insurance and compensation.

The policy takes into consideration the development of appropriate response and recovery measures for crisis affected areas.

4.4 ECOWAS regional strategic plan 2011-2015

The regional strategic plan is predicated on six strategic pillars (peace, security and good governance; cooperation and development; competition and equity; socioeconomic and monetary integration; institutional capacity; and global outlook), which encompass the mission, vision and core values of ECOWAS and translates into the six strategic priorities and goals enumerated below:

1. Promote good governance, justice and upgrade the conflict prevention, management and resolution mechanism. The accompanying objectives emphasize the establishment of a viable framework for conflict prevention/management; capacity building for management of multiple tasks through collaboration; good governance such as strengthening of democratic institutions, promotion of rule of law and human rights.
2. Promote infrastructural development and a competitive business environment. This goal is pursued with the view to providing the adequate infrastructural support and necessary policy input that would ensure regional and national competitiveness as well as an enabling business environment for the development of the private sector and build capacity to support a regional investment framework.
3. Sustained development and cooperation in the region through the promotion of cooperation among member States for the development of a viable regional infrastructure; harmonized policy and strategy for the development of industries and mines in the region; promotion of trade integration, labour and capital mobility; provision of policy direction for the promotion of human development as an instrument of poverty reduction, as well as for strategies and tools to give impetus to regional agricultural development and ensuring the sustainability of the environmental bases of production.
4. Deepen socioeconomic and monetary integration while promoting economic policy harmonization and monetary cooperation as a means of achieving macroeconomic convergence and eventual attainment of single currency within the region.
5. Reinforce institutional capacity by enhancing the technical and analytical skills of staff in all relevant areas in order to create a knowledge-base ECOWAS institutions; ensuring collaboration, coordination and synergy between member States, ECOWAS institutions and other regional bodies and developing an efficient and functional work environment for enhanced productivity and the coordination of activities.
6. Strengthen the mechanism for integration into the global market through partnership with other regional blocs to take advantage of existing global trade and investment arrangements, likewise improving deeper interaction with development partners to ensure that the plans and programmes of ECOWAS have depth in terms of pragmatic content, coverage and financing.

The operational strategies to actualize the above goals take cognizance of the Millennium Development Goals and contains plans and programmes which are developed and implemented for positive impact on the citizens of the community. The programmes are: the Regional Poverty Reduction Strategy; the Community Development Programme; the Regional Medium Term Action Area; and the Capacity Development Strategy.

Extent of disaster risk reduction mainstreaming into regional strategic plan

Some of the priority goals, objectives and programmes of the strategic plan, as highlighted below, contain DRR elements that fall in line with some of the HFA priorities with the exception of priorities II, III and V.

The regional plan advocates for good governance, justice and an upgrade of the conflict prevention, management and development of its conflict resolution mechanism/framework.

It reinforces institutional capacity by enhancing the technical and analytical skills of staff in order to create appropriate human capacity for development and also to ensure collaboration, coordination and synergy among member States.

The plan advocates the promotion of human development as an instrument of poverty reduction and seeks to develop strategies and tools to give impetus to regional agricultural development and ensure the sustainability of the environmental bases of production.

4.5 African Monitoring of the Environment for Sustainable Development

ECOWAS level implementation

The African Monitoring of the Environment for Sustainable Development (AMESD) project is a follow up to the PUMA project (2002-2006), which assisted in developing the capacities of the National Meteorological Services. The current AMESD project covers the period 2008-2013 and is funded by the European Development Fund (9th EDF). The overall purpose of AMESD is to improve the decision-making process in the fields of environmental risk management in Africa and through the following:

- Increasing information management capacity of African regional and national institutions mandated for environment-related sectors;
- Facilitating access to Earth Observation (EO) technologies.

ECOWAS is one of the five sub Saharan Africa Regional Economic Communities (RECs) participating in the project. Each REC has chosen thematic areas to deal with environmental concern that is peculiar to its region. ECOWAS thematic area is "Water Management for Cropland and Rangeland Management".

At ECOWAS Level:

- ECOWAS Commission is in charge of coordinating implementation of the project in 17 countries (ECOWAS + 2);
- AGRHYMET Regional Centre in Niamey (the Niger) is the appointed Regional Implementation Centre (RIC);
- Focal Point has been appointed in every member country

Status of Implementation in ECOWAS: The grant for AMESD in ECOWAS was approved in December 2009 as subregional and national trainings were started both by AMESD at the continental level and by AGRHYMET within the subregion. National sensitization workshops for stakeholders have also been held. Supply, installation and commissioning of AMESD and PUMA satellite receiving equipments commenced in June 2010 in all ECOWAS member States. An exercise has also commenced to establish the operational status of the stations.

Extent of disaster risk reduction mainstreaming – the AMESD project

The AMESD project interestingly contains elements from all HFA priorities. It was established to develop and strengthen the capacities of national

meteorological services and to enhance information sharing in the field of environmental risk management among subregional and national institutions through access to earth observation technologies.

It provides a platform for monitoring, development and dissemination of early warnings, thus improving decision-making processes towards DRR and sustainable development.

It seeks to increase the information management capacity of African regional and national institutions mandated for environment-related sectors and facilitates access to Earth observation technologies.

The AMESD project enables information sharing, communication and the training of individuals and stakeholders. It promotes research, innovation and development of improved methods for predictive multi-risk assessments to substantially reduce the underlying risk factors in ECOWAS sub-region and among member States.

As the AMESD project improves monitoring and dissemination of early warnings on environment matters using Earth observation technologies, it will go a long way to strengthen disaster preparedness and effective response in the subregion.

4.6 ECOWAS development partners

ECOWAS has the following priorities in relation with its partners:

- (a) Promotion of free movement
- (b) Poverty reduction
- (c) Agriculture and food security
- (d) Infrastructure development

- (e) Macroeconomic convergence and the promotion of other initiatives towards a common market
- (f) The consolidation of peace, democracy and good governance
- (g) Enhancing internal capacity and coordination for effective delivery

The approaches adopted by ECOWAS to achieve the above priorities are to build institutional, managerial and operational capacities for effective performance of the ECOWAS Commission; embark on institutional reforms, team-building, performance management, monitoring and evaluation, as well as filling the human capacity gaps in the Commission; and establish a joint financing agreement to enhance donor coordination and programme effectiveness.

To achieve these priorities, the ECOWAS Commission entered into agreements with the several development partners for technical and financial support.

OCHA embarked on capacity building and training for the Commission and its member States in effective disaster preparedness and response. This included: information management (database, maps, web-platform) for preparedness and recovery activities; training –“Beyond Response: Better Preparedness for Environmental Emergencies” with a follow-up training which was held in 2013; and in collaboration with the International Federation of Red Cross and Red Crescent Societies (IFRC), OCHA organizes annual consultations with National Disaster Managers from ECOWAS member States.

AMESD assisted all the five sub-Saharan Africa regional economic communities, including ECOWAS, to develop the capacities of their National Meteorological Services and the use of

satellite to improve decision-making process in the fields of environmental risk management.

The World Bank and the African Development Bank supported the ECOWAS Commission to develop their regional poverty reduction strategy document in 2010 with focus on agricultural and rural development. The PRSP document provided a roadmap to tackle the root causes of poverty and Millennium Development Goals attainment in the subregion.

ECOWAS bilateral partners, including Denmark, Germany, France, Spain, Switzerland and the United Kingdom of Great Britain and Northern Ireland, have supported and coordinated the implementation of key ECOWAS programmes in agriculture, migration, trade facilitation, peace and security. Other partners including Brazil, China, India, Venezuela, Cuba and other Caribbean nations have supported and developed initiatives in the areas of infrastructure, energy and health.

African Union and NEPAD - In line with the African Union and NEPAD/CAADP policy on agriculture, the ECOWAS agricultural policy was developed in 2009 with part funding from other development partners to boost agriculture and food security.

The African Union and United Nations supported ECOWAS in 2010 to restore constitutional order and legality in Côte d'Ivoire, Guinea and the Niger. Similarly, adherence to the constitutional convergence principles of ECOWAS with respect to democracy and good governance yielded relatively peaceful, transparent and credible outcomes in

the conduct of the presidential elections in Benin, Guinea, the Niger and Nigeria.

The European Union supported ECOWAS to implement its Transport and Transit Facilitation Program through the construction of joint border-posts, towards the promotion of free movement and trade.

In conclusion, it is to be observed that most of the development cooperation agreements with ECOWAS have some DRR elements implicit in them. However, the OCHA cooperation agreement was explicitly focused on capacity-building and training for preparedness and response for the Commission and member States and the European Development Fund/AMESD project centred on meteorological and environmental risk management, in line with HFA priorities 5 and 2 respectively. Similarly, the World Bank, United Nations and African Union/NEPAD development cooperation with ECOWAS on agriculture, food security, poverty reduction and good governance are in tandem with HFA 4 on reduction of underlying risk factors.

To strengthen the existing weak governance institutions and deepen DRR mainstreaming and implementation at the community level, ECOWAS will have to rely on the cooperation, expertise and monitoring acumen of the organized private sector and civil society, particularly traditional institutions, women and youth groups, community-based organizations and specialized NGOs.

4.7 National development agenda and disaster risk reduction mainstreaming

4.7.1 Nigeria: Extent of DRR Mainstreaming

1. Revised National Policy on Environment (1999)

The environmental policy made provisions for the establishment of regulatory, monitoring and response agencies with NESREA, NOSDRA, CCA at the federal level; and state environment protection agencies at local levels to prevent, mitigate and respond to environmental challenges like flooding, erosion, desertification, oil pollution etc.

The environmental policy, strategies and plans prescribe for environmental impact assessments (EIAs) for major developmental projects as well as the establishment of collaborative multistate EWS for hydrometeorological, geophysical, biological, social and industrial hazards between the Ministry of Environment and the National Hydro and Metrological Agencies.

It also prescribes for increased advocacy and the need to raise public awareness to promote understanding of the essential linkages between the environment, natural resources and development. The policies and plans encourage local participation in environmental management recommending legislative public hearings as part of major development activities.

The policy encourages the infusion of environmental issues into the primary, secondary and tertiary institution curriculum to engender appropriate public awareness and promote prevention, mitigation and response from individual to community level.

Issues of environmental conservation, restoration and sustainability are pursued with appropriate multilateral support to preserve the environment and natural resources for the benefit of present and future generations.

It also promotes conducting environmental emergency assessments and development of response mechanisms with appropriate contingency plans at the federal and state levels.

2. New Nigerian Agricultural Policy (2001)

The agricultural policy, plans and strategies contain DRR elements that promote the attainment of national, state and local priorities in terms of agricultural research, preservation and issues of food security and poverty reduction.

Methods and initiatives under the Ministry of Agriculture such as the National Fadama projects were put in place to improve rural infrastructure and enhance the capacity of Fadama users to adopt environmentally sustainable land management practices.

The policy encourages participation in the mapping and development of interstate cattle and grazing routes, watering points and appropriate EWS in collaboration with hydrometeorological agencies.

It aspires to improve production and processing technologies, through the promotion of simple, low-cost improved irrigation technology, adoption of improved animal husbandry and development of appropriate machinery and equipment by expanding the capacity of the National Centre for Agricultural Mechanisation.

Research and development of appropriate technology for agriculture, including biotechnology,

training and manpower development and establishment of appropriate structures for collection of agricultural statistics, information sharing and management are encouraged within the policy.

The achievement of self-sufficiency in basic food supply and the attainment of food security, rational utilization of agricultural resources, improved protection of agricultural land resources from drought, desert encroachment, soil erosion and flood, and the general preservation of the environment for the sustainability of agricultural production are the key objectives of the new agricultural policy.

It also seeks to reduce risks and uncertainties in agriculture and enhance security of agricultural production and investment through the introduction of a comprehensive agricultural insurance scheme and improved quality of life of the rural people by articulating and implementing integrated rural development programmes.

3. Revised National Health Policy (2004)

The national health policy lays the foundations for a comprehensive health-care system, based on primary health care that is protective, preventive, restorative and rehabilitative to every citizen of the country within the available resources, so that individuals and communities are assured of productivity and social well-being.

It seeks to develop a high level of efficiency and accountability in the management of the national health system, and to revitalize and provide appropriate quality human resources for health-care delivery at all levels.

The policy promotes practical, scientifically sound and socially acceptable methods and technology in the provision of health care. It also recommends for prime disease surveillance, data collection, compilation and health-risk assessment method-

ologies and community participation to enhance health service delivery.

The policy sets to achieve a gender-sensitive and responsive national health system by mainstreaming gender considerations in the implementation of all health programmes.

It also encourages the development of an articulated programme on information, education and communication, which should also include specific programmes on school health services and integration of basic health education into the school curriculum.

The policy strives to strengthen intersectoral cooperation and collaboration between different health-related ministries, development agencies and other relevant institutions in order to build resilience and reduce the underlying risk factors as much as possible.

The policy aims to provide effective, efficient, quality, accessible and affordable health services that will improve the health status of Nigerians and hence ensure the active prevention and control of locally endemic and epidemic diseases. It also promises an appropriate framework for preparedness and emergency response when there are outbreaks of disease like cholera and meningitis.

4. PRSP: National Economic Empowerment and Development Strategy (NEEDS) 2005

The national economic empowerment and development strategy (NEEDS) emphasizes the strengthening of preventive and curative primary health-care services, the development of viable agricultural and sustainable economic institutions.

NEEDS sets to establish relevant regulatory agencies to enforce environmental laws, monitor industry compliance, conduct environmental audits, impact assessments and set standards.

It subscribes to full integration of women in national development by enhancing their capacity to participate in the economic, social, political, and cultural life of the country.

The strategy document promotes health-care service delivery through a stronger emphasis on health education, disease prevention and unhindered access to compulsory universal basic education to all citizens.

It encourages the building of a culture of peace and security by establishing structures and processes that mainstream conflict prevention and resolution into national development.

NEEDS insists on the provision of adequate water and sanitation, nutrition, clothing, shelter, basic education and health care as well as physical security and the means of livelihood.

The strategy seeks to implement an integrated rural development programme to stem the flow of migration from rural to urban areas. It recognizes the need to tackle the many other social and political factors that contribute to poverty and social exclusion.

NEEDS makes provisions for safety nets to prevent people from becoming poor or poorer, protect vulnerable groups, reducing poverty levels and inequality.

At the conception stage of this policy, DRR, with reference to the HFA was not consciously mainstreamed at the conception stage of this policy, even though a NEMA was in existence.

(a) The United Nations Development Assistance Framework

The results matrix for The United Nations Development Assistance Framework(UNDAFII, 2009-2012) is organized around four major priori-

ties: (i) governance and accountability that supports transparent, equitable and effective use of resources; (ii) productivity and employment for wealth creation with a bias towards the poor and with the aim of contributing towards the growth of a private sector-led non-oil economy; (iii) social service delivery to invest in Nigeria's human capital and contribute towards a democratic dividend that reaches the poor even as it boosts current and future potential for equitable growth; and (iv) reduction of the risk of crisis and conflict to help address the challenge in the Niger Delta, whilst assisting with crisis prevention, management and mitigation in other parts of the country (United Nations, Nigeria, 2008). UNDAF II has certain elements of DRR featured in it; for example UNICEF, in collaboration with NEMA, embarked on capacity-building and training on emergency preparedness and VCA for NEMA staff, state emergency management agencies and civil society organizations. This was to address the emerging hazard risk of floods, pipeline vandalism and displacement of people due local conflict and strife.

Similarly, United Nations Habitat (Nigeria) mainstreamed DRR elements into structure plans for cities in Anambra, Nasarawa and Osun states towards promoting risk-sensitive planning and obtaining resilient cities. In the same vein, in a bid to build capacity to coordinate resources towards efficient and effective disaster prevention, preparedness, mitigation and response in Nigeria, NEMA, in collaboration with the World Food Programme (WFP) embarked on the following programmes: rapid food security assessments training; capacity building training in humanitarian logistics management in emergency situations; emergency preparedness workshop; telecommunications assessment mission; and emergency preparedness federal and state capacity assessment mission. UNDP and the World Bank in collaboration with NEMA, conducted a PDNA after the devastating floods of 2012.

UNDAF II (2009-2012) contain activities which are in line with HFA priorities II, IV and V. UNDAF II as described above, served as a foundation for the development of UNDAF III (2013-2017) which consist of four result areas:

1. Good governance
2. Social capital development
3. Sustainable and equitable economic growth
4. Human security and risk management

While all of the aforementioned result areas feature elements of DRR; the human security and risk management result area supports the vision of the Government of Nigeria to achieve a peaceful, secure and sustainable development path where disaster, environmental, climate and conflict risks and threat are mitigated. Some of the specific activities and strategies related to DRR in UNDAF III are the need to:

- (a) Strengthen resilience of individuals and communities through support to government and community-based organizations, as well as other implementation partners in the result areas
- (b) Focus specifically on effective early warning and response to emerging signs of natural disasters, DRR as well as building coping capacities related to vulnerability to natural disasters
- (c) Promote the development of robust national peace architecture to help prevent or mitigate against potential violence
- (d) Strengthen preparedness and coordination as well as provide early warning and early action systems, inclusive of mediation and conflict management/resolution for recurring conflicts over land and natural resources. It will also build credible platforms for political dialogue and peace-building initiatives at national and

state levels and especially in identified conflict zones

- (e) Focus specifically on strengthening institutions, the private sector and communities to use their natural resources efficiently. It will also encourage them to develop the capacity to engage in climate change negotiations and take action towards environmental sustainability, promote the creation of green jobs and a sustainable green economy
- (f) Support sustainable urban management to enable Nigerian cities fulfil their potentials as engines of economic growth and centres of innovation for the national economy.

UNDAF III focused essentially on all aspects of the HFA priorities with the exception of Priority V, which was primarily addressed in UNDAF II

4.7.2 GHANA: Extent of disaster risk reduction mainstreaming

1. National Environmental Policy (2010)

The environmental policy highlights the establishment of an effective, adequately resourced and harmonized institutional framework, centred around the Ministry of Environment, Science and Technology and the Environmental Protection Agency with an integrated legislative system and institutional capacity development at all levels.

The policy insinuates the development of standards for environmental management systems, environmental impact management, monitoring and evaluation procedures and reporting.

It recommends the mainstreaming of environmental, social and economic impact assessments, management and practices into all existing and future irrigation projects and development programmes to ensure sustainable development.

The policy suggests the promotion of education and awareness creation on environmental issues through the integration and expansion of environmental education in the curricula at all levels of the educational system.

It supports the development of necessary legislation, training and provision of financial support to grassroots communities to ensure their participation in resource and environmental management.

The policy document alludes to the development of strategic environmental research that aims to identify the social, economic and technical factors influencing resources and environmental management. It reiterates the need to support the development and improvement of existing environment related information management systems with the use of tools such as information and communication technologies and geographic information systems.

It promotes equitable access to, and sustainable use of the country's natural and cultural resources. The document also heralds the conservation of the diversity of landscapes, ecosystems, habitats, biological communities, populations, species and genes throughout the country by expanding human capacity

There are also appropriate provisions for environment emergency assessment and response when there are hazard events like flooding and pollution.

(a) Food and agriculture sector development policy (2007)

The food and agriculture sector development policy (FASDEP II) is coordinated and implemented by the Ministry of Food and Agriculture to ensure compliance and integration of environmental considerations in the development of agricultural activities.

It advocates for enhanced collaboration between institutions responsible for disaster management through improved legal and policy frameworks.

The policy seeks to strengthen EWS and pursue the development of an effective and efficient framework for collaboration with appropriate agencies to ensure environmental monitoring, assessment and compliance.

It pursues the enhancement of nutrition by dissemination of nutrition and health information and advocacy for food fortification and increased awareness about environmental issues among all stakeholders.

The policy sets to improve food security and emergency preparedness by targeting vulnerable groups in agriculture, enhancing their diversification opportunities, reducing risk and increasing their access to productive resources.

It maintains the need to mainstream sustainable land and environmental management practices into agricultural sector planning and implementation.

It emphasizes the need to establish contingency plans and strategic stocks to support emergency preparedness to ensure access of the poor to food during disasters and to safeguard production.

2. Ghana Shared Growth and Development Agenda (GSGDA, 2010-2013)

The Ghana shared growth and development agenda is designed to enhance community participation in environmental governance and natural resource management as well as mitigating the impact of natural disasters.

The strategy emphasizes the need to increase resilience to climate change impacts by identifying and monitoring environmental changes and enhancing EWS.

It also solicits for improved environmental and social impact assessment processes and compliance in developmental design and considerations.

The strategy strives to enhance research and awareness creation as well as the development and implementation of environmental sanitation strategies.

It promotes human capacity development through education and vocational training with gender considerations.

Issues pertaining to biodiversity loss, sustainable extraction and use of mineral resources and integrated water resource management are addressed in the strategy document.

Enhanced productivity and livelihoods through agricultural diversification, improved land use management and access to health care are considered paramount in the development strategy.

Particular attention is paid to the development of appropriate institutional arrangements to implement human settlement development, with a focus on land use planning, urban housing development and management, slum upgrading and disaster prevention.

The strategy underscores the need to promote human resource development, productivity and employment, while ensuring poverty reduction and social protection. It promotes good governance, rule of law and encourages women's participation in governance.

Ghana established a NADMO as an emergency response agency to promote national development by responding to natural and human induced emergencies.

(b) The United Nations Development Assistance Framework

The third Ghana United Nations Development Assistance Framework (UNDAF 2006-2010) focused on key development challenges, with an overall goal to support the Government to achieve equitable growth, accelerate poverty reduction and protect the vulnerable and the excluded within a decentralized democratic environment. Its six strategic pillars were to improve accessibility to health services to the vulnerable population; improve access to basic education with focus on gender equity in enrolment especially among the vulnerable group; improve productive capacity and sustainable livelihoods among the vulnerable groups; strengthen national responses to HIV/AIDS; promote effective data management information system in national development; promote human rights, and foster equitable and participatory governance. These activities are in line with all priorities of the HFA with the exception of priorities I and II.

UNDAF 2012-2016 seeks to support the key priorities of the Government's development agenda. The strategic focus and logic of the UNDAF responds directly to central aspects of the Ghana Shared Growth and Development Agenda 2010-2013. The result is an UNDAF with a clear concentration on four thematic areas:

1. Food security and nutrition
2. Sustainable environment, energy and human settlements
3. Human development and productive capacity for improved social services
4. Transparent and accountable governance

Although all of these thematic areas contain DRR feature, some of the activities under the second thematic area are of particular interest:

The strategy seeks to improve the capacity of national systems and existing institutional arrangements to promote climate change mitigation and adaptation as well as DRR, as defined in HFA at all levels. It also seeks to integrate adaptation and mitigation strategies and practices into climate resilient development policies, plans and programmes.

The UNDAF document aims to support the national development policies and strategies on DRR, with an emphasis on budget allocation to disaster-prone districts.

It also hopes to establish a national risk monitoring observatory for providing early warning information and develop a national strategy to raise public awareness on disaster risk reduction in primary and secondary schools, in addition to improving building safety and protection of critical facilities.

The strategy document strives to reinforce the institutional capacities (assessment, coordination and information management) of NADMO and other MDAs for preparedness and response to man-made and natural disasters. It also encourages the integration of biodiversity and land management issues, with a special focus on water bodies and afforestation in policies at the national and local level.

4.7.3 SENEGAL: Extent of disaster risk reduction mainstreaming

1. Environmental Policy Senegal

The department for studies, planning and monitoring under the Ministry of Environment and Sanitation supervises the implementation of the policy and evaluation of projects, programmes,

cooperation and management of external assistance in collaboration with the Supreme Council for Natural Resources and Environment, which ensures the inclusion of environmental considerations into national development programmes.

The policy seeks to develop the capacities for collection, processing, storage, dissemination of information and monitoring of change in environmental resources, the Environment Ministry promises to collaborate with research institutes in order to create a research network and enable standardization of operations.

To raise public awareness and a sense of responsibility for environmental protection, the policy encourages the need to integrate environmental education into formal and non-formal education curricula and to develop comprehensive communication plan for the appreciation of the environmental code.

The policy elucidates improved relations between the Ministry of Environment, the private sector, NGOs and community-based organizations, as well as local communities in the management of the environment.

The document expresses the need to combat desertification and land degradation with the development and implementation of appropriate programmes such as the Plan d'action national de lutte contre la desertification and the national environmental action plan. It encourages the integration of biodiversity conservation into programmes and production activities. It promotes prevention of any form of pollution, proper management of urban waste and an integrated management of coastal and marine ecosystems. Appropriate plans to enhance environmental emergency assessment and response during emergencies like flooding are also included.

2. **New Agricultural Policy of Senegal (1984)**

The philosophy of the new agricultural policy is focused on community participation through cooperative groups and community-based organizations. With the support of development partners the policy seeks to apply appropriate early warning mechanisms to prevent and mitigate emergencies in agriculture. It also seeks to deploy mass education, advocacy and rural training to address a decline in agriculture productivity and rising food insecurity with a view to reduce poverty in the country.

Senegal's new agriculture policy is aimed at achieving food sovereignty and security through self-sufficiency in cereal production to address the reduction in production. With this aim in mind, the Government of Senegal embarked on efficient water and land use management, as well as replenishment of seed capital in order to promote productivity, competitiveness and sustainable development.

The policy promotes the need to diversify agriculture production away from a focus on groundnut into other crops. It recommends that the private sector led this through agriculture mechanization as against the hitherto traditional subsistence farming.

There are also appropriate plans to enhance environmental emergency assessment and response during emergencies like flooding.

3. **PRSP: National Strategy for Economic and Social Development NSESD 2013–2017**

Senegal's PRSP document accentuates the need to promote good sectoral governance to fast track social, economic and environmental development. It promotes standardization of developmental projects and the need for assessments to ensure control over major industrial accidents.

It also highlights the need for collaboration among relevant ministries and departments responsible for environmental monitoring and management, as well as the need to establish EWS for natural disasters.

The policy encourages improved human capital development through universal primary education and skills development. It aims to strengthen capacities in environmental and natural resources management through promotion of environmental education and public enlightenment.

The strategy document underlines the need to create employment opportunities through public investments in highly labour intensive activities and for the private sector to play an active role in the general development of the economy and job creation. It expresses the need for improved access to energy services and development of transportation infrastructure with the promotion of good sectoral governance to fast-track social and economic development.

It also proposes to ensure an integrated and balanced development of the rural economy through increased agricultural productivity, a sustainable agricultural sector management system and establishment of harmonized gender-sensitive development. The strategy targets the eradication of extreme poverty and hunger through the promotion of food security and self-sufficiency.

Senegal's PRSP aims to contribute to economic and social development through increasing access to basic social services; the protection of vulnerable groups; improved health care and nutritional status; a better living environment; and reduction of environmental degradation. It recognizes the importance of mitigating the impact of climate change on the ecosystems through the preservation and management of natural resources at the local level.

It also reiterates the need for peace and security through the promotion of rule of law; human rights and justice; gender equity and equality; land-use planning and local development; improved management of public finances; and the need to promote accountability and transparency.

The strategy stipulates the need to prevent and reduce major disaster risks by developing national and regional contingency plans and promoting the culture of disaster prevention. It also supports management of natural disasters with the establishment of a mechanism to assist and compensate disaster victims. The formation of an emergency response fund and capacity-building for civil protection actors was considered paramount.

(a) United Nations Development Assistance Framework (2012-2016)

The UNDAF (2007-2011) for Senegal was developed in close consideration of Senegal's poverty reduction strategy II, its CCA and targets set by the Millennium Development Goals. The three strategic areas of cooperation identified by UNDAF (2007-2011) in consultation with government agencies, civil society organizations and key development partners include: wealth creation and the fight against hunger for sustainable development; the promotion of basic social services; governance and promoting partnership for development. UNDAF (2007-2011) for Senegal contain some elements of DRR in line with HFA priority IV to reduce the underlying risk in the country.

The development of UNDAF (2012-2016) for Senegal relied heavily on the recommendations of the mid-term review of UNDAF (2007-2011) and the priorities of Senegal's PRSP II. This led to the development of three thematic areas of focus, which have semblances of DRR inherent in them:

1. Creating opportunities for economic development of rural areas

2. Improving equitable community access to rights and social services, basic social protection and sustainable development
3. Strengthening governance at central and local level to ensure sustainable human development.

Activities containing elements of DRR in the strategy document include efforts to: improve food security and increase the nutrition status of the populace by production diversification, empowering farmers and boosting their income; promote equitable access of people and vulnerable groups to basic social services, social protection through improved education, quality health-care services and protection against violence, abuse and exploitation; implement initiatives that relate to climate change adaptation and development of sustainable livelihoods; increase the capacity of national institutions (central, regional and local) to promote good governance; and development of policies and programmes that are participatory, transparent and equitable.

4.7.4 Mali: Extent of disaster risk reduction mainstreaming

1. National Environmental Protection Policy (1998)

The policy approves for appropriate institutional and legislative frameworks for the coordination, standardization and control of the quality of the environment that have been created with the establishment of the environment code. It seeks to establish a system for monitoring, assessment and regulation of environmental pollution and to promote the restoration and recovery of degraded environment.

The policy document mandates the carrying out of EIA as a prerequisite for the implementation of projects and emphasizes the development, preservation and strengthening of technical and

methodological advances garnered through participatory approaches over the years. It sets to develop national capacities at all levels (national, regional and local) and to promote community participation in environmental protection. It also promotes comprehensive and multisectoral collaboration among all stakeholders by encouraging consultation with communities towards ensuring sustainable environmental protection.

The policy supports research on desertification and environmental protection to enable the development of appropriate techniques and technologies as well as the dissemination of environmental information and good practices. Its objective is to develop and support the implementation of a decentralized and participatory resource management programs; promotion of sustainable farming systems; ensuring food security; and sustainable management of renewable natural resources.

It includes measures to prevent any form of nuisance or pollution through the creation of sewage treatment plants for decontamination of liquid effluents and for effective management of solid, gaseous, industrial and artisanal waste in major cities. Appropriate environmental assessments and response mechanisms are also encouraged.

2. Agricultural Development Policy (2013)

The policy document supports the need to establish state institutions to monitor implementation of the provisions in the policy, programs and strategies and also to prevent disasters and calamities with appropriate conflict management and technical support at the local communities. It indicates the need for sustained periodic assessment and monitoring of natural resources and environmental indicators with the use of the EIA and development of mechanisms for adaptation to climate change. The policy acknowledges the need to develop technological innovations

through agricultural research and vocational training and to strengthen the capacity of farmers and stakeholders while reducing rural poverty. It also endorses the development of agricultural research in collaboration with academic and agricultural research institutes and provision of funds for the training of rural dwellers.

The agricultural policy seeks to ensure food security, sovereignty and self-sufficiency. It emphasizes that sustainable management of the environment and conservation of natural resources are critical to sustainable development as well as for climate change adaptations. It provides support in specific risk areas and ensures the regulation of imports and exports of food products through collaboration with local authorities and the organized private sector.

The policy recommends the proactive improvement of the living environment with integrated and sustainable management of natural resources and development of programs to combat desertification and degradation of agricultural land with the full participation of the local authorities. Appropriate measures with development partners are also encouraged during emergency response in agricultural production.

3. PRSP: Plan for the Sustainable Recovery of Mali (2013-2014)

The Mali PRSP recognises the need for sustainable development and therefore promotes factoring monitoring and evaluation into developmental activities. It advocates for improved human resource capacity development by setting up a suitable compensation system, transparent promotional procedures and appropriate in-service training for public officials. It recognizes the role of the media as an instrument for advocacy, public education and to raise awareness among the citizens.

The strategy emphasizes the need to ensure peace, security and development of public services towards attaining sustainable development. It also supports food security and self-sufficiency; protection of fundamental human rights; access to income-generating activities and strengthening the capacities of the microfinance institutions.

The PRSP promotes improved governance through decentralization, organization of credible and transparent elections and strengthening of the role of local authorities in governance and wealth formation. It supports the fight against corruption by accelerating the restoration of the rule of law, modernization of judicial institutions, capacity-building and training of the civil service and consolidating the legal framework.

The strategy document supports rural development and the socioeconomic advancement of women and youths. It promotes environmental protection and sustainable management of natural resources, while intensifying and modernizing agriculture in the context of climate change. It promotes equitable access to quality health-care services and gender-sensitive development. The document also subscribes to humanitarian emergency responses and resettlement of internally displaced persons resulting from conflicts and natural disasters.

(a) United Nations Development Assistance Framework 2008-2012

The UNDAF (2003-2007) for Mali, developed in consonance with the CCA and PRSP, aims to forge synergy and support the promotion of sustainable human development, through the fight against poverty and the protection of human rights. It focuses primarily on improving governance; access to basic social services; rural development, food security and the environment. It also supports issues on gender equity and HIV/AIDS.

The UNDAF 2008-2012 for Mali was developed in close consideration of the priorities of Mali's Framework for Growth and Poverty Reduction (CSCR) 2007–2011. Consequently, this UNDAF includes five development outcomes, which cover ten of the thirteen priorities of the CSCR. The five outcomes, which all contain DRR elements include:

1. Promotion of human rights, good governance and rule of law
2. Reinforcing the capacity of government authorities, civil society and the private sector in planning, formulation, implementation and monitoring and evaluation of projects and programmes
3. Improving access to quality basic social services for the most vulnerable groups
4. Rural development, food security and sustainable development, sustainable alternative energy services and job creation

5. Strengthening the fight against HIV/AIDS

DRR features in this document include the need to strengthen the capacity of government and civil society institutions to harmonize national legislation with international law, to promote a culture of peace, prevention and management of local conflicts. It seeks to improve the status of women and their participation in decision-making and greater involvement in the management of public affairs. It also advocates increased technical and financial support to develop, adopt and implement national policies and strategies to provide instruction tailored to the specific needs of the most vulnerable groups, especially girls' education and women in rural areas.

The document encourages the development of a national system for early warning, prevention and management of food crises and supports the development of effective coordination and response to natural disasters.

It also supports research, agricultural mechanization and the provision of improved seeds with climate adaptation capability, towards sustained national food security, as well as strengthening capacity, especially at the local level, to manage environmental degradation, dwindling resources, desertification and pollution.

The UNDAF 2008-2012 for Mali takes cognisance of all priorities of the HFA with the exception of priority III, which emphasizes the use of knowledge, education and innovation to build a culture of safety and resilience.

4.8 Main tools and approaches for disaster risk reduction mainstreaming and implementation in the ECOWAS subregion

The main tools and approaches used by the ECOWAS Commission, its member States and their development partners to mainstream and implement DRR activities at the subregional and national levels are discussed below.

Training and capacity-building

The focus by ECOWAS Commission on institutional DRR capacity-building is predicated on the understanding that disasters are a governance and development challenge, and as such a systems approach is basic to resolving the issues of vulnerability that constitute primary factors in disaster situations. This approach was adopted in the ECOWAS DRR policy to establish 10 National Platforms; mainstream DRR into development frameworks, especially the PRSPs, ECOWAS Interdepartmental Coordinating Committee and other subregional policies.

This was used as veritable tool to educate and create knowledge in order to improve both human and institutional capacities on the relevance of DRR and the need to mainstream it into the

various sectors of the economy at the subregional and national levels. This is achieved through the infusion of DRR education into the basic education curriculum and the establishment of post-graduate programmes on DRR and development issues in universities. Similarly subregional and national conferences are being embarked upon both at the ECOWAS subregional, national and subnational levels to examine the issues of hazard risks, vulnerabilities and capacities.

Advocacy and public awareness-raising

At the ECOWAS subregional level, DRR advocacy and public awareness-raising tools were deployed in the DRR mainstreaming and implementation of the ECOWAS DRR action plan and policies on environment, agriculture, the regional strategic development plan and the environment monitoring for sustainable development plan. Various expert advocacy conferences/meetings and Head of Summits have been embarked upon since 2006 to raise consciousness and engender commitment on DRR mainstreaming into the national development agenda. At the country level, advocacy and public education has been deployed to popularize the HFA priorities, engender understanding and the need to mainstream and implement the elements in national DRR action plans into the various sectors of the national development agenda.

Environmental impact assessments

EIAs are deployed in the different stages of developmental activities, such as environment, agriculture and regional development projects, to identify and assess the extent of impact of proposed or ongoing projects on the environment. This is integrated into the decision-making process/conceptual design of projects and plans with a view to ensuring that they do not create or aggravate any existing risk.

Post-disaster needs assessments

As the name implies, a PDNA is a post disaster event tool designed to assess the impact of a hazard risk event in an administrative area.

The Government of Nigeria, in collaboration with the European Union, World Bank and the United Nations, embarked on a PDNA as tool to assess the impact of the devastating flood of 2012 in Nigeria, which affected more than 7.7 million people in 33 states. It destroyed over 618,000 houses; killed over 363 people; destroyed a significant amount of infrastructure and disrupted socioeconomic and livelihood activities in general. The PDNA in Nigeria covers fifteen sectors of the national economy: housing, agriculture, transport, education, energy, macroeconomy, gender, trade and investment, health, water, sanitation and hygiene, hydrometeorology, employment and livelihood, environment, DRM and telecommunications.

Similarly, other ECOWAS member States like Benin, Burkina Faso, Senegal and Togo, with the support of the GFDRR and the international community, employed the PDNA as a tool for scientific analysis of the impact of 2009 and 2010 floods.

Vulnerability capacity analysis

VCA is a comprehensive assessment of the hazard risks, vulnerability situation and the institutional capacity of an administrative region. The outcome of a VCA is a useful tool for decision support for disaster risk management mitigation. The National Emergency Management Agency, Nigeria in collaboration with UNICEF and other stakeholders embarked on VCA in Adamawa, Benue, Akwa Ibom, Imo, Lagos and Kaduna states and the Federal Capital Territory in 2010-2011.

National platform on disaster risk reduction

This is foremost a multistakeholding institutional approach recommended by the HFA wherein the different actors bring their experiences and resources to address common problems, for the

good of all. It employs various tools and strategies like advocacy, training and capacity building, public awareness raising and education in the pursuit of its agenda. The ECOWAS Commission had given appropriate training and capacity building support for ECOWAS member States to establish and strengthen their National Platforms as a veritable approach/tool to mainstream and implement DRR in the respective countries.

Collaboration

This is an essential tool in DRR mainstreaming, because DRR is multisectoral and multistakeholding in nature. In the subregion, most DRM agencies (e.g. NEMAs and NADMOs) rely on human and material support from other related MDAs, development partners, NGOs and even community-based organizations to fulfil their mandates and build resilience in their respective countries. None of the agencies is expected to have access to all that it requires to address the hazard risks and vulnerability challenges in their countries, hence the need to collaborate. Indeed, there are other tools and approaches, such as community participation, gender mainstreaming, multi-hazard risk assessment, land use planning, that are utilized in the mainstreaming of DRR at the subregional and national levels.

4.9 Conclusion

In summary, DRR integration/mainstreaming into most of the ECOWAS member States national development policies, plans and strategies cannot be said to be significant. This is because most of the DRR elements displayed in the documents with regard to institutional capacity and debilitating disaster risk situations the subregions and most member States do not correlate as such. The DRR elements according to the HFA priorities are found in most documents just to fulfil the sectoral philosophical requirements, with some exceptions in areas like the PRSPs and some newly revised development documents in some countries.

5. Good practices in mainstreaming and implementing disaster risk reduction measures, programmes and activities

5.1 Introduction

This section describes tools, methodologies, guidelines, approaches, policies, plans and programmes that represent how to effectively assess vulnerability, mainstreaming and/or implementation of DRR/DRM interventions that merit being showcased as good practices for the attention and interest of other policymakers and practitioners for adaptation and replication.

5.2 Guinea-Bissau: Improving rice varieties and production

Profile

Guinea-Bissau is situated on a low lying coastal plain with an estimated population of 1,660,870, a land area of 28,120 sq km, with a generally tropical hot and humid climate. It has a low human development index, 48.9 per cent of the population lives on less than US\$ 1 a day, with an under-5 mortality of 182.7 per 1,000 inhabitants, and a very poor corruption perception index.

Around 80 per cent of the population are involved in agriculture, mainly in the production of rice, the main staple food in Guinea-Bissau. Most of the smallholder farmers do not produce enough rice to feed their families throughout the year, as increasing cultivation of cashews has brought national rice production down. In September 2008, prices for imported rice were 68 percent higher

than in the previous year, this increase, coupled with dwindling incomes from cashews, chronic political instability – which has weakened the agricultural research system in the country, and loss of local rice variety traits have led to a drop in crop yield and left many people food insecure and more vulnerable to future shocks. The Food and Agriculture Organization collaborated with an NGO, Africa Rice and, in cooperation with the national agricultural research institute, tested several rice varieties on inland valley bottoms and in developed mangroves to improve rice varieties (FAO, 2011).

Results

- (a) Seeds, fertilizers, tools and training distributed to 25,000 vulnerable farming families to increase their output during the main growing season of 2010 and the off-seasons in 2009 and 2010
- (b) Funds went towards the rehabilitation of the country's agricultural infrastructure, including rice fields and market garden plots
- (c) In cooperation with the Ministry of Agriculture and the National Institute of Agronomic Research (INPA), FAO supported the training of 50 farmers in seed multiplication activities in a bid to strengthen their understanding of the entire production cycle, from the supply of seed stocks to the marketing of certified seeds
- (d) FAO also focused on building the capacity of the INPA to control the quality of seeds produced
- (e) In an integrated manner with rice production, 50 breeders of small animals (poultry,

sheep, goats, pigs) were taught new techniques in livestock management and receive help in enhancing the sanitary conditions of livestock areas, while veterinary services will be provided with medicines and other essential supplies

- (f) As part of capacity-building for the youth, FAO collaborated with the World Food Programme to support 300 school gardens that will benefit around 24,000 students. The aim is to teach students gardening skills while boosting their nutritional intake. About 40 percent of the produce will be sold in local markets.

Good practices

The FAO programme is regarded as a good practice, as it worked in collaboration with relevant agricultural research institutes to improve rice varieties and ensure sustainable development of rice production. The initiative was participatory, ensured food sufficiency, improved rice seedling and empowered farmers.

Lessons learned

- Through research and development, new varieties can be regenerated
- Through awareness and education, cultural resistance to new varieties can be surmounted

Challenges

- Local resistance in the adoption of new improved variety
- Research and development of appropriate rice varieties for different ecological characteristics

Potential for replication

The experimental method used at the pilot research centres were considered for replication in each of the country's ecosystems, so as to allow new varieties to be distributed to the farmers very shortly to replace older, depleted rice seed varieties.

5.3 Senegal: Reinforcing beneficiaries' skills in disaster risk management

Profile

The republic of Senegal with low rolling plains, a tropical hot and humid climate, land area of 192,530 sq km, has an estimated population of 13,300,410 people. The country has a low human development index, with 33.5 of the population living on less than US\$ 1 a day, an under-5 mortality of 85.9 per 1,000 inhabitants and a poor corruption perception index.

Initiative

In 2009, floods in Senegal affected nearly 40 000 homes. In some rural areas, the harvest, seed stocks and crops were washed away by the rising waters. Given the urgency, FAO funded and implemented a project aimed at boosting agricultural activities and strengthening the capacity of vulnerable households affected by floods and climate-related hazards in the Saint Louis region in northern Senegal. This initiative was carried out in collaboration with local community leaders with the development of training modules centered on the link between climate change and food security in the Sahel.

Results

The project succeeded in boosting agricultural activities through improved seed distribution and capacity building/training (training of trainers) of over 60 community leaders who will train others and strengthening of the capacity of over 2,500 vulnerable households to withstand flood hazard risk. This leads to the development of contingency plans and practical examples of community resilience.

Good practices

The approach adopted is participatory and the DRM training sessions which hinged on promoting resilience and changes in the behaviour of local actors, helped strengthen the capacity of

vulnerable households to react to and cope with climate hazards. The initiative built capacity on the identification and assessment of risk at the community level.

Lessons learned

- DRR can be mainstreamed into agriculture and land use practices to build local resilience to climate related hazards
- Knowledge, innovation and education can be used to build a culture of safety and resilience at the local level

Challenges

- Local frustrations and scepticism surrounded the new initiative as a remedy to perennial displacement, loss of lives, properties and livelihoods

Potential for replication

The DRM training sessions helped strengthen the capacity of vulnerable households to cope with climate hazards. The approach and methodology can be easily adopted, especially in the context of capacity-building and sustainability of livelihoods of vulnerable communities at the local level.

5.4 Liberia: Reducing flood risk through a job creation scheme

Profile

Liberia has mostly flat to rolling coastal plains, a tropical, hot and humid climate, a land area of 96,320 sq km, and an estimated population of 3,989,703 people. It has a low human development index, 83.8 per cent of the population lives on less than US\$1 a day, the under-5 mortality is 108.0 per 1,000 inhabitants, and the country has a poor corruption perception index.

Initiative

Even though floods trigger recurrent disasters - due to the heavy rains in Liberia - drainage systems have not been maintained for decades, due

to lack of funds, years of neglect and misrule, and the civil war. The main goal of the project was to provide the country with a visible benefit of the new post-conflict era of democratic government, by creating jobs for rural Liberians through infrastructure programmes and roadside sweeping. The project began in September 2006 and was completed in September 2007. It was implemented in Sinoe, Grand Gedeh, Grand Bassa, Margibi, and Montserrado counties, and included Buchanan and Kakata cities, in western and west-central Liberia. The infrastructure work was planned in consultation with county officials, and the project worked with community youth clubs that had been supported in earlier projects. Targeting unemployed rural individuals, the project was implemented by Mercy Corps under a United Nations Development Programme grant funded by the World Bank. It reduced flood risks, improved the infrastructure of rural Liberia and generated more than 17,800 days of employment.

Results

The project significantly increased the flow of rain-water and reduced the risk of localized flooding and related health risks. It addressed local needs, including providing clean water through water well rehabilitation and improving market access by clearing roads and constructing small bridges. In addition, the project contributed to short-term employment through the creation of cash-for-work jobs. The project reduced risk and vulnerability by addressing a public health hazard with the potential to flood homes and markets. The project introduced elements of sustainability by working through local governments and leaving tools and materials (e.g. shovels, wheelbarrows, boots and gloves) with government departments.

Good practices

This project is regarded as a good practice because it was responsive to the priorities of the targeted communities. This boosted project ownership, making it easy to improve local knowledge of natural hazards during the mitigation efforts.

The project was also very popular with both officials and unemployed youth because of its job creation potential. It met the double objective of creating income and achieving work that benefits the public.

Challenge

- Donor's reluctance to allow Mercy Corps to sub-contract local government authorities

Lessons learned

Lessons learned include the fact that technical skills such as well maintenance cannot be transferred to communities without extensive involvement and constant monitoring. Local officials, including development superintendents and engineers, should be consulted and used as much as possible, and lastly, NGOs should be allowed to sub-contract local government authorities, who normally have a good understanding of local needs and priorities, and should be regarded as reliable and trustworthy partners. To increase the impact of similar projects in the future, further drainage and cleaning should be undertaken in small and medium sized cities.

Potential for replication

The project methodology can be easily replicated in other contexts, but can only serve as a short-term measure because it is not sustainable. If implemented on a larger scale, these employment creation programmes require a clear exit strategy to reduce potential labour market distortions. The best option to sustain this project is to empower both the Government and civil society to accept responsibility for keeping the drains clean on a continuous basis.

5.5 Nigeria: Collaborations of the national emergency management agency with six Nigerian universities

Profile

Nigeria is a country of multi-ethnic nationalities where southern lowlands merge into central hills and plateaus. It has a land area of 910,768 sq km with a climate that varies from equatorial in south, tropical in the centre and arid in north. It has an estimated population of 174,507,053 people and an urbanization growth rate of 3.75 per cent. Nigeria has a low human development index, and 68 per cent of the population lives on less than US\$ 1 a day. It has under-5 mortality of 141.9 per 1,000 and a poor corruption perception index, plus in recent times, acts of terrorism. The above attributes represent a recipe for disaster without appropriate DRR institutions and good governance.

Initiative

Realizing the very weak institutions inherent in the country and in the quest to improve human understanding of DRR issues, the Nigerian national emergency management agency (NEMA) has sought to build and strengthen human and institutional capacity with a focus on DRR through collaborating with six universities selected from each geopolitical zone of the country. The centres in the universities undertake postgraduate programmes in DRR/DRM and development studies and award degrees and certificates. The collaborating universities with NEMA in DRR include: University of Ibadan (South West); Ahmadu Bello University, Zaria (North West); University of Nigeria, Nnsuka (South East); Federal University of Technology, Minna (North Central); University of Port-Harcourt (South) and University of Maiduguri (North East). In addition, NEMA are collaborating with the Nigerian Educational Research and Development Council on developing and incorporating DRR into basic and post-basic education curricula in Nigeria.

Results

The initiative has improved capacity-building in DRR through the promotion and coordination of research activities related to DRR/DRM in Nigeria. Since its inception, about 500 practitioners have been trained and re-trained. This has also led to the organization of an international conference on disaster management to improve decision-making and international cooperation. The development of a DRR/CCA curriculum and its integration into four carrier subjects: Geography, English, Civil Education and Health Education in the post-basic curriculum has enhanced awareness creation on the relevance of DRR for stakeholders in the educational sector and development of capacity.

Good practices

This programme is regarded as a good practice, as it continuously ensures the building of capacity, while promoting and coordinating research activities related to DRR/DRM in line with international practices and the HFA priorities. It enhances awareness on the importance of DRR and fulfils some of the mandate of NEMA (Nigeria's focal agency for disaster management).

Lessons learned

There must be continuous monitoring and review of the curriculum so as to retain the DRR and development elements in the programme. Effective DRR mainstreaming into different sectors of the economy cannot be achieved without adequate understanding and partnership with relevant stakeholders in such sectors.

Challenges

- DRR is still a relatively new approach in the country; as such legislative leverages and level of awareness on the subject are low
- Capacity for teaching, mentorship and research on DRR related issues are grossly inadequate.

Potential for replication

The programme can and should be replicated in other contexts, especially in fulfilling the mandate of most national and state focal agencies on disaster management in building capacity and creating awareness on DRR and its associated activities.

5.6 Nigeria: National emergency management agency/World Bank post-disaster needs assessment and vulnerability capacity analysis

Initiative

After the devastating effects of the 2012 flood that affected more than 7.7 million people, destroyed over 618,000 houses and killed over 363 people, disrupting socioeconomic and livelihood activities, the Government of Nigeria, along with technical and financial support from the United Nations, European Union and the World Bank embarked on an assessment to estimate the impact of flood, determine recovery and reconstruction needs and formulate a long term strategy for reducing disaster risk in the future. In the same light, the NEMA, in collaboration with other stakeholders, implemented a VCA in several states within Nigeria. The assessment entailed detailed and comprehensive hazard, population and infrastructural vulnerabilities and capacities as well as risk analysis to support mitigation, preparedness and response, taking advantage of different institutional mandates and capacities.

Results

The project improved the capacity of MDA officials on assessment methodology. It also enabled the collection of baseline socioeconomic information at federal and state levels, the development of a needs assessment report and strategies to mitigate the effects and recovery of the affected peo-

ple. NEMA now has a mechanism for implementing and funding the VCA nationwide. It enabled some 600 officials, representing ministries from 36 states and the Federal Capital Territory to acquire skills in basic emergency preparedness and response planning and in implementation of VCA.

Good practices

The project is regarded as a good practice as it sought to identify the needs, discover vulnerabilities and ameliorate the sufferings of disaster victims, develop strategies to mitigate effects and facilitate a sustainable rehabilitation and recovery of the affected people. The project was participatory and provides guidelines for decision and policymaking. It provides a veritable reference document to guide policy decision-making and planning. It also improves capacity-building and creates a base for data and information collection, compilation and sharing.

Lessons learned

The PDNA and VCA require multisectoral and multi-stakeholder consultation for implementation and require a level of commitment from government, local, political and community leaders, community-based organizations, faith-based organizations and other related local level institutions. There has to be proper administrative and logistic coordination for data collection and processing as well as multilateral collaboration for funding and technical support.

Challenges

- The bottlenecks in apportioning roles and responsibilities as well as the coordination of the numerous stakeholders to achieve set goals and targets
- Commitment to funding various aspects of the PDNA by stakeholders and issues on the credibility of information collected

Potential for replication

The initiative is participatory and could serve as a guideline for decision-making on prevention, mitigation, and preparedness, as well as enabling targeted responses and sets the pace for appropriate recovery activities. It can be replicated to ensure coordinated response and reconstruction activities.

5.7 Burkina Faso: Protecting degraded dryland forest: the Tiogo Forest Reserve

Profile

Burkina Faso is mostly flat with dissected, undulating plains. It has a tropical, hot and dry climate, with a land area of 273,800 sq km and an estimated population of 17,812,961 people. Burkina Faso has a low human development index, 44.6 per cent of the population lives on less than US\$ 1 a day, under-5 mortality is at 149.6 per 1,000 inhabitants, and the country has a poor corruption perception index.

Initiative

Over the years, the forest resources in Tiogo, Burkina Faso, has been continually degraded and depleted to various degrees due to farming, lumbering and pastoral activities. Initial efforts focused on conservation and sustainable management through protection and rehabilitation of vegetation cover in the Tiogo Forest Reserve. A project was initiated to conserve natural resources while ensuring that local people had continued access to reserved forests for sustainable wood harvest. This initiative worked with local communities who were organized into forest management groups under the supervision of regional forestry service personnel.

Results

Positive outcome from the initiative include: improved cooperation between herdsman and farmers; the establishment and erection of fire-breaks; stone cordons and anti-erosion dykes around fields; and enhancing of community development and empowerment. Other benefits include the regeneration of tree species through sustainable harvesting techniques, generation of additional income from sale of harvested wood, adoption of improved cooking stoves that save time and energy. The initiative has considerably improved the community's ability to negotiate with authorities and other partners to better defend their interests. Intra-community relationships have benefited from better organization of forest areas and activities, while the communities have

5.8 Ghana: Intersectoral collaboration and heightened education to reduce epidemic mortality

Profile

Ghana is mostly flat with undulating plains, it has a tropical, hot, humid and dry climate, with a land area of 227,533 sq km, and an estimated population of 25,199,609 people. Ghana has a medium human development index, 28.6 per cent of the population lives on less than US\$ 1 a day, it has under-5 mortality of 63.8 per 1,000 inhabitants, and a poor corruption perception index.

Initiative

Northern Ghana is one of the most deprived areas in the country. It is difficult to establish a clear correlation between poverty incidence and the nature of vegetation cover and rainfall, but the incidence of poverty is highest in the three regions in northern Ghana where climatic and vegetative conditions are harsher. There is also significant

weather-induced seasonality in the incidence and prevalence of environmentally related diseases such as Cerebrospinal Meningitis, which is most common in the dry season. The worst affected area is northern Ghana where the weather is dry, with over 95 per cent of the 19,598 reported cases and over 1,500 deaths in the latest major outbreak. NADMO, in collaboration with the Ministry of Health and the World Health Organization, worked to improve awareness and vaccination education campaigns.

Results

There has been about 50 per cent increase in the number of people vaccinated as only contained outbreaks of meningitis are now reported, which do not reach disaster proportions.

Good practices

The initiative aims to improve resilience and build a culture of safety through knowledge and education as well as the development of capacity, which is in line with some priorities of the HFA.

Lessons learned

The initiative to succeed requires multisectoral, multistakeholder consultation and commitment as well as multilateral collaboration for funding and technical support.

Challenges

- The Ministry of Health was not well prepared to respond, due to the lack of prevention and mitigation planning and inadequate supplies of vaccines
- Poor perception by the people who thought that vaccination would result in impotency

Potential for replication

This initiative has huge potential for replication as it improves awareness, builds capacity and enhances resilience.

5.9 Togo: Framework for consultation and coordination on risk and disaster reduction: National platform for disaster risk reduction

Initiative

In April 2007, the Togolese Government established a framework for consultation and coordination with all actors in the context of DRR in Togo. The national platform for disaster risk reduction (NPDRR) is the national coordinating body and implementation channel for HFA. Its specific tasks are to develop a national strategy for DRR and ensure its implementation and monitoring; to develop broad guidelines for DRR in accordance with HFA; to promote the sharing of information and consultation; promote interaction between key stakeholders; advocate for resource mobilization; promote synergy in the design, development and implementation of DRR activities; and support the integration of DRR into national planning documents. It has an operational Technical Secretariat.

Results

The NPDRR brought together stakeholders from public and private sectors with civil society on the joint management of DRR activities in Togo. It allowed players to unite around national a framework for DRR and create a synergy of interventions during disasters in Togo since 2008. The NSDRR has undergone development (2009) and updating (2013).

Good practices

The NPDRR constitutes an effective operational framework for risk reduction at the national level. Locally, its efficiency also results from the implementation of regional and prefectural platforms. There are also plans for the establishment of communal platforms. Local platforms ensure co-

ordination of DRR in the regions and prefectures. Thus, during the recent floods in the affected localities, the prefectural platforms contributed significantly to the collection of information about the emergency, planning and coordination of interventions.

Sustainability

The institutional arrangement developed as part of DRR has gradually been integrated into the national institutional framework. After six years of existence, testing and contributing to the coordination of DRR, the NPDRR has proven to be a sustainable framework.

Lessons learned

Prior to the establishment of the NPDRR, actions in response to emergency situations were slow to get under way. The operationalization of the NPDRR enabled the alarm to be sounded in time and quickly coordinate responses during floods. In districts (prefectures) where local platforms are operational, challenges in mobilizing the necessary resources for their activities still remain.

Despite the efforts of synergy of interventions, some actors are a little reluctant to share resources and continue to act in isolation for various reasons.

Challenges

The biggest challenge in the operation of the NPDRR is preserving the unifying spirit of the institutional framework at the national and local level. In addition, it needs to address the challenges of maintaining operational platforms locally.

Replication

- The NPDRR as a framework for cooperation and coordination can be replicated in other sectors such as agriculture, environment, energy, etc.

- The NPDRR framework also provides a good example to replicate for countries without similar frameworks for consultation and coordination

5.10 Togo: Community early warning system from the Togolese Red Cross

Action taken

After the floods in 2007 and 2008, the Togolese Red Cross initiated a project for a community EWS. This project aims to enhance the capacity of local communities for managing proximity early warning. Volunteers have been trained in each community and have been organized into monitoring groups in areas of flood risk. Observations are made visually on the ground by volunteers who send data by telephone to neighbouring communities and the Togolese Red Cross headquarters in Lomé. It also operates in a decentralized manner by telephone among neighbouring communities. The project has received support from the German Red Cross.

Results

The project provides information, training and organizes communities' flooding monitoring networks in their respective localities. A total of 100 communities have benefited from the implementation of EWS and the setting up a network of tags.

Good practices

This effort has been quickly appropriated by communities to ensure the monitoring of flooding phenomena in their living environment. This initiative is an example of the decentralized action approach for problem management at the basis level. It has also united all local actors and is a concrete action in risk reduction.

In areas where the community EWS has been implemented, the flood damages were lower for the floods that occurred in subsequent years (2009, 2010 and 2011).

In terms of sustainability, after five years of operationalization, the community system is still used by the beneficiary communities despite the deterioration of some equipment (posters) in some places. The system has been efficient and it is envisaged that it will be expanded into other flood risk areas.

Lessons learned

The existence of operational community EWS contribute towards reduced community exposure risks and the saving of human lives and goods.

Challenges

The main challenge is how to expand the community EWS into all flooding risk areas. In addition, there is the problem of how to transmit information to the authorities if necessary. Finally, the unwillingness of some communities to leave their residence after the warning of an imminent threat is often an obstacle for achieving results. The availability of reliable hydrographical data remains an obstacle to the complete success of such a system.

Duplication

The Community EWS project can be duplicated in other flooding risk areas in Togo. This approach may be implemented in other parts of Africa, especially in ECOWAS countries owing to the simplicity of its tools and quick appropriation by beneficiary communities.

6. Conclusions and recommendations

6.1 Conclusions

With its extremely high vulnerability and susceptibility indices with low adaptive and coping capacities for hazard risks, West Africa is one of the highest disaster risk prone areas of the world. The low human development index in the subregion compounds the vulnerability and hazard risk situations in most ECOWAS member States resulting in low adaptive and coping capacities to disaster events such as flooding, storms, epidemics and droughts. The rapid population and urbanization trend over the last 50 years has led to haphazard development in most cities and towns, mostly due to poor urban planning and violation of planning and building codes. The poor are often at the greatest risk, inhabiting slums and the high-risk zones.

The impact of disasters on the poor is grave as most lose their entire livelihoods to disaster events because of their locations and for lack of appropriate mitigation measures such as flood and fire insurance. Usually, the majority of the affected population lose their lives from direct impacts of disasters or due to the accompanying socioeconomic hardships; their limited coping-adaptive capacity; the debilitating governance and corruption challenges they witness daily which further sink them into poverty; and becoming more vulnerable to hazard risks. (ProVention Consortium, 2008).

Health is both a determinant and outcome of vulnerability and poverty. Health issues and health related events can be catastrophic and plunge people further into poverty due to loss of income and high health-care costs in the absence of ad-

equated social protection measures. The lack of access or non-availability of functioning health systems increase the vulnerability to and impact of disasters, particularly for poor segments of society.

Although many countries in the subregion are making good progress – over a decade there has been a general decline in infant mortality, the number of malnourished children and cases of preventable childhood illnesses, including polio and measles, through increased immunization coverage – some hurdles still remain. Strengthening the fragile health systems and addressing basic hygiene and health education are important in addressing health challenges and reducing risks and vulnerabilities. The current Ebola outbreak in the subregion, leading to thousands of deaths, is evident of the inherent weaknesses and fragility of the health-care systems in the subregion, and how vulnerable the majority of the population are.

The HFA has been the bedrock of disaster risk management for almost a decade and an instrumental framework for mainstreaming of DRR into the developmental policies, plans and strategies at international, regional, subregional and national levels. The progress achieved in the mainstreaming and implementation of DRR among ECOWAS member States varies by their socioeconomic attributes and institutional capacity. Some level of progress has been achieved in DRR mainstreaming, especially from an institutional point of view, in the passing of national legislation, setting up EWS and strengthening of disaster preparedness and response systems at the ECOWAS subregional level and among member States. Other

efforts include cooperation agreements and the design and development of the ECOWAS DRR policy and programme of action, in line with the African Strategy for DRR and the overarching HFA priorities. However, DRR mainstreaming and implementation in West Africa is still far from UNISDR expectations, in particular, the need to build both local and national resilience to disaster among countries, especially those that are signatories to the HFA (2005-2015).

In particular, systematic multi-hazards risk assessments, early warning applications and general integration of DRR into the development policies, plans and strategies at national and local levels are not yet a priority among member States. It remains difficult to increase resilience to hazards, especially in the most vulnerable segments of society. In many cases, implementation of DRR in the subregion seems not to be holistic; it is often a reflection of weak governance, insufficient understanding of local risk and vulnerabilities, and poor maintenance of critical facilities. In order to ensure that DRR is a multisectoral and multistakeholding development paradigm, attempts must be made to avoid compartmentalizing the subject. Hence the need to promulgate appropriate legislations and develop strategies to ensure effective DRR implementation at the national and local levels.

6.2 Recommendations

Based on the questionnaire survey and analysis, desk study and relevant contributions and priorities expressed by representatives of ECOWAS member States at the ECOWAS Regional Workshop on Information Sharing and Early Warning Coordination Mechanisms for Disaster Risk Reduction Niamey, in the Niger on 11-14 November 2013, the following recommendations are made to fast track effective mainstreaming and implementation of DRR activities as part of cooperation and development frameworks at the subregional and national levels of West Africa:

- (1) A large number of personnel in the MDAs and NGOs would need requisite capacity-building and training in DRR for them to appreciate its relevance to development and to enhance the efforts being made to mainstream and implement DRR at the subregional and national levels in West Africa.
- (2) To address the current challenges in accessing disaster risk information, there is need to establish strategic DRR data centres to enhance storage and retrieval of DRR information at the subregional and national levels.
- (3) There are indications that the National Platforms on DRR in member States are dysfunctional due to weak political support and non-availability of relevant legislations. There is need therefore to step up advocacy and public enlightenment and promulgate appropriate legislations. It is also necessary to designate competent DRR desk officers in MDAs for effectiveness DRR follow up.
- (4) To strengthen EWS in the subregion and among member States, there is need to establish mechanisms for information sharing and early warning between meteorological services and DRR experts so as to give appropriate alerts to prevent, mitigate and ensure adequate preparedness in the subregion.
- (5) An agency for DRR/DRM should be established by all ECOWAS member States with international, national, local and private sectors partnership for the support, funding and implementation of DRR related policies, plans and programmes.
- (6) As DRR seems to be much more pronounced at the federal/central governmental level in most countries, there is a need for proper decentralization of DRR activities to the local communities and the populations at the frontier of disasters.

- (7) Currently, funding of DRR initiatives is not statutory and so appropriate legislation is needed to institutionalize DRR funding.
- (8) Presently, countries like Nigeria and Ghana have made attempts to mainstream DRR into their primary, secondary and tertiary institutions, it is recommended that other ECOWAS member States should mainstream DRR elements into their basic education curriculum and enlarge the frontier for undergraduate/postgraduate studies and in-service training.
- (9) There is need for a more enduring collaboration and sharing of sensitive DRR information among the academic/research institutes, hydrological and meteorological agencies, planning and decision-makers so as to ensure effective DRR delivery.

Annex - Questionnaire

1	<p>Does your country have a Disaster Risk Management (DRM) legal and institutional framework? Votre pays a-t'il une structure légale et institutionnelle de Gestion des Effets de Catastrophe (GEC)?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> If yes, Si oui</p> <p>iv Mention the name of the institution Indiquez le nom de l'organisation</p> <p>v What is the Act (if any) establishing the institution? Quelle est la législation (s'il y en a une) qui a permis la création de l'organisation?</p> <p>vi What is your staff strength? Combien d'employés avez-vous?</p>
2	<p>Does your country have a Disaster Risk Management (DRR) legal and institutional framework in accordance with the Hyogo Framework of Action (HFA)? Votre pays a-t'il mis en place un système légal et institutionnel pour la Gestion des Effets de Catastrophe (GEC) suivant le Cadre d'Action de Hyogo HFA?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> If yes, Si oui</p> <p>iv Mention the name of the institution Indiquez le nom de l'organisation</p> <p>v What is the Act (if any) establishing the institution? Quelle est la législation (s'il y en a une) qui a permis la création de l'organisation?</p> <p>vi What is your staff strength? Combien d'employés avez-vous?</p>
b	<p>Does the legal framework provide for decentralization of DRR institutions/activities at all levels? Le système légal autorise-t'il la décentralisation des organisations/activités de Gestion des Effets de Catastrophe à tous les niveaux?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> Please give details: Expliquez:</p>
3	<p>Does an active multi sectoral DRR National Platform exist? Existe-t-il dans votre pays une plateforme GEC nationale et multi-sectorielle active?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> Please give details: Expliquez:</p>
4	<p>Does an active multisectoral DRR Platform exist at sub-national and local levels? Existe-t-il une plateforme GEC multi-sectorielle active aux niveaux sous-national et local?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> Please give details: Expliquez:</p>
5	<p>Does the legal framework provide some mechanisms for funding DRR activities? La structure légale fournit-elle des possibilités de financement pour les activités de GEC?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> Please give details: Expliquez:</p>
6	<p>Does your country have a DRR policy? Votre pays a-t'il une législation de GEC?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/> Please give details: Expliquez:</p>
7	<p>Does the policy clearly state the integration of DRR into other sectors of the economy? La législation adresse-t'elle clairement l'intégration de la GEC dans les autres secteurs de l'économie?</p>	<p>Yes <input type="checkbox"/> Oui <input type="checkbox"/> No <input type="checkbox"/> Non <input type="checkbox"/></p>

8	<p>Does your country have DRR related policies? Votre pays a-t-il des législations liées à la GEC?</p>	<p>Yes p Oui p No p Non p Please list them (Please send us electronic copies) Si oui, lesquelles? (Merci de nous envoyer une copie électronique) 4.1.1. 4.1.2.</p>
9	<p>Does your country have a participatory DRR plan of action? Votre pays a-t-il un plan d'action de GEC participatif?</p>	<p>Yes p Oui p No p Non p If yes, when was it produced? (Please send us an electronic copy) Si oui, à quelle date a-t-il été établi? (Merci de nous envoyer une copie électronique)</p>
10	<p>To what extent has the DRR plan of action been implemented? Dans quelle mesure le plan d'action de GEC a-t-il été mis en œuvre?</p>	<p>Please give details: Expliquez:</p>
11	<p>Does your country have guidelines for mainstreaming DRR into sector programme and project design? Votre pays a-t-il des lignes directrices pour intégrer la GEC dans les programmes de secteurs et la conception de projets?</p> <p>If yes, To what extent has DRR been mainstreamed and implemented across the different sectors? Si oui, Dans quelle mesure la GEC a-t-elle été intégrée et exécutée dans les différents secteurs?</p>	<p>Yes p Oui p No p Non p</p> <p>Please give details Expliquez:</p>
12	<p>What are the challenges encountered in the mainstreaming of DRR measures into your programmes? Quelles sont les difficultés rencontrées pendant l'intégration des mesures GEC dans vos programmes?</p>	<p>Please give details: Expliquez:</p>
13	<p>What are the challenges experienced in the implementation of DRR measures and activities? Quelles sont les difficultés rencontrées pendant l'exécution des mesures et des activités GEC?</p>	<p>Please give details: Expliquez:</p>
14	<p>What are your suggestions for proper mainstreaming and implementation of DRR measures as we move towards HFA2? Quelles sont vos suggestions pour une intégration et exécution efficace des mesures GEC à l'aube du HFA2?</p>	
15	<p>Kindly share with us your best practices (which include projects and programmes) on the mainstreaming and implementation of DRR measures. Merci de bien vouloir partager vos meilleures pratiques (y compris projets et programmes) pour l'intégration et l'exécution des mesures de GEC.</p>	<p>Please give details and possibly attach relevant documents. Expliquez et incluez les documents pertinents si possible.</p>

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