



Africa Report on Disaster Risk Reduction 2015-2018

With the support from:



15 December 2019
Ver 1.2

Foreword



Disaster risks, particularly those associated with natural hazards, have increased in frequency and intensity on the continent. During the last four years (2015-2018), the continent experienced, on average, approximately 98 disasters each year. These resulted in 68,000 total mortalities. This is alarming and requires concerted efforts by all the African Union (AU) member states in building resilience to natural hazards through effective implementation of the Africa Programme of Action for the Implementation of Sendai Framework for Disaster Risk Reduction (DRR) 2015 – 2030 in Africa. With predicted increase in climate change, these events are expected to get worse. Recent

disasters such as Cyclone Idai induced disaster that killed hundreds of people across Mozambique, Malawi and Zimbabwe and also the mudslide in Sierra Leone point to this fact. The disasters are unfortunate and should not have occurred, had there been effective early warning systems and mechanisms for the continent to take urgent measures to address disaster risks.

The Africa We Want cannot be realized when 47 Africans are killed each day from disasters, most of which are preventable through fairly simple means. Whereas natural hazards are bound to occur, they do not have to result in disasters. Investing in disaster risk reduction and resilience can significantly reduce disaster risks and associated losses, thus achieving significant reduction in disaster mortalities and other losses by 2030. Achieving targets that the continent committed itself to is far from reach, as evidenced by the worrying number of mortalities captioned above. However, it is not yet late for the continent to meet its targets as set forth in the Sendai Framework and Africa Programme of Action for Disaster Risk Reduction.

Despite these challenges, the continent has recorded numerous achievements. Dedicated institutions for DRR have been established. The Republic of the Gambia is among the many countries that established an independent agency for Disaster Risk Management. At regional level, the AU Commission and the Regional Economic Communities have established dedicated Unit for Disaster Risk Reduction. More than thirty (30) member states have their strategies aligned to the Sendai framework for Disaster Risk Reduction.

These achievements are commendable but not enough. African Union member states must increase domestic investment for DRR to support implementation of resilience programmes, facilitate functioning of effective multi-hazard early warning systems and preparedness, provide innovative solutions through proactive engagement of science and technology, develop human resources, particularly the youth, and strengthen coordination and mainstreaming of DRR in development processes.

A handwritten signature in black ink, which appears to read 'Adama Barrow'.

Adama Barrow
President of the Republic of The Gambia

Table of Contents

Foreword	ii
Abbreviations and Acronyms	vi
Executive Summary	viii
Introduction	xii
CHAPTER 1	
Africa's Disaster Profile	1
Introduction.....	1
1.1 INFORM Risk Index (2015-2018)	6
1.2 Hazards and Exposure Index (2015-2018)	6
1.4 Lack of Coping Capacity Index (2015-2018)	7
CHAPTER 2	
Progress in Achieving DRR Priorities	8
Introduction.....	8
2.1 Priority 1: Understanding disaster risk	9
2.2 Priority 2: Strengthening disaster risk governance to manage disaster risk	9
2.3 Priority 3: Investing in disaster risk reduction for resilience	12
2.4 Priority 4: Enhancing disaster preparedness for effective response and to “Build back Better” in recovery, rehabilitation and reconstruction	12
CHAPTER 3	
SFDRR Targets (2015-2018)	14
Introduction.....	14
3.1 SFDRR Target A: Reduce continental disaster mortality	15
3.2 SFDRR Target B: Reduce the number of affected people	17
3.3 SFDRR Target C: Reduce direct disaster economic loss	18
3.4 SFDRR Target D: Reduce disaster damage to critical infrastructure and disruption of basic services	19
3.5 SFDRR Target E: Increase the number of countries with national and sub-national/local disaster risk reduction strategies	22
3.6 SFDRR Target F: Enhance international cooperation	25
3.7 SFDRR Target G: Increase the availability of and access to multi-hazard early warning systems	26

CHAPTER 4	
Progress on POA Targets	29
Introduction.....	29
Africa PoA Dashboard	29
4.1 PoA Additional Target 1: Increase the number of countries with DRR in their educational systems at all levels	32
4.2 PoA Additional Target 2: Increase integration of DRR in regional and national sustainable development, and climate change adaptation frameworks, mechanisms and processes.....	33
4.3 PoA Additional Target 3: Expand the scope and increase the number of sources for domestic financing in DRR.....	34
4.4 PoA Additional Target 4: Increase the number of countries with, and periodically testing, risk-informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms	35
4.5 PoA Additional Target 5: Increase the number of regional networks and partnerships for knowledge management and capacity development	36
Challenges.....	37
Recommendations.....	38
Annexure A	
Indicator Assessment Criteria as per the MRF (Appendix 2: Assessment Criteria for Each of The Indicators in The Matrix)	38
References.....	49

List of Tables

Table 1: Summary of SFDRR targets and indicators1	xiv
Table 2: Summary of PoA Additional Targets Performance Indicator2	xv
Table 3: Likert scale rating of variables	xvi
Table 4: REC disasters and losses (2015-2018)	4
Table 5: INFORM Risk Index (2015-2018) and 2019 map.....	6
Table 6: Hazards and Exposure Index (2015-2018) and 2019 map.....	6
Table 7: Vulnerability Index (2015-2018) and 2019 map.....	7
Table 8: Lack of Coping Capacity Index (2015-2018) and 2019 map.....	7
Table 9: Achievement of the SFDRR and PoA Targets in Africa (2015-2018).....	15
Table 10: Number of affected per REC (2015-2018).....	17
Table 11: Total damage per REC/region (2015-2028).....	18
Table 12: Loss of critical infrastructure per REC (2015-2018): Some examples.....	20
Table 13: Member States' progress: SFDRR Target E (2018).....	23
Table 14: DRR Strategies in place.....	23
Table 15: Reported sub-national DRR Strategies	24
Table 16: Early warning systems in SADC.....	27
Table 17: Member States' SFDRR and PoA Dashboard	31
Table 18: DRR integrated in all curriculum (2015-2018)	32
Table 19: DRR, sustainable development and climate change integration	33
Table 20: Number of domestically funded DRR programmes.....	35
Table 21: Existence of disaster preparedness plans and contingency plans and regularly tested.....	35

List of Figures

Figure 1: Selected recorded disasters in Africa (2015-2018)	3
Figure 2: INFORM Model and classes thresholds.....	5
Figure 3: DRR governance progression in Africa (2003-2018)	11
Figure 4: Disaster mortalities per REC (2015-2018).....	16
Figure 5: Total deaths per selected disaster (2015-2018).....	17
Figure 6: Total affected people per selected disasters (2015-2018).....	18
Figure 7: Disaster losses per selected disasters (2015-2018) total damage ('000 US\$).....	19
Figure 8: MS Implementation of DRR Strategies.....	22
Figure 9: Member States' Composite PoA Dashboard Scores (2015-2018)	29

List of Maps

Map 1: Global disasters (1986-2015).....	1
Map 2: Global floods (1986-2015)	2
Map 3: Global droughts (1986-2015)	3
Map 4: Comparative REC achievement of SFDRR and PoA.....	30
Map 5: DRR integrated in all curriculum (2015-2018).....	33
Map 6: DRR in sustainable development and climate change strategies.....	34
Map 7: Risk-informed preparedness plans and response mechanisms.....	36

Abbreviations and Acronyms

ACMAD	African Centre of Meteorological Application for Development
AfRP	Africa Regional Platform for DRR
AfSTAG	Africa Science and Technology Advisory Group
ARC	African Risk Capacity
ARSDRR	Africa Regional Strategy for Disaster Risk Reduction
AU	African Union
AUC	African Union Commission
AWGDRR	African Working Group on Disaster Risk Reduction
AU63	African Agenda 2063
A-YAB	Africa Youth Advisory Board
CAPC-AC	Centre of Applications and Climate Forecast of Central Africa
CCA	Climate change and adaptation
DIRAJ	Disaster Risk Reduction Network of African Journalists
DRC	Democratic Republic of the Congo
DRR	Disaster Risk Reduction
DRRU	Disaster Risk Reduction Unit
DRM	Disaster Risk Management
DRMICS	Regional Disaster Risk Management Information and Communication Systems
EAC	East Africa Community
ECCAS	Economic Community of Central African States
ECO-DRR	Ecosystems-based Disaster Risk Reduction
ECOWAS	Economic Community of West African States
EWS	Early Warning Systems
HFA	Hyogo Framework for Action (2005-2015)
ICPAC	IGAD Climate Prediction and Application Centre
IGAD	Intergovernmental Authority on Development
INFORM	Index for Risk Management
MRF	Monitoring and Reporting Framework for the Programme of Action for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Africa

MS	Member States
NMHSs	National Meteorological and Hydrological Services
PoA	Programme of Action for the implementation of the Sendai Framework for Disaster Risk Reduction (2015-2030) in Africa
RECs	Regional Economic Communities
RVAA	Regional Vulnerability Assessment and Analysis
SADC	Southern Africa Development Community
SARCOF	Southern African Regional Climate Outlook Forum
SASDiR	Southern Africa Society for Disaster Reduction
SAWIDRA	Satellite and Weather Information for Disaster Resilience in Africa
SDGs	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction 2015-2030
SFM	Sendai Framework Monitoring tool
UMA	Union du Maghreb Arabe

Executive Summary

The African Union's Heads of State and Government in the 28th Extraordinary Summit that took place in January 2017 in Addis Ababa, Ethiopia, adopted the Programme of Action (PoA) for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Africa. The PoA outlines how Africa aims to implement the Sendai framework for Disaster Risk Reduction (SFDRR) on the continent. The seven SFDRR targets as contextualised for the African setting are:

- Substantially reduce continental disaster mortality by 2030, aiming to lower the average per 100,000 continental mortality rate in the decade 2020–2030 compared to the period 2005–2015;
- Substantially reduce the number of affected people continentally in Africa by 2030, aiming to lower the average continental figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015;
- Reduce direct disaster economic loss in relation to continental gross domestic product (GDP) by 2030;
- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;
- Substantially increase the number of countries with national and sub-national/local disaster risk reduction strategies by 2020;
- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement national actions for implementation of the Sendai Framework by 2030; and
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

In addition to achieving the above targets as set out in the Sendai Framework, African countries agreed to develop data by 2020 to measure progress in achieving the following additional targets:

- Substantially increase the number of countries with DRR in their educational systems at all levels, as both stand-alone curriculum and integrated into different curricula;
- Increase integration of DRR in regional and national sustainable development, and climate change adaptation frameworks, mechanisms and processes;
- Substantially expand the scope and increase the number of sources for domestic financing in DRR;
- Increase the number of countries with, and periodically testing, risk-informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms; and
- Substantially increase the number of regional networks or partnerships for knowledge management and capacity development, including specialized regional centres and networks.

The African Union Commission (AUC), as the custodian of the PoA, is required to coordinate and report on the implementation of the PoA biennially. In October 2018, the High-Level Ministerial Meeting on Disaster Risk Reduction adopted the Monitoring and Reporting Framework (MRF) for the Programme of Action for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Africa. This monitoring and reporting framework is guided by the SFDRR and PoA and builds on the successes of the implementation of the Hyogo Framework of Action (HFA 2005-2015), the Africa Regional Strategy for Disaster Risk Reduction (ARSDRR) of 2004 and its Programme of Action (2005). The MRF has been designed to focus on three levels: the AUC, Regional Economic Communities (RECs) and Member State (MS) level. The monitoring and reporting system is meant to facilitate robust monitoring and reporting of the PoA's performance in relation to its targets. The report package is constituted of one continental report supported by six regional reports. The regions covered are; the East African Community (EAC), the Economic Community for Central African States (ECCAS), the Economic Community of West Africa States (ECOWAS), the

Intergovernmental Authority for Development (IGAD), the Southern African Development Community (SADC) and Union du Maghreb Arabe (UMA) and North Africa (including Egypt and Saharawi Republic). The report aimed at exploring and explaining the status of the implementation of the SFDRR and the PoA with current available data. Qualitative and quantitative research tools were used. Four regional data collection workshops were held from July-September 2019, during which inputs from Member States and RECs were elicited. A total of 40 countries (72%) participated in the data collection workshops. However, in total 50 member states (91%) provided data. All of the RECs were given the opportunity to provide inputs to their progress since 2015 against the indicators of the SFDRR and PoA.

The key findings of the report include:

- Recorded disaster events increased from 2015/6 to 2017/8 (311 to 474). This is mostly due to increases in the North Africa region and Algeria in particular.
- Droughts, floods, storms and epidemics caused the most loss in lives, livelihoods, critical infrastructure, and had the greatest economic impact.
- The number of recorded droughts and floods decreased from 2015/6 to 2017/8, however, storms and epidemics increased, mostly due to the El Niño event in 2015/6 and the Ebola epidemic in West Africa.
- Droughts (2015/6: 39 842 228; 2017/8: 9 942 474) and floods (2015/6: 4 052 497; 2017/8: 4 872 943) affected the most amount of people.
- There has been a heightened reporting on extensive risks by Member States, with transportation and industrial accidents increasing over the two periods under investigation.
- **Sendai Target A: Reduce disaster mortality:** In the period 2015-2018 there is an increase in disaster mortalities in Africa from 31,710 in 2015-2016 to 36,287 in 2017-2018 mostly due to droughts, floods and epidemics.
- **Sendai Target B: Reduce the number of affected people:** For the period 2015 to 2018, almost 82 million people in Africa have been affected by disasters. In total there has been a significant decrease in the total number of people affected from 2015-2016 (58.7 million) to 2017-2018 (22.9 million).
- **Sendai Target C: Reduce direct disaster economic loss:** In total Africa sustained more losses in the last two years (2017-2018) (US\$8.1 million) than the previous two (2015-2016) (US\$2.8 million). The lack of accurate and sustained data in this area remains a concern.
- **Sendai Target D: Reduce disaster damage to critical infrastructure and disruption of basic services:** On average, there has been an 11% increase in the loss of critical infrastructure from all reporting MS from 2015/6 to 2017/8. Member States experienced difficulties in reporting data on damage to critical infrastructure and the disruption of basic services. Comparison with the EM-DAT data shows that this specific indicator is significantly under reported. Some member states indicated that lack of capacity and poor in-country reporting up to the national disaster risk management structures can also be blamed.
- **Sendai Target E: Increase the number of countries with DRR strategies:** Since the inception of the Hyogo Framework for Action (HFA), Member States have made significant strides in developing strategies, promulgating laws and revisiting existing plans, strategies and legislation. 4.55% of Member States reported full implementation of their national DRR strategies. 77.27% of Member States reported partial implementation and 18.18% reported no implementation. In addition, 22.58% of the Member States are currently reviewing their existing strategy in order to ensure alignment with the SFDRR and PoA, with 42.94% developing a new strategy.
- **Sendai Target F: Increase international cooperation to developing countries:** Since 2015 there has been a mentionable amount of international cooperation on bi- and multilateral level within Africa Member States. In general, it is evident that significant international support to Member States is taking place
- **Sendai Target G: Increase the availability of and access to multi-hazard early warning systems:** Data indicates that there has not been a significant increase in various early warning systems (EWS) amongst Member States since 2015. However, most Member States reported that they have refined or are refining their systems over the last five years. One of the issues raised by Member States is the need for more coordination

of these systems at REC level, and the sharing of information between states.

- **PoA Additional Target 1: Increase the number of countries with DRR in their educational systems at all levels:** MS have made significant progress in including DRR in Education Systems at all levels. For both primary and secondary level all MS have made moderate to substantial progress. Most progress has been made at tertiary education level where MS reported substantial achievement of the target. In general, the uptake of DRR within primary and secondary school curriculum has been limited. More attention has been given to tertiary level education and then also more at post-graduate level than undergraduate. This is largely due to the current need within the market as well as the nature of disaster risk studies.
- **PoA Additional Target 2: Increase integration of DRR in regional and national sustainable development, and climate change adaptation frameworks, mechanisms and processes:** MS have made moderate to substantial progress in integrating DRR, development and climate change plans. The south, western and eastern regions have made the most progress. There has been improvement in integrating DRR into environmental policies, insurance sector and other development frameworks and processes by the member states.
- **PoA Additional Target 3: Expand the scope and increase the number of sources for domestic financing in DRR:** MS have significantly under-reported on the number of sources for domestic financing in DRR. This is mostly due to the fact that funding is spread across various sectors and spheres of government. MS indicated that this target is not well defined which makes obtaining data problematic.
- **PoA Additional Target 4: Increase the number of countries with, and periodically testing, risk-informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms:** Most MS reported on the existence of preparedness and recovery plans. There has been an increase in plans especially south and eastern regions.

- **PoA Additional Target 5: Increase the number of regional networks and partnerships for knowledge management and capacity development:** Significant progress has been made in establishing regional networks for knowledge management and capacity development. From reporting the research/academic sector being the most active.

The following recommendations can be made:

- Member States must make significant efforts to use the existing Sendai Framework Monitor as well as DesInventar as tools for continued reporting and capturing of data. The use of these systems will eliminate double reporting and contribute to much better data management and reporting.
- Member States, with the assistance of the RECs' DRR Units, must plan for a continued data collection and reporting process using the data capturing tools provided by UNDRR and supported by the AUC.
- Member States must work towards strengthening their national DRR platforms for cross-sectoral reporting and coordination.
- Where not present, a designated SFDRR focal point must be appointed/designated by each Member State and this must be communicated to the RECs' DRR Unit and the AUC to ensure future continuity in reporting on the SFDRR and PoA.
- To achieve the envisioned biennial reporting on the SFDRR and PoA, Member States and the RECs' Secretariat must strive to establish a relationship with at least one research institution in the region (or nationally). The data relating to the Targets must be gathered and validated on an ongoing basis.
- Lesson from this report indicate that a comprehensive biennial report cannot be compiled at the end of each two-year term but should be a living document supported by institutional data repositories which are constantly updated. Universities/research centres in the region are ideally placed to fulfil this role.
- Significant financial and technical support is needed for national DRR structures to report on losses (Target C of SFDRR) and DRR funding (Additional Target 3 of PoA).

- MS might need to consider compliance at national levels by including biennial reporting as a legislative requirement.
- Sector departments must be encouraged to attend and work with National DRM Platforms for better coordination. This can be achieved through performance contracts and annual evaluations.
- Annual national level reporting on the SFDRR and PoA must be enforced and upscaled to REC level.
- Specific emphasis must be placed on ensuring disaggregated (gender, age, abilities etc) and meta data.
- Member States need to engage more with national research institutions for continued and annual data gathering and data management (e.g. implementing localised DesInventar databases).
- National DRM structures as well as the RECs' DRR Units must be strengthened with more HR and ICT skills and infrastructure.
- The RECs' DRR Units need to play a leading role in coordinating regional reporting on the SFDRR and the PoA.
- Periodic face-to-face working sessions of Member States DRR Technical officers should be conducted in order to consolidate and report on progress across all the PoA targets.
- DRR Units must utilise Parliamentary Committees to ensure cross-sectoral cooperation in reporting.
- Member States should engage the media to communicate the results of the biennial reporting to ensure stakeholder engagement.
- The next cycle of biennial reporting must start no later than the last quarter of 2020 and should be spearheaded by the RECs and AUC.

The major challenge associated with the research was obtaining comparative data from RECs and MS. Significant portions of data are not readily available within MS and where data is available, comparative analysis with other datasets shows some discrepancies. Significant lessons in terms of data management in regions have been learned and shared with MS.

The research identified a number of challenges relating to the reporting on the SFDRR by MS. Most significantly, MS, find it difficult to generate and report disaster losses and other data. Such losses are recorded across sectors with very little coordination. Although MS are committed to DRR funding, the multi-sectoral nature makes reporting very problematic (money in sectors). There is still inadequate technical expertise (in DRR) and institutional weaknesses in data management, especially within national DRR structures. Reliance on a central statistical agency/organisation to record and report on disasters and losses has shown not to be effective and national DRR units/offices/centres/agencies must take responsibility for such data management. There is severely limited and weak reporting on the Sendai Framework Monitor, and the use of DesInventar, as a very useful tool, is lacking. Member States must thus be encouraged to use the Sendai Framework Monitor as well as DesInventar on a continuous basis. This will not only eliminate data duplication and efforts, but it will make future biennial reporting much more effective and coordinated. RECs need to play a much more leading role in assisting Member States with the above through capacity development and provision of expertise.

Introduction

Disaster risk and its consequences remains a yearly challenge for many African states. Africa is the only continent where disasters have increased over the past 20 years (Guha-Sapir et al, 2016; UNDRR, 2019). Although the mortality rate due to disasters is decreasing, the number of people affected, and the economic impact of disasters on the continent over the last two decades is increasing (UNDRR, 2019). This can be largely ascribed to trends in development (including urbanisation) and economic growth which unfortunately also increases vulnerability if not managed properly. The major hazards effecting people and livelihoods in Africa are hydro-meteorological in nature, with anthropogenic hazards (such as transportation and industrial accidents) on the increase. Various types of floods, drought, wildfires, cyclones and epidemics rate highest on impact of all hazards. Volatile vulnerable conditions are rooted in extreme poverty and under development, which makes Africa one of the most at-risk environments on Earth (WEF, 2019). However, these alarming occurrences have not gone unnoticed. Civil society, government, Regional Economic Communities (RECs) and international actors have noted the inevitability of destruction and setbacks in development which disasters bring. Since the early 2000s a number of continental, regional and national policies, strategies, plans, frameworks and laws have been developed with the explicit aim of addressing disaster risks on the continent.

In 2004 the African Union Member States adopted the Africa Regional Strategy for Disaster Risk Reduction (ARSDRR) and its Program for Action. Although preceding the Hyogo Framework for Action (HFA) 2005-2015, this strategy was aligned with the overall objectives of the HFA. Following the adoption of the HFA, the ARSDRR and its Extended Programme for Action were revisited in 2005 and fully aligned with the HFA. During the ten-year period

following the implementation of the HFA, the African continent saw major policy changes within Member States and cooperating partners, characterised by a notable paradigm shift from the unsustainable focus on disaster response to disaster risk reduction. During this period, a number of Member States embarked on a revision of their national civil protection, emergency management and disaster management plans, strategies, policies and legislation. These new and revised legal and statutory instruments became aligned with the new international thinking ushered in by the HFA. Significant growth in attention to disaster risk reduction occurred during 2005-2015 with many governments and international development sectors adopting a disaster risk reduction focus. These developments have been accompanied by a noticeable increase in academic interest through multiple disciplines. During the HFA decade it is fair to argue that the African continent made massive strides in institutionalising disaster risk reduction within various government sectors and levels of governance. However, despite all of the positives during this era, many communities, households and individuals remain trapped in poverty and acute vulnerability to disasters. More therefore needs to be done.

In March 2015, the Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted by the UN General Assembly. In alignment with the SFDRR, the African Union (AU) Member States developed a new Programme of Action (PoA) for the implementation of the SFDRR in Africa. In addition to the seven global targets of the Sendai Framework, the PoA has an additional 5 targets meant to promote the implementation of the Sendai Framework in Africa. The PoA requires African States to develop data for a Biennial Report to be presented to High-level DRR structures.

About this Biennial Regional Report

The African Union's Heads of State and Government in the 28th Extraordinary Summit that took place in January 2017 in Addis Ababa, Ethiopia, adopted the PoA. The PoA outlines how Africa aims to implement the SFDRR on the continent. In June 2018, the African Union Commission (AUC) developed the Monitoring and Reporting Framework (MRF) for the Programme of Action for the implementation of the Sendai Framework for Disaster Risk Reduction (2015-2030) in Africa (PoA), which was adopted in October 2018, at the High Level Ministerial Meeting on DRR, through the Tunis Declaration. This monitoring framework is guided by the SFDRR and PoA, and builds on the successes of the implementation of the Hyogo Framework of Action (2005-2015), the Africa Regional Strategy for Disaster Risk Reduction (ARSDRR) of 2004 and its Programme of Action (2005). The AUC, as the custodian of the PoA, is required to coordinate and report on the implementation of the PoA biennially. In adopting the MRF, the Ministers requested the African Union Commission to prepare a Biennial Report on Disaster Risk Reduction in Africa using the MRF. This report is therefore the first biennial report as called for by the MRF and the Tunis Declaration.

The MRF has been designed to focus on three levels: the AU, Regional Economic Communities (RECs) and Member State level. The monitoring and reporting system is meant to facilitate robust monitoring and reporting of the PoA's performance in relation to its targets.

Scope and aim

The aim of the Report is to comprehensively report on the implementation of the Programme of Action for the implementation of the Sendai Framework 2015-2030 and the Africa Strategy for Disaster Risk Reduction. This report focusses on all of the Member States of the AU.

Objectives

The objective is to use the outcome of the report to:

- Increase knowledge, inform, advocate and enhance understanding of disaster risks to inform DRR policy and programmes;
- Track progress against targets and indicators (see tables below for the performance indicators) and provide future benchmark against which DRR progress can be measured;
- Identify best practices to share learnings/lessons among Member States; and
- Inform development of DRR measures, including capacity development for future reporting.

Methodology

The nature of the study necessitated the use of a mixed methods approach. Both qualitative and quantitative data were collected. The main objective of the study was to provide a report of Member States' and RECs' progress against the targets of the SFDRR and the Africa PoA's additional five targets. Therefore, the reporting had to also consider the four Priority Areas of the SFDRR as they relate to the various targets. Quantitative data mostly related to the targets of the SFDRR, while reporting on the PoA was more qualitative and nuanced. Two surveys for MS were developed and administered online during a number of workshops (see below). Two additional surveys were conducted, one for RECs and one for the AUC. The tables below show the core indicators for the SFDRR and the PoA additional targets.

The PoA MRF outlines thirteen (13) indicators for the five (5) additional targets of the PoA over the period 2015-2030. Of these thirteen indicators, data for nine (9) indicators will be collected at member state level through DRR National Focal Points while data for the remaining four (4) indicators will be collected at REC level through DRR REC Focal Points.

Table 1: Summary of SFDRR targets and indicators¹

Targets	Indicators
Substantially reduce continental disaster mortality by 2030, aiming to lower the average per 100,000 continental mortality rate in the decade 2020–2030 compared to the period 2005–2015;	<ul style="list-style-type: none"> • Number of deaths and missing persons attributed to disasters, per 100,000 population
Substantially reduce the number of affected people continentally in Africa by 2030, aiming to lower the average continental figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015;	<ul style="list-style-type: none"> • Number of directly affected people attributed to disasters, per 100,000 population
Reduce direct disaster economic loss in relation to continental gross domestic product (GDP) by 2030;	<ul style="list-style-type: none"> • Direct economic loss attributed to disasters in relation to global gross domestic product
Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;	<ul style="list-style-type: none"> • Damage to critical infrastructure attributed to disasters
Substantially increase the number of countries with national and sub-national/local disaster risk reduction strategies by 2020;	<ul style="list-style-type: none"> • Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030. • Percentage of local governments that adopt and implement local disaster risk reduction strategies in line with national strategies.
Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement national actions for implementation of the Sendai Framework by 2030; and	<ul style="list-style-type: none"> • Total official international support, (official development assistance (ODA) plus other official flows), for national disaster risk reduction actions. • Number of international, regional and bilateral programmes and initiatives for the transfer and exchange of science, technology and innovation in disaster risk reduction for developing countries. • Number of international, regional and bilateral programmes and initiatives for disaster risk reduction-related capacity-building in developing countries. • Number of developing countries supported by international, regional and bilateral initiatives to strengthen their disaster risk reduction-related statistical capacity.
Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.	<ul style="list-style-type: none"> • Number of countries that have multi-hazard early warning systems • Percentage of population exposed to or at risk from disasters protected through pre-emptive evacuation following early warning.

Data collection tools

A number of data gathering tools were used. For baseline information, data relevant were extracted from the INFORM database for the years 2015–2018, and HFA reporting up until 2015. INFORM is a collaboration of the Inter-Agency Standing Committee Reference Group on Risk, Early Warning and Preparedness and the European Commission. The European Commission Joint Research Center is the technical lead of INFORM. The INFORM model is based on risk concepts published in scientific literature and envisages three dimensions of risk: hazards and exposure, vulnerability and lack of

coping capacity dimensions. INFORM uses 25 different international databases for its various indicators. Some include Agriculture Stress Index Probability of the Food and Agricultural Organization of the UN (FAO), personal remittances, received (% of GDP) by the World Bank, International humanitarian aid by the Financial Tracking Service by UN Office for Coordination of Humanitarian Affairs (OCHA), and the Conflict Barometer - HIIK by the Heidelberg Institute for International Conflict Research. Only data relevant for the creation of a baseline were selected. These were extracted and recoded.

¹ Source: Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction

Table 2: Summary of PoA Additional Targets Performance Indicator²

PoA Additional targets	Indicators
Substantially increase the number of countries with DRR in their educational systems at all levels, as both stand-alone curriculum and integrated into different curricula	<ul style="list-style-type: none"> Percentage of countries with DRR curricula in their educational systems at all levels
Increase integration of DRR in regional and national sustainable development and climate change adaptation frameworks, mechanisms and processes	<ul style="list-style-type: none"> Percentage of RECs with DRR integrated in regional sustainable development frameworks, mechanisms and processes Percentage of countries with DRR integrated in national sustainable development frameworks, mechanisms and processes Percentage of RECs with DRR integrated in climate change adaptation frameworks, mechanisms and processes Percentage of countries with DRR integrated in climate change adaptation frameworks, mechanisms and processes
Substantially expand the scope and increase the number of sources for domestic financing in DRR	<ul style="list-style-type: none"> Total number of DRR programmes and activities domestically funded Total cost of DRR programmes and activities domestically funded Percentage country level disbursement of funds for DRR programmes and activities Percentage of total cost of DRR programmes and activities domestically funded
Increase the number of countries with, and periodically testing, risk- informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms	<ul style="list-style-type: none"> Percentage of countries with risk informed preparedness plans, response, post- disaster recovery and reconstruction mechanisms Percentage of countries periodically testing their preparedness plans, response, post- disaster recovery and reconstruction mechanisms
Substantially increase the number of regional networks or partnerships for knowledge management and capacity development, including specialized regional centres and networks	<ul style="list-style-type: none"> Number of regional networks or partnerships for DRR knowledge management and capacity development Number of specialised DRR regional centres established and operational

The primary data collection instrument was regional data gathering workshops which were held from July-September 2019 Africa. Four workshops in total were held and they were:

- IGAD and EAC: 11-13 July 2019, Mombasa, Kenya (9 Member states were represented)
- SADC: 7-9 August 2019, Sandton, South Africa (11 member states were represented)
- ECOWAS: 21-23 August 2019, Abuja, Nigeria (All ECOWAS member states were represented); and
- UMA and ECCAS: 23-25 September 2019, Addis Ababa, Ethiopia (12 member states were represented).

A total of 40 countries (72%) participated in the data collection workshops. However, in total 50 member states (91%) provided data.

Three different data collection tools were used during the workshops. Firstly, Member States were supplied with a PowerPoint template of the various data points on which they had to report. The template was disseminated prior to the workshops and focal persons were encouraged to consult with their national DRR platforms in compiling the report. On the day of the workshop, each Member State was given 15 minutes to present their progress against the SFDRR as well as the PoA. All Member states who participated in the workshops made the presentations. Member states who did not physically attend workshops were given opportunity to submit their reports on via email and were guided by the consultants.

² Source: Monitoring and Reporting Framework for the Programme of Action for the Implementation of the Sendai framework in Africa

Subsequently, two online surveys were administered during the workshop. Member States were guided through the use of the online survey driven by the QuestionPro survey tool. The first survey specifically focused on the SFDRR and the 13 mentioned targets. Qualitative responses were also elicited to allow each Member State to give more depth in understanding and motivation to their progress against each target. The second survey focused on the additional five targets of the PoA as well as disaster risk reduction institutional aspects including national statutory and regulatory instruments. This second survey was more qualitative in nature and allowed for more in-depth reporting on the various aspects. Member states who could not attend the workshops were given time to complete the surveys and submit their reports online. Forty Seven (47) Member States completed the online surveys and an additional three (3) Member States provided data through email correspondence. Similarly, for REC level reporting, an online survey was developed mostly consisting of qualitative responses linked to the SFDRR targets and additional PoA targets. This provided each REC the opportunity to explain regional specific progress and use nuanced narratives. A qualitative questionnaire for the AUC was also developed and completed.

Data analysis and interpretation

The quantitative data was analysed using the QuestionPro analytics engine. Where needed data was exported for further manipulation and analysis. All data was aggregated to REC level for further analysis. The qualitative data were analysed and interpreted according to the various Targets of the SDFRR and PoA. In all cases the deeper meaning of the qualitative data were explored, and these appear as narratives linked to each Member State and REC. For the purpose of comparison and showing progress against the targets, a SFDRR and PoA “dashboard” was

developed. In this way a quick reference is provided for Member States of their progress between 2015 and 2018. All of the indicators were aggregated to provide a final dashboard score for each country. In total 13 indicators were used to reach the combined scores for 2015-2016 and 2017-2018 respectively. The indicators are linked to a 5-point Likert scale (1 meaning no to little progress and 5 meaning comprehensive progress), as per the requirements of the Monitoring and Reporting Framework, were used. These were in turn colour coded for easy and visual reference (See Table 3 below). These colours are used throughout this report (in tables and maps) to facilitate reference and understanding.

Table 3: Likert scale rating of variables

Rating key	Qualitative criteria
1	No achievement or non-existent
2	Limited achievement
3	Moderate achievement, neither comprehensive nor substantial
4	Substantial achievement, additional progress required
5	Comprehensive achievement

The aggregated scores of the two periods formed the basis of comparison. Where no data were reported, “n/a” was used. In total 13 different indicators (as per the MRF) were used to arrive at the composite country scores for 2015-2016 and 2017-2018 respectively. The five-point scale allowed for qualitative comparison and thus the rating scale (e.g. 1-5) could be averaged where needed to arrive at an overall score for the period in question. The scores for the period 2015-2016 were added and averaged thus arriving at the average total for the two periods. In a similar vein, all other Targets were added and averaged to arrive at the final total for the dashboard per MS.

CHAPTER 1

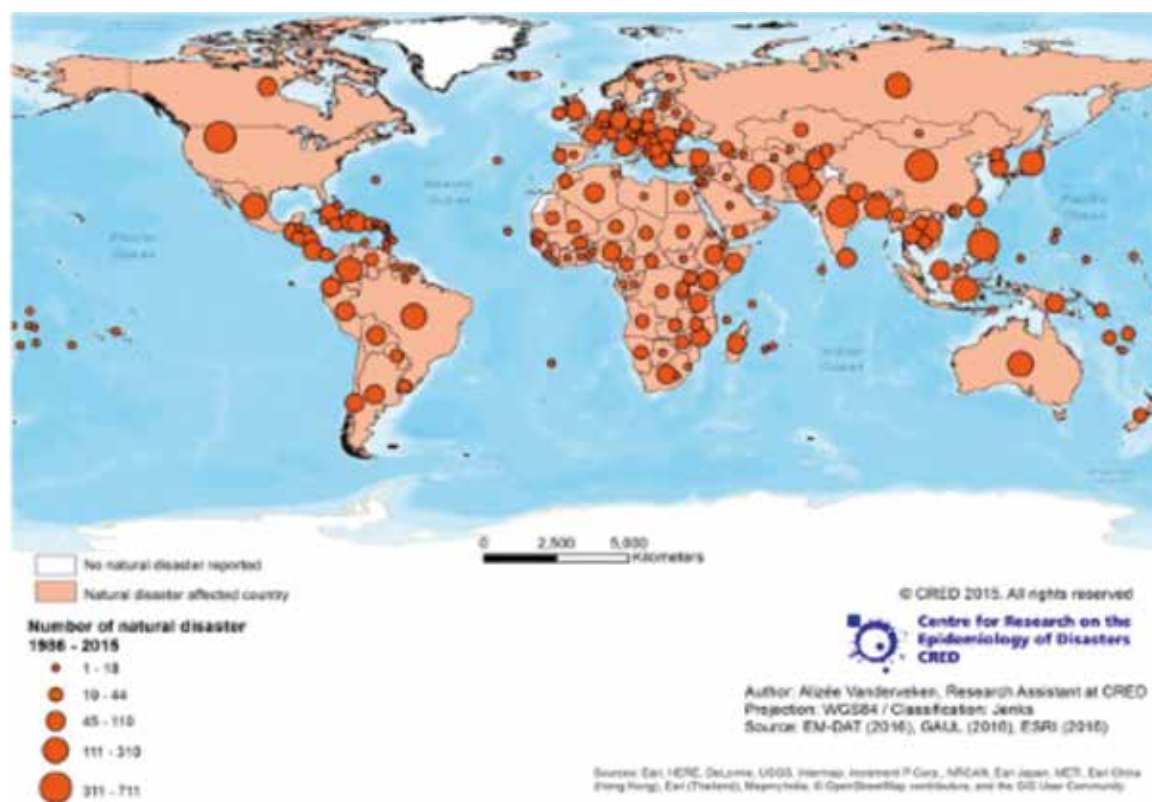
Africa's Disaster Profile

Introduction

The risk and impacts of disasters not only depend on the nature of the hazards prevalent on the continent, but also on the characteristics and vulnerability of elements (the places and people) exposed to the hazards. Thus, the risk of disasters (and opportunities) are dependent on the interaction of the hazards with vulnerabilities of exposed human and natural systems and their capacity to cope with the impending

disasters. Africa has experienced significant disaster impacts over the centuries. Recorded data from EM-DAT shows that in the period 1986-2015, almost all African countries experienced at least over 20 disasters of various nature (see Map 1). The eastern and southern part of the continent recorded the most disaster events and sustained the greatest losses in terms of human lives, livelihoods and economic losses.

Map 1: Global disasters (1986-2015)



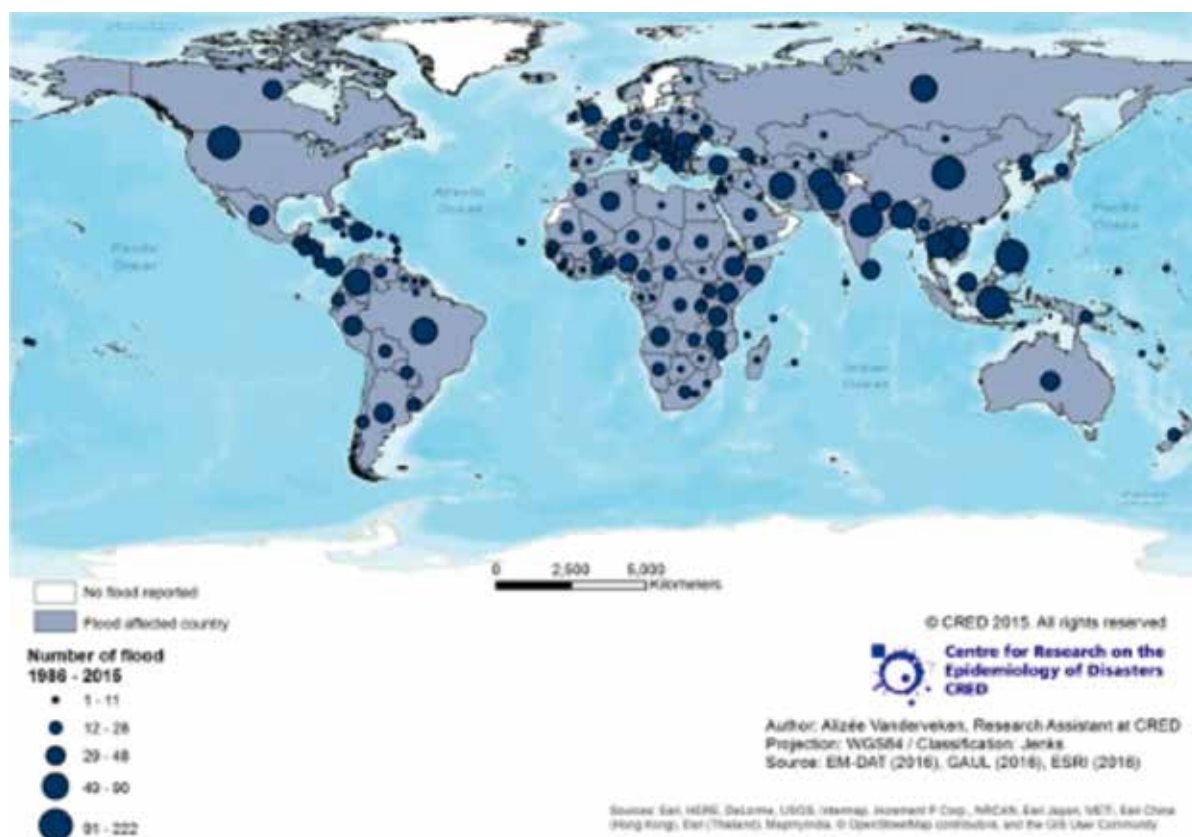
Floods (see Map 2) and droughts (see Map 3) remain two of the most frequent and most devastating disasters in Africa. Other hazards such as geophysical (earthquakes – mostly in Uganda and Tanzania) and meteorological (such as strong winds and storms) also occur. They are, however, less frequently reported on. Over the past decade epidemics and transportation accidents have increased significantly. Floods occur mostly in the southern, eastern and western part of the continent. The eastern part annually records the greatest flood impacts, with more than 50% of all recorded flood incidents from 2006-2011 occurring here. The number of floods in the central, southern and western regions of the continent remained largely the same over the past decade (Guha-Sapir et al., 2016).

Drought affects the most people on the continent. This longitudinal and slow onset hazard is pronounced in the Sahel, east and southern Africa regions. More droughts occur in Africa than any other continent. For decades, drought has had an immense

impact on people and their livelihoods. From 1900 – 2013, Africa recorded 642 drought disasters affecting 2 billion people and killing 11.7 million people (Mashi et al, 2014). In East Africa from 1900 – 2017, over 100 drought disasters have occurred, affecting 217 million people and claiming 572 000 lives (Haile et al, 2019). Drought in Africa remains a significant natural hazard which needs particular management.

Over the past 5 years, droughts, floods, storms and epidemics remain the main causes of disasters in Africa. There has been an increase in the number of disaster events from 2015-2018, and the number of deaths has also increased. This is mainly due to the El Niño event in 2015/2016, Ebola outbreaks and landslides in West Africa. The number of affected populations has decreased. However, direct reported economic losses have increased. A comparison of the two periods (2015-2016 and 2017-2018) shows an increase in most of the common disasters with the exception of floods and droughts which shows a decrease (see Figure 1).

Map 2: Global floods (1986-2015)



Map 3: Global droughts (1986-2015)

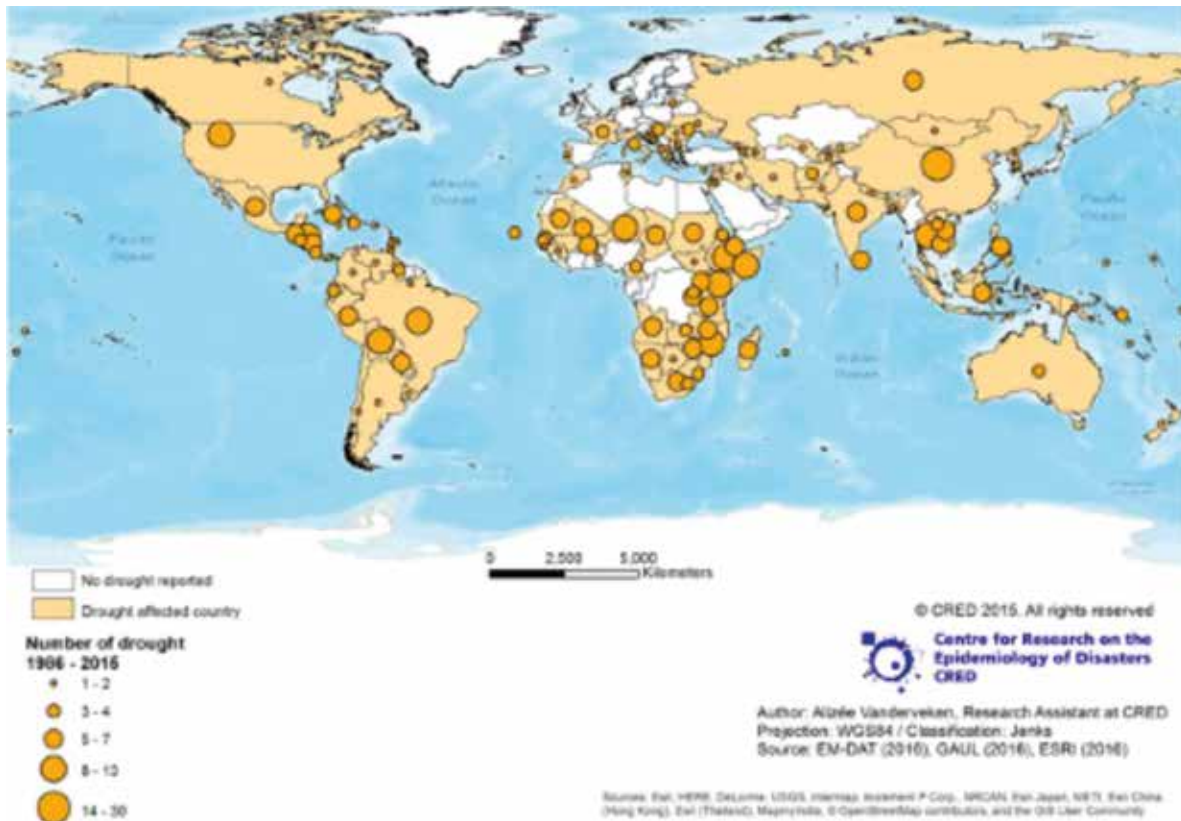
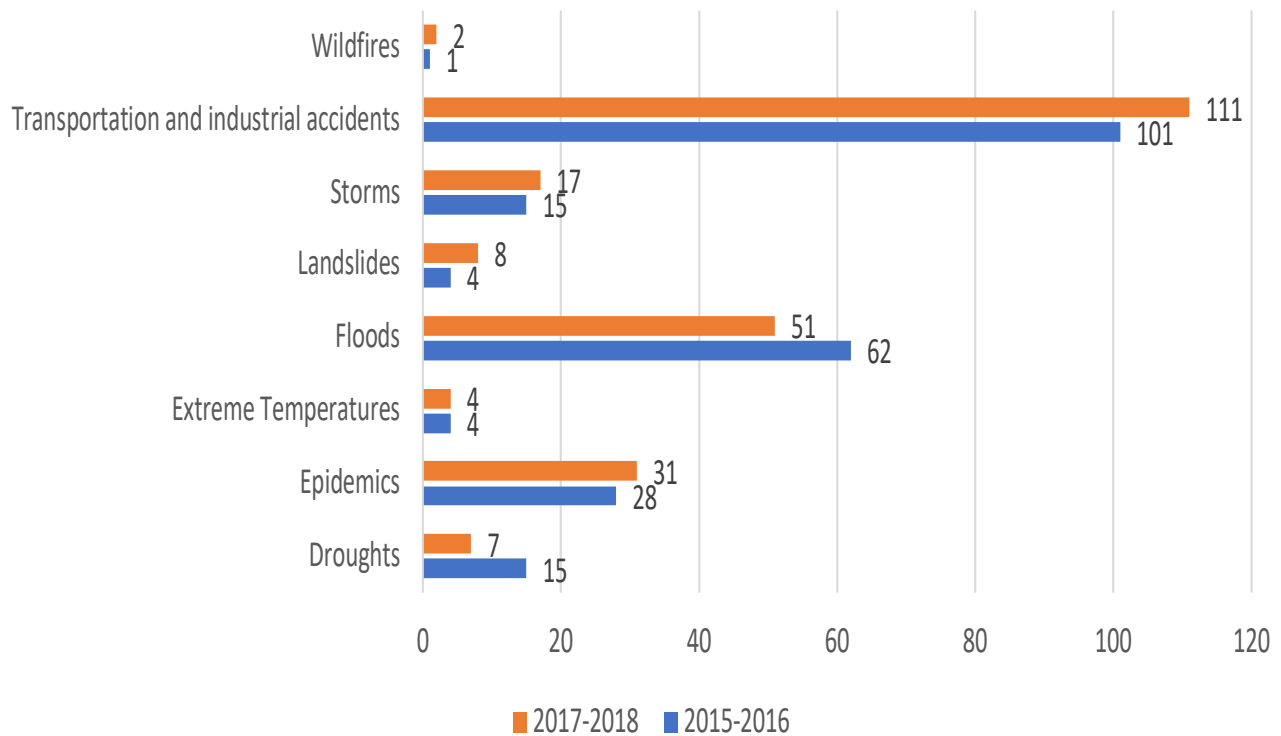


Figure 1: Selected recorded disasters in Africa (2015-2018)



(Source: Member States' reporting on the SFDRR and PoA)

Total continental disaster events increased from 311 in 2015/6 to 474 in 2017/8. This is mostly due to increases in the North Africa region and Algeria in particular. From a regional perspective, UMA and SADC recorded less events from 2017-2018 than the preceding two years. There has been a decrease in the number of disaster-related deaths in two of the six RECs. Two of the RECs recorded an increase in the number of affected people, with ECOWAS and ECCAS showing a sharp increase due to prolonged droughts and floods in the regions. This can be attributed to the 2018 flood season in most of west, central and eastern Africa. The economic losses due to these disasters has decreased by almost US\$1.5 billion over this period. A significant portion of the losses incurred (US\$ 220 million) was due to the devastating wildfires in the Southern Cape region of South Africa which effected high value properties, of which most were insured losses.

However, for any progress against all of the SFDRR and PoA Targets to have value it is also important to consider the changing disaster risk profile of the continent over the periods under investigation.

Africa Disaster Risk Profile: Index for Risk Management (2015-2018)

For the purpose of this report the Index for Risk Management (INFORM) was used for baseline information for determining vulnerability, hazards and exposure, lack of coping capacity and ultimately risk. INFORM is a joint initiative of the European Commission and the Inter-Agency Standing Committee Task Team (IASC) for Preparedness and Resilience, in partnership with many UN Agencies, donors, NGOs, and Member States. INFORM is also intended to support global policy processes, including:

- The Sendai Framework 2015-2030;
- The 17th Sustainable Development Goals adopted in UN Summit in September 2015;
- The 2016 World Humanitarian Summit;
- The 2017 Global Platform for Disaster Risk Reduction; and
- The resilience 'agenda', around which many organisations are focusing their humanitarian and development work.

Table 4: REC disasters and losses (2015-2018)

REC	No. of events		No. of deaths (Target A)		No. affected (Target B)		Direct economic loss ('000 US\$) (Target C)	
	2015-2016	2017-2018	2015-2016	2017-2018	2015-2016	2017-2018	2015-2016	2017-2018
IGAD/EAC	39	40↑	2 297	1 579↓	32 030 471	1 502 846↓	1 873 700	483 600↓
ECCAS	45	68↑	11 858	9 792↓	1 993 579	3 492 008↑	379 798	280 833↓
North Africa	112	258↑	4 425	8 242↑	758 902	6 020 335↑	20 017	36 000↑
SADC	84	80↓	11 260	14 463↑	20 811 703	7 146 549↓	492 515	2 536 612↑
ECOWAS	31	28↓	1 870	2 211↑	3 160 999	4 807 094↑	69 100	4 807 094↑
Total	311	474↑	31 710	36 287↑	58 755 654	22 968 832↓	2 835 130	8 144 139↑

(Source: EM-DAT: Member States' reporting on the SFDRR and PoA; the Emergency Events Database - Université catholique de Louvain (UCLouvain))

The Index for Risk Management (INFORM) is a composite indicator that identifies countries at risk of humanitarian crisis and disaster that would overwhelm national response capacity. The INFORM model is based on risk concepts published in scientific literature and envisages three dimensions of risk: Hazards and exposure; Vulnerability; and Lack of coping capacity. The INFORM model is split into different categories and levels using 54 core indicators³ to provide a quick overview of the

underlying factors leading to risk. The INFORM model uses a linear 5-point Likert type scale which are linked to a specific qualitative “class” (very low, low, medium, high, very high). These in turn are linked to a quantitative scale giving the minimum and maximum value of the qualitative quantifier (see Figure 5 below). Using the INFORM model in this report allows for the creation of a benchmark against which the current report can be measured.

Figure 2: INFORM Model and classes thresholds

Risk	INFORM														
CLASSES THRESHOLD IN INFORM	Risk														
	Very high	High	Me-dium	Low	Very low										
MAX	10.0	6.4	1.9	3.4	4.9										
MIN	6.5	5.0	0.0	2.0	3.5										
Dimensions	Hazard and Exposure					Vulnerability					Lack of coping capacity				
Categories	Natural		Human			Socio-economic		Vulnerable groups			Institutional		Infrastructure		
Components	Earthquake		Current conflict intensity			Development		Uprooted people			DRR		Communication		
	Tsunami		Projected conflict intensity			Inequality (25%)		Other Vulnerable Groups			Governance		Physical Infrastructure		
	Flood					Aid dependency (25%)							Access to health system		
	Tropical cyclone														
	Drought														
CLASSES THRESHOLD IN INFORM															
Dimension	Hazard and Exposure					Vulnerability					Lack of coping capacity				
CLASS	Very high	High	Me-dium	Low	Very low	Very high	High	Me-dium	Low	Very low	Very high	High	Me-dium	Low	Very low
MAX	10.0	6.4	1.9	3.4	4.9	1.4	2.6	4.0	6.0	10.0	1.9	3.2	4.7	6.3	10.0
MIN	6.5	5.0	0.0	2.0	3.5	0.0	1.5	2.7	4.1	6.1	0.0	2.0	3.3	4.8	6.4

3. For more information in the INFORM index, methodology and indicators see: <https://drmkc.jrc.ec.europa.eu/inform-index>

1.1 INFORM Risk Index (2015-2018)

The overall risk index of all RECs has increased over the two periods under investigation. The most significant increase is within the ECCAS region with the least increase in SADC region. The increase in the ECCAS region is worrisome seeing that the region enjoyed a fairly low index in 2015. This data correlated to that of the EM-DAT as explained above. The most recent data for 2019 (see map below) is similar to that recorded in 2018. For Africa as a whole the INFORM Index shows a slight increase from 2015-2016 to 2017-2018, however from 2018 to 2019 it seems that the disaster risk has remained fairly stable over the continent.

1.2 Hazards and Exposure Index (2015-2018)

The hazards and exposure in all regions have increased over the four-year period. The eastern and central regions of the continent experienced a significant increase in hazards and exposure. The ECCAS region needs specific attention with the biggest increases. However the IGAD region has the highest risk index. 2019 data indicates a similar upward trend. Although there has been an increase in the Hazard and Exposure Index for Africa from 2016 to 2017, the period 2017-2018 shows a slight decrease.

Table 5: INFORM Risk Index (2015-2018) and 2019 map

REC	2015	2016	2017	2018
EAC	5.9	6.0	6.4	6.2
ECCAS	3.2	4.9	5.5	5.4
ECOWAS	4.5	4.4	4.9	5.0
IGAD	6.5	6.5	6.8	6.8
North Africa	4.3	4.3	4.6	4.5
SADC	4.3	4.1	4.3	4.4
Africa	4.8	5.0	5.4	5.4

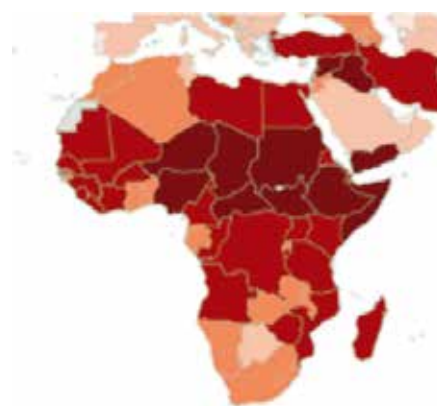


Table 6: Hazards and Exposure Index (2015-2018) and 2019 map

REC	2015	2016	2017	2018
EAC	4.8	4.8	5.9	5.5
ECCAS	3.5	5.5	5.4	5.5
ECOWAS	2.7	2.7	3.6	3.7
IGAD	5.6	5.5	6.2	6.1
North Africa	4.2	4.2	5.6	5.3
SADC	3.2	2.4	3.0	3.4
Africa	4.0	4.2	5.0	4.9



1.3 Vulnerability Index (2015-2018)

The data indicates that vulnerability within the continent has remained fairly the same over the last three years. As can be expected, the vulnerability index for ECCAS has increased the most over the comparative two periods. The rest of the regions seems to be stable, however, the vulnerability remains unacceptably high in all regions except UMA. Similar to the Risk Index, the vulnerability in Africa seems to be stable over the last two years of reporting.

1.4 Lack of Coping Capacity Index (2015-2018)

There seems to be a slight increase in the coping capacities across all regions, with UMA and SADC making the most progress. This however does not correlate with the EM-DAT data which shows an increase in affected populations and direct economic losses. IGAD remains the region with the least coping capacities with ECCAS showing a slight increase in capacities over the two periods. The Lack of Coping Capacity Index follows a similar trend to the overall Africa picture and also shows a period of stabilisation over the last two years.

Table 7: Vulnerability Index (2015-2018) and 2019 map

REC	2015	2016	2017	2018
EAC	6.3	6.6	6.5	6.5
ECCAS	3.5	5.5	5.4	5.5
ECOWAS	5.5	5.5	5.3	5.2
IGAD	6.6	6.9	6.8	6.8
North Africa	3.5	3.4	3.3	3.3
SADC	4.8	4.8	4.6	4.7
Africa	5.0	5.5	5.3	5.3



Table 8: Lack of Coping Capacity Index (2015-2018) and 2019 map

REC	2015	2016	2017	2018
EAC	6.9	6.8	6.8	6.8
ECCAS	5.4	7.0	6.9	6.9
ECOWAS	7.1	6.8	6.7	6.6
IGAD	7.7	7.6	7.5	7.5
North Africa	5.9	5.8	5.7	5.6
SADC	6.2	6.1	5.9	5.9
Africa	6.5	6.7	6.6	6.6



CHAPTER 2

Progress in Achieving DRR Priorities

Introduction

Africa has made significant progress in achieving the priorities set out in the SFDRR since 2015. Most Member States have built on the successes of the period 2005-2015 under the Hyogo Framework for Action and the Africa Regional Strategy for DRR and its Programme of Action. This is evident in the development of a number of multi-hazard national and sub-national disaster risk profiles, contingency measures and preparedness planning, new and refined DRR strategies and laws, and early warning systems. At a regional level, RECs have also made progress in working towards the global targets and priorities. All RECs reported an increase in regional and national DRR projects, with Member States emphasising the important role played by RECs in providing technical assistance and funding. In the ECOWAS region there is forward action in all the countries to institutionalize DRR, develop strategies and frameworks for DRR and strengthen disaster preparedness for effective response. However, investing in DRR for resilience is the most critical challenge in the region. In 2015, the ECCAS region aligned its Regional Strategy for Risk Prevention, Disaster Risk Management and Climate Change Adaptation Plan to the four priorities of the SFDRR. The IGAD and the EAC regions are making good progress in the implementation of the SFDRR. Both RECs have dedicated institutions to spearhead the DRR agenda in their respective areas and have developed DRR strategies to guide the implementation of DRR in their sub regions. Apparently, IGAD is a front-runner in aligning their DRR strategies to the SFDRR. In the SADC region there are several initiatives that the SADC is engaged in that seek to pursue the SFDRR priority areas. These include the collaboration with academic institutions in the region, establishment of a DRRU, development of the DRR Strategic Plan 2020-2030 and the Regional Resilience Strategic Framework (2019), among others.

There has been a significant increase in direct DRR funding on the continent by international partners, in particular under the programme: *“Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities”* (in short, *“Building Disaster Resilience to Natural Hazards”*) being implemented by AUC and partners to build capacity of RECs and member states. The Programme seeks to achieve five results which are cross cutting the SFDRR priorities. They are:

- Extended Programme of Action for the Implementation of the Africa Regional Strategy for Disaster Risk reduction operational, through the improved AUC’s coordination and monitoring capacity;
- RECs have DRR coordination, planning and policy advisory capacities to support their respective member- states and regional and sub-regional programmes;
- Core capacities of the specialized national and regional climate centres are improved to meet the needs of DRM agencies and socio-economic sectors for effective use of weather and climate services and community-focused and real-time early warning systems;
- African countries have improved knowledge of risks through, the compilation of historical disaster related data to inform the assessment and modelling of future risks; and
- Multi-risk financing strategies are developed at regional, national and local levels to help African countries make informed decisions, to improve their financial response capacity post disaster and to mitigate the socio-economic, fiscal and financial impacts of disasters of African countries (AUC, 2018b).

This has enabled many Member States and RECs to implement critical projects and address disaster risks which is aligned to the four SFDRR priorities.

2.1 Priority 1: Understanding disaster risk

The AUC developed an operational plan for the implementation of the PoA for the period 2018-2020. Detailed activities are planned at various levels and this includes risk assessments. The MRF for the PoA was also developed and is being used for the development of the Africa Biennial report (this report) on the implementation of the PoA. A 15-member Africa Science and Technology Advisory Group (AfSTAG) was established and had its inaugural meeting in May 2019. The AfSTAG is currently reviewing its terms of reference and developing an action plan. An orientation workshop and a training on DRR were conducted by the AUC in collaboration with the UNDRR.

The AUC reported that it has not yet established guidelines for surveillance of continental risks. However, under the Programme *“Building Disaster Resilience to Natural Hazards”*, Climate Service Centres are being strengthened. Similarly, the AUC DRR Unit does not currently have the capacity to develop risk surveillance. It is thus fair to argue that the AUC have not developed an inventory and mapping of different approaches and methods used for risk assessment and analysis. There are, however, plans to commission studies on existing risk assessment methodologies in Africa. An interactive knowledge sharing platform with a library of existing methodologies for risk assessments and analysis for different risk contexts will thus soon be developed. The AUC have assessed existing gaps with respect to risk assessments and surveillance, but this is still work in progress and improvements can be made. The AUC has received feedback in various platforms that result in mapping of the gaps and challenges related to risk assessment. However, more thorough assessments need to be done by the AUC as most of the information obtained has been qualitative and provided by a limited number of stakeholders.

At regional level, ECCAS has commissioned studies to develop risk information, including new risks and human-made risks. ECCAS is currently conducting a study on the regional assessment of hazards, vulnerabilities and risks in ECCAS member states. IGAD, in collaboration with the GFDRR and other stakeholders, have conducted a number of training

interventions targeting relevant sectors drawn from member states such as the media, agriculture, academia, health, and infrastructure. The trainings focus on a variety of tailored topics such as risk analysis and use of geospatial technology in risk assessment, and post-disaster needs assessments. Additionally, the IGAD sub region has developed guidelines to mainstream DRM and CCA into school curricular to guide Member States. A number of higher institutions of learning have developed DRM courses in universities such as MMUST in Kenya, Bahir Dar University in Ethiopia and Makerere University in Uganda. However, a regional centre of excellence in DRR/M is lacking to advance risk science and knowledge. In the SADC region a Regional Vulnerability Assessment and Analysis (RVAA) Programme implemented at the Secretariat undertakes assessment of food security and vulnerabilities on annual basis through the National Vulnerability Assessment Committees in 14 Member States, as posed by climate-related risks (mainly drought). An interactive knowledge sharing platform with risk information and knowledge has been established in SADC. Through the SADC Climate Service Centre (CSC), climate monitoring information and alerts on extreme weather events are shared with Member States and partners. The North African countries (Algeria, Egypt, Libya, Mauritania, Morocco, Sahrawi Republic and Tunisia) have undertaken studies to better understand disaster risk in the region. The UMA secretariat reported that inter-RECs experience sharing and exchange of lessons learned under auspices of AUC have been realized, by visiting IGAD and COMESA.

2.2 Priority 2: Strengthening disaster risk governance to manage disaster risk

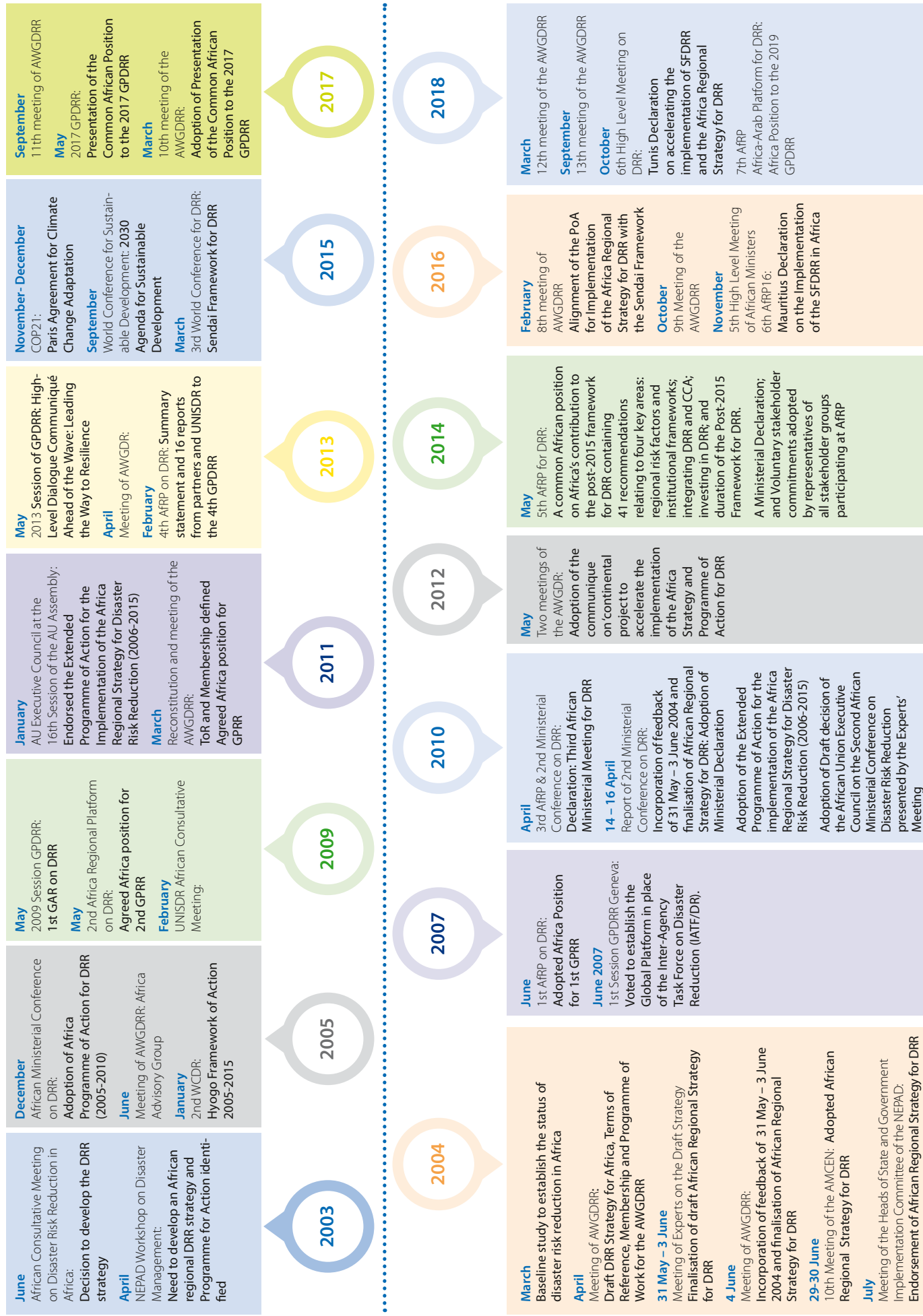
DRR activities have not been fully mainstreamed across AUC Departments. However, efforts are ongoing. AUC DRR Unit continues to engage the Humanitarian Affairs Division within the Political Affairs Department as well as the Peace and Security Department. A DRR Unit exists in AUC Department of Rural Economy and Agriculture (DREA) since 2017. The Unit comprises of a Technical Coordinator, Senior Policy Officer, Policy Officer for Monitoring and Evaluation (M&E), Programme Assistant and Admin. Assistant. The Unit is however supported through Partner funds

(EU). Partial mapping and assessment of the roles, functions and mandates of regional stakeholders in DRR has been undertaken. The operational plan includes a column for the key stakeholders for each activity. This was based on input of members of the Africa Working Group for DRR and the Programme Partners. A more detailed assessment has not yet been done. The AUC convenes a biennial Africa Regional Platform for DRR in collaboration with the UNDRR. The last Platform was held in October 2018 in Tunis, Tunisia. Partial progress has been made in the development of guidance to facilitate alignment of national and regional DRR programmes to aid implementation of the Sendai Framework. There are plans to develop the policy guidelines for alignment. A Monitoring and Reporting Framework (MRF) was adopted in 2018 by the Ministerial Meeting. The biennial reporting process started in 2019. The AUC is to facilitate annual data review workshops at regional level. Furthermore, the AUC have made measurable efforts in the development and implement a programme to popularise and propagate the ARSDRR and the PoA. An orientation workshop was held, and challenges and opportunities and potential areas of intervention have been identified. The operational plan for 2018-2020 maps out the key interventions needed in all priority areas of the SFDRR and PoA. Lastly, a 15 member African Youth Advisory Board (A-YAB) was established and had its inaugural meeting in May 2019. An orientation workshop was conducted by UNDRR and AUC to ensure that the team is well equipped with basic DRR principles to ensure a common approach.

Structures and mechanisms for coordinating DRR in ECCAS region are established. ECCAS is supporting the development of capacity for downscaling of global weather and climate data for hydro-meteorological hazards, through the development of seasonal forecasts for Central Africa. Establishment of the Centre of Applications and Climate Forecast of Central Africa (CAPC-AC) based in Douala whose mission is the production of reliable satellite and weather

information for integrated and informed decision-making in risk reduction of disasters in Central Africa was achieved through the SAWIDRA project. In the ECOWAS region a number of Member States have made significant progress in the development and adoption of legal and statutory mechanisms for DRR. For example, Burkina Faso included DRR in the country's "National Development Plan: Strategy for Accelerated Growth and Sustainable Development", and Mali developed a national disaster risk reduction strategy with an action plan for the implementation of the 2015-2019 strategy. SADC has developed a draft DRR Strategic Plan 2020-2030 and the Regional Resilience Strategic Framework 2020-2030 that are aligned to regional goals and aspirations of the Africa Programme of Action (PoA), other continental and global DRR frameworks as well as regional development agenda. In addition, Member States have been increasingly made aware of the need to review or develop DRM frameworks for alignment with sustainable development provisions of the global frameworks. The draft DRR Strategic Plan 2020-2030 and the Regional Resilience Strategic Framework 2020-2030 enlisted strategic actions for Member States to ensure the development of frameworks at national level and local level. IGAD and EAC are making good progress in implementation of this priority at sub regional levels. High-level ministerial committees for DRM are established in both RECs. Disaster risk management policies and strategies have been developed to guide implementation of DRR in both RECs. IGAD has further advanced on this by aligning its regional DRM strategy to the SFDRR and the PoA for Implementation of DRR in Africa to guide the member states in the sub region. In North Africa an interactive knowledge-sharing platform with risk information and knowledge sharing was established as reported, resulting in better disaster risk governance. Also in this region Algeria is updating its national strategy and launching the development of local strategies with the assistance of the United Nations Office for Disaster Risk Reduction's Regional Office for Arab States in Cairo (Egypt).

Figure 3: DRR governance progression in Africa (2003-2018)



2.3 Priority 3: Investing in disaster risk reduction for resilience

An Africa/Arab Disaster Risk Reduction Fund under the auspices of the League of Arab States and the AUC is being implemented. This fund aims to provide an additional bridging fund for all issues relating to DRR. The Africa Risk Capacity (ARC) is functioning and continuing to grow its sphere of influence in regard to risk transfer mechanisms; supporting and cushioning African countries from heavy impacts of disasters through provision of funds for recovery and building back better for the future. However, the AUC have not yet assessed and advocated, conceptualised and developed policy, operational and governance guidelines for establishment of a continental funding mechanism for DRR. Therefore, DRR is also not yet integrated as a priority of key African Union-led development frameworks, plans, policies and flagship projects. Guidance on establishing linkages between DRR and relevant development frameworks at regional level is underway. The AUC are supporting increased participation and investment in mechanisms for disaster risk financing, risk transfer and insurance, risk sharing and retention.

According to the available data, ECCAS has made limited investment in disaster risk reduction. A number of Member States have signed up to the ARC insurance mechanism. Ongoing exploration of additional sources of financing through the renegotiation of quotas for various premiums and penalties arising from the taxation of risk-providing activities is underway. The region created an Emergency Fund in 2012 dedicated to the support of victims of disasters and natural hazards, and this mechanism is being expanded. In the ECOWAS region, Member States reported little progress in investing in DRR measures. However, as in the case of ECCAS, Member States are utilising the ARC. Ghana and Liberia reported a dedicated DRR fund to finance DRR at various levels of government. Six SADC Member States (Comoros, Madagascar, Malawi, Mozambique, Zambia and Zimbabwe) have signed up to the ARC. Some of the SADC Member States received technical assistance on Risk Financing Strategies from the World Bank's Global Facility for Disaster Reduction (GFDRR) through the EU-funded programme "Building Disaster Resilience to natural hazards in Sub-Saharan African Regions, Countries and communities".

2.4 Priority 4: Enhancing disaster preparedness for effective response and to "Build back Better" in recovery, rehabilitation and reconstruction

The AUC have supported and coordinated existing disaster interventions on disaster preparedness, response, and humanitarian assistance. The Early warning and preparedness component as well as post-disaster recovery activities, including PDNA were supported by UNDRR and GFDRR through the ongoing DRR Programme "Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and communities". Disaster response activities were supported by the Humanitarian Affairs Division within the Political Affairs Department. However, the AUC have not yet developed and strengthened continental and regional institutions, networks and forums for research, innovation and scientific solutions, incorporating traditional knowledge, for preparedness, response and recovery. Also, a dialogue forum under the AfRP for exchange of know-how and best practices on preparedness, response and recovery has not been developed. The AUC have not developed and supported operationalization of guidelines on post-disaster response, recovery and reconstruction in settings of fragility and conflict. However, an operational plan for the PoA was developed and shared with MS, to allow them request for support and funding from Partners. Plans are underway to establish continental multi-hazard early warning and preparedness system for natural hazards. The system is envisaged to delineate roles and responsibilities among AUC, RECs and Member States. The system will also facilitate disaster operations and humanitarian assistance.

In the ECCAS region, design and continuous implementation of joint disaster preparedness and response interventions, among Member States, sectors and partners has been facilitated through the creation and revitalization of National Platforms for Disaster Risk Reduction, Partnership with donors, international agencies, the private sector and implementing organizations to strengthen national post-disaster response management capacities has been facilitated through the Annual Central Africa Platform for Disaster Risk Reduction. The ECOWAS region reported the existence and development of multi-sectoral and multi-hazard contingency

plans linked to some form of early warning system. A number of Member States regularly conduct desktop and scenario planning exercises. In SADC, the Regional Early Warning System is an integrated project comprising a Regional Early Warning Unit (REWU), based in Zimbabwe, and separate National Early Warning Units (NEWUs) in each of the 10 SADC Member States whose activities are coordinated by the REWU. Its primary objective is to provide advance information on the food security prospects for the region through provision of regular assessments of regional food crop production, food supplies and food requirements, and to alert Member States of impending food shortages/surpluses in sufficient time for appropriate interventions to be set in motion. In a similar vein, regional assessments and services are also provided by the WMO-UNDP Drought Monitoring Centres in Eastern and Southern

Africa, the Inter-Governmental Authority on Drought and Development in north-eastern Africa, and the AGHRYMET Programme of the Inter-State Committee on Drought Control (CILSS) in the Sahel. The North African countries have generated risk information packages for different cultural, gender, and age groups. The IGAD secretariat is in the process to build capacity in damage and loss assessment through trainings on Post Disaster Needs Assessments (PDNA). The trainings aim at enhancing the capacity of the Member States to conduct needs assessments in the aftermath of a disaster to inform the recovery and reconstruction needs. The IGAD secretariat has also developed a framework for funding disasters, which seeks to have a regional pre-positioned resource to support early response to disasters and other calamities facing the Member States.

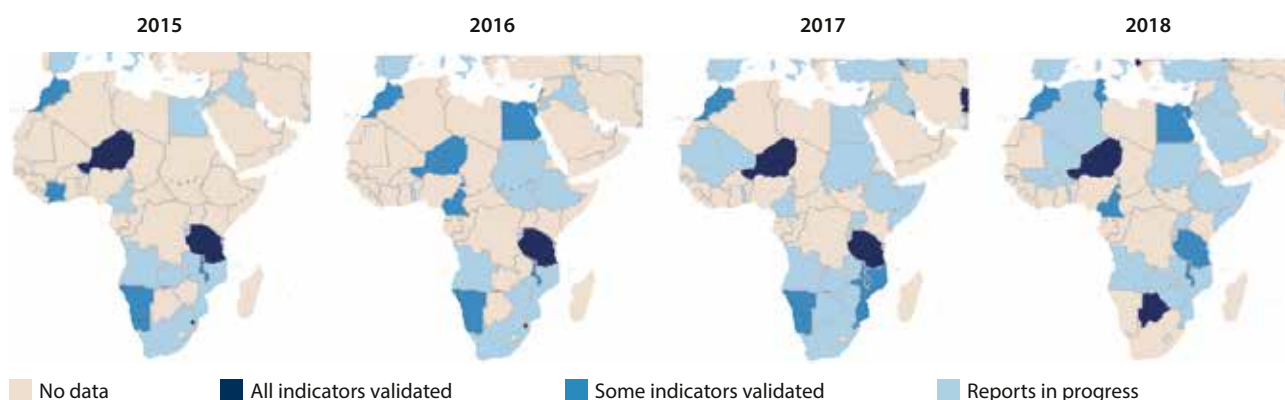
CHAPTER 3

SFDRR Targets (2015-2018)

Introduction

Reporting on the SFDRR since 2015 has been very low for African states (see Figure below) despite a number of capacity development initiatives in this regard. There has, however been a slight increase in the number of member states utilising the Sendai Framework Monitoring (SFM) tool to report on the various SFDRR Targets. The data to date is however inadequate to make any continental wide conclusions. Progress in achieving the Targets is however noticeable. For the purpose of this research, the data from the SFM does not adequately cover all AU Member States and thus would not provide a conclusive benchmark against which progress can be measured.

However, from an AUC perspective some progress has been made against the SFDRR and PoA. These will be highlighted below using the SFDRR Priorities as guiding framework. Table 9 indicates the reported percentage progress from 2015 and 2016 as per the available data of the Sendai Framework Monitor⁴. The data obtained for the period 2015-2018 by this research were used to calculate the percentage increase or decrease against the various targets. This percentage should only be seen as a broad overall indicator for the whole continent and the actual progress within MS varies considerably from region to region.



(Source: <https://sendaimonitor.unisdr.org>)

4 The SFM uses data from approximately 19-22 African countries which reported over the period in question. One should thus take cognisance of the fact that even the baseline data is incomplete and should be treated with the necessary care.

Table 9: Achievement of the SFDRR and PoA Targets in Africa (2015-2018)

SFDRR Targets	2015-2016⁵	2017-2018
SFDRR Target A: Reduce continental disaster mortality	-6.25%	+30.87%
SFDRR Target B: Reduce the number of affected people	+52.88%	-37.61%
SFDRR Target C: Reduce direct disaster economic loss	-99.22%	+50.2%
SFDRR Target D: Reduce disaster damage to critical infrastructure and disruption of basic services	+128.53%	+11%
SFDRR Target E: Increase the number of countries with DRR strategies	+0.12%	+22.85%
SFDRR Target F: Increase international cooperation to developing countries	+59.31%	n/a
SFDRR Target G: Increase the availability of and access to multi-hazard early warning systems	+2.82%	+1.26%
PoA Targets	2015-2016	2017-2018
PoA Additional Target 1: Increase the number of countries with DRR in their educational systems at all levels	+46%	+22.85%
PoA Additional Target 2: Increase integration of DRR in development, and climate change adaptation plans	+40%	+21.05%
PoA Additional Target 3: Expand domestic financing for DRR	n/a	+0.4%
PoA Additional Target 4: Increase the number of countries with preparedness and recovery plans	+53%	+10%
PoA Additional Target 5: Increase regional networks for knowledge management and capacity development	n/a	+9%

(Source: Member States' reporting on the SFDRR and PoA)

The main finding across all RECs is that Africa is making progress in the implementation of the SFDRR and the PoA. In general, all MS have reported progress on the various indicators. However, SFDRR Targets C remains problematic because of the continued annual increase in direct disaster economic losses. The continent is not making in-roads into curbing the human, environmental and economic losses due to disasters. The number of anthropogenic hazards is on the rise and natural hazards have shown a slight decrease. Progress varies across regions and there is a strong correlation between the risk profile of MS (especially lack of capacity – see discussion on the INFORM Index) and the progress they are reporting. SFDRR Target D has shown a significant increase in the reported incidents. This can be ascribed to various reasons: a) reporting on direct infrastructure loss has been very poor in the past and heightened reporting means more recorded events; b) the development tract and urbanisation in Africa is increasing significantly thus more losses will be recorded; c) poor infrastructure protection and urban risk reduction heightens the risk of infrastructure loss and failure. The sections to follow analyse the progress against the Targets in more detail.

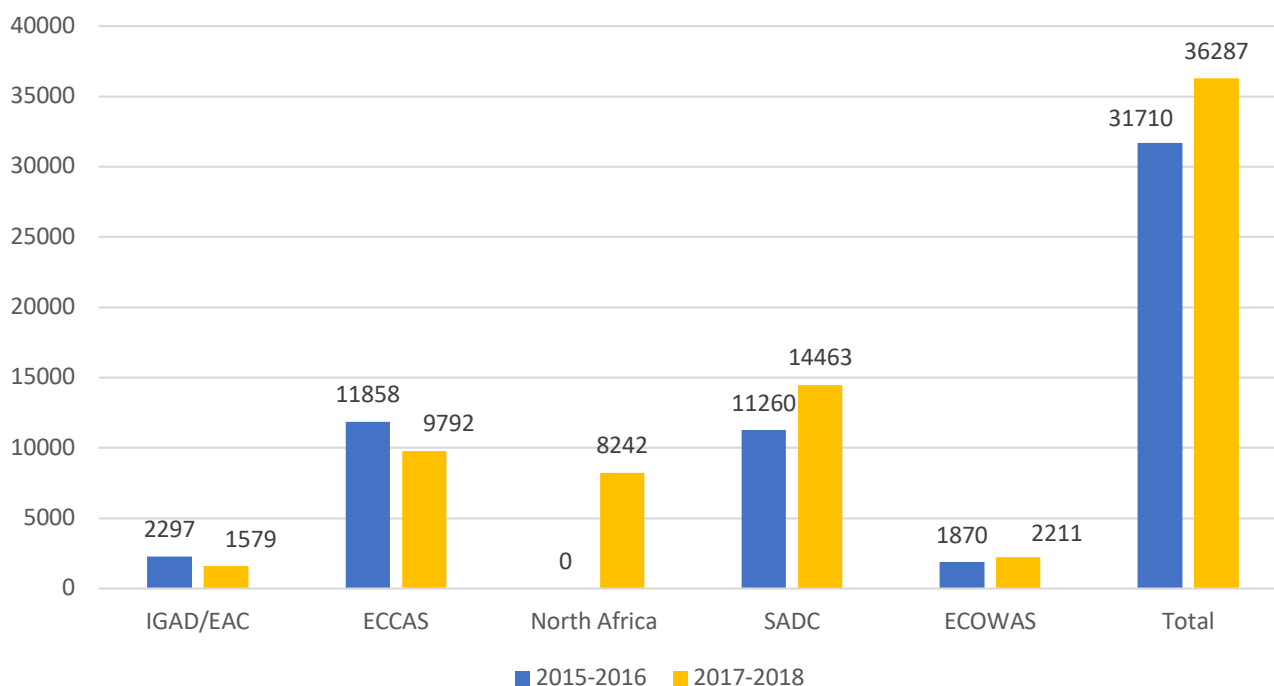
3.1 SFDRR Target A: Reduce continental disaster mortality

The SFDRR Target A aims to substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate in the decade 2020–2030 compared to the period 2005–2015.

MS reported an increase in disaster mortality from 31,710 for the period 2015-2016 to 36,287 for the period 2017-2018. The Ebola outbreak in West Africa claimed a number of lives, so did the mud- and landslides in Sierra Leone in 2017. A strong El Niño in southern and eastern regions caused losses due to floods. The North Africa, SADC and ECOWAS regions all showed an increase in mortalities, with a decrease in the IGAD/EAC and ECCAS regions. The increase in SADC and North Africa is largely due to more reported transportation and industrial related disasters. In total there has been a slight increase in disaster mortalities between 2015-2016 and 2017-2018. In the IGAD region Sudan recorded the highest number of disaster mortalities over the period that is associated with outbreak of cholera mostly in the refugee camps in 2017.

5 The increase or decrease in percentages relates to the reported increase/decrease by MS over the two periods as per the SFM. Thus, for example under Target A from 2015 to 2016 there was a decrease in continental mortality rate of 6,25%. However, for the two years following (2017-2018) there was a 30,87% increase in continental mortalities.

Figure 4: Disaster mortalities per REC (2015-2018)



(Source: Member States' reporting on the SFDRR and PoA EM-DAT: Emergency Events Database – *Université catholique de Louvain* (UCLouvain))

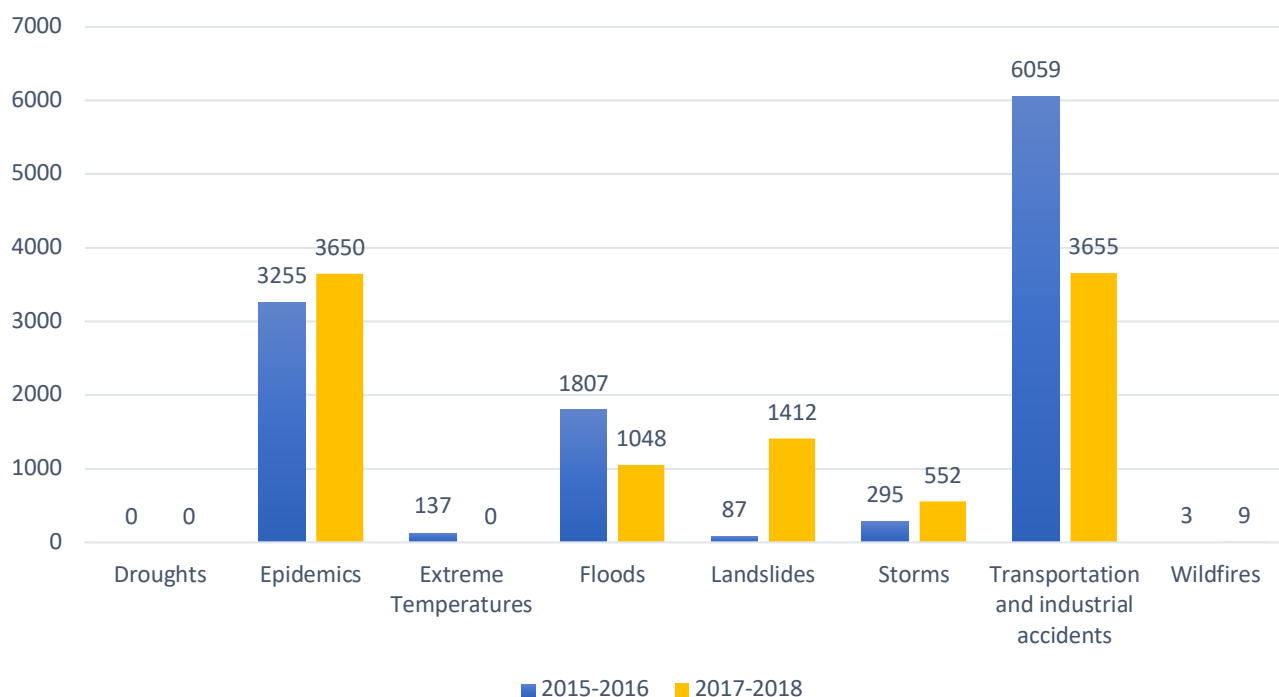
Interestingly most of the disaster mortalities in 2015-2016 were caused by anthropogenic hazards; mostly transportation and industrial disasters. From a natural hazard perspective, biological and hydro-meteorological disasters caused the most deaths in this category. The Ebola crisis caused an increase disaster deaths. Storm mortalities have increased. Note should be taken that direct deaths due to

drought has not been accurately recorded and this might have an impact on these figures if such losses can be determined. The longitudinal and creeping nature of drought events makes such direct linkages to mortality somewhat problematic. MS do not readily attribute deaths to a specific drought disaster and the knock-on effects of droughts (e.g. food insecurity, epidemics, health problems) causing deaths are not well reported on. Much better reporting on drought mortalities is needed.

Epidemics are the leading cause of mortalities followed by floods in the ECOWAS region. The high mortalities from epidemics would be attributed to the outbreak of Ebola Virus Disease (EVD) that spread quite fast in a number of ECOWAS member states between 2012 and 2016. The wide scope of the outbreak can be attributed to the unprecedented circulation of EVD into crowded urban areas, increased mobility across borders, and conflicts between key infection control practices and prevailing cultural and traditional practices in West Africa.

One should note that the analysis of the disaster mortalities only covers a four-year period. The losses reported is but a very small percentage over for instance a 10-20 year period. Although the losses declined, one must realise that one big disaster in any given year will significantly skew the analysis. The challenge with this indicator is to obtain as accurate as possible data from MS and other partner organisations. It is recommended that more accurate statistics of deaths associated with disasters in MS be recorded on an annual basis using established tools such as DesInventar.

Figure 5: Total deaths per selected disaster (2015-2018)



(Source: Member States' reporting on the SFDRR and PoA)

3.2 SFDRR Target B: Reduce the number of affected people

Target B of the SFDRR requires MS to substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015. There has been a significant decrease (39%) in affected populations from 58 755 654 during 2015/2016 to 22 968 932 during 2017/2018. IGAD/EAC (-95%) and SADC (-66%) recorded decreases in affected populations. However,

there has been a 57% increase in affected people in ECCAS, an increase of 35% in ECOWAS, and 88% increase in North Africa.

These numbers of affected populations can be ascribed to the strong El Niño in southern and eastern regions in 2015-2016. This also related to droughts and floods in South and East Africa over this period. Droughts have by far affected the most people on the continent, followed by floods. Storms and extreme temperatures showed a sharp increase from 2015-2016 to 2017-2018.

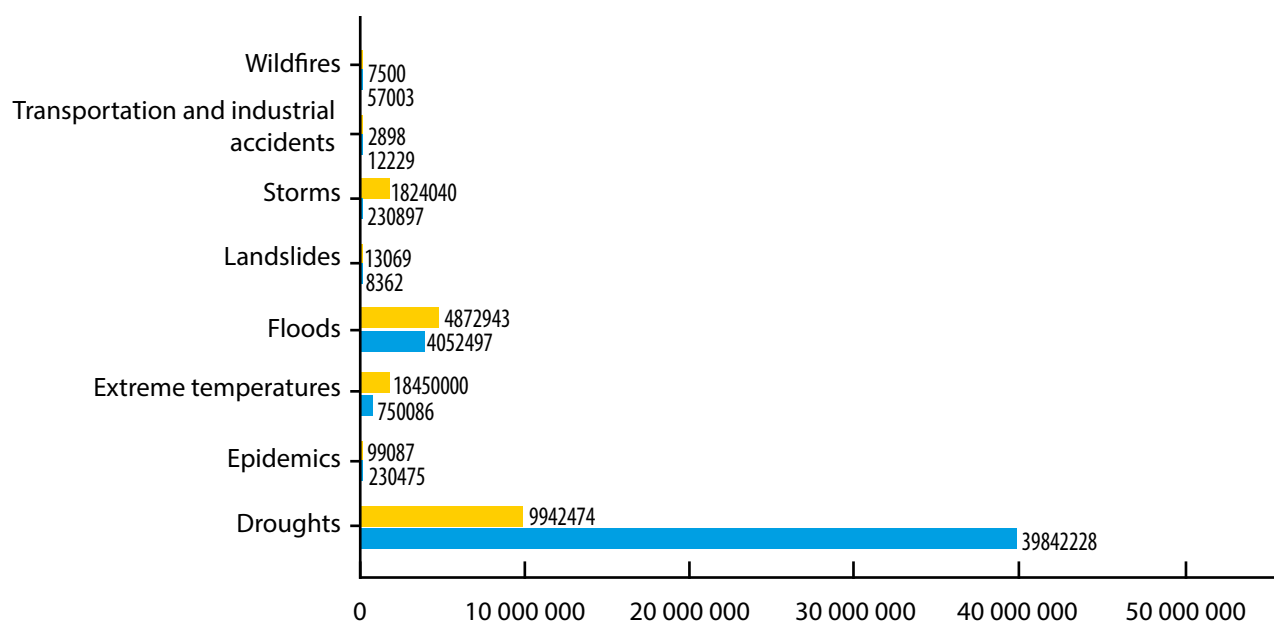
Table 10: Number of affected per REC (2015-2018)

REC	No. affected	
	2015-2016	2017-2018
IGAD	32 030 471	1 502 846↓
ECCAS	1 993 579	3 492 088↑
North Africa	758 902	6 020 355↑
SADC	20 811 703	7 146 549↓
ECOWAS	3 160 999	4 807 094↑
Total	58 755 654	22 968 932↓

(Source: Member States' reporting on the SFDRR and PoA EM-DAT: Emergency Events Database – Université catholique de Louvain (UCLouvain))

In the North Africa region, Mauritania, hit by drought, recorded the highest number of affected people (more than 4.2 million), followed by Morocco with 1.7 million people affected due to extreme temperature. Due to drought in Mauritania and extreme temperature in Morocco and to a less extent Algeria, the number of affected people has increased by almost 9 times in 2017-2018 to that for the period 2015-2016.

Figure 6: Total affected people per selected disasters (2015-2018)



(Source: EM-DAT: The Emergency Events Database - Université catholique de Louvain (UCLouvain); Member States' reporting on the SFDRR and PoA)

As with disaster mortalities, there is less coordination among the different actors in recording the number of affected populations. RECs, with the assistance of international cooperating partners and MS, must establish mechanisms for the recording of these statistics.

3.3 SFDRR Target C: Reduce direct disaster economic loss

SFDRR Target C requires MS to reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030. Over the past four years, there has been an increase (34%) in overall reported direct economic losses in Africa. IGAD/EAC and ECCAS showed a decrease in economic losses. There has been a slight increase in North Africa but a significant increase in the SADC and ECOWAS regions.

Most of the disaster losses were due to the impacts of the droughts and floods. Storms also caused economic losses and there was a significant increase in the losses in SADC due to wildfire incidents in South Africa in 2017⁶. Although the losses in South

Table 11: Total damage per REC/region (2015-2028)

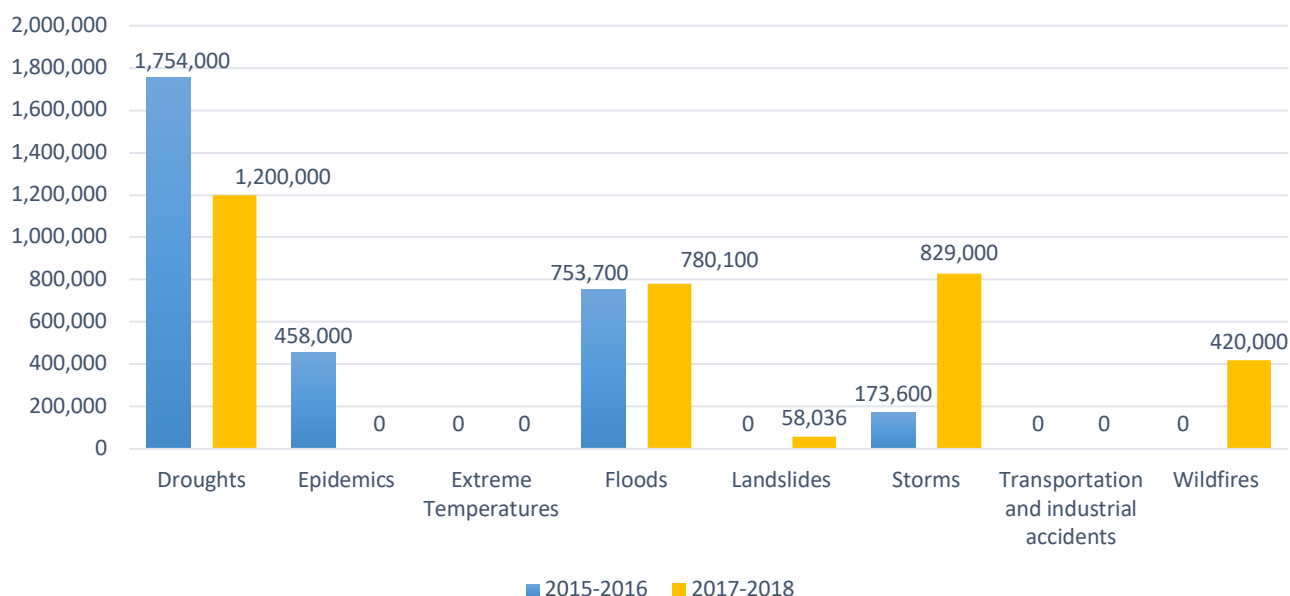
REC	Total damage ('000 US\$)	
	2015-2016	2017-2018
IGAD/EAC	1 873 700	483 600↓
ECCAS	379 798	280 833↓
North Africa	20 017	36 000↑
SADC	492 515	2 536 612↑
ECOWAS	69 100	4 807 094↑
Total	2 835 130	8 144 139↑

(Source: Member States' reporting on the SFDRR and PoA; EM-DAT: Emergency Events Database – Université catholique de Louvain (UCLouvain))

Africa were high in relation to the other recorded losses in the SADC region, it is important to note that it did not have any significant impact on the South African economy. This is largely due to the stronger South African economy, and the presence of public and private insurance mechanisms.

6 Most of the losses in the Knysna fires in South Africa were insured losses.

Figure 7: Disaster losses per selected disasters (2015-2018) total damage ('000 US\$)



(Source: Member States' reporting on the SFDRR and PoA; EM-DAT: Emergency Events Database – Université catholique de Louvain (UCLouvain))

Interestingly, no direct economic losses have been recorded in relation to transportation and industrial accidents. The heightened increase in these incidents on the continent over the past four years warrant a question as to the economic losses associated with such incidents. The lack of data on this composite disaster shows a lack of coordination between national disaster risk management structures and other sectors, such as transportation. Similarly, the economic losses due to epidemics is poorly defined and not accurately reported on.

One of the challenges identified in the reporting on this Target is the delineation of what constitutes direct economic loss across sectors. Although the SFDRR provides adequate guidance on this Target, Member States reported difficulties in obtaining complete data. Disasters (such as epidemics and transportation) do not allow for the once off recording of massive losses. These losses are more associated with the aggregate loss linked to a number of disasters over a period of time.

Direct disaster losses are poorly recorded by MS and RECs. Better coordinating mechanisms must be put in place and it is suggested that MS and RECs make concerted efforts to establish linkages with their national research institutions and universities which

can play a valuable role in gathering and managing such data on an ongoing basis. Most regions in Africa have a number of DRR-related centres in universities which can be partnered with for the purpose of disaster data management.

3.4 SFDRR Target D: Reduce disaster damage to critical infrastructure and disruption of basic services

Target D of the SFDRR aims to substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.

Reporting by MS on the damage to critical infrastructure and disruption of basic services remains a challenge. Data is not readily available or quantified at national levels, with most of the losses sustained at local level. However, looking at the available data, MS reported a significant increase in damage from 2015-2016 (128.53%). From 2016-2017 there was a reported decrease of 24.31%, however from 2017-2018 there was a 58.41% increase. Despite the increase in damage reported, the number of losses is less between the comparative periods by 11%.

Unprecedented urban flooding over decades in Algiers (capital of Algeria) led to an innovative public investment in infrastructure to reduce flood disaster risk in the District of Bab El Oued. The main public infrastructure investment for flood disaster risk reduction was the increase of the capacity of the existing sewerage system of the district by the duplication of the collector of the Oued M'kacel. The new collector is composed of two parts: a tunnel part and an open sky part. The tunnel has 4 meters in diameter and is 4.4 km long and its depth varies between 30 and 54 meters. The open sky part consists of a double frame of size 2.40 x 4 meters and 270 meters long. This project was conceptualised and funded by budget allocated by the public authorities for disaster risk reduction to the value of US\$75 million.

Table 12: Loss of critical infrastructure per REC (2015-2018): Some examples

REC / Member State	Disaster	2015-16	2017-18
ECCAS			
1. Number of health facilities destroyed or damaged			
Cameroon	Flood	0	1↑
	Landslide	0	4↑
	Structural fire	0	20↑
	Civil hazards	0	1↑
Congo	Severe weather	1	0↓
2. Number of educational facilities destroyed or damaged			
Cameroon	Flood	0	5↑
Congo	Severe weather	2	4↑
3. Number of transportation infrastructures destroyed or damaged			
Cameroon	Flood	1	0↓
	Civil hazard	0	3↑
Gabon	Sinkhole	0	↑
ECOWAS			
1. Number of health facilities destroyed or damaged			
Benin	Flood	0	51↑
Côte d'Ivoire	Severe weather	2	0↓
Liberia	Flood	1	1
	Structural fire	0	1↑
Sierra Leone	Flood	15	25↑
2. Number of educational facilities destroyed or damaged			
Benin	Flood	70	198↑
Côte d'Ivoire	Severe weather	22	0↓
Liberia	Flood	1	1
	Severe weather	0	1↑
Sierra Leone	Flood	21	36↑
3. Number of transportation infrastructures destroyed or damaged			
Benin	Flood	0	18↑
Côte d'Ivoire	Flood	1	2↑
	Sinkhole	2	0↓
Liberia	Flood	1	0↓
	Coastal erosion	2	0↑
Sierra Leone	Flood	12	18↑

IGAD/EAC			
1. Number of health facilities destroyed or damaged			
Kenya	Flood	10	20↑
	Landslide	30	40↑
	Sinkhole	50	60↑
	Drought	70	80↑
2. Number of educational facilities destroyed or damaged			
Kenya	Flood	10	15↑
	Landslide	10	15↑
	Sinkhole	10	15↑
	Drought	10	15↑
3. Number of transportation infrastructures destroyed or damaged			
Kenya	Flood	5	25↑
	Landslide	10	30↑
	Sinkhole	15	35↑
	Drought	20	40↑
SADC			
1. Number of health facilities destroyed or damaged			
Lesotho	Severe weather	2	1↓
Madagascar	Floods/cyclones	137	123↓
Malawi	Flood	23	0↓
Mozambique	Flood	10	18↑
Zambia	Floods	3	1↓
Zimbabwe	Flood/cyclone	0	53↑
2. Number of educational facilities destroyed or damaged			
Botswana	Earthquake	1	0↓
	Flood	0	3↑
Eswatini	Severe weather	68	9↓
Lesotho	Severe weather	10	25↑
Madagascar	Floods/cyclones	461	1114↑
Malawi	Flood	626	18↓
Mozambique	Flood	110	42↓
Zambia	Floods	63	15↓
Zimbabwe	Flood/cyclone	0	331↑
3. Number of transportation infrastructures destroyed or damaged			
Botswana	Flood	0	1↑
	Cyclone	0	2↑
Lesotho	Severe weather	45	250↑
Madagascar	Floods/cyclones	1	32↑
Malawi	Flood	1220,53km & 3210 meters bridges, drifts, culverts	0↓
Zimbabwe	Cyclone	2 bridges 10km roads	369 culverts and bridges↑

(Source: Member States' reporting on the SFDRR and PoA)

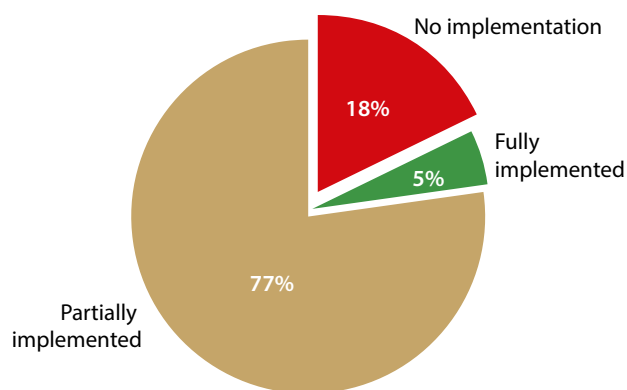
The data recorded by MS only relates to the number of facilities destroyed or damaged. Very little other data on such losses is recorded for example: amount of school days lost; impact on supply chains and other business opportunities; or additional deaths and affected people through the loss of health facilities. Although it is useful to record the number of critical infrastructure loss, it is recommended that MS also draw correlations with the direct and indirect economic losses as per Target C of the SFDRR.

3.5 SFDRR Target E: Increase the number of countries with national and sub-national/local disaster risk reduction strategies

Target E aims to ensure the substantial increase in the number of countries with national and local disaster risk reduction strategies by 2020. The number of MS with DRR strategies in Africa has increased by 22.85%. Most of the post-2000 policies and strategies are aligned with the Hyogo Framework for Action, with an increasing number aligned with the SFDRR. MS reported that where policies and strategies are being revised, they are now being aligned with the SFDRR and the PoA. Few countries have policies and strategies dating before the 1990s. Most of these are being revised.

Although there has been an increase in the development and promulgation of national disaster risk reduction policies, strategies and plans, the actual implementation throughout various levels remains problematic. Only 4.55% of MS reported

Figure 8: MS Implementation of DRR Strategies



(Source: Member States' reporting on the SFDRR and PoA)

that their disaster risk reduction strategies are fully implemented (interventions exist that address all the objectives/priority areas of the strategy/plan). 77.27% indicated that their policies and strategies have been partially implemented and 18.18% reported no implementation at all.

From Table 13 it is clear that most African countries have made significant progress over the past decade in institutionalising disaster risk reduction in their national structures through policies and legislation. A number of international cooperating partners such as the WB, EU, AfDB, UNDRR, UNDP, GFDRR, IFRC, WFP, USAID and FAO (to name but a few) have greatly contributed towards supporting MS to develop these policies and strategies.

Kenya has fully institutionalised DRR in the country with National Disaster Operations Centre (NDOC) fully dedicated to coordinate all aspects of disaster prevention, mitigation, preparedness and response in the country. It has a vibrant multi stakeholder national DRR platform that meets quarterly to share experiences and lessons on various DRR aspects. The DRR platform annually conducts a National DRR Symposium, which runs back-to-back with the IDRR day in the month of October. The various stakeholders are involved to show case their innovations and experiences and topical papers are presented relevant to the year's theme. Planning for the two events starts back in July to search for key speakers, solicit for relevant presentations and resources to fund the symposium and the IDRR day.

Table 13: Member States' progress: SFDRR Target E (2018)

Aspect	Yes
Does your country have a national DRR/DRM policy or legislation?	88.24%
Does your country have a national DRR Strategy/Plan?	64.71%
Does your country have legislation/policies that seek to address the global and continental DRR target to reduce disaster mortality?	79.41%
Does your country have legislation/policies that seek to address the global and continental DRR target to reduce the number of people affected by disasters?	80%
Does your country have legislation/policies that seek to address the global and continental DRR target to incorporate DRR in the country's educational systems at all levels?	74.29%
Does your country have legislation/policies that seek to address the global and continental DRR target to reduce economic loss due to disasters?	64.71%
Does your country have legislation/policies that seek to address the global and continental DRR target to increase funding for DRR?	70.97%
Is there a government institution/s responsible for Disaster Risk Reduction/Disaster Risk management?	93.55%
Does your country have a national DRR/DRM Platform?	80.65%
Does your country have a parliamentary subcommittee dealing with DRR issues?	62.07%

(Source: Member States' reporting on the SFDRR and PoA)

Table 14: DRR Strategies in place

IGAD/EAC	UMA	SADC	ECOWAS	ECCAS
Burundi	Algeria	Angola	Benin	Cameroon
Djibouti	Libya	Botswana	Burkina Faso	CAR
Eritrea	Mauritania	Comoros	Cape Verde	Chad
Ethiopia	Morocco	DRC	Ivory Coast	Congo
Kenya	Tunisia	Eswatini	Gambia	Equatorial Guinea
Rwanda	Sahrawi Republic	Lesotho	Ghana	Gabon
Somalia		Madagascar	Guinea	São Tomé and Príncipe
South Sudan		Malawi	Guinea-Bissau	
Sudan		Mauritius	Liberia	
Tanzania		Mozambique	Mali	
Uganda		Namibia	Niger	
		Seychelles	Nigeria	
		South Africa	Senegal	
		Tanzania	Sierra Leone	
		Zambia	Togo	
		Zimbabwe		
Yes	No	No data		

(Source: Member States' reporting on the SFDRR and PoA)

Djibouti, DRC, Somalia, Sudan, Guinea-Bissau, Liberia, Niger, Senegal, Cameroon, Congo, Equatorial Guinea and Gabon do not currently have DRR strategies in place. At sub-national level a number of MS reported the existence of DRR strategies and plans. Most of the local level entities with DRR strategies in place are urban centres with rural municipalities lagging behind. On average 38% of sub-national entities in Africa have DRR strategies and plans in place.

Challenges reported on by MS are the lack of implementation of the national policies at national (cross-sectoral coordination and buy-in) and sub-

national level, as well as funding support for the implementation of the policies and strategies.

The AUC and appropriate RECs should make concerted efforts to support the MS who do not have national policies, laws and strategies for DRR in place yet, in order to achieve the 2020 target. It is recommended that funding tracking streams are created for tracking the funds which are allocated to DRR policy and strategy implementation at all spheres of government and that this is reported on annually.

Table 15: Reported sub-national DRR Strategies

Member State	Total number of local governments	Number of local governments with adopted strategies	% of local governments with adopted strategies
Benin	77	45	58%
Botswana	32	9	28%
Burkina Faso	421	41	10%
Chad	23	4	17%
Equatorial Guinea	8	0	0%
Eswatini	353	121	34%
Ghana	260	260	100%
Lesotho	80	17	21%
Liberia	15	7	47%
Madagascar	22	6	27%
Malawi	32	28	88%
Mali	69	69	100%
Mozambique	151	53	35%
Niger	255	225	88%
Seychelles	5	1	20%
Sierra Leone	16	10	63%
South Africa	52	52	100%
Togo	39	23	59%
Tunisia	350	17	5%
Zambia	107	12	11%
Zimbabwe	72	61	85%
Africa average (with current data)			38%

(Source: Member States' reporting on the SFDRR and PoA)

3.6 SFDRR Target F: Enhance international cooperation

SFDRR Target F aims to substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the SFDRR by 2030. MS reported an increase in international cooperation and funding. In the period 2015-2016 MS reported an average of 53% increase in such cooperation. Of specific importance is the role played by the World Bank, the EU as well as the Africa Development Bank in supporting MS. MS reported in a number of bi- and multi-lateral cooperation for DRR.

Burkina Faso highlighted the role and support by ECOWAS in capacity development for DRR. Mention was also made of the Global Environment Facility and its support towards the integration of disaster risk reduction and climate change adaptation aspects in the country. Benin reported on the inter-state cooperation in DRR which it has with Cameroon, Morocco and Togo. Cote d'Ivoire highlighted the cooperation and support by ECOWAS, UNDP, UNDRR, the World Bank and the EU, for information management, awareness creation and capacity development. Cape Verde reported on the project: "Building Capacities for Resilient Recovery - Phase 2 (2018-2022)" which is funded by the Government of Luxembourg and UNDP. The project is designed to improve recovery preparedness, support effective recovery management and promote building back better. Ghana highlighted the "Greater Accra Climate Resilient and Integrated Development Project" funded by the World Bank as well as the support

by GIZ in integration of risk transfer solutions into a holistic climate risk management approach for Ghana. The Norwegian Government also supports Ghana via funding and technical assistance. Liberia reported the involvement by the Japan International Cooperation Agency (JICA) which supports the four priority areas of the SFDRR and the PoA. JICA promotes the mainstreaming of DRR in every developmental project and support the development of a framework for DRR with other stakeholders. Sierra Leone is currently undergoing significant and profound changes in their national disaster risk management structures with the support of the World Bank, DFID and UNDP. Emphasis in this cooperation is placed on the creation of a new DRR Agency (draft Bill has already been developed), a recovery programme, multi-hazard assessment for resilient cities, compiling a national hazard profile, implementing schools programmes and ensuring public education.

An example of sub-national cooperation was given by Botswana. It has a capacity enhancement cooperation programme with the State of North Carolina in the USA. This programme not only enhances skills but also equipment for search and rescue and an Emergency Operations Centre. Eswatini has agreements with the Government of Taiwan which provides in-kind support, and a proposal to the World Bank is in negotiation phase. Malawi reported on a significant number of international cooperation initiatives. One such agreement is a trilateral cooperation between Peoples' Republic of China, Republic of Malawi and United Nations Development Programme that was in place from 2016 to 2017. This initiative involved an agreement to implement a small grants scheme on DRR to contribute to disaster risk reduction and recovery among communities. It also involved the mainstreaming of DRR into policies, development plans and programmes, and collecting and making data and knowledge on the impact of natural disasters accessible to decision makers. The Seychelles highlighted the technical assistance provided to them by the World Bank for the development of the National Integrated Emergency Management Plan. Various cooperation with regional bodies were also recorded such as the Regional Vulnerability Assessment and Analysis programme of SADC which has assisted greatly in sub-national integration of vulnerability measures into development planning.

With the SADC region, the Southern Africa Society for Disaster Reduction (SASDiR – see www.sadir.org) was established in 2010. This Society is a community of practise in DRR and brings together civil society, governments and academia through a biennial conference. SASDiR also publishes the first and only internationally accredited academic journal in DRR (Jámbà: Journal of Disaster Risk Studies – see www.jamba.org.za) on the African continent with direct financial support by the South African National Disaster Management Centre.

Algeria has developed several international cooperation agreements in DRR, mainly in capacity building, with UNDP, France, Italy, Japan, and China. Morocco developed international relations with JICA (Japan), Switzerland, as well as the OECD, while Tunisia has cooperation with UNDRR, UNDP, and EU (DG ECHO) in order to develop their national strategy on DRR and the plan of action. This cooperation also focusses on implementing local strategies for DRR at the municipalities of Ain Drahem and Tataouine (ongoing pilot projects). Furthermore, French-Tunisian cooperation between the Civil Protection (ONPC) and Priority Solidarity Fund (PSF), which has funded the development of the national analysis, exists.

It is clear from the brief analysis above that significant bi- and multi-lateral cooperation for DRR exists on the continent. However, cooperation can also be problematic. Some of the challenges mentioned by MS is that funding comes with certain conditions from the donors. Such conditions do not always fully align with the national priorities, and MS reported that they need to adhere to these conditions if funding is to be secured. MS highlighted the need for continued cooperation but felt that this Target can have a negative focus in assuming that developing countries are always in need of assistance. Emphasis was placed on the existence of local technical skills which can be much better utilised if funding is available. A distinction should thus be drawn between monetary and technical assistance.

3.7 SFDRR Target G: Increase the availability of and access to multi-hazard early warning systems

In achieving Target G, MS will substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030. 82,35% of MS reported that they have some form of multi-hazard early warning system(s) in place. Challenges identified relate to the lack of systems integration, multiple early warning systems at various levels which are not coordinated, and national sovereignty issues in relation to cross-border early warnings and systems. In general, the amount of early warning systems has increased since 2015. Member States' meteorological and hydrological services seem to be the greatest sources of early warning information. Regions like IGAD and EAC have the IGAD Climate

The IFRC, in collaboration with national societies and other partners, is currently pioneering a Forecast Based Financing project across a number of IGAD and EAC member states as a mechanism to forecast early humanitarian action. The forecast-based action attempts to utilize weather forecasts to enhance preparedness measures and thus reduce the humanitarian impact of natural hazards particularly on vulnerable populations. This is because there is increasingly high precision in predicting natural hazards such as floods and drought through effective people-centered early warning systems. A humanitarian action is then activated based on triggers when they have exceeded a certain threshold level. This requires prepositioning adequate resources and funds to support early action and thus reduce the suffering of the vulnerable populations. Ultimately, the cost of the interventions is much lower and the consequences of the disaster is reduced.

Prediction and Application Centre (ICPAC) which is advanced on issuance of weather and climate early warning. The Southern African Regional Climate Outlook Forum (SARCOF) is coordinated by the Southern African Development Community (SADC) Climate Services Centre (CSC) in Gaborone, Botswana. The SADC Climate Services Centre provides operational, regional services for monitoring and predicting extremes in climate conditions. The Centre develops and disseminates meteorological, environmental and hydro-meteorological products. The Centre's products contribute to improved disaster risk management in the region, and help to ensure Member States are better prepared for weather and climate disasters, conservation and protection of natural resources. The African Centre of Meteorological Application for Development (ACMAD) continue to support Member States with meteorological data and warnings. Very little coordination and integration of early warning information between the various centres and agencies was reported on. It is suggested that the AUC, through the RECs, implement measures aimed at better use and integration of early warning systems. Data on the accessibility of these systems by the broader public is limited. Communication processes must be put in place to adequately communicate early warning information to those most in need of such information.

MS reported an increase in the development and implementation of Multi-Hazard Early Warning Systems (MHEWS). Most MS reported on the existence of two or more of such systems. These systems are, however, very much sector specific (see the example of the SADC region below). Concerns were raised on the lack of integration of such systems, and most MS believe that RECs need to play a more leading role in ensuring synergies in MHEWS

and regional warnings. IGAD reported progress in the development of a regional MHEWS which might be operational before 2021. Furthermore, the IGAD region undertakes hazard and risk assessment using GIS and Earth Observation, and training for early warning is provided. Forecast-based early warning has been implemented in the region since 2014 when the IGAD DRM unit was moved to Kenya.

Table 16: Early warning systems in SADC

Member State	Early warning systems in place	Existing (before 2016)	Focus	Number of people covered by multi-hazard EWS (G-3)
Angola	Yes	Yes	In Cuvelai Baciun, in Cavaco River, Coporolo River and Catumbela River	9.535
Botswana	SMS Mass Communication Early Warning	Since 2012	Multi-hazard	Whole population 1.2 Million
	Severe Weather & Flood Warning	Since 2016	Multi-hazard	Whole population 1.2 Million
Congo Dem. Republic	Volcanological Observatory of Goma (Ovg), Seismological Center of Lwiro,	Yes	N/A	N/A
	National Institute for Biomedical Research (Inrb)	Yes	N/A	N/A
	Disease Management Branch (Ministry of Health)	Yes	N/A	N/A
	Humanitarian Watch (Ministries of Humanitarian Action) Metsatt	Yes	N/A	N/A
Eswatini	Meteorology	Before 2016	Multi-hazard	Nationally
	Geology	Before 2016	Single hazard	Nationally
	Department of Water Affairs	Before 2016	Single hazard	Nationally
	Eswatini National Trust Commission	Before 2016	Single hazard	Nationally
	Ministry of Health	Before 2016	Multi-hazard (epidemics)	Nationally
Lesotho	Global information and Early warning system	December 2017	Single hazard	1,800,000
	Climate risk analysis and EWS IMS	2015	Multi hazard	-
	Lesotho Meteorological services	Before 2016	Multi hazard	1,800,000
Madagascar	Cyclone early warning system	2016	Cyclone	3 750 000
	Flood prevision and warning system	2017	Flood	1 021 000
Malawi	National Early Warning System (Hydro-Met & Geological EWS)	On-going	MHEWS (Floods, Drought, Dry spells, Fall Army Worms, etc)	Whole country
	Community Based Early Warning System	On-going	Floods & drought	Varies from one community to the other
Mozambique	Community sensors	Before 2016	Flood	-
	Hydrometrical Scale Before 2016		Flood	-
	Datawiner	Before 2016	Multi hazard	-
	Electric siren	Since 2017	Multi-hazard	-

Member State	Early warning systems in place	Existing (before 2016)	Focus	Number of people covered by multi-hazard EWS (G-3)
Namibia	Meteorological Services	Before 2016	Multi hazard	-
	Hydrological Services	Before 2016	Multi hazard	-
	Vulnerability assessment and analysis	Before 2016	Multi hazard	-
	Food security reports	Before 2016	Multi hazard	-
South Africa	Impact based EWS (SW Weather Service and NDMC)	Existing but improved on in the last 3 years	Single hazard Impact driven Indicate mitigation measures	Covers 9 provincial DM entities but limited to sectors within it.
	National communication television coverage during day by all national channels	Existing but improved on in the last 3 years	Single hazard Impact driven Indicate mitigation measures	Covers 9 provincial DM entities but limited to sectors within it.
	Local radio	Existing but improved on in the last 3 years	Single hazard Impact driven Indicate mitigation measures	Covers 9 provincial DM entities but limited to sectors within it.
	Ward level communication paths (councillors and traditional leaders)	Existing but improved on in the last 3 years	Single hazard Impact driven Indicate mitigation measures	Covers 9 provincial DM entities but limited to sectors within it.
Zambia	SMS Alert System sent through Mobile Service Providers	Before 2016	Multi-hazard covering floods, Fall Army Worms and Epidemics	National
	Flood Early warning System (EWS)	2018	Single hazard - Floods	District
	Community Radio Stations	Before 2016	Multi-hazard	Targets specific communities
	Surveillance systems on epidemics	Before 2016	Single hazard based on the sector	National
	National Meteorological Seasonal Forecast	Before 2016	Multi-hazard covering hydro-met hazards	National
	Food and Nutrition Security Early Warning System	Before 2016	Food and Nutritional insecurity Famine	National
Zimbabwe	Civil Protection Organisation National Early Warning System	Yes	Multi-hazard (Cyclones, Floods, storms, Epidemic Diseases)	National (10 provinces and 72 districts)

There does not seem to be significant progress on this Target over the periods in question and most MS reported on existing EWS which have been in place prior to 2015. The main challenge on this indicator is that most MS have a number of single hazard focussed warning systems, with very little integration. Poor coordination at national and regional level hinders effective MHEWS. The lack of meteorological data capture platforms or networks

could also contribute to less effective EWS. Weather and climate forecasts in Africa are produced on a data-scarce environment, hence resulting in biased early warnings. It is recommended that RECs play a much more leading role in promoting, assisting and enhancing regional MHEWS among MS, taking cognisance of the necessity of sovereign national warnings.

CHAPTER 4

Progress on POA Targets

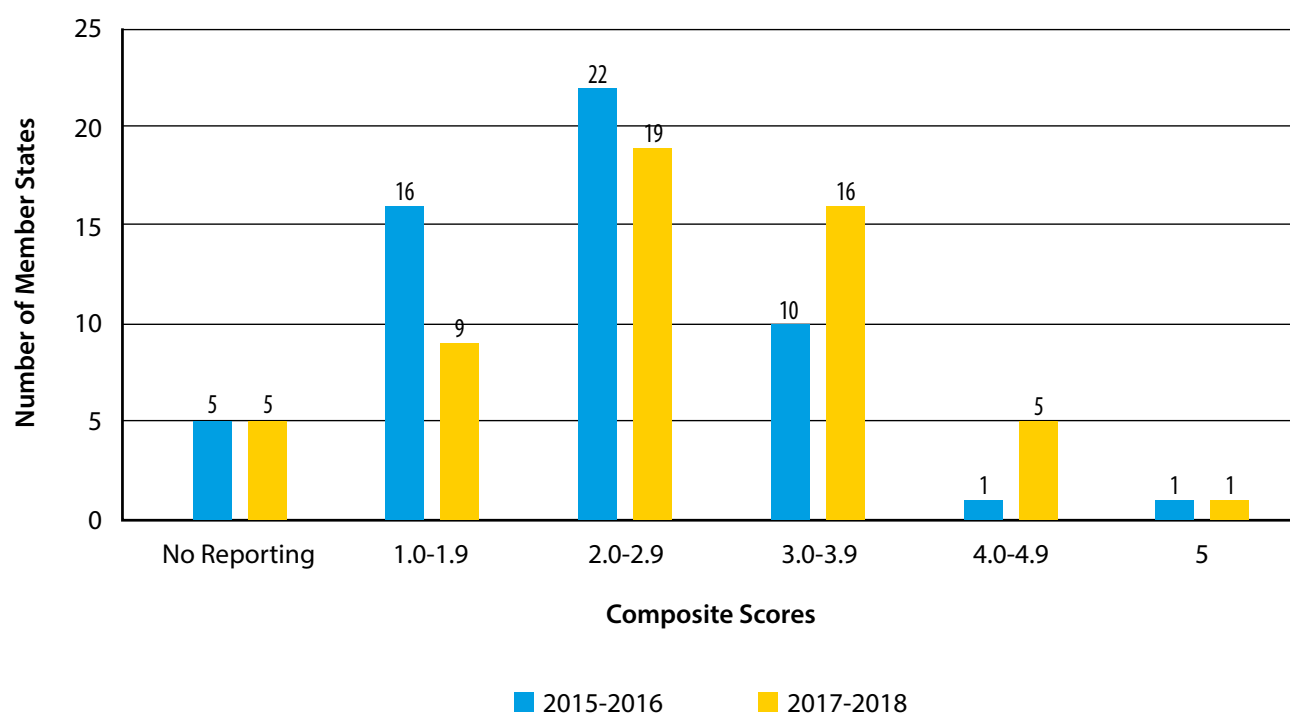
Introduction

In addition to the seven SFDRR Targets the PoA calls for the measurement of an additional five targets unique to Africa. These Targets are measured according to the MRF and the sections that follow use the variables to report on the progress made by Member States. To ease in comparison and overall progress, an Africa PoA Dashboard was developed which uses an averaged combination of the Target scores to derive at a 2015/6 and 2017/8 score.

Africa PoA Dashboard

The Africa PoA Dashboard represents the overall progress made by Member States against the PoA. The variables are linked to a 5-point Likert scale (1 meaning no to little progress, and 5 meaning comprehensive progress), as per the requirements of the MRF. These were in turn colour coded for easy and visual reference. These colours are used throughout this report (in tables and maps) to facilitate reference, understanding and comparison.

Figure 9: Member States' Composite PoA Dashboard Scores (2015-2018)



(Source: Member States' reporting on the SFDRR and PoA)

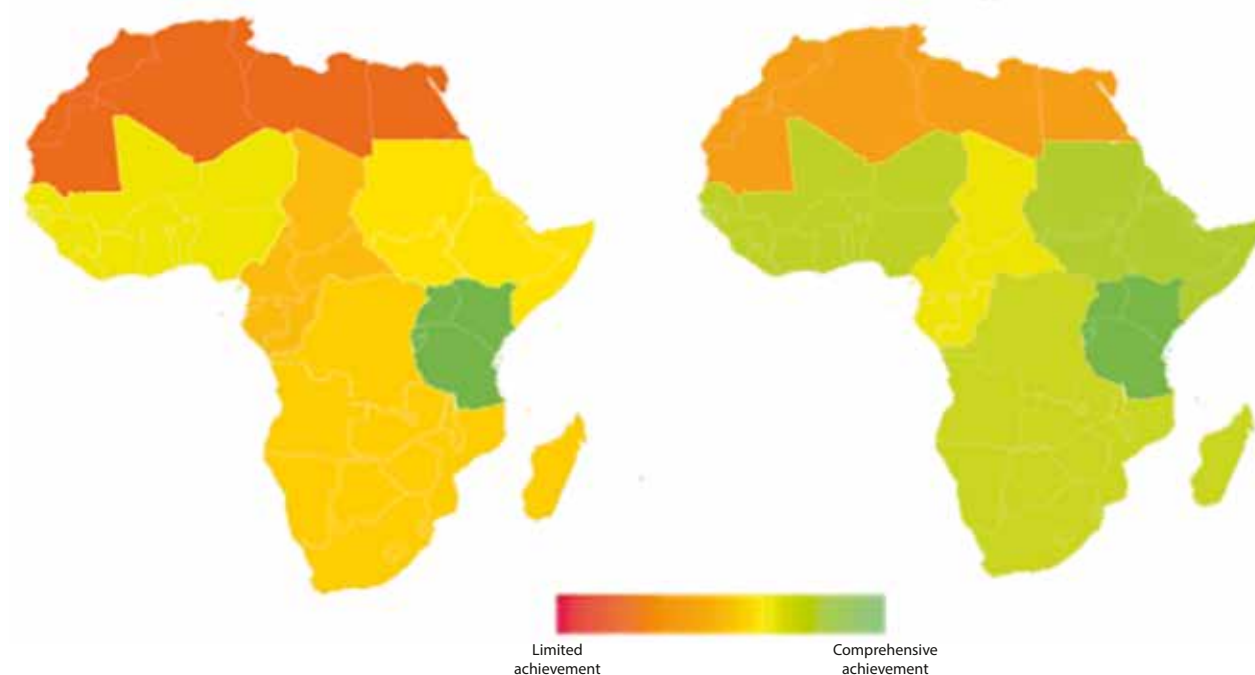
Results on the PoA indicators are represented in Table 17 below. In most instances the reporting on an indicator consists of a number of variables which have been normalised according to the Proposed Criteria for Assessing Indicators in the MRF (see Annexure A). The aggregated scores of the two periods form the basis for comparison. Where no data were reported, a grey colour indicating “n/a” was used. A total of 13 variables linked to the PoA Targets were used. All of these indicators use the 5-point rating scale above and thus scores could be averaged across regions and the continent.

Map 4 shows an overall comparison between the periods 2015-2016 and 2017-2018 linked to the various RECs (average scores of all MS per REC). All of the data reported on by the various MS were averaged and linked to their specific REC. Egypt and the Saharawi Republic were linked to the North

Africa region for comparison purposes. Where MS are members of more than one REC, the scores were incorporated in both RECs. From the map it is evident that in general all of the RECs are making progress in achieving the PoA Targets.

Table 17 provides a quick reference “dashboard” of each member state linked to the two reporting periods. MS with no data are indicated in grey. From the dashboard it is clear that the majority of all AU MS are making progress towards the implementation of the PoA targets, with the exception of very few. Congo, Guinea and Sao Tome and Principe showed regression. Angola, Gabon, Ghana, Mali, Mauritania, Morocco, Namibia, and Somalia, reported no further overall progress, however this does not mean no progress has been made on all indicators. Rwanda reported that they have comprehensively reached all of the PoA Targets.

Map 4: Comparative REC achievement of SFDRR and PoA



(Source: Member States’ reporting on the SFDRR and PoA)

Table 17: Member States' SFDRR and PoA Dashboard

Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cabo Verde	CAF	Chad	Comoros
3,4	1,1	2,7	2,3	2,0	2,4	2,9	n/a	1,6	1,3	1,2
4,4	1,1	3,4	2,7	2,4	3,1	3,1	n/a	2,9	3,3	1,6
Congo	DRC	Cote d'Ivoire	Djibouti	Equatorial Guinea	Egypt	Eritrea	Eswatini	Ethiopia	Gabon	Gambia
2,1	1,8	n/a	1,6	1	1,9	n/a	1,8	2,4	3	2,2
1,4	2,2	n/a	2,6	1,2	3,6	n/a	2,2	2,4	3	2,6
Ghana	Guinea	Guinea-Bissau	Kenya	Lesotho	Liberia	Libya	Madagascar	Malawi	Mali	Mauritania
4	1,6	2,5	3,7	2,4	1,9	n/a	1,8	3,8	3	1
4	1,5	2,5	4	3,9	2,9	n/a	2,7	4,1	3	1
Mauritius	Morocco	Mozambique	Namibia	Niger	Nigeria	Rwanda	Saharawi Arab Democratic Republic	Sao Tome and Principe	Senegal	Seychelles
2	1	2,4	2,7	2,1	2,1	5	n/a	2,3	2	2
3,4	1	3,4	2,7	2,2	2,2	5	n/a	1,9	2,4	2,5
Sierra Leone	Somalia	South Africa	South Sudan	Sudan	Tanzania	Togo	Tunisia	Uganda	Zambia	Zimbabwe
2,9	1,2	3,7	1,6	3,2	3,4	2,2	2,1	2,1	3,7	3,2
3,6	1,2	3,8	2,1	4,1	3,8	2,8	2,8	3,4	3,8	3,3

4.1 PoA Additional Target 1: Increase the number of countries with DRR in their educational systems at all levels

MS have made significant progress in including DRR in Education Systems at all levels. For both primary and secondary level all MS have made moderate to substantial progress. Most progress has been made at tertiary education level where MS reported substantial achievement of the target. In general, the uptake of DRR within primary and secondary school curriculum has been limited. More attention has been given to tertiary level education and then also more at post-graduate level than undergraduate. This is largely due to the current need within the market as well as the nature of disaster risk studies. Disaster Risk Sciences is largely seen as a trans-disciplinary issue which is

The main challenge is the integration of DRR within the primary and secondary sector. MS mentioned that some of the constraints include lack of knowledge by educators on DRR issues, an oversubscribed curriculum and the lesser priority given to DRR issues. MS with DRR education as a specific focus in their national policy and/or legislation recorded better progress than others, for instance Egypt, Gabon, Kenya, Malawi, Mali, Nigeria, Rwanda, Sierra Leone, Tanzania and Uganda.

An UNICEF project is currently focussing on developing capacities in Mozambique, Malawi and Zimbabwe for the mainstreaming of DRR in primary curriculum. The IGAD region has developed a strategy for DRR mainstreaming in education curriculum which is currently being implemented.

Table 18: DRR integrated in all curriculum (2015-2018)

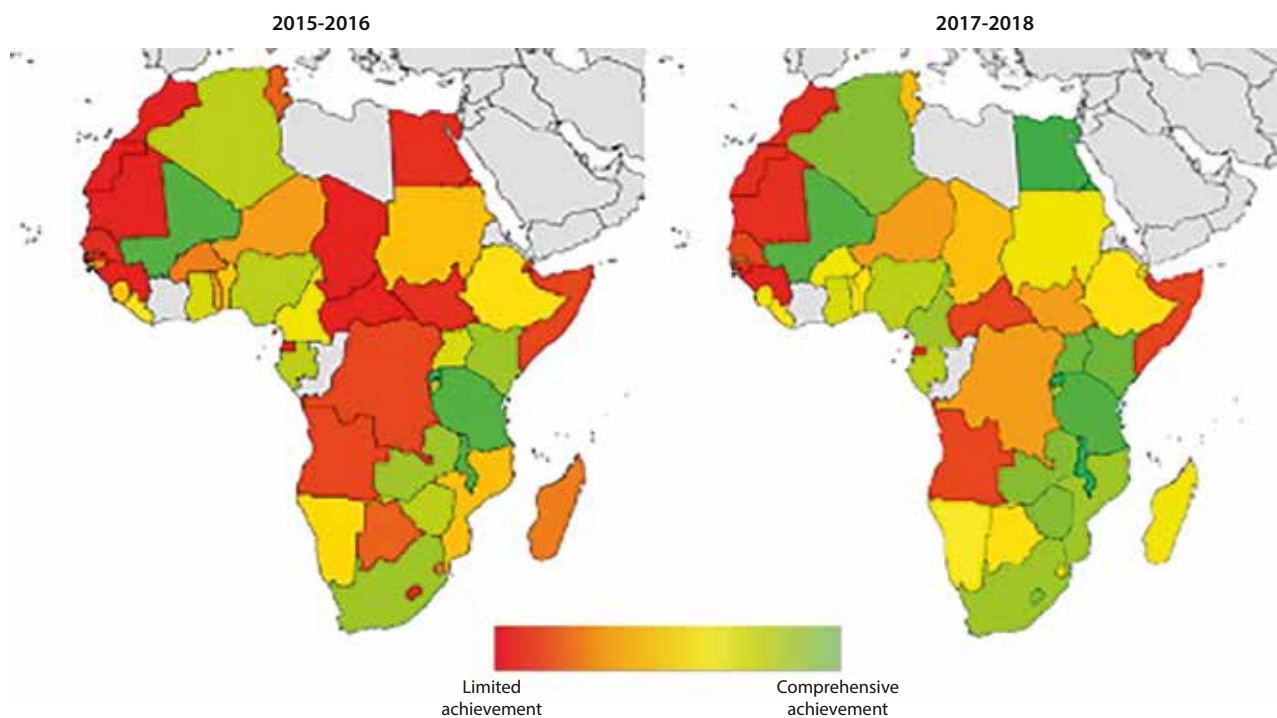
REC	DRR in primary education		DRR in secondary education		DRR in tertiary education		DRR in professional courses		Country index	
	2015-2016	2017-2018	2015-2016	2017-2018	2015-2016	2017-2018	2015-2016	2017-2018	2015-2016	2017-2018
EAC	3.8	4.3	3.8	4.3	4.5	4.8	4.5	4.8	4.1	4.5
ECCAS	2.3	2.5	2.2	2.5	2.5	2.8	2.3	2.7	2.3	2.7
ECOWAS	2.4	2.5	2.1	2.3	2.2	2.8	3.2	3.1	2.5	2.7
IGAD	2.2	2.6	1.8	2.2	3.6	4.0	3.4	3.8	2.8	3.2
SADC	2.1	2.9	2.2	2.6	3.4	3.9	2.9	3.6	2.7	3.3
North Africa	1.0	2.0	1.0	1.3	1.7	1.7	1.3	1.7	1.3	1.7
Africa	2.3	2.8	2.2	2.5	3.0	3.3	2.9	3.3	2.6	3.0

(Source: Member States' reporting on the SFDRR and PoA)

best taught within a postgraduate environment. However, quite a number of undergraduate courses are present on the continent. There is, however, a need for Member State and institutions to focus more on DRR education at the lower education levels which can have a greater impact on saving lives and livelihoods.

More concerted effort is needed in all regions to engage MS for the inclusion of DRR specifically in primary and secondary education. The current model of implementation is piecemeal and haphazard focussing too much on very specific local level gains. DRR integration at primary and secondary school level can only be effective if it is driven by a top-down approach through the various Departments of Education in MS. It is recommended that international cooperating partners engage MS at national levels to facilitate integration across scales and ensue national roll-out for maximum gains.

Map 5: DRR integrated in all curriculum (2015-2018)



(Source: Member States' reporting on the SFDRR and PoA)

4.2 PoA Additional Target 2: Increase integration of DRR in regional and national sustainable development, and climate change adaptation frameworks, mechanisms and processes

MS have made moderate to substantial progress in integrating DRR, development and climate change plans. The south, western and eastern regions have made the most progress. There has been improvement in integrating DRR into environmental policies, insurance sector and other development frameworks and processes by the member states. Notable progress by Ghana and Mali in integrating DRR in environmental policies and frameworks including CCA while Ghana, Guinea Bissau and Sierra Leone have excelled in integrating DRR into financial instruments in the ECOWAS region. Insurance sector is the most challenging in considering DRR in their activities, with most countries indicating little or no progress.

For the past 10 years a fair amount of capacity development in this arena has been taking place in

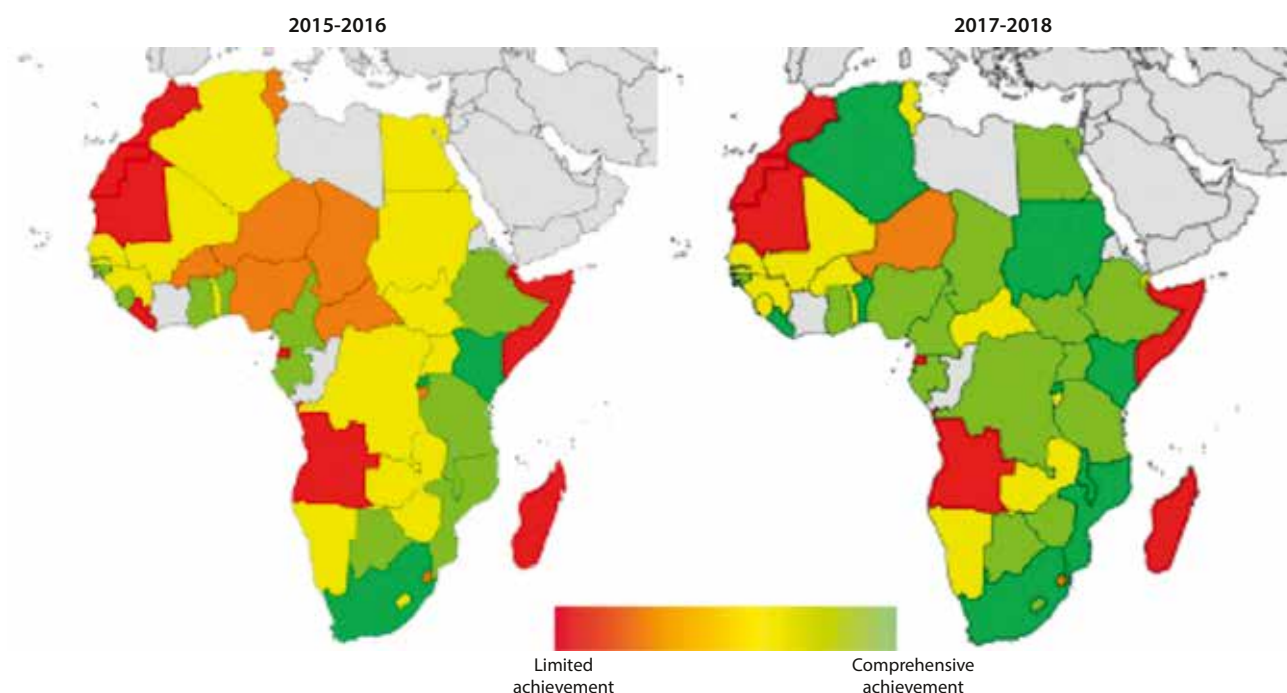
Table 19: DRR, sustainable development and climate change integration

DRR, SD, CC integration		
REC	2015-2016	2017-2018
EAC	1.6	2.4
ECCAS	1.8	2.8
ECOWAS	2.8	3.5
IGAD	2.7	3.2
SADC	2.8	3.7
North Africa	1.3	1.7
Africa	2.2	2.9

(Source: Member States' reporting on the SFDRR and PoA)

the SADC region. It is evident from the research that more of the SADC MS are ensuring the inclusion of DRR in environmental policies and vice versa. The average of the SADC region has moved from "limited achievement" to "moderate achievement" for DRR in environmental related policies and strategies (such as land use and natural resources management).

Map 6: DRR in sustainable development and climate change strategies



(Source: Member States' reporting on the SFDRR and PoA)

In the UMA region, Tunisia has forward looking legislation/policies that is addressing the global and continental DRR target to integrate DRR in national sustainable development and climate change adaptation frameworks, mechanisms and processes. Furthermore, the National Strategy for Climate Change (2012), the National Strategy for Sustainable Development (2014) and specific regulatory texts are integrating DRR in all these domains.

Although MS have recorded progress in the integration of climate change, sustainable development and disaster risk reduction, national structures are hindering optimal integration. It is common cause that climate change adaptation and disaster risk reduction are still being managed by different ministries and departments with very little integration. Where this integration is present it is

mostly in text and little in implementation. MS and RECs must aim towards finding better integration for application purposes.

4.3 PoA Additional Target 3: Expand the scope and increase the number of sources for domestic financing in DRR

MS have significantly under-reported on the number of sources for domestic financing in DRR. This is mostly due to the fact that funding is spread across various sectors and spheres of government. MS indicated that this Target is not well defined which makes obtaining data problematic. However, a number of MS reported on the number of such domestic funding. It is thus clear that slow, but steady progress is being made in this Target.

Table 20: Number of domestically funded DRR programmes

Country	2015	2018
Angola	17	7
Botswana	2	2
Cameroon	1	6
Central African Republic	30	20
Chad	1	2
Congo	25	70
Gabon	4	3
Gambia	1	15
Ghana	0	20
Kenya	1	3
Lesotho	2	4
Liberia	0	1
Malawi	6	13
Mali	45% were domestically funded	0
Mozambique	2	8
Senegal	0	0
Tanzania	10% were domestically funded	75% were domestically funded
Uganda	2	1
Zimbabwe	2	1

(Source: Member States' reporting on the SFDRR and PoA)

The information on the percentage of allocation and disbursement of funds for DRR is generally very complex to obtain from the administration, because projects or activities are managed at various levels in MS but not detailed to DRR. The data concerning DRR programmes are not generally recorded separately but integrated in the cost of the overall projects. It is recommended that MS establish mechanisms for tracking domestically funded DRR projects. Much better local-national reporting is thus needed.

4.4 PoA Additional Target 4: Increase the number of countries with, and periodically testing, risk-informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms

Most MS reported on the existence of preparedness and recovery plans. There has been an increase in plans especially in south and eastern regions.

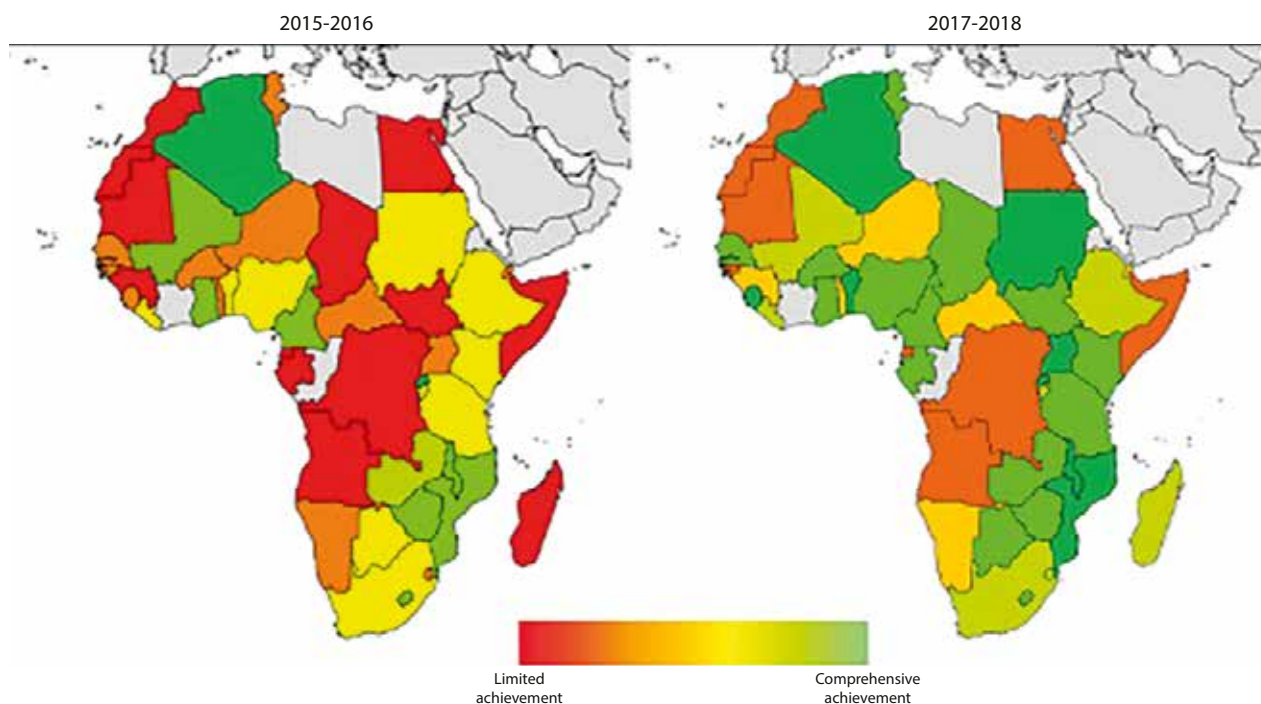
Table 21: Existence of disaster preparedness plans and contingency plans and regularly tested

RECs	2015-2016	2017-2018
EAC	3.6	4.2
ECCAS	2	3
ECOWAS	2.9	3.3
IGAD	2.8	3.3
SADC	3.1	3.6
North Africa	1.7	2

(Source: Member States' reporting on the SFDRR and PoA)

In general, the SADC region showed mentionable progress in risk-informed preparedness planning. However, some of the Member States have not shown any progress over the last four years. Comoros, the DRC, Madagascar and Zambia specifically reported no progress on this target. Malawi and Tanzania have made the most progress with substantial progress, but no further progress, reported by Botswana, Seychelles and Zimbabwe. ECOWAS member states made progress in implementing risk-sensitive disaster preparedness plans over the 2015-2018 period. Data gathered from the member states indicates that Benin and Sierra Leona have comprehensive risk-informed disaster preparedness plans in the region. Guinea Bissau has made no progress towards developing these plans while Guinea, Niger and Togo indicate limited achievement.

Map 7: Risk-informed preparedness plans and response mechanisms



(Source: Member States' reporting on the SFDRR and PoA)

4.5 PoA Additional Target 5: Increase the number of regional networks and partnerships for knowledge management and capacity development

Significant progress has been made in establishing regional networks for knowledge management and capacity development. From reporting the research/academic sector being the most active. Examples cited include the growth in the Southern Africa Society for Disaster Reduction (SASDiR), Global Network of Civil Society Organisations for Disaster Reduction (GNDR), and Peri Peri U Network. MS also reported on cooperation among MS especially the meteorological sector. The specific partnerships enjoy more attention in the regional reports. The

SADC region reported increase knowledge for DRR that has been facilitated in the region through the development of a knowledge sharing platform (the DRR Knowledge Shop – www.drrknowledge.co.za funded by USAID and developed by North-west University, South Africa). In addition, free on-line training is being piloted on an introductory course on DRR for the benefit of governments' institutions, non-governmental organisations and community-based organizations. This is also currently hosted by the African Centre for Disaster Studies at the North-West University in South Africa. SADC is also in the process of developing an on-line knowledge and information management system and peer review system for engagement and knowledge sharing.

Challenges

The report identified a number of challenges relating to the reporting on the SFDRR by Member States. Most significantly, Member States, find it difficult to generate and report disaster losses and other data. Such losses are recorded across sectors with very little coordination. Although Member States are committed to DRR funding, the multi-sectoral nature

makes reporting very problematic (money in sectors). There is still inadequate technical expertise (in DRR) and institutional weaknesses in data management, especially within national DRR structures. There is severely limited and weak reporting on the Sendai Framework Monitor, and the use of DesInventar as a very useful tool is lacking.

Recommendations

Preliminary recommendations from the report conclude that the AUC through the RECs should encourage regular reporting on the SFDRR utilising the Sendai Framework Monitor by Member States. Member States should record disaster events and losses through DesInventar, EM-DAT and other regional databases. RECs should aim to play a better coordinating role in data recording and reporting. Member States in turn must ensure timely and comprehensive reporting on a biennial basis. To this end a standardised tool for reporting the PoA targets should be developed which can be used and updated on a regular basis. Furthermore, the UNDRR should work more closely with AUC to coordinate data collection and sharing.

The following recommendations can be made:

- Member States must make significant efforts to use the existing Sendai Framework Monitor as well as DesInventar as tools for continued reporting and capturing of data. The use of these systems will eliminate double reporting and contribute to much better data management and reporting.
- Member States with the assistance of the RECs' DRR Units must plan for a continued data collection and reporting process using the data capturing tools provided by UNDRR and supported by the AUC Monitoring and Reporting Framework.
- Member States must work towards strengthening their national DRR platforms for cross-sectoral reporting and coordination.
- Where not present, a designated SFDRR focal point must be appointed/designated by each Member State and this must be communicated to the RECs' DRR Unit and the AUC to ensure future continuity in reporting on the SFDRR and PoA.
- To achieve the envisioned biennial reporting on the SFDRR and PoA, Member States and the RECs' Secretariat must strive to establish a relationship with at least one research institution in the region (or nationally). The data relating to the Targets must be gathered and validated on an ongoing basis.
- Lessons from this research indicate that a comprehensive biennial report cannot be compiled at the end of each two-year term but should be a living document supported by institutional data repositories which are constantly updated. Universities/research centres in the region are ideally placed to fulfil this role.
- Significant financial and technical support is needed for national DRR structures to report on losses and DRR funding (Target C).
- One might need to consider compliance through legislative enforcement at national levels by including biennial reporting as a legislative requirement.
- Sector departments must be compelled to attend and work with National DRM Platforms for better coordination. This can be achieved through performance contracts and annual evaluations.
- Annual national level reporting on the SFDRR and PoA must be enforced and upscaled to REC level.
- Specific emphasis must be placed on ensuring disaggregated (gender, age, abilities etc) and meta data.
- Member States need to engage more with national research institutions for continued and annual data gathering and data management (e.g. implementing localised DesInventar databases).
- National DRM structures as well as the RECs' DRR Units must be strengthened with more HR and ICT skills and infrastructure.
- The RECs' DRR Unit need to play a leading role in coordinating regional reporting on the SFDRR and the PoA.
- Periodic face-to-face working sessions of Member States DRR Technical officers to consolidate and report on progress across all the PoA targets.
- DRR Units must utilise Parliamentary Committees to ensure cross-sectoral cooperation in reporting.
- Member States must engage the media to communicate the results of the biennial reporting to ensure stakeholder engagement.
- The next cycle of biennial reporting must start no later than the last quarter of 2020 and should be spearheaded by the RECs and AUC.

ANNEXURE A

Indicator Assessment Criteria as per the MRF (Appendix 2: Assessment Criteria for Each of The Indicators in The Matrix)

PoA Additional Target 1: Substantially increase the number of countries with DRR in their educational systems at all levels, as both stand-alone curriculum and integrated into different curricula

Indicator	Indicator Key Elements	Key Question(s)	Means of verification
1. Percentage of countries with DRR curricula in their educational systems at all levels		<ul style="list-style-type: none"> Is DRR included in the national educational curriculum? Is DRR included in primary level educational curriculum? Is DRR included in secondary level educational curriculum? Is DRR included in higher/tertiary level educational curriculum? Is DRR included in professional level educational curriculum? Does school curricula, education material and relevant trainings include risk reduction and recovery concepts and practices? 	Primary school curriculum Secondary school curriculum Higher/tertiary curriculum Professional DRR education programmes
	Disaster risk reduction elements included in primary education curricula		
	Disaster risk reduction elements included in secondary education curricula		
	Higher education training on disaster risk reduction (Disaster risk reduction incorporated into curricula - architects, planners, MDs, agriculture experts, engineers, environment and infrastructure, social workers, health workers, etc.)		
	Broader disaster risk reduction training programmes for institutional staff of country institutions conducted		

PoA Additional Target 1: Substantially increase the number of countries with DRR in their educational systems at all levels, as both stand-alone curriculum and integrated into different curricula

Sub Indicator	Level 1 No progress has been made and/ or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
1. 1 Disaster risk reduction elements included in primary education curricula	No progress in incorporating disaster risk reduction elements in primary education curricula and school-wide activities at primary level	Awareness of the need to incorporate disaster risk into primary level education curricula, but efforts not yet borne fruit. Other improvised and ad hoc efforts carried out	Incorporation of disaster risk into primary level education curricula in progress, but at a very early stage	Incorporation of disaster risk into primary level education curricula significantly advanced	Disaster risk fully incorporated, in cross-cutting fashion, throughout primary secondary education.
1. 2 Disaster risk reduction elements included in secondary education curricula	No progress in incorporating disaster risk reduction elements in secondary education curricula and school-wide activities at secondary level	Awareness of the need to incorporate disaster risk into secondary level education curricula, but efforts not yet borne fruit. Other improvised and ad hoc efforts carried out	Incorporation of disaster risk into secondary level education curricula in progress, but at a very early stage	Incorporation of disaster risk into secondary education level curricula significantly advanced	Disaster risk fully incorporated, in cross-cutting fashion, throughout secondary education.
1. 3 Higher/tertiary education training on disaster risk reduction (Disaster risk reduction incorporated into curricula - architects, planners, MDS, agriculture experts, engineers, environment and infrastructure, social workers, health workers, etc.)	No progress in incorporating disaster risk reduction in higher/tertiary education curricula and training	Awareness of the need to incorporate prevention and disaster risk in tertiary education curricula, but no result yet	Incorporation of DRR in higher/tertiary education institutions curricula in progress	Significant advances have taken place in the incorporation of DRR in higher/tertiary education curricula	Higher/tertiary education fully supports professionalization of and research in DRR
1. 4 Broader disaster risk reduction training programmes for institutional staff of country institutions conducted	No training programmes for building capacity in DRR for institutional stakeholders	Some staff training initiatives in DRR launched, but basically in disaster response alone	Limited processes underway to hire staff with experience in DRR issues, and some support available for training to strengthen institutional capacity	Advanced processes underway to hire staff with experience in DRR issues, and support available for training to strengthen institutional capacity	Training programmes on DRR for professionals and technicians promoted and conducted

PoA Additional Target 2: Increase integration of DRR in regional and national sustainable development, and climate change adaptation frameworks, mechanisms and processes

Indicator	Indicator Key Elements	Key Question(s)	Means of verification
2. Percentage of RECs with DRR integrated in regional sustainable development frameworks, mechanisms and processes		<ul style="list-style-type: none"> Is DRR included in regional and national sustainable development plans? Is DRR included in regional and national climate change adaptation frameworks, mechanisms and processes? Are the impacts of disaster risk that are created by major development projects assessed? Are cost/benefits of disaster risk taken into account in the design and operation of major development projects? 	<ul style="list-style-type: none"> Climate change adaptation projects and programmes, plans and implementation progress reports Programme development plans and implementation progress reports - Environment Impact Assessment (EIA) reports Project financing agreements
3. Percentage of countries with DRR integrated in national sustainable development frameworks, mechanisms and processes			
4. Percentage of RECs with DRR integrated in climate change adaptation frameworks, mechanisms and processes			
5. Percentage of countries with DRR integrated in climate change adaptation frameworks, mechanisms and processes			
	Disaster risk reduction is an integral objective of sustainable development related regional and national policies and plans, including for land use, natural resource management, environmental management		
	Regional and national climate change adaptation frameworks, mechanisms and processes include elements which address disaster risk reduction.		
	The insurance sector is actively participating in disaster risk reduction		
	Financial institutions have included DRR criteria for approval of project financing		

Sub Indicator	Level 1 No progress has been made and/or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
2.1 Disaster risk reduction is an integral objective of sustainable development related regional policies and plans, including for land use, natural resource management, environmental management	No progress in including disaster risk reduction elements in sustainable development-related regional policies and plans, including for land use, natural resource management, environmental management	Some progress in considering disaster risk reduction in sustainable development related regional policies and plans, including for land use, natural resource management, environmental management	Strong awareness on the relation between disaster risk reduction and sustainable development related regional policies and plans, including for land use, natural resource management, environmental management. Limited attempts to relate DRR issues in sustainable development-related regional and national policies and plans, including for land use, natural resource management, environmental management	Sustainable development related regional policies and plans, including for land use, natural resource management, environmental management include disaster risk reduction issues, but a broader consideration as a cross cutting theme needs to be implemented	DRR fully integrated in sustainable development related regional policies and plans, including for land use, natural resource management, environmental management as a cross cutting theme
2.2 The insurance sector is actively participating in disaster risk reduction	No system in the region or country for insurance against the risk of disasters, or not applied	Insurance policies incorporate some conditions of prevention related to certain assets or persons, but in a limited manner and without technical assessment of risk situations	Awareness for the establishment of such mechanisms by the inhabitants of areas at risk. Participation by the private sector in providing disaster related insurance is limited	Establishment of disaster risk insurance based on greater technical knowledge of the risks. Little knowledge or awareness on the part of some potential beneficiaries	Strong participation by insurance agencies in risk assessment, with systems developed for different geographical areas and economic sectors
2.3 Financial institutions have included DRR criteria for approval of project financing	Disaster prevention not among the criteria for approval of projects in geographical areas and economic sectors at risk	There is awareness among financial institutions of the need to incorporate risk assessment among their criteria for approval; however, there has been little concrete progress	Some financial firms incorporate elements of risk assessment in their criteria for approval, but not in an organized fashion. Instead, they may be acting out of environmental considerations that have been previously established	Disaster risk management is a requirement for financing development projects located in areas at risk. However, problems of implementation remain	Many financial institutions in the country have developed disaster risk assessment methodologies and regularly apply obligatory risk assessment criteria before approving the funding of projects

Indicator 3 Assessment Criteria

Sub Indicator	Level 1 No progress has been made and/ or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
3.1 Disaster risk reduction is an integral objective of sustainable development related national policies and plans, including for land use, natural resource management, environmental management	No progress in including disaster risk reduction elements in sustainable development-related national policies and plans, including for land use, natural resource management, environmental management	Some progress in considering disaster risk reduction in sustainable development related national policies and plans, including for land use, natural resource management, environmental management	Strong awareness on the relation between disaster risk reduction and sustainable development related national policies and plans, including for land use, natural resource management, environmental management Limited attempts to relate DRR issues in sustainable development-related regional and national policies and plans, including for land use, natural resource management, environmental management	sustainable development related national policies and plans, including for land use, natural resource management, environmental management include disaster risk reduction issues, but a broader consideration as a cross cutting theme needs to be implemented	DRR fully integrated in sustainable development related national policies and plans, including for land use, natural resource management, environmental management as a cross cutting theme
3.2 The insurance sector is actively participating in disaster risk reduction	No system in the region or country for insurance against the risk of disasters, or not applied	Insurance policies incorporate some conditions of prevention related to certain assets or persons, but in a limited manner and without technical assessment of risk situations	Awareness for the establishment of such mechanisms by the inhabitants of areas at risk. Participation by the private sector in providing disaster related insurance is limited	Establishment of disaster risk insurance based on greater technical knowledge of the risks. Little knowledge or awareness on the part of some potential beneficiaries	Strong participation by insurance agencies in risk assessment, with systems developed for different geographical areas and economic sectors
3.3 Financial institutions have included DRR criteria for approval of project financing	Disaster prevention not among the criteria for approval of projects in geographical areas and economic sectors at risk	There is awareness among financial institutions of the need to incorporate risk assessment among their criteria for approval; however, there has been little concrete progress	Some financial firms incorporate elements of risk assessment in their criteria for approval, but not in an organized fashion. Instead, they may be acting out of environmental considerations that have been previously established	Disaster risk management is a requirement for financing development projects located in areas at risk. However, problems of implementation remain	Many financial institutions in the country have developed disaster risk assessment methodologies and regularly apply obligatory risk assessment criteria before approving the funding of projects

Indicator	Level 1 No progress has been made and/or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
4.1 Regional climate change adaptation frameworks, mechanisms and processes include elements which address disaster risk reduction.	DRR not incorporated in regional climate change adaptation frameworks, mechanisms and processes	Limited attempts made to incorporate DRR in regional climate change adaptation frameworks, mechanisms and processes. Incorporating DRR in climate change adaptation frameworks, mechanisms and processes is still not legally compulsory	Strong attempts to incorporate DRR issues to regional climate change adaptation frameworks, mechanisms and processes. However, control mechanisms to ensure compliance still weak or lacking.	Regional climate change adaptation frameworks, mechanisms and processes include disaster risk reduction issues, but a broader consideration as a cross cutting theme needs to be implemented. Control mechanisms to ensure compliance in place and being strengthened.	DRR fully incorporated in regional climate change adaptation frameworks, mechanisms and processes. Control mechanisms to ensure compliance in place and functional.
4.2 The insurance sector is actively participating in disaster risk reduction	No system in the region or country for insurance against the risk of disasters, or not applied	Insurance policies incorporate some conditions of prevention related to certain assets or persons, but in a limited manner and without technical assessment of risk situations	Awareness for the establishment of such mechanisms by the inhabitants of areas at risk. Participation by the private sector in providing disaster related insurance is limited	Establishment of disaster risk insurance based on greater technical knowledge of the risks. Little awareness or awareness on the part of some potential beneficiaries	Strong participation by insurance agencies in risk assessment, with systems developed for different geographical areas and economic sectors
4.3 Financial institutions have included DRR criteria for approval of project financing	Disaster prevention not among the criteria for approval of projects in geographical areas and economic sectors at risk	There is awareness among financial institutions of the need to incorporate risk assessment among their criteria for approval; however, there has been little concrete progress	Some financial firms incorporate elements of risk assessment in their criteria for approval, but not in an organized fashion. Instead, they may be acting out of environmental considerations that have been previously established	Disaster risk management is a requirement for financing development projects located in areas at risk. However, problems of implementation remain	Many financial institutions in the country have developed disaster risk assessment methodologies and regularly apply obligatory risk assessment criteria before approving the funding of projects

Indicator 5 Assessment Criteria

Indicator	Level 1 No progress has been made and/ or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
5.1 National climate change adaptation frameworks, mechanisms and processes include elements which address disaster risk reduction.	DRR not incorporated in national climate change adaptation frameworks, mechanisms and processes	Limited attempts made to incorporate DRR in national climate change adaptation frameworks, mechanisms and processes. Incorporating DRR in climate change adaptation frameworks, mechanisms and processes is still not legally compulsory	Strong attempts to incorporate DRR issues to national climate change adaptation frameworks, mechanisms and processes. However, Control mechanisms to ensure compliance still weak or lacking.	National climate change adaptation frameworks, mechanisms and processes include disaster risk reduction issues, but a broader consideration as a cross cutting theme needs to be implemented. Control mechanisms to ensure compliance in place and being strengthened.	DRR fully incorporated in national climate change adaptation frameworks, mechanisms and processes. Control mechanisms to ensure compliance in place and functional.
5.2 The insurance sector is actively participating in disaster risk reduction	No system in the region or country for insurance against the risk of disasters, or not applied	Insurance policies incorporate some conditions of prevention related to certain assets or persons, but in a limited manner and without technical assessment of risk situations	Awareness for the establishment of such mechanisms by the inhabitants of areas at risk. Participation by the private sector in providing disaster related insurance is limited	Establishment of disaster risk insurance based on greater technical knowledge of the risks. Little knowledge or awareness on the part of some potential beneficiaries	Strong participation by insurance agencies in risk assessment, with systems developed for different geographical areas and economic sectors
5.3 Financial institutions have included DRR criteria for approval of project financing	Disaster prevention not among the criteria for approval of projects in geographical areas and economic sectors at risk	There is awareness among financial institutions of the need to incorporate risk assessment among their criteria for approval; however, there has been little concrete progress	Some financial firms incorporate elements of risk assessment in their criteria for approval, but not in an organized fashion. Instead, they may be acting out of environmental considerations that have been previously established	Disaster risk management is a requirement for financing development projects located in areas at risk. However, problems of implementation remain	Many financial institutions in the country have developed disaster risk assessment methodologies and regularly apply obligatory risk assessment criteria before approving the funding of projects

PoA Additional Target 3: Substantially expand the scope and increase the number of sources for domestic financing in DRR

Indicator	Indicator Key Elements	Key Question(s)	Means of verification
6. Total number of DRR programmes and activities domestically funded disaggregated by source – measuring increase in domestic sources for DRR financing		<ul style="list-style-type: none"> Is disaster risk taken into account in public and private investment and planning decisions? What is the ratio of the budget allocation to risk reduction versus disaster relief and reconstruction? Are financial arrangements in place to deal with major disaster? 	<ul style="list-style-type: none"> National DRR budget Decentralised or sub-national DRR budget National contingency and calamity funds Insurance and reinsurance facilities Catastrophe bonds and other capital market mechanisms
7. Total cost of DRR programmes and activities domestically funded disaggregated by type of intervention funded – measuring scope of domestic DRR financing			
8. Percentage country level allocation and disbursement of funds for DRR programmes and activities			
9. Percentage of total cost of DRR programmes and activities domestically funded			

PoA Additional Target 4: Increase the number of countries with, and periodically testing, risk-informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms

Indicator	Indicator Key Elements	Key Question(s)	Means of verification
10. Percentage of countries with risk informed preparedness plans, response, and postdisaster recovery and construction mechanisms		<ul style="list-style-type: none"> Are there national programmes or policies for disaster preparedness, contingency planning and response? Are future disaster risks anticipated through scenario development and aligned preparedness planning? Did you undertake simulation exercises to the Contingency Plan with relevant Partners? Are recovery plans in place? 	<ul style="list-style-type: none"> DRR incorporated in these programmes and policies The institutional mechanisms exist for the rapid mobilisation of resources in a disaster, utilising civil society and the private sector; in addition to public sector support. Training and mock drills for emergency preparedness Potential risk scenarios are developed taking into account climate change projections Preparedness plans are regularly updated based on future risk scenarios - simulation exercises are undertaken regularly
11. Percentage of countries periodically testing their preparedness plans, response and postdisaster recovery and reconstruction mechanisms			

Indicator	Indicator Key Elements	Key Question(s)	Means of verification
	All organizations, personnel and volunteers in the preparedness system possess the required technical capacity to carry out essential elements and tasks for effective disaster response		
	Independent assessment of disaster preparedness capacities and mechanisms have been undertaken and responsibility for implementation of recommendations assigned and resourced		
	Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes		

Indicator 10 Assessment Criteria

Indicator	Level 1 No progress has been made and/or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
10.1 Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes	No disaster preparedness plans and programmes elaborated for disaster prone areas	Some initiatives for elaborating and institutionalizing disaster preparedness plans and programme, but with poor technical quality and scarce institutional participation	Preparedness plans elaborated at some geographical levels, but only for response without considering risk reduction and relevant mitigation actions. No evaluation and update. No regular drills and rehearsals being done to test and develop disaster response programmes.	Disaster preparedness plans of good quality in different geographical levels and sectors elaborated, but not monitored or updated. Limited drills and rehearsals being done to test the plans.	Disaster preparedness plans elaborated at all levels with good technical quality, involving the participation of response and development bodies. Permanently evaluated and updated. Regular training drills and rehearsals are held to test and develop disaster response programmes.

Indicator 11 Assessment Criteria

Indicator	Level 1 No progress has been made and/or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
11.1 All organizations, personnel and volunteers in the preparedness system possess the required technical capacity to carry out essential elements and tasks for effective disaster response	No programme implemented for improving technical capacity to carry out essential elements and tasks for effective disaster response	Some isolated programmes with limited coverage implemented for improving technical capacity for effective disaster response	National and local efforts for improving technical capacity made through programmes covering a broad range of actors (personnel, volunteers and organizations), but not institutionalized	Relevant progress made for establishing and implementing technical capacity on preparedness oriented to a wide range of actors (organizations, personnel and volunteers), but efforts need to be made	Sufficient technical capacity of organizations, personnel and volunteers in the preparedness system for carrying out essential elements and task for effective disaster response
11.2 Independent Assessment of disaster preparedness capacities and mechanisms have been undertaken in the last 12 months and responsibility for implementation of recommendations assigned and resourced	No assessment undertaken on disaster preparedness capacities and mechanisms undertaken in the last 12 months	Some advances on assessment of disaster preparedness capacities and mechanisms undertaken in the last 12 months at some geographical levels, but no mechanisms and responsibilities established	Progress on assessment of disaster preparedness capacities and mechanisms achieved at national and some local levels in the last 12 months, but implementation limited due to lack of resources and coordination	Relevant progress in assessment of disaster preparedness capacities and mechanisms in the last 12 months and in the implementation of recommendations, but insufficient geographical coverage	Wide updated independent assessment of disaster preparedness capacities and mechanisms frequently executed in the last 12 months and recommendations implemented by responsible

PoA Additional Target 5 Substantially increase the number of regional networks or partnerships for knowledge management and capacity development, including specialized regional centres and networks

Indicator	Indicator Key Elements	Key Question(s)	Means of verification
12. Number of regional networks or partnerships for DRR knowledge management and capacity development		Are there regional networks or partnerships for DRR knowledge management and capacity development?	
13. Number of specialized DRR regional centres and networks established and operational	Network or partnerships for knowledge management and capacity development established and operational		
	Sub-regional specialized Centres for disaster risk reduction established as appropriate, with ownership and adequate resource allocation.		

Indicator 12 Assessment Criteria

Indicator	Level 1 No progress has been made and/ or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
12.1 Network or partnerships for DRR knowledge management and capacity development established and operational,	No regional networks or partnerships for DRR knowledge management and capacity development	Some initiatives for establishing regional networks or partnerships started, but still not yet developed.	Progress on establishment of regional networks or partnerships achieved, but implementation limited due to lack of resources and coordination.	Sufficient progress in establishing regional networks or partnerships achieved, but insufficient geographical coverage due to limited resources. Coverage and objectives of the regional networks or partnerships clearly defined.	Regional networks or partnerships for knowledge management and capacity development established and operational, including Sub-regional specialized Centres for disaster risk reduction as appropriate, with ownership and resource allocation.

Indicator 13 Assessment Criteria

Indicator	Level 1 No progress has been made and/ or progress has stopped or moved backwards	Level 2 Minor progress achieved in disaster risk reduction actions, with no systematic commitment	Level 3 Institutional commitment to reduction disaster risk, but no substantial progress	Level 4 Systematic commitment at policy level, but insufficient resource allocation	Level 5 Full achievement with sustained commitment
13.1 Sub-regional specialized Centres for disaster risk reduction established as appropriate, with ownership and adequate resource allocation.	No sub-regional specialized centres for disaster risk reduction	Some initiatives for establishing regional specialized sub-regional centres started, but still not yet developed.	Progress on establishment of regional specialized centres achieved, but implementation limited due to lack of resources and coordination.	Sufficient progress in establishing regional specialized centres achieved, but insufficient geographical coverage due to limited resources. Coverage and objectives of the regional specialized centres clearly defined	Regional specialized centres established and operational with adequate resource allocation. Ownership of the centres clearly defined.

References

- Africa Union. 2015. Programme of Action for the implementation of Sendai Framework for Disaster Risk Reduction 2015-2030 in Africa. Addis Ababa: AUC.
- Africa Union. 2018a. Monitoring and Reporting Framework of the Programme of Action for the implementation of Sendai Framework for Disaster Risk Reduction 2015-2030 in Africa. Addis Ababa: AUC.
- Africa Union. 2018b. Annual Report: Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities. Addis Ababa: AUC.
- Gebremedhin G.H., QiuHong T., Siao S., Zhongwei H., Xuejun Z., and Xingcai L. 2019. Droughts in East Africa: Causes, impacts and resilience. *Earth-Science Reviews*. 193: pp.146–161.
- Guha-Sapir D, Hoyois Ph., Wallemacq P., and Below. R. 2016. Annual Disaster Statistical Review 2016: The Numbers and Trends. Brussels: CRED.
- Masih, I., Maskey, S., Mussá, F.E.F., and Trambauer, P. 2014. A review of droughts on the African continent: a geospatial and long-term perspective. *Hydrol. Earth Syst. Sci.* 18: pp3635–3649.
- UNDRR. 2015. Sendai Framework for Disaster Risk Reduction 2015-2030. Geneva: United Nations Office for Disaster Risk Reduction (UNDRR).
- UNDRR. 2019. Global Assessment Report on Disaster Risk Reduction. Geneva: United Nations Office for Disaster Risk Reduction (UNDRR).
- World Economic Forum (WEF). 2019. The Global Risks Report 2019. 14th Edition. Geneva, WEF.