



Africa Science and Technology On Disaster Risk Reduction (Af-STAG DRR)



Dr. Rakiya Abdullahi Babamaaji **Vice Chair, Af-STAG DRR,**

Assistant Director/Head,

Natural Resources Management Division, Strategic Space Applications

National Space Research and Development Agency (NASRDA), Abuja, Nigeria

Member, United Nations Disaster Risk Reduction Global Risk Assessment Framework (UNDRR-GRAF), Steering Group

Table of Content

- Background
- Af-STAG Establishment
- Structure
- Purpose
- Mandate, Scope and Guiding Principles
- Function of Af-STAGs
- Roadmap
- The Role of Science & Technology in Disaster with respect to AI Application
- Conclusion



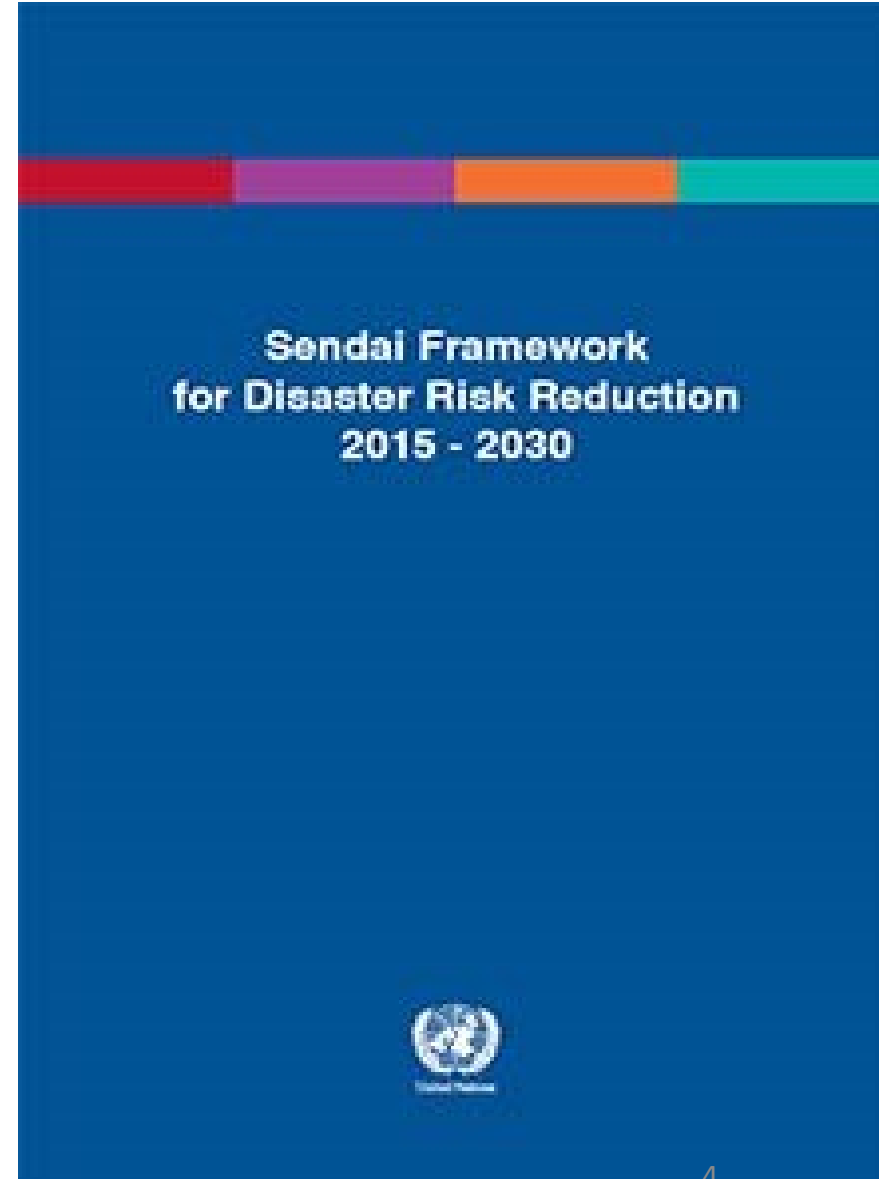
Background

- Globally, the significant role of science and technology was recognized since the proclamation of the International Decade for Natural Disaster Reduction (IDNDR, 1990–1999).
- The successive major international initiatives in DRR:
 - ❖ Hyogo Framework for Action 2005–2015
 - ❖ Sendai Framework for DRR 2015–2030
- In 2016, the UNDRR together with other partner organizations prepared a global roadmap to Support the Implementation of the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030.



Background Cont'd

- The importance of science, education, research, innovation and technology application is well documented in the Programme of Action (PoA) for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in Africa.
- And also, well reinforced by the Human Resources, Science and Technology Department (HRST) of the African Union Commission in October 2017, at the Periperi U Consultation meeting in Bahir Dar
- DRR in Africa has always been guided by the Africa Regional Strategy for Disaster Risk Reduction (ARSDRR), which was adopted by African Union (AU) Heads of State and Government in 2004.
- The African Union Heads of State and Government expressed their strong commitment to the implementation of the Sendai Framework and adopted the Africa PoA for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.



Af-STAG Establishment

The Africa Science and Technology Advisory Group (Af-STAG) was established in April 2019 with 15 Member in accordance with the key provisions in the PoA for the implementation of Sendai Framework (2015-2030) in Africa.

The role of the group is to provide scientific and technical support, as well as facilitate the technology transfer for the implementation of the PoA and to ensure effective implementation, follow up and review of the Sendai Framework and the PoA.

The African Union Commission's Department of Rural Economy and Agriculture is responsible to facilitate, among other tasks, the implementation of the mission assigned to the mechanisms by providing support and technical guidance



Structure

No	Surname	Given Names	Nationality
1	Mr. AYONGHE	Samuel Ndonwi	Cameroon
2	Ms. Alladoumngue Nadingar	Assial	Chad
3	Mr. ELMESSAOUDI	Brahim	Morocco
4	Dr. BENOUAR	Djillali	Algeria
5	Ms. Balachew	RAHEL ASFAW	Ethiopia
6	Mr. YEHUALA	Tarekegn Ayalew	Ethiopia
7	Dr. Oubeidillah	Abdoul Aziz	Comoros
8	MUTILO	SILENGO	Burundi
9	RANDRIAMANAMPISOA	Holimalala	Madagascar
10	Mr. NDLOVO	THABO	Zimbabwe
11	Ms. Babamaaji	Rakiya A. B.	Nigeria
12	Dr SANOU	Patrice	Burkina-Faso
13	Dr. Amponsah	Paulina	Ghana
14	Dr. Nicodemus	Nyandiko	Kenya
15	Prof. KOUAME	Koffi Fernand	Cote-d'Ivoire

3/15/2021

No	Region	Members		
		Male	Female	Total
1	Economic Community of Central African States (ECCAS)	1	1	2
2	Arab Maghreb Union (AMU)	2		2
3	Inter-governmental Authority on Development (IGAD) and East African Community (EAC)	2		2
4	Southern African Development Community (SADC)	3	1	4
5	Economic Community of West African States (ECOWAS)	3	2	5
	Total	11	4	15

The Af-STAG have a Chair and a Vice-Chair elected by members of the group to serve a two year term, with Chair and Vice-Chair being elected in alternate years. Successive terms can be served.



Participants at the Inaugural meeting of Af-STAG in Nairobi, May 2019

Purpose

- Af-STAG was established to provide scientific and technical support to African countries for the implementation of the Disaster Risk Reduction agenda in Africa
- Af-STAG supports the generation of assessments of scientific and technical information for effective implementation of Africa Regional Strategy for Disaster Risk Reduction, Sendai Framework for DRR 2015-2030, and Agenda 2063.



Mandate, Scope & Guiding Principles

➤ Roles and Responsibilities

Af-STAG will strengthen evidence-based decision making that supports disaster risk reduction including:

- Providing technical advice and guidance on disaster risk research and capacity building,
- Facilitating the dissemination and communication of disaster risk knowledge and information,
- Strengthened regional collaboration, partnerships and DRR networking among science, research, academia, civil society and policy-makers.



Role of Science & Technology in Disaster with respect to AI Application

Science and Technology (S&T) has been able to help mankind to **solve** or **minimize problems** when arise. Different **methodologies**, **techniques** and **tools** were developed or used for specific cases by researchers, engineers, scientists throughout the world

➤ The potential contribution of emerging technologies and innovations to improving understanding and management of disaster risk is necessary in;

- Innovation in access to data through earth observation technology, street-level imagery, connected devices and volunteered geographical information;
- improvements in the capacity to process and analyze this data through cloud computing platforms and big data analytical techniques, such as artificial intelligence; and
- increased capacity to transmit risk and risk management information as a result of the proliferation of internet and mobile access and continued improvements in broadband and data speeds.

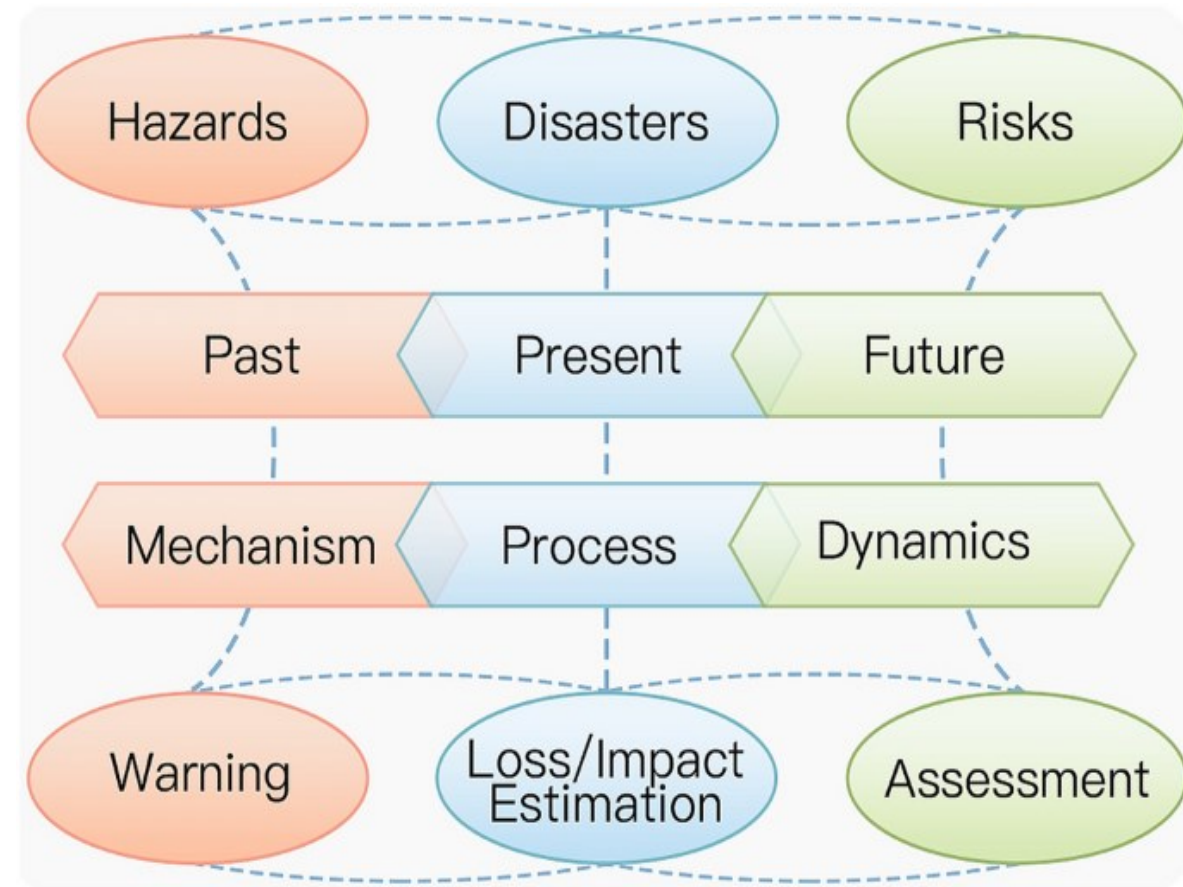


Role of Science & Technology in Disaster with respect to AI Application

Data mining is an interdisciplinary field in various domains such as databases, statistics, machine learning and other related fields combines. Three-layer disaster risk science disciplinary structure (contains three pillars: Disaster science, Disaster technology, and Disaster governance)

Monitoring at different Level of Disaster:

- **Data gathering/Collection**
 - ❖ Automated Data Collection (e.g. sensors)
 - ❖ Data Fusion Techniques
 - ❖ Crowd Sourcing
- **Data Processing and Analysis**
 - ❖ Data Analytic/Big Data Analytic Techniques
 - ❖ Natural Language Processing
 - ❖ Machine Learning
 - ❖ Data Visualization
- **Risk Modelling and Prediction**
 - ❖ Early Warning System
- **Data/Information Dissemination**
 - ❖ Automated Email, SMS, Web Sourcing



Af-STAG ROADMAP

1. Biannual Report on Programme of Action for Implementation of Sendai Framework for Disaster Risk Reduction in Africa.
2. Highlights: Africa Regional Assessment Report 2020 by United Nations Office for Disaster Risk Reduction (UNDRR) Nairobi, Kenya.
3. Natural Risk Governance in Countries: First draft is due for submission in March, 2021 and final draft in April, 2021 for Publication
4. Develop Need Assessment and Policy brief on DRR Education: Originally review in June 2020 and Final Paper in July 2020 to produce a Policy Paper (New date to be determine)



Af-STAG ROADMAP Cont'd

➤ Workshops and Training: Af-STAG proposed 6 workshops and Trainings:

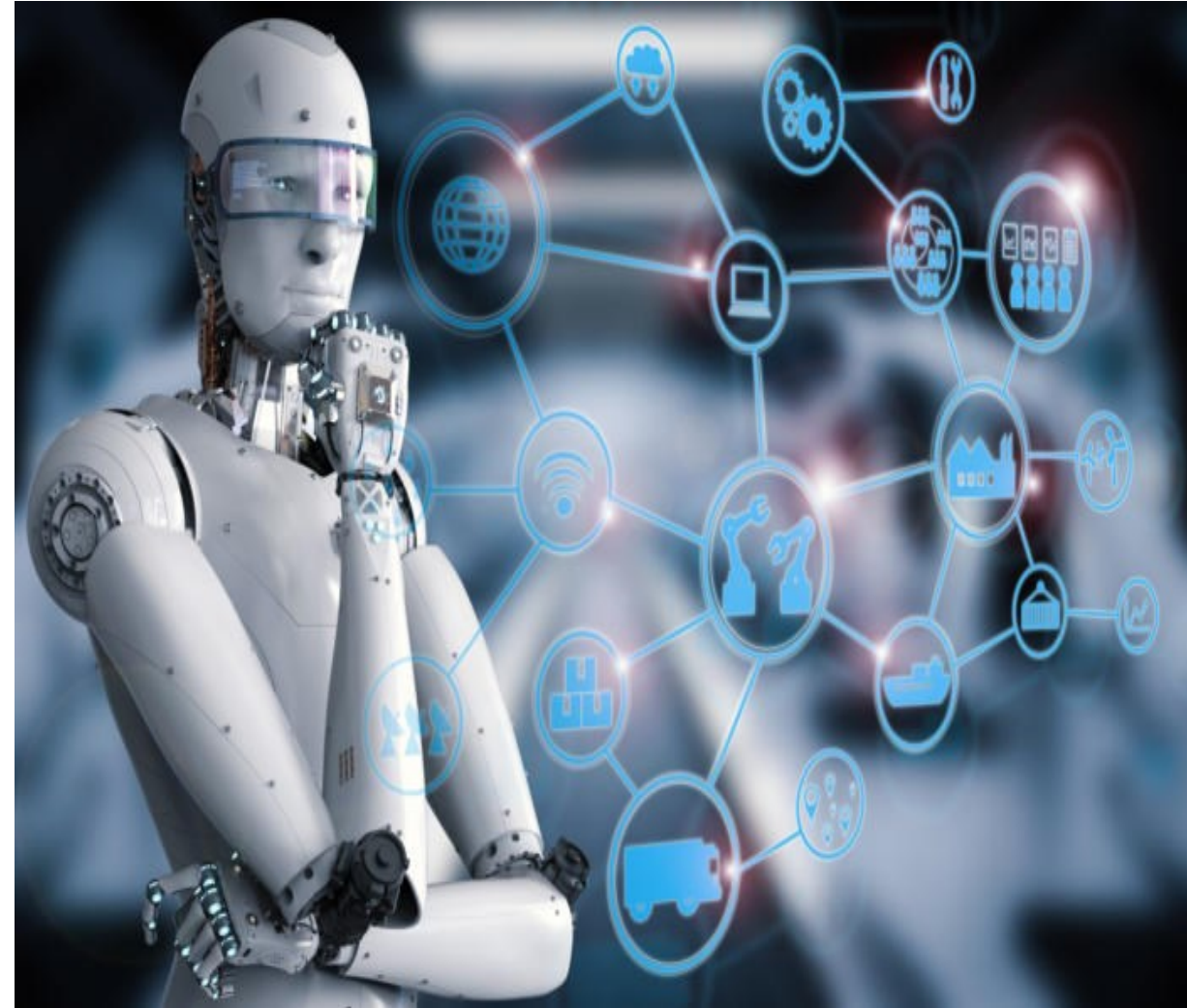
- AU AF-STAG – UNDRR WEBINAR, 19 MAY 2020 with Theme Af-STAG for DRR Research contributions to reinforce resilience in the face of COVID-19"
- Online webinar: The role of science and technology in the implementation of the four (4) priorities of Sendai framework for DRR Organized by AUDRR and Af-Stag in 28th October, 2020
- Af-STAG Upcoming training on Data Gathering and Dissemination for all relevant DRR stakeholders in the region (AYAB, Af-STAG, RECs and others), proposed date May, 2021
- **Regional workshops (Themes Yet to be determine)**

3/15/2021



Conclusion

- “Technology, at the end of the day, doesn’t solve problems, It takes smart people using technology creatively to come up with solutions.”
- Af-STAG is open for collaborations to proffer Scientific and technical advice and guidance in providing solution to **Disasters Risk Reduction** Challenges for the implementation of the Sendai Framework at regional and national levels in the Context of **Sustainable Development**”



Contact us at: Info.afstagdrr@africa-union.org
Twitter: [AfstagDrr @Afstag1](https://twitter.com/Afstag1)