



This project is funded by the European Union

## Study Tour for Disaster Risk Reduction

### High Level Representatives and Technical Experts

As part of the ACP-EU Programme *“Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities”*

**Savona-Genoa-Rome-Brussels**

September 16-20, 2019





This project is funded by the European Union

<b>1</b>	<b>Contents</b>	
2	Executive Summary	3
3	Background	7
3.1	UNDRR – CIMA RESEARCH FOUNDATION: phase I activities	7
3.2	UNDRR – CIMA RESEARCH FOUNDATION: phase II activities	8
4	Study Tour	10
4.1	Day 1   Introduction to CIMA Research Foundation Activities and Departments	10
4.2	Day 2   Visit to the Ligurian Environmental Protection Agency (ARPAL) and to the Local Civil Protection Authority	13
4.3	Day 3	15
4.3.1	Day 3   High Level Representatives	15
4.3.2	Day 3   Technical Experts:	19
4.4	Day 4	20
4.4.1	Day 4   High Level Representatives	20
4.4.2	Day 4   Technical Experts	22
4.5	Day 5	23
4.5.1	Debriefing and feedbacks from the Study Tour	23
4.5.2	Day 5   Technical Expert	23
5	Evaluation and Delegates Feedbacks	23
5.3	Republic of Angola	23
5.4	United Republic of Tanzania	24
5.5	Republic of Zambia	25
5.6	Federal Democratic Republic of Ethiopia	26
5.7	IGAD	26
5.8	African Union Commission	27
5.9	Evaluation	28
6	Glossary	29



This project is funded by the European Union

## 2 Executive Summary

Within the Programme “Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities<sup>1</sup>”, UNDRR and CIMA Research Foundation organized a five-day Study Tour in Europe – namely Italy and Brussels - for members of African countries.

Delegations from ACP-EU four target countries- Republic of Angola, Republic of Rwanda, United Republic of Tanzania, and Republic of Zambia as well as delegations from Federal Democratic Republic of Ethiopia, Intergovernmental Authority for Development (IGAD) and the Africa Union Commission (AUC), participated in the visit organized by UNDRR and CIMA Research Foundation 16-20 September. The five day Study Tour was dedicated to two different targets of participants: high level representatives of Disaster Risk Management Authorities of the four target countries and Directors of DRR unit of IGAD and AUC; technical staff, Risk Assessment Experts, Hydrological Experts, Early Warning System experts from Disaster Risk Management Authorities and line ministries of Republic of Angola, U.R Tanzania, Republic of Rwanda, Federal Democratic Republic of Ethiopia, Republic of Zambia and from IGAD/Climate Prediction and Applications Centre (ICPAC).

The Study Tour of the two target delegations had the following overall goal and objectives:

- *Study Tour for high-level representatives of Disaster Risk Management Authorities.* The main objectives were: to familiarize with the inclusive political process leading to the establishment and consolidation over 20 years timeframe of the Civil Protection and Disaster Management systems in Europe; its organization and functioning. The case study of the Italian civil protection system was analyzed in depth, moving from the local to the sub-national and national levels. The delegates visited the Civil Protection structure of the Municipality of Genova, the Monitoring and Forecasting Centre of the Liguria Region, the Regional Civil Protection structures and the National Civil Protection Department in Rome. The visit demonstrated the importance of effective coordination among multiple stakeholders across different levels, including governmental authorities, private and public sectors, academia as well as representatives of civil society. The coordination function is facilitated by the adoption of new technologies, with high performance, free of charge and open source, such as the web-based common platform used by Italian civil

---

<sup>1</sup>The African, Caribbean and Pacific Group of States Programme: funded by the European Union (EU), provides an analytical basis for and accelerates the effective implementation of an African comprehensive disaster risk reduction and risk management framework.



This project is funded by the European Union

protection authorities and other relevant stakeholders to exchange data and information, according to well established roles and rules. The delegates also visited the Emergency Response Coordination Centre (ERCC) established by the European Commission in the context of the (European) Union Civil Protection Mechanism. The delegates were briefed about the political process, promoted by European member States, to establish a common mechanism to address rare but extreme events which overcome national DRM capacities. The establishment and maintenance of national DRM capacities to manage such extreme events is in fact not sustainable. The European Member States therefore agreed on the development of national capacities having common standards and common procedures, to be pooled together and deployed in support of the most affected country/ies in the case of extreme events, under a unique coordination mechanism. Furthermore, the delegates appreciated the practical demonstration of the adoption of such common tools, data and Standard Operating Procedures to improve the efficiency and the effectiveness of advanced impact based Early Warning Systems (EWS) and transboundary risk management. Finally, the delegates were informed about data and services made available free-of-charge by the European Commission, such as the one provided by remote sensing through the Copernicus programme.

- *Study Tour for technical staff.* The technical staff visited the local and regional structures of Civil Protection in Genoa. The visit has been instrumental for familiarizing with the organization and functioning of the Italian EWS at National, Sub-National and Local Level. The technical staff continued the visit with an intense three-day training to build in-house capacity for the integration of local knowledge and experience in the risk modelling, to enhance ownership of the tool and its sustainability in the long run. Accordingly, the focus of the training was to consolidate the existing knowledge on risk modelling and on risk profiles prepared during the phase I of this activity; to explore the use of different datasets for characterizing exposures and vulnerability, of population, critical infrastructure, productive sector; prepare for more accurate risk modelling; interpret hazard and risk modelling results; develop new risk metrics targeted to the need of the country; start a validation process of the risk profile. The technical experts were also presented technical solutions for the acquisition, installation and maintenance of low-budget meteorological stations. The proposed solution meets the standards set by World Meteorological Organization (WMO) but is an open-source hardware which can be produced, assembled and maintained by the already existing staff of national and regional authorities, making the service independent from biggest international firms producing patented hardware and software and delivering expensive maintenance services. The

open-source option could also facilitate the development of new economic activities and generate resilient job opportunities locally.

The delegates highly appreciated the opportunity offered by the Study Tour and shared the below considerations during the mission debriefing:

1. The Study Tour was a practical experience that demonstrated the complexity but also the effectiveness of an inclusive approach for the establishment of a continental coordination mechanism, which supports the development of national capacities, according to common tools, standards and operating procedures.
2. The active engagement of different stakeholders, including governmental authorities, public and private sectors, academia, ranging from local to the continental levels, is critical to ensure effective use of available capacity and resources as well as for the development of new ones.
3. The adoption of a common tool, free of charge, open source and customizable to the specific needs of each user, was identified as a fundamental step to facilitate the exchange of data and information, according to specific roles and rules, for improving risk understanding, enhancing transboundary risk management and for more effective impact-based EWS.
4. The visit highlighted the complexity of the systems, with multiple actors with different mandates and responsibilities that are regulated by procedures and clear coordination mechanisms. The delegates underlined that the improvement of coordination mechanisms among different institutions is a priority; in particular, vertical coordination from continental to regional/national and from national should be improved by clear set up of roles and responsibilities
5. Delegates expressed the intent of continuing with UNDRR support the exchange of experiences and practices with Civil Protection of Italy and/or other Member States, as well as with the ERCC, Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) and Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW). The delegates aim to use the experience of Europe- and Italy in particular- for improving such inclusive coordination mechanism and the EWS in Africa, by adapting the tools and approaches used in Europe to African context and to the different institutional and legal frameworks.
6. The technical visit demonstrated the use of new technologies for improving the availabilities and accessibility of data and risk Information for Early Warning System. The web-platform MyDewetra is used in operations by the Italian Civil Protection System and

at EU level. It is an open source and free-of-charge platform, ready to be used, that improve accessibility and comparability of risk data and information connecting meteorological and hydrological services with disaster management authorities and improving the coordination during operations. Delegates expressed the need to increase the investment in technologies.

7. Data availability remains a challenge in the Africa context. Meteorological and hydrological data are not often available and geospatial information on hazard or exposure are fragmented among institutions. There is a need to firmly support, at political and technical level, the systematic collection of risk information and the sharing from multiple authorities; experience from Italian Civil Protection and other EU countries, as well as ERCC and Copernicus services, can be instrumental for this aim.
8. The delegates appreciated the strong connection between the scientific community and the disaster risk management authorities in Italy and at European Level. This should be taken as an example for the empowerment of the African Science and Technology Advisory Board (STAG) to support policy development as well as to build capacity of local, national and international authorities (Member States, RECs and AUC)
9. Delegates agreed that there is a need of both short- and long-term training and capacity development programmes on disaster risk management with a focus on risk assessment, early warning and early action systems. There is an urgent need to fully use the available knowledge and risk information for substantially reducing the impact of disaster. In this regard, the delegates suggested short term training for disaster management authorities and long term programme, such as summer school, and visiting programmes, organized in conjunction with African University. The trainings should aim at capacitating Trainers, eventually composing a network of experts that can deliver trainings in multiple African countries or regions and contribute to the reform of DRR/DRM curricula of African universities.

## 3 Background

### 3.1 UNDRR – CIMA RESEARCH FOUNDATION: phase I activities

In 2018, as part of the “*Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities*” Programme, UNDRR (formerly UNISDR) and CIMA Research Foundation have developed probabilistic risk profiles for floods and droughts at the national level for 16 African countries. The Country Risk Profiles provided a comprehensive view of hazard, risk and uncertainties for floods and droughts in a changing climate and socio-economic situation, projected over the next 50 years. The profiles included the estimation, under current and future climate, of the monetary losses for the different sectors identified by the Sendai Framework, namely: housing, health and education, agriculture, productive asset, critical infrastructure, services and transports. The risk profiles, combined with data on disaster losses and budget review of DRR investment, provide a solid base of risk information for developing actionable strategic plans such as DRR strategies, National Adaptation Plans, and development plans foreseeing sustainable societies.

The project has also seen the implementation of national workshops, one week per country, aimed at sharing the methodology, the results and the usability of the generated risk profiles into Disaster Risk Reduction strategies at national level. Together with the risk profiles, workshops have contributed at providing a more complete picture of the likelihood and impact of floods and droughts, while improving the understanding of risks and the related impact in each critical sector; moreover, they have contributed to enhance internal coordination efforts to manage disaster risks, by promoting the integration of scientific risk information into decision-making processes.

However, the national workshops have demonstrated the need of a continuous improvement of the risk profiles. This will be made possible through the integration of local data and knowledge on hazard and exposure, to be provided by relevant local institutions and actors. It is expected that the engagement of local institutions and actors will also facilitate and enhance the usability of the risk profiles in decision-making processes, based on the identification of the country’s own development priorities. Furthermore, workshops have highlighted the need for a more accurate translation of scientific evidence into improved flood and droughts risk management, towards the substantial reduction of disaster impacts and its consequences on the country’s development efforts.

## 3.2 UNDRR – CIMA RESEARCH FOUNDATION: phase II activities

Based on the experience gathered in the previous phase of the programme and the feedback received from the partner countries, the Phase II of the project has been structured to enhance the ownership and uptake of the probabilistic risk profiles developed and to foster their utilization in different fields of DRR. As a result, the main objectives of the project are:

1. To improve the **availability and the quality of disaster risk information** through the consolidation of the results of the probabilistic risk profiles in four selected countries – Republic of Angola, Republic of Rwanda, U.R Tanzania and Republic of Zambia - and their integration with local data and knowledge, in partnership with institutions engaged during the workshop. Strengthen access to risk information by further engaging national governments and key stakeholders in the revision of national risk profiles and their mainstreaming in national policies and strategies; enhancing coordination through empowering the National Platforms for DRR or other existing national coordination mechanisms.
2. Develop a **strategic, inclusive and coherent Roadmap to build resilient societies** by further improving availability, accessibility and use of risk information at continental, regional, national and local scale, involving the AUC, the RECs and the countries, as well as key African actors in the field of DRR, such as the African Risk Capacity (ARC), the African STAG and the academic network Periperi U. The Roadmap will enhance the capacity for data exchange and coordination among national, regional and continental actors. As a result, transboundary risk management and impact-based Early Warning Systems will be also emphasized.

The phase II is structured along the two activities described below:

**ACTIVITY 1:** Integration of local data and knowledge to improve probabilistic risk profiles for floods and droughts and to mainstream them in national development policies across sectors.

Activity 1 will focus on the availability and the quality of disaster risk information through the consolidation of the results of the risk profiles in four selected countries – Republic of Angola, Republic of Rwanda, U.R Tanzania and Republic of Zambia. The integration of local data and knowledge, in close partnership with local institutions already identified and engaged during the workshops implemented in phase I is an essential step of the process. Engagement of national

governments and key stakeholders in the revision of national risk profiles will contribute to the accuracy of risk profiles and its mainstreaming in national development policies and strategies.

**Output 1: Improved country-level probabilistic risk profiles.** The risk profiling workshops conducted in 2018 highlighted the need to consolidate and tailor the probabilistic risk profiles. Additional data suitable for the improvement and for the fine-tuning of the risk profiles has been identified in collaboration with national stakeholders. Country risk profiles will be updated based on the identified complementary datasets. New risk metrics will be discussed with national stakeholders for case-specific needs related to national DRR strategies, to the UNDAF and to other priority policies.

**Output 2: Guidelines on the use of the probabilistic risk profiles in decision-making policies for DRR, CCA and Sustainable Development.** Mainstreaming disaster risk information in national development policies has a great potential to reduce the impact of disasters by promoting a risk-informed approach. For this reason, recognizing the importance of integrating disaster risk information within and across all sectors of development is an essential step to achieve risk informed, resilient, inclusive and sustainable societies. The Guidelines are intended to be a tool to foster the use of the probabilistic risk profiles for improving disaster risk management.

**ACTIVITY 2: Roadmap for improving availability, access and use of disaster risk information for building resilient societies**

Activity 2 will focus on improving the availability, accessibility and use of risk information at the continental, regional, national and local levels by developing a Roadmap orientated at addressing issues identified during a participatory Gap Analysis process. A multi-stakeholder approach that will involve the AUC, the RECs and the countries will be applied. Focus will be put on transboundary risk management and impact-based Early Warning Systems at the continental, regional and national level.

**Output 3: Situation Analysis and Roadmap** An initial review of the use of disaster risk information across the entire disaster risk management cycle will be undertaken for each country by CIMA Research Foundation. A particular focus will be paid to preparedness and impact-based Early Warning. The review will concentrate both on the availability of tools and data to support prevention and preparedness, on the legal and institutional setup and the associated SOPs. The Roadmap will cover the local, national, regional and continental scale. Tools will be assessed as scientific and technical means to support DRR and Civil Protection systems in effectively communicating with citizens.

**Output 4: Pilot demonstration.** A web-based open-source and free-of-charge platform will be proposed in support of the aforementioned Roadmap for the collection and analysis of disaster risk related data and for the redistribution of relevant information for prevention and preparedness (including EWS). The platform will serve to aggregate, define and test the institutional setup proposed in the Roadmap and to draft SOPs defined by the countries, RECs and AUC. The platform will integrate data from the probabilistic risk profiles, from national disaster loss databases (including DesInventar) as well as from the Global Framework for Climate Services and publicly available risk data and information from relevant stakeholders at the national, regional and continental level.

## 4 Study Tour

The study tour was organized over five days according to the Agenda attached in Annex 1.

### 4.1 Day 1 | Introduction to CIMA Research Foundation Activities and Departments



The first day saw the participation of 17 people among High-Level Representatives and Technical Experts from IGAD, the AUC, Republic of Angola, the United Republic of Tanzania, Federal Democratic Republic of Ethiopia and Republic of Zambia. The expected delegations from the

Republic of Rwanda and Southern African Development Community (SADC) could not participate in the study tour.

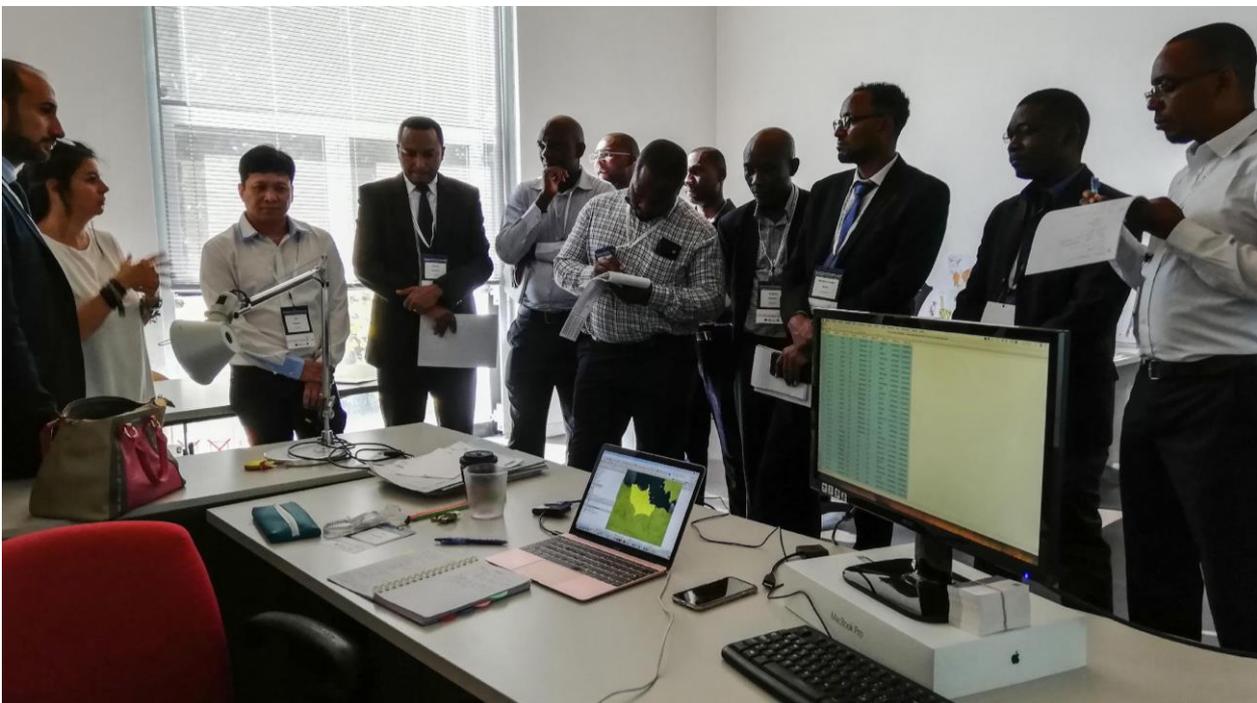
Professor Luca Ferraris, President of CIMA Research Foundation welcomed participants and introduced the CIMA Research Foundation’s background, activities and DRM tools implemented in Italy and internationally. Focus was given to the role of academia/scientific community in decision making processes for disaster risk management. Considering the existing links between CIMA Research Foundation and the Italian Civil Protection Mechanism, Italy was used as a case study to show the benefits of science-based information, technological tools and multi-level coordination efforts across sectors, from local to national and regional levels (EU).

Mr. Luca Rossi, Deputy Chief of the UNDRR Regional Office for Africa followed and presented the implementation status of the second phase of the “Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities” Programme. Mr. Rossi



called for the active engagement and participation of Countries in order to ensure positive, effective and sustainable outcomes, not only with the Programme’s framework but also in the long-term. Mr. Rossi recalled the importance of achieving the targets of the Sendai Framework for Disaster Risk Reduction by 2030 and explained how the Programme functions as an important

catalyzer to strengthen the creation of risk informed, risk prepared and risk resilient societies in Africa. Mr. Rossi remarked the importance of achieving Target E, the development of national and local strategies for DRR, by 2020 and how the current activity is instrumental to it. Finally, he noted the importance of inclusive national platforms for DRR and other national coordination mechanisms, including government authorities, public and private sector, academia and civil society, to ensure that the resulting national strategies are actionable and sustainable in the long run, based on the commitment of all stakeholders.



Participants were then invited to visit the CIMA Research Foundation Headquarters and were introduced to the activities of the existing 13 departments: Meteorology, Hydrology and Hydraulics, Earth Observation, Wildfire and Forest Conservation, Risk Assessment and Loss Data, Marine Ecosystems, Civil Protection Planning and Procedures, Software Development, Communication and Sustainability, User Community, Geospatial Data, Integrated Systems and Project Administrative Support. The visit worked as an “ice-breaker”, fostering an informal and dynamic dialog between researchers and participants.

The participants visited CIMA’s Operational Room where they were introduced to different monitoring and forecasting tools used by CIMA researchers to assist the provincial and the national civil protection mechanisms on floods and forest fires risk assessment and mapping,

early warning system and emergency planning. It was noted how limited technical tools handled by experts are fully sufficient to provide technical scientific support for informed decision-making processes about the management of weather-driven risks by local and national civil protection authorities and to back up the national civil protection system in case of disruption of the scientific function.



## 4.2 Day 2 | Visit to the Ligurian Environmental Protection Agency (ARPAL) and to the Local Civil Protection Authority

During day 2, participants visited the Ligurian Environmental Protection Agency and Genoa's Local Civil Protection Authority. Participants were presented with the operational structure of both institutions and the existing links between the two for civil protection purposes.

Genoa's Local Civil Protection Authority presented its daily activities implemented across the entire DRM cycle, from prevention and preparedness to emergency response and emergency overcome. It included both risk communication campaigns in schools and communities for awareness raising as well as real time monitoring and response activities during emergencies.

The Ligurian Environmental Protection Agency, after presenting the institutional and legal framework and its various environmental related activities in the territory, gave an insight on the operational forecasting chain, on the monitoring processes and on the warning issuing

procedures for rain, thunderstorms and snow. The communication tools used to reach different audiences for risk information - from specific websites to social media – were also presented.

In the afternoon, while the High-Level Representatives travelled to Rome, further inputs on meteo-hydrologic forecasting chains and civil protection procedures were given to the technical delegation by ARPAL researchers.





## 4.3 Day 3

### 4.3.1 Day 3 | High Level Representatives

Visit to the Italian Civil Protection Department (DPC) in Rome and meeting with Dr. Angelo Borelli, Head of the Italian Civil Protection Department







During day 3, the High-Level Representatives were hosted at the Italian Civil Protection Department. Dr. Agostino Miozzo, Director for International Cooperation chaired the visit and engaged on enriching discussions about DRM in the represented African countries, sharing its experience of more than 20 years within the international cooperation field. Dr. Miozzo then introduced participants to the legal, institutional and operative Civil Protection framework at national and international/regional levels and accompanied participants to the different DPC departments. Participants were presented to the multi-risk management of main hazards observed in Italy, namely: forest fires, floods, earthquakes, marine traffic, industrial risks and other social situations where the intervention of civil protection might be necessary (e.g. massive gatherings involving millions of people such as religious meetings, political demonstrations, etc.). The delegation was also briefed about existing awareness campaigns implemented by the Italian civil protection to inform the citizens about the risks they are daily exposed to, how to reduce their vulnerability and how to behave in case of emergency.

The visit ended with a meeting with Mr. Angelo Borelli, Head of the Italian Civil Protection Department which explained the long and complex process to reach the existing setting of the

civil protection mechanism since the late 1990's and the efforts being made to achieve the “last mile”. Under this lens, Mr. Borelli presented the initiative IT ALERT. When an early warning is issued by the civil protection authority, this tool reaches the mobile phone of each single person detected in the risk area and provides information about the expected evolution of the situation as well as about self-protecting measures to be adopted by the person. The IT ALERT system is expected to be active by the end of 2020. It will comply with the existing European system - EU Alert - and is being developed by DPC, CIMA and Acrotec Foundations, in cooperation with all telecommunication providers available in the country. This is an example of an effective partnership of Governmental authority, Academia and Private Sector, achieved through the work carried on by the national platform for DRR.

#### 4.3.2 Day 3 | Technical Experts:

Technical Experts attended theoretical and practical sessions on

- Risk modelling for Floods and Droughts;
- Flood Risk Assessment: Exposure and Vulnerability
- Risk Modelling: introduction to Rasor Platform for Flood Risk Assessment

The technical experts were familiarized with the methodology for risk assessment and modelling, and acquired the capacity to compare the results obtained with local or global information. After the training, the participants will be able to further motivate the importance of integrating local data and knowledge in the model.



## 4.4 Day 4

### 4.4.1 Day 4 | High Level Representatives

Visit to the Emergency Response Coordination Centre and presentation of the European Union Civil Protection Coordination Mechanism.

During day 4, the High-Level representatives travelled to Brussels, Belgium to visit the Emergency Response Coordination Centre (ERCC), established within the Union Civil Protection Mechanism by the European Commission.

The delegation was welcomed by a team of High-Level representatives of DG ECHO and Directorate-General for International Cooperation and Development ( DG DEVCO), supported by the heads of units and relevant staff responsible for different sectors in the Union Civil Protection Mechanism, ranging from policy to prevention, preparedness, emergency response and building back better. The team explained the functions and procedures of the Union Civil Protection Coordination Mechanism on assisting EU member countries as well as non-European ones, within international cooperation frameworks.

The delegates also received a comprehensive description of the long and articulated process leading to the establishment of the Union Civil Protection Mechanism, in response to the strong request by Member States, which could not cope with their own national means to rare but extreme events affecting their countries.



The Participants visited the EU Operational room where they were shown different DRM platforms and observational tools for multi-hazards such as: ERCC daily maps, Copernicus EMS satellite mapping; GDACS ( Earthquakes, Tsunamis, Tropical Cyclones); GLOFAS – Global Flood Awareness System; GWIS – Global WildFire Information System; and GDO – Global Drought Observatory



Focus was given on the free access to such platforms, inviting participants to integrate them in their daily DRM activities as well as to activate ERCC assistance in case of national and regional emergencies. Instructions on how to activate the ERCC assistance was given, using Mozambique's Idai cyclone as a case study.

#### 4.4.2 Day 4 | Technical Experts

The technical Experts attended the following sessions on

- Risk Modelling: use of Razor Platform for Flood Risk Assessment – Focus on Exposure and Vulnerability
- Risk Modelling: Impact Assessment for Floods, focus on data source
- Impact Assessment for Droughts, focus on data source Risk modelling for Floods and Droughts;

The technical experts become acquainted with the methodology with a special focus on vulnerability assessment; participants acquired more capacities on the quality assessment of different sources of data for exposures and vulnerabilities. The participants were familiarized with drought impact assessments and representations over multi-spatial scales.

## 4.5 Day 5

### 4.5.1 Debriefing and feedback from the Study Tour

On the morning of day 5 all participants were invited for a debriefing session where they were asked to share their feedback on the outcomes of the Study Tour. Feedback is described in the next session on evaluation and delegates feedback.

### 4.5.2 Day 5 | Technical Experts

The Technical Experts continued the training activities with focus on the pilot demonstration on EWS: practical steps, data sharing, institutions involved.

## 5 Evaluation and Delegates Feedbacks

High Level representatives and Technical Experts were connected through video conferencing and each country shared their views below:

### 5.3 Republic of Angola

- **High-Level Representatives**

The High-Level representatives thanked the organizers for the opportunity of the Study Tour, highlighting the way they felt engaged, *“treated always as part of the system rather than simple beneficiaries of external actions”*. Another highlight mentioned was the opportunity to see and share concrete and tangible examples on *how to do civil protection rather than just talking about it*.

The team was impressed by the civil protection vertical coordination capacity among all levels, and the example from Italy *“was of great inspiration”*. According to the team, Angola needs further investments on EWS from both observational systems (e.g. weather/rain gauge stations) and through the strengthening of its institutional capacities.

Under this lens, the team will reach out at the political decision-making level to ensure a similar approach is adopted in Angola. This process is expected to be positive, as the new Minister of the Interior is the founder of Angola’s Civil Protection for which openness and a possible collaboration in this sense is expected.



This project is funded by the European Union

- **Technical Experts**

Technical Experts appreciated the training opportunity recalling its usefulness to better understand which data is needed to improve risk profiles (with focus on vulnerability data) as well as the importance of local data to increase the reliability of risk assessment results.

The experts highlighted the opportunity to improve the dialogue and understanding of mutual needs and capacities between the meteorological and the hydrological institutions (INAMET and INRH), facilitating the coordination and the exchange of vital data for DRM. The team suggested a longer period of training in order to consolidate the acquired capacities and to better assimilate the concepts and tools presented.

#### 5.4 United Republic of Tanzania

- **High-Level Representative**

The single High-Level representative from UR of Tanzania thanked the organizers for the opportunity by highlighting the *“impressive demonstration of knowledge and capacity by UNDRR, Italian Government, European Commission and Scientific institutions like CIMA”*. The Italian and EU Civil Protection Mechanisms are similar to what UR of Tanzania wishes to achieve. In order to do so, further support from UNDRR is needed, not only for coordination among sectors and between different levels but also for investments and guidance. National hydrological and meteorological services need to be better linked among them and with the disaster management authorities; in the same way, scientific and technological transfer needs to be further enhanced. Mentioning the Tunis declaration, the HL representative remarked the need to build African capacity rather than working with consultants who deliver products without consulting local experts or authorities, *“for which there is no understanding, no ownership and no future.”* Appreciation was given to UNDRR for adopting a different approach which focused on building countries own capacities.

Advocacy towards the national government for strengthening coordination with UNDRR has already taken place as the support of UNDRR is considered critical to facilitate legal and policy changes not only at the national level but also through the engagement of regional and continental stakeholders. Under this lens, the presence of UNDRR in the regional platforms, African Working Group for DRR, events aimed at enhancing coherence

in the development and implementation of national strategies for DRR, CCA and SD, peer learning and exchanges is extremely important.

- **Technical Experts**

Experts from UR of Tanzania stated the impressive work made on the risk profiles and by recognizing the training as an opportunity to further improve their experience and knowledge on the national flood/drought risk profile. The experts highlighted the demonstration on how to use ICT for improving Disaster Risk Management and believe that *myDewetra* platform could enhance coordination between sectors and levels. The team suggested additional training and capacity building actions, through remote support, and further collaborations on data availability and accessibility, risk modeling, and SOPs in EWS.

## 5.5 Zambia

- **High-Level Representatives**

HL Representatives expressed their enthusiasm for the *“excellent experience which inspired the way forward”*, which will be achieved through *“risk informed investments to ensure resilient infrastructures and economies for sustainable development”* and through *“building human capital and investments”*. The team hopes to strengthen the cooperation with UNDRR and its scientific partners. They expressed the full commitment from the Government for closer collaboration on strengthening EWS and to effectively decrease the impact of disasters, both nationally and transboundary.

- **Technical Experts**

Experts shared their appreciation on the study tour/training as it increased their understanding of data gaps and coordination challenges and how to address them. The tools and methodology presented during the week were considered extremely useful for daily work although further training, more practical exercises are still needed. Regarding *myDewetra* platform, the team suggested the possibility to receive and integrate information coming from the community. Experts called for further assistance in the effective use of satellite applications and risk modelling. Further guidance on the definition of SOPs in order to strengthen inhouse capacities is also needed; the aim is to enable the replication of the probabilistic risk assessment at the district level and to use

the scientific knowledge and existing expertise for decision making and resilient investments across stakeholders.

Experts agree on the benefits of adopting an open-source common platform at local, national and regional level to enhance vertical coordination and data sharing. Moreover, experts noted the need to increase north-south cooperation and to strengthen capacities of African stakeholders in order *“to position them in the driving seat”*.

## 5.6 Federal Democratic Republic of Ethiopia

- **High-Level Representative**

The single High-Level representative from the Federal Democratic Republic of Ethiopia thanked organizers for the learning opportunity. He highlighted the impressive coordination among all DRM components, from a legislative standpoint to an operational point of view, with well-defined structures, roles and responsibilities of all stakeholders. The participant mentioned the inclusiveness approach where all the relevant stakeholders are engaged and have the chance to concretely contribute to build disaster resilience.

- **Technical Experts**

The experts expressed their appreciation for the opportunity and were impressed with the capacity demonstrated in the management of forest fires. The team has also recognized *myDewetra* platform as a useful tool to enhance coordination by facilitating data collection, visualization and analysis. Experts requested the installation of the platform in Ethiopia and asked for further training on the definition of SOPs for risk management and alert issuing. Further assistance may also be required for risk mapping based on the on-going activity of risk profiling at ward level, which should ideally be integrated in *myDewetra* platform.

## 5.7 IGAD

- **High-Level Representative**

IGAD’s HL representative congratulated UNDRR and the CIMA Research Foundation on the work carried out saying that *“IGAD needs the capacities of CIMA and the support of UNDRR”*. IGAD’s representative mentioned that the coordination of DRR/DRM

stakeholders in Africa is very critical *“as everybody wants to coordinate but nobody wants to be coordinated”*. In the same way, accountability is extremely relevant for regional organizations who are providing scientific based information to civil protection authorities and IGAD wishes to keep working with UNDRR to promote an accountable system in Africa similar to the one presented during the Study Tour. The representative was impressed by the practical examples of operational EWS and by the technological capacity showed at different levels stating that *“the effective use of technological tools is a paramount priority for IGAD. Investments should be prioritized for technology and young people and focus should be made to reach out to communities, informing them about potential upcoming risk as well as measures for self-protection.”*

IGAD values partnership with equal position, with mutual engagement and consultation and wishes for a strengthened partnership between UNDRR and CIMA, inviting CIMA to the next Climate Forum in February 2020.

- **Technical Experts, IGAD/ICPAC**

IGAD Technical Experts were impressed by the effectiveness of the system in place to ensure data collection, data sharing and data analysis and to support informed operational decision making. The team requested to continue the cooperation efforts with UNDRR-CIMA and to test *myDewetra* platform at the operational level. Further assistance in the effective use of satellite application and risk modeling is requested.

## 5.8 African Union Commission

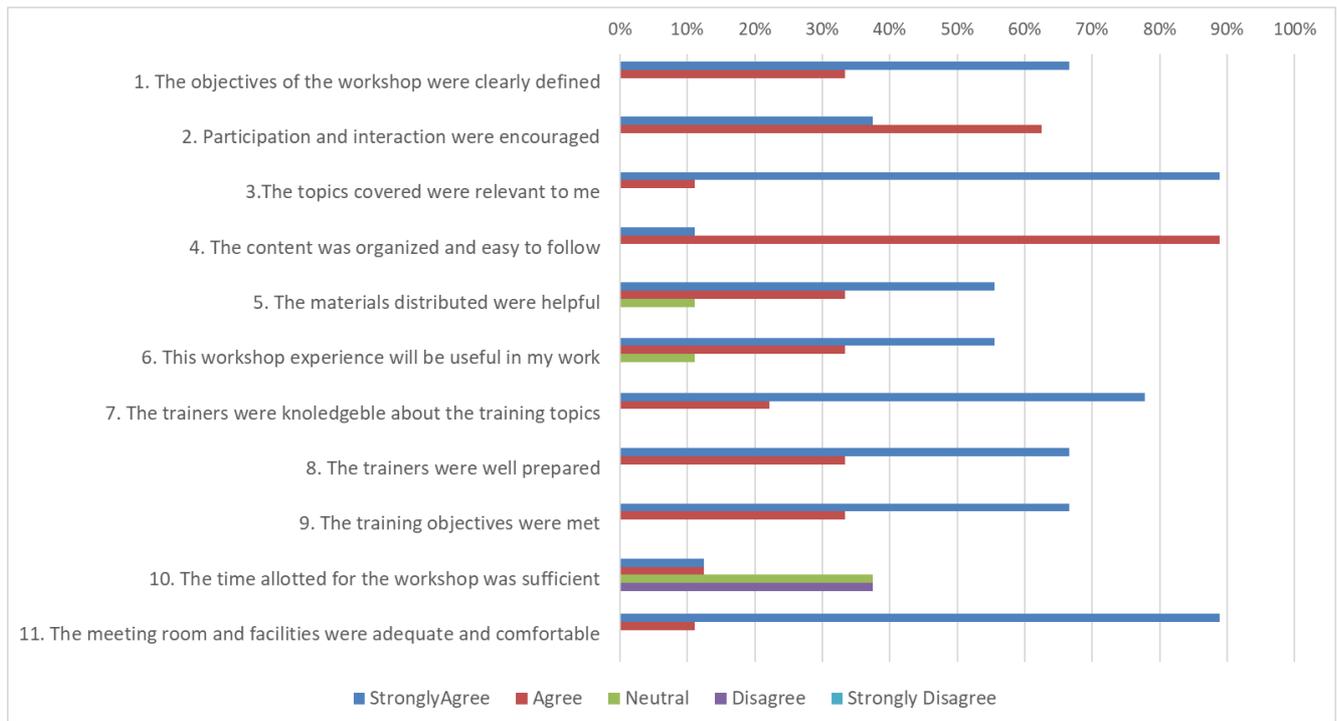
The African Union Commission HL representative thanked the organizers for the enriching opportunity and was impressed by the implementation capacity at all levels. The participant has mentioned that the AUC is moving quickly towards the creation of a Continental EWS, with concrete actions being taken. However, there is the need for data sharing and customization of tools and, above all, the need to develop human capacity by mapping country capacities and then build up on the existing skills. Further support will be needed on the definition of legal frameworks, improvement of the monitoring network, access to data and information and the capacity to interpret it, as well as on the establishment of coordination mechanisms, definition of clear roles and responsibilities and standard operation procedures.

The AUC representative also mentioned the need to empower African STAG to support policy development as well as to build capacity of local, national and international

authorities (Member states, RECs and AUC itself). Within the Programme, the AUC HL representative suggested a wider regional representation, calling for African countries from other geographic zones and languages to be included.

## 5.9 Evaluation

An evaluation form has been compiled by the technical experts, the results are summarized in the table below. The large majority of participants agreed or strongly agree that: the training workshop objectives were clearly defined, the topics were relevant for the attendees, the content was well organized, the training was useful for their job, the trainers were knowledgeable and the training room was adequate. Time allocation was not sufficient.



## 6 Glossary

- AUC - African Union Commission
- CCA -Climate Change Adaptation
- Copernicus EMS – Copernicus Emergency Service
- DG DEVCO - Directorate-General for International Cooperation and Development
- DG ECHO - Directorate-General for European Civil Protection and Humanitarian Aid Operations
- DG GROW - Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
- DRM - Disaster Risk Management
- DRR - Disaster Risk Reduction
- ERCC - Emergency Response Coordination Centre
- EWS - Early Warning System
- GDACS – Global Disaster Alerting Coordination System
- GDO – Global Drought Observatory
- GLOFAS – Global Flood Awareness System
- GWIS – Global Wild-Fire Information System
- ICPAC - IGAD Climate Prediction and Applications Centre
- IGAD - Intergovernmental Authority for Development
- RECs – Regional Economic Communities
- SADC - Southern African Development Community