



GREEN
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Technical Expert Meeting on Climate Information, Early Warning Systems and Disaster Risk Reduction



Report

Geneva, Switzerland

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Executive Summary

The Technical Expert Meeting on Climate Information, Early Warning and Disaster Risk Reduction Services was held on 16 May 2019 at the Permanent Mission of Switzerland to the United Nations Office and to the other international organizations in Geneva, Switzerland. This half-day meeting was organized to gather inputs for the development of the strategy and guides for climate information, early warning and disaster risk reduction services. More than 30 experts attended from different regions and varying institutions including government, research, funding institutions and civil society organizations.

On the GCF conceptual framework for the development of climate information, early warning and disaster risk reduction services strategy and guide, it was noted that coordination of all actors for efficiency and effectiveness was rated with the highest priority as an outcome while enhanced availability and access to quality climate information, early warning and disaster risk reduction services was rated with the highest priority as an impact area. During the interactive discussion, it was also noted that the conceptual framework should be accompanied by a financing and implementation framework. Country ownership should also be ensured through capacity building for meteorological agencies to ensure sustainability. At the same time, regional networks need to be utilized and regional approach for projects need to be supported. Stronger links and leverage with other initiatives should also be considered in the strategy. Capacities and gaps at the country, regional and global level should be considered. Monitoring and evaluation systems should be put in place to justify the expenses. Finally, it is necessary to have an integral approach of projects and assure sustainability.

On building a stronger pipeline for climate information and early warning systems, it was acknowledged that there is a fragmented approach in preparing projects. Ensuring stakeholders are engaged across sectors would promote sustainability. Sustainability also entails building local capacity to sustain what is on the ground. Projects that go beyond community level, to national and regional level with capacity building and integration across the board are needed. Investments into policies that would maintain and sustain these investments as well as inform decision-making are also needed. It was also noted that different partners will have different comparative advantage to offer specific components of a project and this should be taken into acknowledged in designing the project and approaching the donor. This is an equal responsibility between countries, agencies and funding donors. Forecast-based financing was also mentioned as a good model to identify risks that trigger early action.

On the means of implementation, it was acknowledged that climate information is the basic requirement for climate adaptation and mitigation measures, thus it should be prioritized. It was also noted that the current structure of one project, one agency and one funding structure is completely incompatible with the creation of an operational system that creates climate information; therefore, creating a dedicated financing window for climate information services to filter all the information out to make informed investments to address the structural issue. Institutional arrangements at the country level would be able to support coordination among agencies and stakeholders. Capacity building was again emphasized specifically for meteorological agencies. Finally, while there really is a need for coordination, we also need to define the rules of engagement from the country to the international level.

I. Background

1. GCF recognizes that significant investment is needed to build climate information, early warning and disaster risk reduction services in order to support countries develop transformative projects for climate action. Climate actions will require new policies, technological innovations, attitudinal changes and ramping up adaptation and mitigation financing, all of which should be informed by robust climate information and early warning systems. The lack of such information in projects could lead to maladaptation, loss of investments and increases in long-term climate risks. To effectively reduce risk of vulnerable communities and limit global warming to 1.5°C in accordance with the Paris Agreement, countries need to mainstream robust climate information, early warning and risk reduction services into policy and decision-making to enable their transition to a low-emission climate-resilient development pathway. However, most developing countries are unable to provide these services at a range of decision timelines to support climate-resilient development planning.
2. The first replenishment of GCF is ongoing and a workplan has been developed by the GCF Secretariat to ensure investments in areas where GCF can have most impact and to guide stakeholders on how to develop quality proposals for GCF. Due to the strategic and cross-cutting linkages of climate information, early warning and disaster risk reduction services with all GCF result areas and sectors, the approach is to develop strategic frameworks, guides and request for proposals for robust climate information and early warning systems, building on and/or integrate existing global, continental, regional, national and sub-national work of GCF's constituencies and partners.
3. To formulate these strategies, guides and proposals, GCF is utilizing different methods to gather inputs from various sources including engaging in a strategic partnership with the World Meteorological Organization. GCF is also organizing meetings and dialogues to collect expert views on climate information and early warning systems. These initiatives will also feed into the UN Climate Action Summit in September 2019.

II. Overview

4. The meeting was held on 16 May 2019 at the Permanent Mission of Switzerland to the United Nations Office and to the other international organizations in Geneva, Switzerland hosted by the Swiss Government and organized by the GCF Secretariat. The concept note and agenda is outlined in Annex 1.
5. The meeting was attended by technical experts who were invited based on their individual expertise in climate information and early warning systems with background on related policies and programmes in global, national, or subnational levels and with knowledge of GCF and its activities. A total of 36 experts were accounted for at the beginning of the meeting although more participants came in the middle of the meeting. The list of participants is found in Annex 2.
6. The participants were also provided with a conceptual framework for climate information, early warning and disaster risk reduction services strategy and guide prior to the meeting and were encouraged to provide additional inputs prior to the meeting. The conceptual framework is attached as Annex 3 and the additional inputs received from participants are found in Annex 6.

7. The meeting was also attended by 4 GCF Secretariat staff who acted as facilitators, note takers and logistics support. They also provided their inputs on the session topics during the discussions. Representatives of the GCF Board were also present at the meeting including the Swiss Board member and the adviser to the Swedish Board member.

Objectives and Expected Outcomes

8. The objectives of the meeting were to socialize elements of the conceptual framework for climate information, early warning and disaster risk reduction services strategy and guide; to gather inputs for further development of the strategy and guides for climate information, early warning and disaster risk reduction services; and to identify best practices in climate information, early warning, and disaster risk reduction services investments and interventions.
9. The inputs from experts gathered at the meeting will subsequently be used to inform the Secretariat of best practices and lessons learned from other multilateral funds, civil society organizations, government institutions. Furthermore, the outcomes of the meeting will be used to develop the climate information, early warning and disaster risk reduction services strategy and guide by the GCF Secretariat.

Meeting Format

10. The meeting started with an opening ceremony led by Ania Grobicki, Deputy Director of the Division of Mitigation and Adaptation of GCF. Following her opening remarks, an opening speech was made by the host of the technical expert meeting, Stefan Schwager, GCF Board member.
11. The opening speech was followed by a quick roundtable of introductions by participants and then high-level remarks on leadership, policy and frameworks made by two ministers from developing countries. The full speech from the Minister of Lesotho is attached as Annex 4.





12. This was followed by the first main session which presented GCF's conceptual framework for developing the sector strategy and guide. The experts were asked to provide their feedback and questions through an interactive software called mentimeter.
13. The second and third sessions were organized and structured similarly with moderators who posed questions to the audience, five pre-selected interventions and then general discussion with the audience.
14. Finally, the meeting concluded with a recap from Joseph Intsiful, Senior Specialist for Climate Information and Early Warning Systems of GCF and closing remarks by Ania Grobicki.



III. Detailed Discussions

Session 1. GCF's conceptual framework for developing the sector strategy and guide

Presentation and interactive discussion

15. Joseph Intsiful, Senior Specialist for Climate Information and Early Warning Systems of GCF, introduced the GCF conceptual framework for developing the climate information, early warning and disaster risk reduction services strategy and guide. The full presentation and the results of the mentimeter slides is attached as Annex 5.
16. The presentation included the following: 1) value proposition in focusing on climate information and early warning systems; 2) the outcomes in developing strategies, guides and proposals for climate information and early warning systems, 3) current investments by GCF on the sector and 4) emerging impact areas that GCF can potentially build on. These are further elaborated in the conceptual framework found in Annex 3.

Value proposition:

- Challenges for the sector include the lack of enabling environment for institutions and policies; lack of coverage in terms of hard infrastructure for effective service delivery; inadequate delivery and uptake of information pertaining to soft infrastructure; and uncoordinated interventions limiting efficiency and effectiveness of the investments
- Opportunities for the sector include huge demand; high return of investment; growing commitment seen in Paris Agreement, Sustainable Development Goals, Sendai Framework and the Global Framework for Climate Services; numerous stakeholders to optimize; opportunity to leverage public-private partnerships; and opportunity to leverage national budgets.

Outcomes:

- What GCF is trying to achieve was developed into four main outcomes including:
 - i.* Climate information informs adaptive planning and leverages public sector budgets
 - ii.* Enhanced availability of data and science for climate rationale as a basis for project design
 - iii.* Increased coordination of all actors to enhance efficiency and effectiveness
 - iv.* Mobilized private sector driven uptake and investments at scale

GCF investments:

- GCF has invested a total of USD 659 million in 23 projects that have climate information and/or early warning systems components. With co-financing amounts, total leveraged finance adds up to USD 1.57 billion. These projects span 29 countries across Africa, Asia-Pacific, Eastern Europe and Latin America and the Caribbean reaching 126 million beneficiaries.

Emerging impact areas:

- Four impact areas were identified based on the value proposition, outcomes and GCF investments and processes to date including:
 - i.* Enhanced availability/access to quality climate information, early warning and disaster risk reduction services through strategic partnerships.
 - ii.* Quality analysis of climate services for climate investments/ finance through country programming
 - iii.* Informed sector strategies, policy and decision making through Request for Proposals

17. Following the presentation, the participants were asked to rate each outcome in terms of priority through the use of the mentimeter software. A total of 40 participants responded. Based on the weighted average of each outcome, the third outcome on increased coordination of all actors for efficiency and effectiveness was perceived with the highest priority, while the fourth outcome on mobilization of private sector riven uptake and investments at scale was perceived with the lowest priority.

18. The audience was also asked to rate each impact area in terms of priority. There were 39 respondents and based on the weighted average of each impact area, the first impact area was perceived with the highest priority, followed by the second impact area, and finally, the third impact area with the lowest priority.

19. Through the same software, the participants were also requested to provide questions and/or comments about the conceptual framework that was presented. Below is a list of inputs received:

- It should be complemented by the financing and implementation framework.
- Stronger links and leverage with other initiatives like GFCS, CREWS, Alliance and CSI
- To what extent is impact-oriented warning taken into account?
- Excellent and well informed. The recognition of the importance of climate data and information as the basis for building climate resilience is well received.
- Too Top Down. Where is "Country Capacity"?
- How can GCF assist countries to enhance private sector participation in climate related project development and financing
- Would be good to receive and have a chance to provide more detailed feedback in writing. There is a lot of experiences and capacities already in different organizations that could support better identification of gaps and where to build on strengths.
- I see the GCF having strong potential to pull countries in, raise awareness and interest, gather proposals. Other organizations can then follow up with more targeted projects.
- The State of Climate services report will provide a solid basis to identify the current status, capacities and gaps in climate services.
- Field missions to LDCs on these issues.
- Between the interrelationships between EWS, DRR and adaptation, the framework should promote an integrate approach to ensure that not parts of the problem are

addressed, but the full set of issues which should be part of EWS, DRR and adaptation.

- Emphasize business case for climate information services, from a systemic point of view. If this comes early on, it will support multi-stakeholder and multidisciplinary approaches at the local level for project design and implementation.
- Country capacities but also regional and global capacities and gaps should be considered.
- A strong call for free and open-access data in order to allow a broad group of actors to build on.
- More explicit linkages needed between GCFs support for NAPs and use of climate information to design funding proposals
- What regional networks/set-up are you going to use if you opt for regional initiatives?
- Climate rationale should not be a conditionality for funding, nor should it be confused with attribution.
- Use Country Support Initiative as the means of implementation for increased country capacity.
- How will you concretize coordination with existing initiatives and tap into existing technical expertise such as the one of CREWS?
- Stronger integration of the humanitarian response community to the group of CCA, DRR and sustainable development communities.
- Climate information and EWS depend on sustainably operationalized, complete systems. Important to avoid ad hoc solutions and rather build on and enhance existing systems through existing multi-stakeholder frameworks and initiatives.
- How is exposure and vulnerability considered?
- Is there investments (fundings) in technology transfer and knowledge management between global, regional and national.
- The presentation is very helpful but how can the GCF support countries and what is expected from countries to overcome the challenges faced through GCF.
- How can you support countries in project preparation?
- How many countries can submit the proposal?
- I suggest thinking already now about a monitoring and evaluation system to be able to justify the expenses
- Our collective efforts contribute to resilience building. How do we better coordinate between various global initiatives that aim to local impact?
- How much is there possibility for a regional approach? In the European region, we see only solo approaches?
- Importance of supporting regional projects under the umbrella of the GFCS of WMO
- It's very informative.
- How can we accelerate action? Disasters are accelerating but too many people are still at risk - we need to sprint the last mile.
- It is necessary to have an integral approach of projects and assure sustainability of them.

- Met Services that do not have experience in designing projects must be supported. It is necessary to assure personal to operate new system. It's mandatory to assure sustainability of the project under government support.
- GCF should work side by side with WMO GFCS in order to optimize support to Met Services requirements. WMO should consider using the Country Support Initiative (CSI) to be implemented in the near future to support Met Services real requirements.
- It leaves out all potential synergies of intervention and gathering stakeholders from different "thematic areas"

Session 2. Building a strong project pipeline

Moderated discussion and interactive discussion

20. Session 2 was moderated by Maxx Dilley of the World Meteorological Organization. He set the tone for the session and elaborated on the topics to be discussed and the expected outcomes which revolved around the elements of a good project design for climate information, early warning and risk reduction services.
21. Followed by this introduction, pre-selected interventions were made by the following and their main points are summarized below:
 - Evan Thompson, Jamaica
 - Jamaica is in the process of streamlining the process to leveraging climate finance. There is a fragmented approach in preparing projects and we are trying to ensure guidance is available to ensure stakeholders are engaged so that it is not seen as just a sectoral approach but rather goes across sectors.
 - National focus is healthy environment and climate resilience. We are needing to streamline approach and bring stakeholders together.
 - To inform the strategies we employ will be dependent on accurate climate information and comprehensive information and developing a network where we are able to monitor accurately.
 - Sustainability entails building local capacity to sustain what is on the ground, multi-stakeholder approach including the private sector, government initiatives supporting private sector, vice versa, youth participation in stakeholder engagement
 - Anne Marie Ramiandrisoa, Madagascar
 - Agriculture and water resources are vulnerable in Madagascar. Projects to reduce victims of flood and increasing resilience focused on health to prevent disease and food and water security are all necessary
 - Mitigation benefits can also be expected through land use and reforestation
 - Working together with local governments, disaster risk center, and different agencies is crucial
 - Tessa Kelly, International Federation of the Red Cross
 - Way too often investments are made into hydromet without making investments into policies that would maintain and sustain these investments and to use these investments to inform decision-making.

- We want to see the design of a project include the intermediaries and end users (through multi-stakeholders) NMSs, where communities are brought together
- We want to see projects that go beyond community level, to regional level, to national with capacity building and integration across the board.
- Going beyond early warning and early action and this decision making aspect, there is also forecast based financing, looking at identifying risks that trigger early action – information that triggers action at the end.
- Action track on preventing extreme weather events from becoming disasters and this will feed into the climate summit - there we want to see that whenever there is an investment made in hydromet there is also investment in the last mile to enable action.
- Filipe Lucio, Global Framework for Climate Services
 - The GFCS framework was launched to support disaster risk reduction, health, food security. It is a platform for dialogue to identify needs and priority and also identify the type of action needed.
 - Implementation at national level can often be better done when things are done at the regional level – cascading of capacity from regional level to national level. Regional centers are becoming the focus of our intervention, so that region is provided with capacity.
 - Last COP, WMO was requested to report on the status of climate services capabilities. By providing that and reporting that to COP countries will be able to identify where they are.
 - Climate services and early warning systems themselves if they are not linked to element of preparedness and element of response will result in nothing.
- John Harding, CREWS
 - Challenges are evident, but there has been a real shift in recent years in engagement of the partners, a lot of the people are here in the room driving the process of reflection.
 - Rhetorically, every initiative that is developed refers to the last mile, the end-to-end, but we are very challenged when it comes to operationalizing this. When we develop these type of frameworks, we need to measure how much money goes into monitoring for hydromet and this last mile component, but we also need to measure or monitor the impact.
 - There is a suprisingly low level of learning – we are not very effective at learning from previous initiatives and we can collectively be much better. E.g. Through communities of practice – we can find out what investments are required at the regional level, the national level, gender sensitivity, etc.
 - We don't see CREWS as the solution but we welcome the initiative and we can help leverage funds.

22. After the pre-selected interventions were made, the floor was opened for comments from other participants and inputs were received through the mentimeter software. Below are the list of comments received from the floor:

- Observations from Europe and Central Asia with primarily middle-income countries. Loans are primarily provided with very few grant resources. We [WorldBank] have

long term dialogues with these countries and long-term relationship building using primarily loans. Then you have these UN agencies, including GCF, offering grants, disrupting the dialogue. Project designs are relatively poor and agency involved does not have the relevant experience and expertise. National agencies come to us asking for help. Here, GCF is seen as negative disruptor.

- Forecast-based financing in the Asia Pacific region – joint platform with IFRC, WFP, etc. – fantastic initiative with four different agencies working together in four different countries
- Building the capacities at national level is essential
- Risks are changing, dynamics of climate change need to be considered cause people may not expect larger floods, etc. Make sure maps are up to date and accuracy
- Information requirements are not the same going forward
- Second look at projects is necessary for transparency and find out what we see at regional aspects, we need to look at what's in the kitchen
- Lessons learned from green economy and green growth - identify socio-economic and environmental aspect, identify causality of these indicators of performance, then the coordination, climate rationale, buy-in and ownership
- In Africa, we [WorldBank] are still developing and strengthening the hydromet program. We are partners in the same crime. The very way in which we define the project is fragmented. A project belongs to a particular agency because it is linked to a particular financing. This has to go. We need to acknowledge that different partners will have different comparative advantage to offer specific components in our project. This needs to be acknowledged in designing the project and approaching the donor. This is an equal responsibility between country, agencies and funding donor. We are too focused on fundraising.

23. Below are the list of comments received from the software:

- How can the gaps in the value chain towards service provision be overcome and how is service oriented funding secured?
- Need for stronger consideration of the "localisation" paradigm shift within Member States to govern disaster management.
- Identify stakeholders, identify their indicators of performance (social, economic and environmental), identify causality between climate and indicators of performance, and among indicators of performance (to create synergies) > then tell the story.
- Development partners need to bring multi-disciplinary team to the countries, don't simply ask for multi-stakeholder participation when meetings are organized. This is to ensure that conversations (going both ways) can take place.
- We need new information. Risk is dynamic, new areas are affected by hazards, events are more frequent & or intense.
- Population growth & urbanization leads to higher exposure.
- Ecosystems decline increases hazards & vulnerability.
- Is a "second look" on proposals an option to secure service provision?

- Countries can identify and prioritize the CIEWS and risk financing services that they need by convincing politicians that they will lose political support (e.g. votes) if they fail to provide and make use of CIEWS at emergencies and others.
- Countries can identify and prioritize the CIEWS and risk financing services that they need through public awareness and support to CIEWS that drive politicians to do more for CIEW. Education is the key.
- Countries can identify and prioritize the CIEWS and risk financing services that they need by strengthening & enabling communities so that they take active roles not only at emergency but in normal periods.
- Investments need to consider all 4 components of MHEWS rather than just aspects of the system. Work with regional agencies and orgs when engaging with countries. Do an assessment of what exists and identify what is needed
- Hydrometeorological network enhancements and technological advancements for early warning improvements
- To foster long-term sustainability, create incentives that support existing, well-functioning partnerships.
- The coming together of sectors to formulate transformative proposals is great. A collaborative approach of climate finance partners in taking proposals from initial to advanced stages may also be revolutionary.
- To provide effective preparation and early response to disasters, an operational framework from Continental, Regional and National level to be set up by stakeholders at Global, Regional, and national levels
- Hydromet projects need to be built on and reflect best available WMO technical expertise
- How do we ensure the complementarity of individual projects? Individual projects should have common targets which cannot be achieved without joint works by the multiple projects. Targets should be constantly monitored in coordination mechanism.
- Lots of lessons and knowledge gained in supporting national institutions in identifying CIEWS gaps, designing programmes and building on existing best practices with monitoring in place. Build on our lessons of working at the national level please
- How do we ensure last mile delivery? Education/awareness raising of individuals cum strengthening community's supporting functions to individuals. Grass-roots involvement of citizens/farmers/stakeholders in drafting municipal/community plans.
- Today project proposals are made by the Accredited entity and the sectoral agencies with much collaboration with other agencies in particular NMHS. There is neither a collaboration with others other donors and accredited entities.
- How can countries ensure the sustainability of CIEWS systems? Stronger linkage between climate services and sector practitioners. Support (even financial one) should be initiated from the both sides.
- For Africa case, we recommend urging early warning services, humanitarian organizations, and DRM agencies and stakeholders to take advantage of the existing untapped potential in Climate information from Climate Centres

- The WMO country support initiative offers the opportunity to overcome the agencies coordination disruptive elements of GCF funding
- Working with a multidisciplinary approach from the get-go will also help identify what type of tools and models may be needed (e.g. on ecosystem services, economics) to perform relevant forecasts (also for forecast-based financing).
- Use GCF convening power, i.e. solicit proposals from consortia instead of single actors and incentivize joint proposals, e.g. from groups of countries through substantially higher support for such endeavors.
- Where and which project to implement? It has to be based on a sound needs, capacities and gap analysis. The State of Climate services report can provide that basis.
- To identify existing initiatives a thorough analysis needs to be done.
- Institutional arrangements at national level was mentioned as a need. National frameworks for climate services are showing to be as successful mechanisms for this at national level. There are about 30 around the world so far.
- Take advantage of mechanisms being tested in CREWS. Climate information and EWS depend on sustainably operationalized, complete systems. Important to avoid ad hoc solutions and rather build on and enhance existing systems through existing multi-stakeholder frameworks and initiatives.
- How is exposure and vulnerability considered?

Session 3. Means of implementation

Moderated discussion and interactive discussion

24. Session 3 was moderated by Markus Repnik of the World Meteorological Organization. He started the session by elaborating on the topics to be discussed and the expected outcomes which focused on the elements of the GCF strategy and means of implementation to drive investments in climate information, early warning and disaster risk reduction.
25. Followed by the introduction, pre-selected interventions were made by the following and their talking points are summarized below:
- Mabafokeng Mahahabisa, Lesotho
 - As we are trying to implement the Paris Agreement, we have submitted our NDCs to outline mitigation and adaptation needs
 - In order to be able to address these issues, we need a mix of resources either from domestic or international resources
 - We are also trying through our efforts to integrate and leverage our national projects to address issues of climate change
 - GCF offers 1 million per year for readiness but GCF needs to look into monitoring tool to clearly see how many countries are able to do that and how can GCF help LDCs access their programmes
 - Engage the private sector in participating in these initiatives
 - Cost-benefit analysis is necessary – cost of inaction to disasters, return of investments
 - Jason Spensley, GCF

- Two specific opportunities for GCF as a glue: adaptation planning and the project preparation facility
- Adaptation planning including support for NAPs
 - COP requested GCF to expedite support for NAPs up to 3 million dollars – grant funding for processes in country and if resources are used well, this could ensure that funds are going to be used for GCF to be a positive disruptor
 - These funds are used to strengthen climate information, policies, production of vulnerability impact assessments, and ultimately, the design of projects that could be for early warning systems.
 - Key area is coordination: How can countries ensure that the funds that they get are an integrating force between the different stakeholders?
- Project Preparation Facility (PPF)
 - Direct access entities can access this to support proposal design, feasibility studies, impact assessments
 - But to do this well, we need partners
- Prashant Singh, World Bank
 - GCF would require a super glue.
 - Project itself has a component on implementation arrangements: DO NOT ACCEPT project without implementation arrangements!
 - Harmonization of agencies is needed.
 - It has to be country-owned. If you have 5 different agencies, the means of implementation has to talk about how you dance (coordinate) with them – institutional arrangements at the country level would be able to support this
 - There needs to be a level of security to be honest with each other that one may do better than the other among different agencies/entities. The ambition can start with modest coherence.
 - What incentives can GCF create to make sure implementation plans are not fragmented?
- Maxx Dilley, World Meteorological Organization
 - One agency, one project, one funding source – this is the current structure, which is completely incompatible with the creation of an operational system that creates climate information
 - Multiple projects being developed in the same country – often not aware that other projects are going on
 - Global data processing and forecasting system has been developed over the last 60 years by NMS, WMO, etc., that can be utilized – these entities exchange data, cascading integrated information, but single projects done in isolation
 - GCF could consider creating a dedicated financing window for the dedicated climate information services to filter all this information out to make informed investments to address the structural issue
 - This can then also influence other sectors like agriculture, water, etc.

26. After the pre-selected interventions were made, the floor was opened for comments from other participants and inputs were received through the mentimeter software. Below is the list of comments received from the floor:

- Similar interventions are being done by different agencies.
- Many countries do not want to say no to a funder, so it is a vicious cycle of accepting projects.
- We need to encourage countries to say no when it does not add value.
- In some cases, the met services have experience to put project in the system. We need to make sure that the met agencies will have people to maintain those systems – that capacity building is included in the projects.
- GCF can help to encourage and support the sharing of data by met agencies to other agencies and vice versa.
- GCF should not accept a proposal where the implementation modality is not working with the MET department as well as the relevant sectors.
- Plea for an integrated approach.
- There also needs to be flexibility for reconstruction of projects during project implementations
- Climate rationale: we know there is a false partition between climate and development finance
- The countries have to break down the silo mentality
- There really is a need for coordination but we also need to define the rules of engagement at the country at the international level
- We already have some systems in place to address some of the issues we have, NAPs, SAP, EDAs which we can access

27. Below are the list of comments received from the software:

- What are the mechanisms to "glue together"? Integrated Water Resources Management should be "gluing concept" to connect climate, water and DRR strategies.
- What are mechanisms to "glue together"? Regional Economic Commission (SADAC, SAARC, ECLAC, ASEAN, etc.) and UN Regional Existing commission are useful platform to propose/decide gluing strategies/projects.
- How to glue them together that the whole is bigger than the individual parts? GCF Strategy should be glued to sectoral plans at "sub-national" levels so that the strategy activates actions of regional/local governments.
- A challenge is how to bring met departments into the development planning process. What glue do we create otherwise? To deliver projects more effectively, without knowing whether these projects will contribute to development (with no side effects)?
- Rarely are the hydromet agencies the accredited agency under GCF - might be the reason why you don't see many applications.
- Which benchmarks could be used to quantify the slightly overused terms of efficiency and effectiveness?

- The WMO Country Support Initiative will support countries and development partners by acting as the "glue" through the provision of CIEWS integrated advisory
- It is possible to centralize some activities to scale faster (e.g. global observations) but this has to be coupled with the generation of information relevant to local stakeholders (e.g. impacts on ag yield and income, estimated with local capacity).
- There is a pool of demonstrated projects related to CIEWDRRS and best practices which are worth to be supported and to be upscaled.
- Create a dedicated financing mechanism for hydromet systems to support specific services needed to achieve socio-economic benefits financed through sector focused country level investments. Total estimated global annual hydromet investment \$200-300m.
- There are about 30 national frameworks for climate services providing the space for effective institutional coordination at national level
- WMO Country Support Initiative is an opportunity that will enable best available science and expertise to be brought in an integrated manner to all GCF hydromet projects promoted by different partners
- A one project one country one agency approach misses the regional and global components and capacities to support the national MetServices and to realise socio economic benefits of climate services in the sectors
- Climate information is the basic requirement for climate adaptation and mitigation measures , I support the need of dedicated funding for hydromet and EWS under GCF.
- The 'glue' should also be the demands driven by the end users, by the communities who need climate and weather information to develop preparedness and risk reduction measures - they should be our starting point
- The Alliance for Hydromet Development offers an opportunity to come together under a minimum of principles of collaboration for hydromet development
- Engage with beneficiaries during project design so that they're not caught unaware during implementation.
- Climate or hydromet project proposal need expedited process or special process
- Work with regional organizations when engaging with member countries. They'll be able to provide ongoing support to national counterparts during implementation and beyond project lifetimes.
- Take advantage of coordination mechanisms being tested in CREWS.
- Can we better learn from current practices of World Bank, WMO (CREWS, Hydromet Africa etc.)
- What will the relationship be between CIEWS and CREWS?

IV. Annexes

Annex 1. Concept note

GCF Technical Expert Meeting on Climate Information, Early Warning and Disaster Risk Reduction Services

Dates and duration: Thursday, May 16, 2019 (9:00 – 13:00)

Host: Swiss Government

Venue: Permanent Mission of Switzerland to the United Nations Office and to the other international organizations in Geneva Rue de Varembe 9–11 **(CCV Building, 4th floor)**
CH-1211 Geneva 20

Number of participants: 25 technical experts, 4 GCF staff

Participants: Experts in climate information and early warning systems with background on related policies and programmes in global, national, or subnational levels from research, civil society, government and financial institutions with knowledge of GCF, its activities and challenges in relation to climate information services

I. Background and Context

The Green Climate Fund (GCF) provides financial support to developing countries to limit or reduce greenhouse gas emissions and to adapt to the impacts of climate change, with the goal of promoting paradigm shift towards low emissions and climate resilient development.

GCF recognizes that significant investment is needed to build climate information, early warning and disaster risk reduction services in order to support countries develop transformative projects for climate action. Climate actions will require new policies, technological innovations, attitudinal changes and ramping up adaptation and mitigation financing, all of which should be informed by robust climate information and early warning systems. The lack of such information in projects could lead to maladaptation, loss of investments and increases in long-term climate risks. To effectively reduce risk of vulnerable communities and limit global warming to 1.5°C in accordance with the Paris Agreement, countries need to mainstream robust climate information, early warning and risk reduction services into policy and decision-making to enable their transition to a low-emission climate-resilient development pathway. However, most developing countries are unable to provide these services at a range of decision timelines to support climate-resilient development planning.

The first replenishment of GCF is ongoing and a workplan has been developed by the GCF Secretariat to ensure investments in areas where GCF can have most impact and to guide stakeholders on how to develop quality proposals for GCF. Due to the strategic and cross-cutting linkages of climate information, early warning and disaster risk reduction services with all GCF result areas and sectors, the approach is to develop strategic frameworks, guides and request for proposals for robust climate information and early warning systems, building on and/or integrate

existing global, continental, regional, national and sub-national work of GCF's constituencies and partners.

To formulate these strategies, guides and proposals, GCF is utilizing different methods to gather inputs from various sources including engaging in a strategic partnership with the World Meteorological Organization. GCF is also organizing meetings and dialogues to collect expert views on climate information and early warning systems. These initiatives will also feed into the UN Climate Action Summit in September 2019.

II. Objectives

The technical expert meeting aims to:

- Socialize elements of the conceptual framework for climate information, early warning and disaster risk reduction services strategy and guide
- Gather inputs for further development of the strategy and guides for climate information, early warning and disaster risk reduction services
- Identify best practices in climate information, early warning, and disaster risk reduction services investments and interventions

III. Expected Outputs and Outcomes

The following objectives, outputs and outcomes are expected as a result of the meeting:

Specific Objectives	Expected Outputs	Expected Outcomes
Leadership, policy and frameworks		
1. Seek support from high-level leadership in creating awareness of the acute capacity and funding gaps in making widely available robust climate information, early warning and risk financing services for SIDS, LDCs and Africa in meeting their commitments under the Paris agreement, Sendai framework and sustainable development goals 2. Build a high-level consensus on coordinated approaches to supporting the most vulnerable countries SIDS, LDCS and Africa to establish systems and processes for effective access and use robust climate information, early warning and risk financing services to build their resilience to climate variability and change. 3. Seek a strong high-level political message to drive	1. Awareness of the increasing cost of disasters, declining capacity and investment in climate information and early warning services in most vulnerable countries raised. 2. High-level consensus on the need for a coordinated, integrated and comprehensive approach to supporting most vulnerable countries to establish effective and efficient climate information, early warning and risk financing services established. 3. A strong high-level political message to drive uptake and investments in climate information, early warning and risk financing services for climate action in most	- Leadership to drive/support resource mobilizing efforts to make robust climate information, early warning and risk financing services widely available in most vulnerable countries - High-level consensus to inform the framing of a coordinated approach to supporting most vulnerable countries establish robust climate information, early warning and risk financing services.

uptake and investments in climate information, early warning and risk financing services for climate action in most vulnerable countries	vulnerable countries delivered.	
Building a strong project pipeline		
<ol style="list-style-type: none"> 1. Take stock of climate information, early warning and risk financing services in most vulnerable countries – what currently exist; what are the best practices and lessons? What are the barriers to their efficiency and effectiveness; what are the administrative, technical and financial gaps 2. Define a fit-for-purpose climate information, early warning and risk financing services for most vulnerable countries – How do they address the key targets of the Paris agreement, Sendai framework and SDGs? 3. Define what it will take to support countries establish and maintain a fit-for-purpose climate information and early warning system – How do they align with the minimum benchmark? How do they comprehensively represent the checklist for MHEWS? 	<ol style="list-style-type: none"> 1. Status of capacity and financial gaps of climate information, early warning and risk financing services in most vulnerable countries established; 2. Climate information, early warning and risk financing services priorities are defined and prioritized 3. The minimum standards of a fit-for-purpose climate information, early warning and risk financing services established; 4. The level of support (financial and technical) required for ensuring most vulnerable countries establish and maintain fit-for-purpose climate information, early warning and risk financing services. 5. Private sector engagement 	A roadmap developed for improving access, establishment and operations of climate information, early warning and risk financing services.
Means of implementation		
<ol style="list-style-type: none"> 1. Identify donor coordination challenges and opportunities to enhance efficiency and effectiveness of fund mobilization, allocation and utilization. 2. Leverage national, regional and international sources of funding to advance interventions climate information, early warning and risk financing services. 	<ol style="list-style-type: none"> 1. Better understanding of donor coordination challenges and opportunities for improving efficiency and effectiveness. 2. Opportunities for mobilizing finance at scale, enhance coherence and complementarity among donors identified. 3. Means of implementation well-defined (could include RfP, SAP, PPF, NAP and other financing vehicles) 	A roadmap developed for driving investments in climate information, early warning and risk financing services.

IV. Agenda (as of 15 May 2019)

Time	Topic	Presenter	Outline
9:00 – 9:10 (10 mins)	Opening Ceremony	Master of Ceremonies: Ania Grobicki, Deputy Director for Adaptation, GCF	Opening Remarks: Ania Grobicki Opening Speech:

			Stefan Schwager, GCF Board member
9:10 – 9:20 (10 mins)	Introductions	Round table of introductions by participants	
9:20 – 9:40 (20 mins)	High-level remarks on leadership, policy and frameworks	Remarks: H.E. Laouan Magagi Minister, Ministerre de l'Action Humanitaire et de la Gestion des Catastrophes, Niger Hon. Tsukutlane Au Minister of Energy and Meteorology, Lesotho	Discussion outline Mobilizing high-level leadership for a coordinated approach to making widely available robust climate information, early warning and risk financing services in most vulnerable countries (LDCs, Africa and SIDS): - Growing commitment across global, continental and national scales - Call for leadership - informed policy and decision making to ensure climate information, early warning and disaster risk reduction services drive planning
9:40 – 10:20 (30 mins)	Session 1. GCF's conceptual framework for developing the sector strategy and guide	Presenter: (15 mins) Joseph Intsiful, GCF Q&A (15 mins)	Presentation: Introduction of GCF conceptual framework for developing CIEWDRRS strategy and guide
10:20 – 10:45 (20 mins)	Tea/Coffee Break		
10:45 – 11:45 (60 mins)	Session 2. Building a strong project pipeline - <i>Paris Agreement means of implementation (technology development and transfer and capacity building)</i> - <i>Quantitative enhancement</i> - <i>Qualitative enhancement</i> - <i>Private sector engagement</i>	Moderator: Maxx Dilley, WMO Commenters: (3-5 minute interventions) Evan Thompson, Jamaica Anne Marie Ramiandrisoa, Madagascar Tessa Kelly, IFRC Filipe Lucio, GFCS John Harding, CREWS General discussion (30 mins)	Overall objective Elements of a good project design for climate information, early warning and risk reduction services. Discussion outline Crafting a guide to provide technical support and services for building transformational and paradigm-shifting projects: - Growing demand - Bridging the capacity gaps in both hard and soft infrastructure

			<ul style="list-style-type: none"> - Strengthening capacity for transformational projects - Promoting sustainability of interventions
11:45 – 12:45 (60 mins)	<p>Session 3. Means of implementation</p> <ul style="list-style-type: none"> - <i>Paris Agreement means of implementation (finance)</i> - <i>Complementarity and coherence with other institutions</i> - <i>Country programming including NDCs and NAPs</i> - <i>Request for proposal</i> 	<p>Moderator: Markus Replik, WMO</p> <p>Commenters: (3-5 minute interventions) Mabafokeng Mahahabisa, Lesotho Lamin Mai Touray, Gambia Jason Spensley, GCF Prashant Singh, World Bank Maxx Dilley, WMO</p> <p>General discussion (30 mins)</p>	<p>Overall objective Elements of GCF strategy and means of implementation to drive investments in climate information, early warning and disaster risk reduction</p> <p>Discussion outline Crafting a strategy for an effective and efficient means of implementation for making climate information, early warning and risk reduction services widely available in most vulnerable (LDCs, Africa and SIDS):</p> <ul style="list-style-type: none"> - Growing demand - Building the business case - Enhancing coherence and complementarity of investments - Leveraging private sector finance, public budgets and public-private partnerships
12:45 – 13:00 (15 mins)	Closing ceremony	Recap: Joseph Intsiful Closing remarks: Ania Grobicki	Wrap-up and next steps

Annex 2. List of participants

	NAME	AFFILIATION
1	Guillermo Navarro	NMS - Chile
2	David Bresch	ETH Zurich
3	Evelyn Munheolfer	ETH Zurich
4	Andrea Bassi	International Institute for Sustainable Development (IISD)
5	Daniel Kull	World Bank
6	Tessa Kelly	International Federation of the Red Cross (IFRC)
7	Litea Mukoto	The Pacific Community (SPC)
8	Sergio Perez	Swiss Agency for Development and Cooperation (SDC)
9	Andrea Rossa	Swiss Agency for Development and Cooperation (SDC)
10	Benjamin Laroquette	United Nations Development Programme (UNDP)
11	Evan Thompson	NMS - Jamaica
12	Katiuscia Fara	World Food Programme (WFP)
13	Fetene Teshome Tola	NMS - Ethiopia
14	Mabafokeng Mahahabisa	NMS – Lesotho
15	Tsukutlane Au	[Minister] NMS – Lesotho
16	Karma Dupchu	NMS – Bhutan
17	Marie Karlberg	[Adviser to the Board] Swedish Energy Agency
18	Veronica Grasso	World Meteorological Organization (WMO)
19	Pascal Peduzzi	United Nations Environment Programme - GRID
20	Filipe Lucio	World Meteorological Organization (WMO)
21	Stefan Schwager	[Board member] Swiss Agency for Development and Cooperation (SDC)
22	Paul Desanker	UNFCCC

23	Miwa Kato	UNFCCC
24	Helen Bye	UK Met Office
25	Michael Staudinger	NMS – Austria
26	Laouan Magagi	[Minister] Gestion des Catastrophe Niger
27	Angelia Guy	NMS – Belize
28	Loren Santamaria	World Meteorological Organization (WMO)
29	Markus Repnik	World Meteorological Organization (WMO)
30	Maxx Dilley	World Meteorological Organization (WMO)
31	Kenzo Hiroki	National Graduate Institute for Policy Studies (GRIPS)
32	Joerg Szarzynski	UNU-EHS
33	Guleid Artan	ICPAC
34	André Joyeux	NMS – Saint Lucia
35	Prashant Singh	World Bank
36	Britta Horstmann	Global Commission on Adaptation

Annex 3. Conceptual framework for the strategy and guide

Separate attachment.

Annex 4. High-level remark by the Minister of Lesotho

Separate attachment.

Annex 5. Presentations slides with mentimeter results

Separate attachment.

Annex 6. Additional inputs from participants

Only one input was received from the participants.

<p>Mrs Voahanginirina Anne Marie Pierrette RAMIANDRISOA voahangy_ramiandrisoa@yahoo.com</p>	<p>Engineer of Meteorology Director of Operational Meteorology at the General Directorate of Meteorology- Madagascar B.P 1254 Ampandrianomby ANTANANARIVO 101 MADAGASCAR</p>
<p>1. Value proposition: Why should GCF focus on climate information, early warning and disaster risk reduction?</p>	
<p>Due to its geographical location and the dependence of its population on natural resources, Madagascar is particularly vulnerable to the impacts of climate change. Climate projections indicate an increase in average temperatures and high variability of precipitation, associated with increased torrential rains and floods, but also acute drought in the south of the country. An increase in frequency and intensity as well as a change in the trajectory of cyclones are likely. The annual economic cost of cyclone and flood losses is estimated at USD 470 to 940 million (out of a GDP of USD 10.5 billion). Agriculture and livestock, important pillars of the island's economy, are the mostly affected by the impacts of climate change. About 26% of GDP (2012) and 28% of export earnings come from agriculture and livestock, and livestock is an important part of the life of most of the poorest population.</p> <p>About 8.3 million people are active in the agricultural sector, and more than half are women. The main activities of smallholder farmers are characterized by poorly developed structures based on value chains of minimal importance to the economy. The productivity of agricultural value chains stagnates at a very low level because of the lack of professionalism and the persistence of traditional practices in farming, livestock and processing methods. This situation is exacerbated by the impacts of climate change and the inexistence of appropriate adaptation measures, leading to periodic agricultural losses, which in turn causes serious food crises.</p>	
<p>2. Objectives: What are we trying to achieve?</p>	
<p>Make the early warning system in floods efficient to reduce the number of victim and to support the development of the country</p>	
<p>3. GCF investments and activities: What are the investments and processes of GCF to-date?</p>	
<p>Strengthening the observation system Improving communication system Enhance early warning system in floods</p>	

4. Impact areas: Translating the challenges and opportunities into action

- Identify gaps and needs on the existing early warning system
- Improve climate services and information
- Strengthen the means of dissemination of information and climate services
- Work together with local risk and disaster management sectors such as National Hazard and Disaster Management Office, Emergency Management Prevention Center, National Office of Carbon and Climate Change REDD +

Conceptual framework for the development of climate information, early warning and disaster risk reduction services strategy and guide

Background and context

The Green Climate Fund (GCF) provides financial support to developing countries to limit or reduce greenhouse gas emissions and to adapt to the impacts of climate change, with the goal of promoting a paradigm shift towards low-emissions and climate-resilient development.

GCF recognizes that significant investment is needed to build robust climate information, early warning and disaster risk reduction services to support countries develop transformative projects for climate action. Effective climate action will require new policies, technological innovations, attitudinal changes and the ramping up of adaptation and mitigation financing. This transformational change should be informed by robust climate information and early warning systems to avoid maladaptation, the loss of investments and increases in long-term climate risks. However, most developing countries are unable to provide these services within a range of decision-making timelines that support climate-resilient development planning.

While GCF has begun its first replenishment, the GCF Secretariat has developed a workplan to ensure GCF invests in areas where it can have the most impact. The workplan also helps guide stakeholders to develop high-quality proposals requesting GCF financial support. Climate Information and Early Warning Systems (CIEWS) have strategic and cross-cutting linkages with all GCF result areas and sectors. The recommended approach for GCF then is to develop strategic frameworks and guides, and to generate request for proposals (RFPs) for robust climate information and early warning systems. These should build on and/or be integrated with the existing global, continental, regional, national and sub-national work of GCF's constituencies and partners.

To formulate these strategies, guides and proposals, GCF is utilizing different methods to gather inputs from various sources. This includes engaging in a strategic partnership with World Meteorological Organization to set global standards and guidelines on investments in climate information and early warning systems. GCF is also organizing a series of meetings and dialogues to collect expert views about climate information and early warning systems. These initiatives will also feed into the UN Climate Action Summit in September 2019, as well as providing input to GCF's ongoing replenishment.

This concept note outlines initial thoughts and elements to inform the formulation of strategies, guides and proposals on climate information, early warning and disaster risk reduction services by articulating: 1) value proposition, 2) objectives, 3) investments and activities and 4) impact areas.

1. Value proposition: Why should GCF focus on climate information, early warning and disaster risk reduction?

The global economic and human cost of disasters from 1970 – 2012 has been significant - with 1.94 million deaths and economic losses valued at USD 2.4 trillion.ⁱ Four of the five of the world's most pressing risks are weather, climate and water related.ⁱⁱ 2017 was the costliest year on record in terms of weather-related natural disasters, with global economic losses exceeding USD 320 billion. In the same year, the Commonwealth of Dominica's economy was decimated (equivalent to about 226 percent of the country's GDP) and the destruction of about 90 percent of buildings in Barbuda.ⁱⁱⁱ More recently, the monetary and human costs of hurricane Idai that devastated

Mozambique, Malawi and Zimbabwe in late March this year is estimated to be at least USD 1 billion and over 1000 deaths.^{iv} This followed what was considered to be the worst cyclone season on record in the southern Indian Ocean region.

Weather patterns are projected to worsen with increasing global warming. This means that the current linear approach to delivering CIEWS will be woefully inadequate to address the scale of challenges and demands.

1.1 Challenges

- **Lack of enabling environment for institutional effectiveness.** Policies to remove barriers to uptake and investments in climate information and early warning services are not in place within national and local governments.
- **Lack of coverage and sale for effective service delivery in terms of quantity and quality of hard infrastructure and inadequate soft infrastructure for ensuring delivery and uptake of information.** In a global assessment of countries' capacities to provide climate information services, it showed that about six countries are unable to provide basic services, up to 65 provide basic services, 55 provide essential services, less than 40 provide full services and less than 25 provide advanced services.^v A further World Meteorological Organization (WMO) assessment of developing country National Meteorological and Hydrological Services shows that 90 percent (53 of 59) need to upgrade operational infrastructure to enhance their capacity to support disaster risk reduction.^{vi} The assessment found that 78 percent (45 of 58 developing countries) consider a lack of appropriate hydrometeorological observing networks limited their ability to contribute to disaster risk reduction. It also showed the following:
 - 76 percent (45 of 59) consider the maintenance of observing networks is a major challenge
 - 85 percent (51 of 60) indicated they have limited financial resources
 - 83 percent (50 of 60) cited other resources such as spare parts and personnel as lacking
 - 66 percent (39 of 59) indicated a lack of adequate technical expertise

Sub-Saharan Africa has the lowest levels of hydromet infrastructure capacity. The observation network density (number of stations per 10,000 km sq.) is as low as 0.4 in Niger, 0.5 in Mali, 1.1 in Nigeria, 1.6 in Senegal, 1.7 in the Ivory Coast, 6.2 in Malawi and 45.2 in Rwanda. Countries such as Liberia and Sierra Leone are currently rebuilding their National Meteorological and Hydrological Services from scratch following civil war.^{vii}

The World Bank estimates about USD 1.5 to USD 2 billion is required to modernize CIEWS infrastructure in sub-Saharan Africa, with an additional USD 400 to USD 500 million needed annually for operations and maintenance.^{viii}

- **Uncoordinated interventions limit the effectiveness of existing support to developing countries.** The CIEWS landscape is crowded with various donor and development agencies funding similar activities in countries. This often leads to the duplication of effects. The inflow of billions of dollars has not translated into the improved institutional effectiveness of countries' National Meteorological and Hydrological Services. GCF can improve the efficiency and effectiveness of investments in this area by coordinating its financial support with other key players to optimize funding inflows while maximizing impacts on the ground.

1.2 Opportunities

- **Growing demand far exceeds supply:** Demand for climate information, early warning and risk reduction services far exceeds supply, and this is increasing exponentially in all GCF-supported regions. The submission of non-annex I countries' Nationally Determined Contributions (NDCs) to the Paris Agreement shows that 77 percent are countries in Africa and the Middle East, 76 percent in Latin America and the Caribbean and 100 percent in Asia and the Pacific requested support for early warning systems to enable them to manage climate risks. In addition, 40 LDCs and SIDS require urgent support while 88 percent of LDCs and SIDS request early warning systems to manage climate risks.^{ix} While demand for the provision of information and services is rapidly increasing, many National Meteorological and Hydrological Services in developing countries are confronted with substantial performance challenges. GCF can help close this capacity gap by scaling up effective collaboration, shift focus from a capital-based infrastructure to a service-based approach, and leveraging partnerships including those with the private sector.
- **CIEWS is good business:** Global climate services enterprises have experienced significant growth over the past decade, with expenditures exceeding 35 percent (USD 56 billion) between 2011 and 2015. It is estimated that the modernization of National Meteorological and Hydrological Services to reduce losses from disasters have a return on investments between USD 2 and USD 36.^x Much of this growth has occurred in developed countries while there has been limited knowledge of developing country market sizes. Although this growth has mostly occurred in developed countries, markets in developing countries are picking up as governments explore opportunities to create the appropriate policies/incentives to unlock private sector participation. The market size for sub-Saharan Africa - considered to be among the smallest - is estimated to be about USD 1.4 billion with significant scope for expansion.^{xi} This is a great opportunity for GCF to create a facility to drive uptake and investments in CIEWS by supporting countries in setting up business delivery and quality management systems and processes.
- **Growing commitment across global, continental and national scales.** The Paris Agreement Sub-paragraph 7(c) calls for "Strengthening scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making". Target 13.1 of the Sustainable Development Goals calls for "... Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries .." while target 13.3 calls for "...Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning..". The Sendai Framework's Seven Global Targets calls for efforts to "...substantially increase the availability and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030." Effective implementation of the post-2015 UN agenda requires alignment of these agreements and a commitment to joint efforts to optimize interventions and maximize impacts on the ground by scaling up strategic partnerships.
- **Unique opportunity to enhance coherence and complementarity of investments.** The climate finance investment landscape is crowded with climate and development finance institutions that are looking for opportunities to align their efforts to maximize impacts. Several approaches have already emerged east Developed Countries Fund, Adaptation Fund, Global Environmental Fund and Climate Investment Fund but operate

at a smaller scale compared to GCF. Other programmes include the ClimDev-Africa, EU intra-ACP Global Climate Change Alliance+, Africa HydroMet Programme, Climate Resilience and Early Warning Systems, and Global Framework for Climate Services. GCF's unique role will be the glue that binds the alliance and sets the standards for mobilizing finance at scale.

- **Leveraging private sector finance, public budgets and public-private partnerships.** Investments in CIEWS has traditionally come from the public sector and donor finance with a limited private sector niche, including for sectors such as aviation. A vibrant private sector is emerging as governments start putting in place enabling environments through better policy incentives to unblock barriers to private sector investments in CIEWS. The US government annual investment of USD 1 billion in the private sector returned USD 7 billion.^{xii} In the developing world, a new trend of public-private partnership is emerging where National Meteorological and Hydrological Services are encouraged to raise part of their capital through revenue generation. The growing community of the Global Weather Enterprise (GWE), which brings together public and private sectors and academia, has often focused on the developing economies. Opportunities exist for GCF to help mature similar markets in the developing world by fostering innovative hydrometeorological services business models aiming at exploiting the maximum potential of public, private and academia sectors.

2. Objectives: What are we trying to achieve?

The strategy, guides and proposals on climate information, early warning and disaster risk reduction services aim to achieve the following objectives:

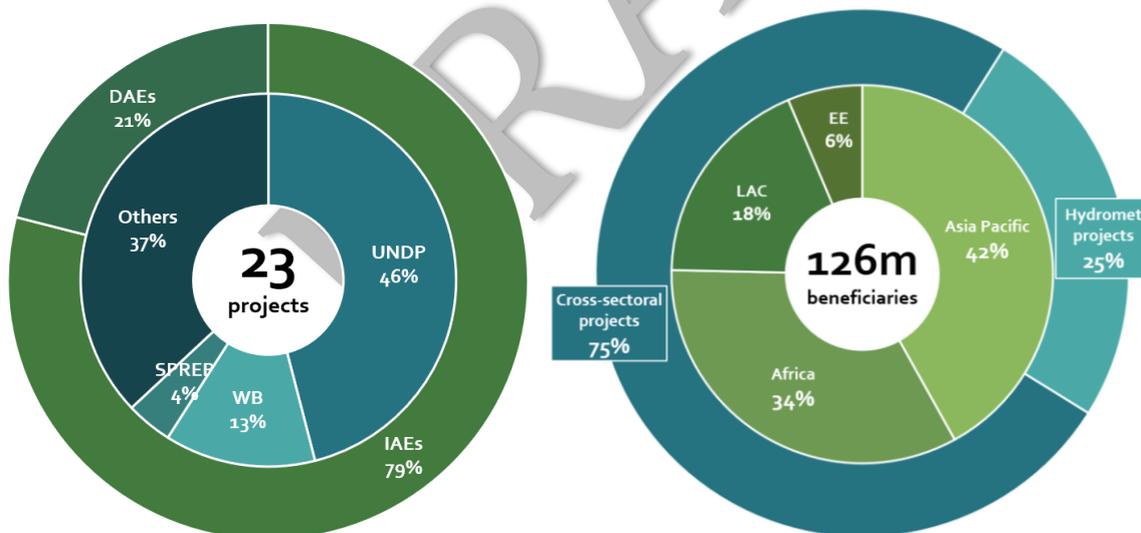
- **Ensuring climate information, early warning and disaster risk reduction services drive planning:** Increase the relevance of mainstreaming climate considerations in policy and decision making at all levels. Leverage public budgets and ensure investments successfully drive the delivery and uptake of climate information services.
- **Enhancing availability of data and science for climate rationale as a basis for project design:** Build the capacities of GCF Accredited Entities (AEs) and countries to ensure that i) a robust climate rationale underpins the design of projects and informs the implementation of outcomes; and that 2) interventions are designed to effectively use robust climate information, early warning and disaster risk reduction services to deliver results that maximize impacts on the ground.
- **Increasing coordination of all actors to increase efficiency and effectiveness of investments:** Promote strategic partnerships to make robust climate information, early warning and disaster risk reduction services widely available to the most vulnerable countries. Further promote coordinated approaches to enhance coherence and complementarity among funding agencies to increase efficiency and effectiveness of investments. Scale up country level collaboration between ministries and government agencies designed to enhance the global level collaboration of all providers of finance to the Global Weather Enterprise (GWE) by bringing together public and private sector and academia.

- Crowding in private sector:** Build on the business case for climate information, early warning and disaster risk reduction services. Promote innovative financing solutions by harnessing new opportunities for accelerating and scaling up successful business models to enhance the socio-economic benefits of hydromet services by ensuring interventions result in unblocking barriers to investments in climate services and create incentives for catalyzing funds beyond the life-cycle of projects (e.g. crowding in private sector investments and supporting governments to better programme public sector investments).

3. GCF investments and activities: What are the investments to-date and possible entry points?

3.1 Portfolio and pipeline analysis

As of the 21st meeting of the Board, GCF has invested a total of USD 659 million in 23 projects that have climate information and/or early warning systems components. With co-financing amounts, total leveraged finance adds up to USD 1.57 billion. These projects span 29 countries across Africa, Asia-Pacific, Eastern Europe and Latin America and the Caribbean reaching 126 million beneficiaries. International access entities comprise 79% of the investments made by GCF in climate information and/or early warning systems, while direct access entities only comprise 21%. UNDP accounts for the largest share of projects in the portfolio with climate information and/org early warning systems (46% of total).



The Asia-Pacific region has the most projects, with 10 approved CIEWS projects in nine countries, reaching 82 million beneficiaries and totaling USD 376 million, including GCF financing of USD 273 million. The Latin America and Caribbean region, on the other hand, receives the most financing, totaling USD 618 million, including GCF financing of USD 175 million, for five CIEWS projects in seven countries, reaching 4.7 million beneficiaries. The African region includes the most countries, with seven projects across 12 countries, reaching 35 million beneficiaries and totaling USD 506 million, of which USD 184 million is financed by the GCF.

As of late 2018, there were 82 projects totaling USD 2,693 million in the GCF pipeline focused solely or partly on climate information and/or early warning systems. These projects span 82

countries across Africa, Asia-Pacific and Latin America and the Caribbean and are estimated to reach 1,618 million beneficiaries.

Although, this demonstrates GCF's commitment to support Least Developed Countries (LDCs), Small Island States (SIDS) and African States with at least 50% of its portfolio, the typology of projects further demonstrates that countries urgently need support to modernize their hydrometeorological services and drive investments and uptake of climate information and early warning systems in decision making. Currently, the level of investments needed to transform effective production and delivery of climate information, early warning and risk reduction services remain inadequate.

3.2 Funding modalities and processes

The GCF has embarked on a series of activities to make climate information, early warning and disaster risk reduction services widely available to vulnerable countries. At its eighteenth meeting, the Board approved the work programme of the Secretariat for 2018 and its goals as well as suggested policy priorities. The work programme underscores specific interventions being undertaken by the Secretariat that support the enhancement of the climate rationale of GCF-supported activities. Other interventions are also being undertaken based on the work programme of the Secretariat for 2017 and previous decisions mandated by the Board. The work involves improving the guidance and review processes to strengthen climate information development and the capacity of countries, AEs and other GCF stakeholders, and to promote the inclusion of climate information in proposals, allowing for quality projects and programmes that clearly contribute to low-emission and climate-resilient development.

To realize the objectives and outcomes, a number of implementation modalities are being explored throughout GCF's programme activity cycle:

- *Readiness Programme support* – Developing countries can access USD 1 million per country per year for capacity building. In particular, GCF continues to work with WMO and other organizations to promote capacity building for climate information services. GCF can play a crucial role in linking MET agencies with WMO and other partners to further improve capacity.
- *Adaptation planning processes including National Adaptation Plans* – Developing countries can access up to USD 3 million once for the development and/or improvement of their National Adaptation Plans. This provides an opportunity to mainstream the use of climate information to inform key development, economic, and financial planning at the desired scale where GCF can incentivize the commitment of long-term public financing for climate mitigation and adaptation.
- *Project Preparatory Facility* – The facility supports AEs in project and programme preparation. It is especially targeted to support direct access entities, and micro-to-small size category projects. This facility is able to provide support to strengthen the scientific underpinning for climate rationale and encourage the use of climate information in project design.
- *Proposal Approval Process* – The proposal approval process is the regular process where AEs submit concept notes and funding proposals which undergoes 2nd level due diligence within the Secretariat and Board approval through the Board meetings. Soft infrastructure and hard infrastructure for climate information services and early warning systems can be funded through this process. Climate information is also fundamental in project design for interventions in other sectors to enable transformative mitigation and adaptation.

- *Simplified Approval Process* – This process is a new application process for smaller scale projects or programmes. Soft infrastructure for climate information services can be funded through this process.
- *Request for Proposals (RfPs)* – AEs can also respond to RfPs issued by GCF to fill current gaps in climate financing. RfPs are approved by the Board with specific conditions for funding which can be proposed to increase investment in climate information and early warning systems.
 - *Enhanced Direct Access* – An initial allocation of USD 200 million for at least 10 pilots specifically for Direct Access Entities including at least four in LDCs, SIDS, and African states. The objective of Enhancing Direct Access is to devolve decision-making to the accredited entity while ensuring strong country ownership and multi-stakeholder engagement. To this end, the entity needs to have a decision-making body that should include civil society, the private sector and other relevant stakeholders, and should be sensitive to gender considerations
 - *Micro- Small-, and Medium-Sized Enterprises Pilot Programme* –The programme aims to support micro-, small-, and medium-sized Enterprises in addressing mitigation and adaptation challenges through an allocation of USD 200 million divided among the geographic regions of Africa, Latin America and Asia.

GCF also commits to leveraging finance for climate mitigation and adaptation from the private sector through its Private Sector Facility (PSF). PSF engages with pension funds, insurance companies, corporations, local and regional financial intermediaries and capital markets. PSF has an opportunity to capitalize on the challenges and opportunities mentioned above.

4. Impact Areas: Translating challenges and opportunities into action

Considering the value proposition, overall objectives and the GCF investments, activities and processes to date, impact areas have been identified where GCF can play a role as a leader, convenor, and driver for the sector.

Impact Area	Modality	Specific actions
Impact Area 1: Enhanced availability/access to quality climate information, early warning and disaster risk reduction services	Strategic partnerships	<ul style="list-style-type: none"> • Building on ongoing partnerships such as EU-ACP, CREWS, World Bank, and WMO • Leveraging and scaling up finance from GEF, AF
Impact Area 2: Quality analysis of climate services for climate investments/finance	Country programming	<ul style="list-style-type: none"> • Utilizing current modalities such as Readiness, NAPs, PPF • Enhancing climate rationale in project design • Influencing IPCC summary for finance decisions
Impact Areas 3: Informed sector strategies, policy and decision making	Request for Proposals	<ul style="list-style-type: none"> • Further market study and frontier research on target areas – e.g. insurance, infrastructure resilience design, agricultural service,

		livelihoods, mitigation action, GCF priority areas
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- ⁱ World Meteorological Organization (2015), *Valuing Weather and Climate: Economic Assessment of Meteorological and Hydrological Services*, Geneva, Switzerland.
- ⁱⁱ World Economic Forum (2018), *The Global Risks Report 2018, 13th Edition*, Geneva, Switzerland.
- ⁱⁱⁱ Regina Asariotis (August 31, 2018), "2018 demonstrates extreme weather's impact on development", accessed from <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=1840>
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- ^v World Meteorological Organization (2010), *Global Framework for Climate Services*.
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- ^x World Meteorological Organization (2015), *Valuing Weather and Climate: Economic Assessment of Meteorological and Hydrological Services*, Geneva, Switzerland.
- ^{xi} Winrock International (May 2018), *Climate Information Services Market Assessment and Business Model Review*, Arlington, VA.
- ^{xii} Winrock International (May 2018), *Climate Information Services Market Assessment and Business Model Review*, Arlington, VA.



**TALK BY HON. TSUKUTLANE AU
MINISTRY OF ENERGY AND METEOROLOGY**

**AT THE 6TH SESSION OF THE GLOBAL PLATFORM FOR
DISASTER RISK REDUCTION**

DURING

**Green Climate Fund Technical Expert Meeting on Climate
Information, Early Warning and Disaster Risk Reduction Services**

GENEVA , SWITZERLAND

16TH MAY 2019

Distinguished Guests, Ladies and Gentlemen,

It is an honour for me to be participating in this event organized by the Green Climate Fund (GCF) to collect information on climate information and early warning systems which will further provide guidance in the development of GCF strategic frameworks. We note with appreciation the work that the Fund is doing in promoting a paradigm shift towards low-carbon and climate-resilient development pathways by supporting developing countries to address their climate change mitigation and adaptation needs. The Fund is also playing a significant role in channeling financial resources to developing countries to implement projects and activities to address climate change in a manner consistent with countries national development priorities.

Climate change and disaster hazards are reversing years of development gains and affect nations in different ways. Lesotho's vulnerability does not only stem from climate change impacts, but also from the current levels of poverty, which limit its ability to cope with weather and climate induced impacts. Lesotho is committed to sustainable and climate resilient development pathways that will help build on the development progress so far achieved. Being aware that climate change will continue to intensify its impacts, we should

appreciate that it will pose even a bigger challenge for the future generations.

Therefore, as a country Lesotho has to align herself with the objectives of the United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement, Sendai Framework for Disaster Risk Reduction (SFDRR), and Sustainable Development Goals which are geared to reduce the advancement of climate change by eliminating or reducing its causes, and adapting to the emerging climates.

Many African countries have started establishing institutional capacities and approaches to maximize opportunities and benefit from the Green Climate Fund. The Government of Lesotho has not yet identified a Nationally Designated Authority however, it is currently putting in place a plan to allow it to identify relevant institutions to directly engage with the GCF, apply for accreditation with the Fund and develop proposals for low emissions and climate resilient initiatives in the country. It has requested the GCF's provision of resources for readiness support so that it can prepare and identify relevant institution for direct modalities to receive funds from the GCF.

In Lesotho, we have not fully benefitted from the opportunities offered by the Green Climate Fund. This is due to amongst other factors lack

of capacity to write fundable proposals and low understanding of engagement with the Fund by various stakeholders. Therefore there is need to accelerate our country's engagement with the Green Climate Fund (GCF) so that we can:

1. Increase our understanding of the GCF and fully participate in its processes;
2. Engage more with Accredited Entities and other partners to support the design and development of our country programme proposals; and
3. Develop a roadmap and action plan with the already Accredited Entities and the GCF so that we can develop and submit concrete funding proposals with impact.

The GCF should continue to seek support from high-level leadership in creating awareness and identifying funding gaps in developing countries in particular Least Developed Countries taking into account their limited capacity to participate and developing fundable project proposals. It is important that the application and approval processes for readiness support is simplified to ensure timely disbursements.

It is important to define what it takes to support countries to establish and maintain a fit-for-purpose climate information and early warning system. This is important so that we can widely make available robust climate information, early warning and risk financing services for our countries in meeting commitments under the Paris agreement, Sendai Framework and Sustainable Development Goals.

We need to increase awareness on the increasing costs of disaster, declining capacity and investment in climate information and early warning services in most vulnerable countries. It is also important to identify early warning barriers including technical and financial gaps so that we can appropriately address them. There is therefore, a need to improve engagement at high level for a coordinated, integrated and comprehensive approach to supporting our most vulnerable countries. This will enable countries to establish effective and efficient climate information and early warning services. We have learned with enthusiasm the launch of the GCF new Communities for Practice (CoP) in order to improve delivery of climate knowledge in support of GCF's activities. It is our sincere believe that this noble initiative will work hard to understand our challenges and improve the delivery of much needed financial support to our vulnerable communities.

In conclusion, I would like to call upon the GCF to enhance their engagement with Policy makers and the financial sector in their work in an effort of increasing collaboration and bridging the gaps in financial support to Least Developed Countries and contribute to enhancing reduction in climate related risks.

Thank you



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Technical Expert Meeting on Climate Information, Early Warning and Disaster Risk Reduction Services

Chair:

Ania Grobicki

Deputy Director for Adaptation

16 May 2019

0900h – 1230h





Opening Speech

Opening Speech:

Stefan Schwager

Swiss Board member of the Green Climate Fund





High-level remarks on leadership, policy and frameworks

H.E. Laouan Magagi

Ministre de l'Action Humanitaire et de la Gestion des Catastrophes,
Niger

Hon. Tsukutlane Au

Minister of Energy and Meteorology, Lesotho

Hon. Eric Nana Agyemang Prempeh

Director General, National Disaster Management Organisation,
Ghana





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Session 1. Conceptual Framework for GCF Climate Information, Early Warning and Disaster Risk Reduction Services Strategy and Guide

Presenter:

Joseph Intsiful

Senior Specialist for Climate Information and Early Warning
Systems





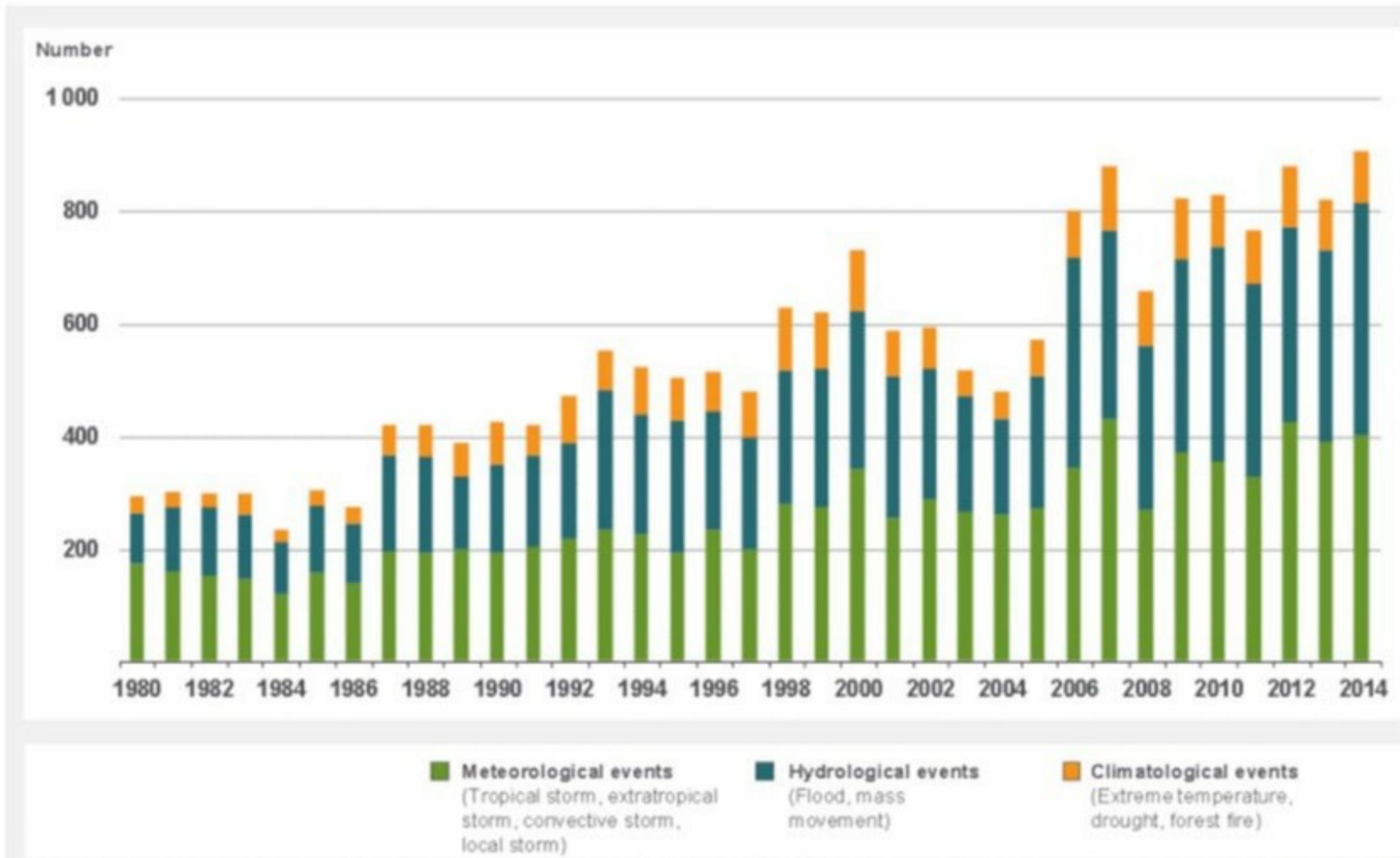
NatCatSERVICE

Loss events worldwide 1980 – 2014

Number of events



Climate Extremes and Related Disasters are on the Rise



© 2015 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE – As at January 2015





VALUE PROPOSITION:

Why focus on climate information, early warning and disaster risk reduction?

To reduce the economic losses and mortality from climate change

Challenges

- Lack of enabling environment for institutions and policies
- Hard infrastructure: lack of coverage for effective service delivery in terms of quantity and quality
- Soft infrastructure: inadequate delivery and uptake of information
- Uncoordinated interventions limiting efficiency and effectiveness of investments

Opportunities

- Demand outstrips supply
- Good business – high return of investment
- Growing commitment – Paris, SDGs, Sendai, GFCS
- Many players to optimize – Hydromet Alliance, Global Weather Enterprise
- Opportunity to leverage public-private partnership
- Opportunity to leverage national budgets





OUTCOMES:

What are we trying to achieve?

OUTCOME 1

Climate information informs adaptive planning and leverage public sector budgets

OUTCOME 2

Enhanced availability of data and science for climate rationale as a basis for project design

OUTCOME 3

Increased coordination of all actors to enhance efficiency and effectiveness

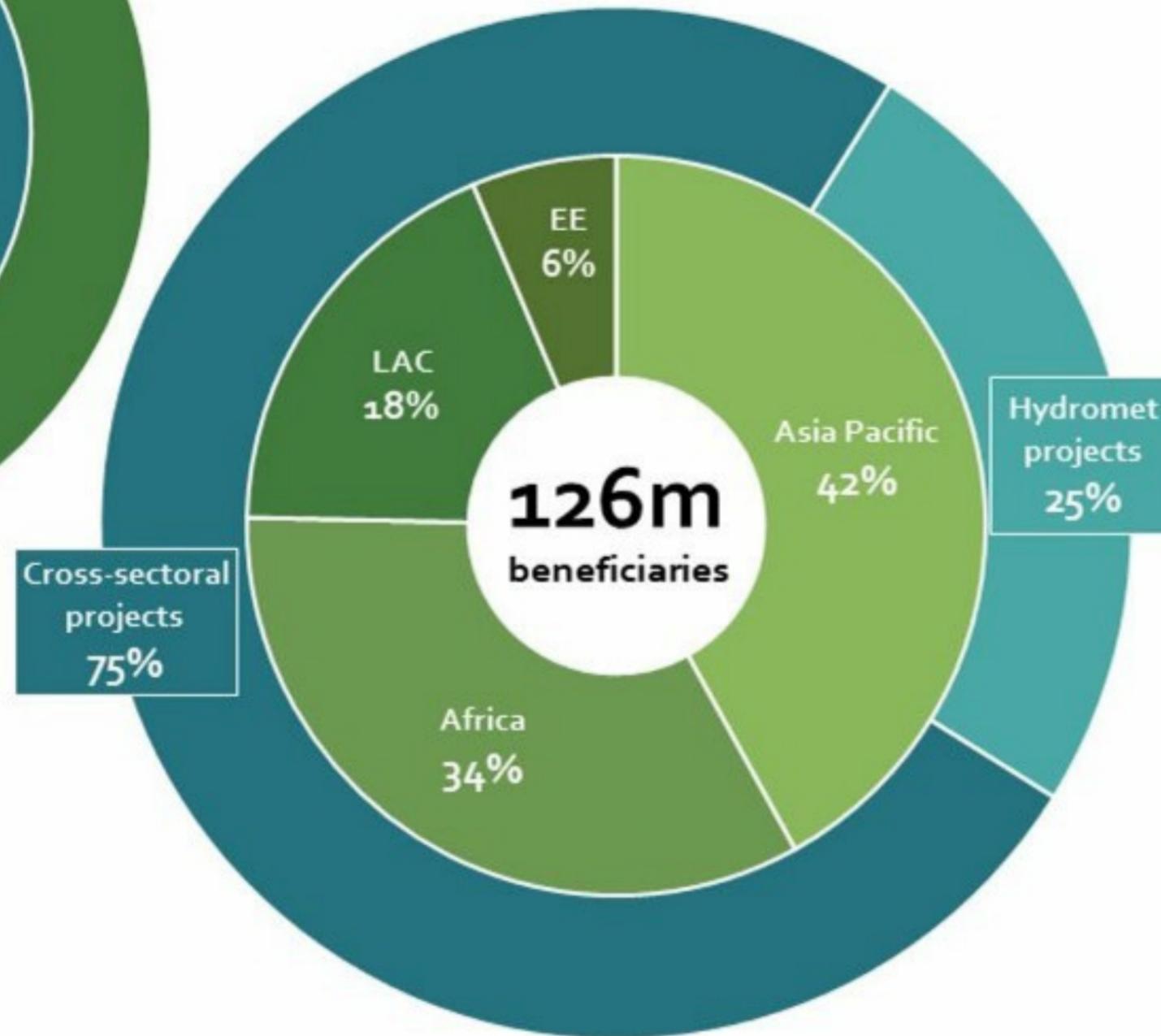
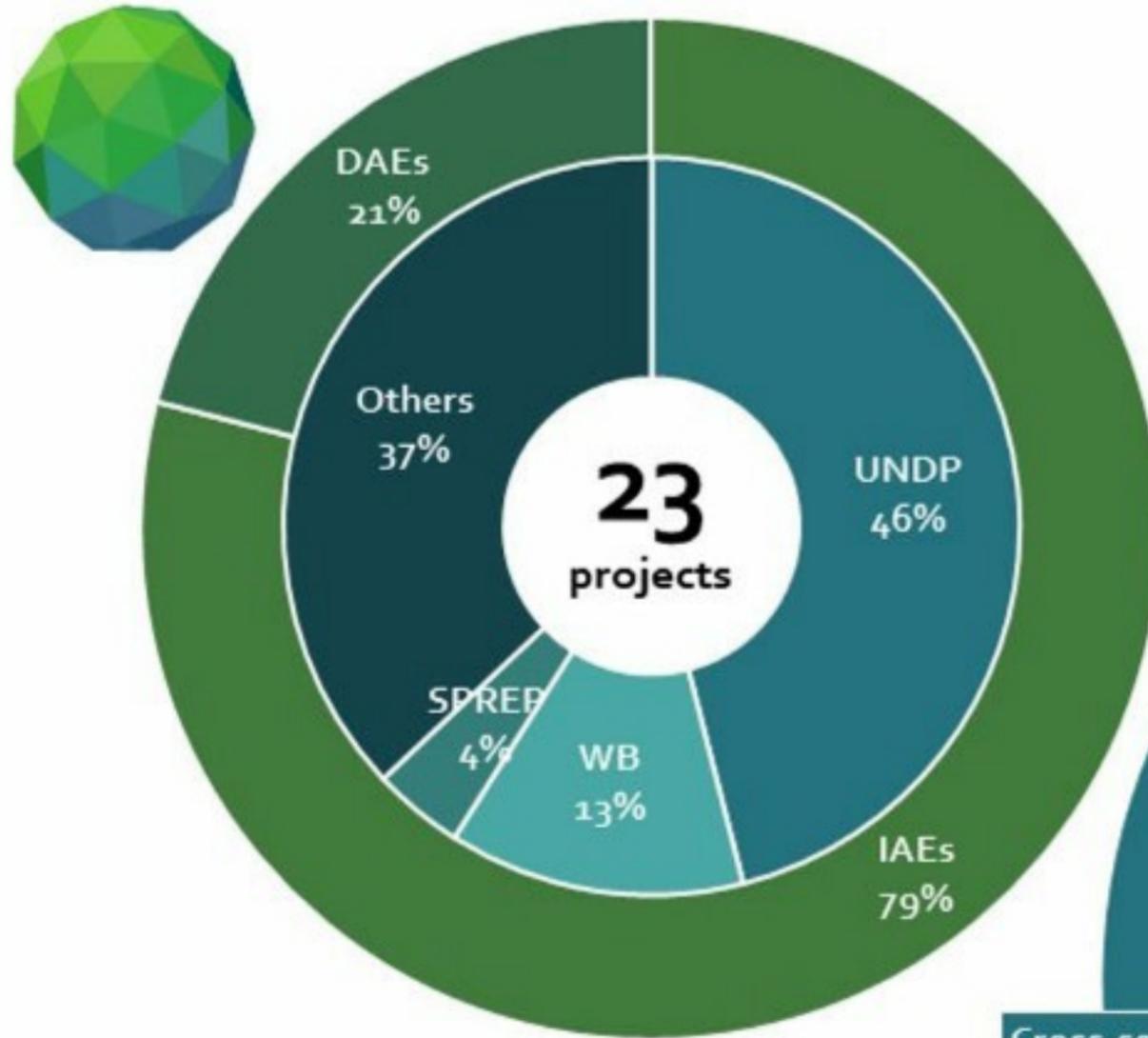
OUTCOME 4

Mobilized private sector driven uptake and investments at scale



GCF INVESTMENTS:

Climate Information and Early Warning



USD 659 million GCF funded	USD 1.57 billion Total leveraged
USD 898 million Co-financed	

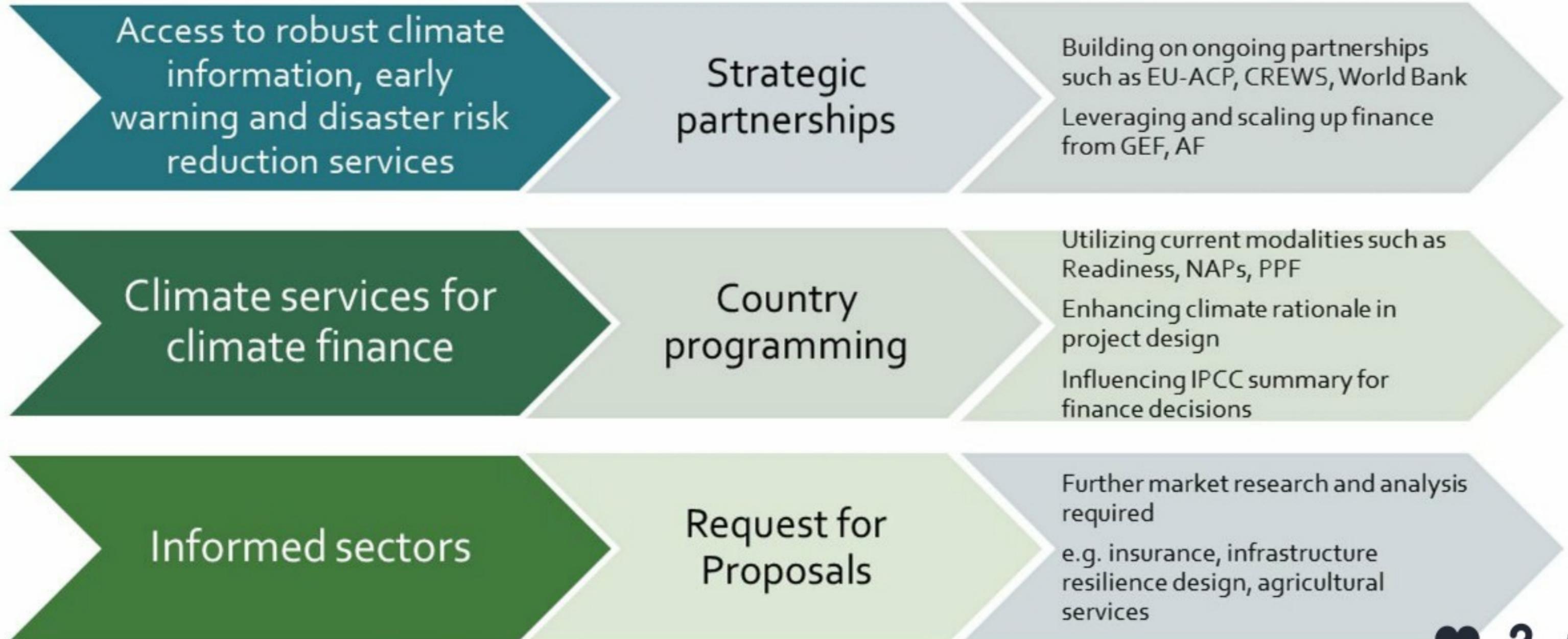
- Most of the projects in the portfolio are under UNDP – CIEWS being embedded into development programs
- CIEWS is servicing other sectors



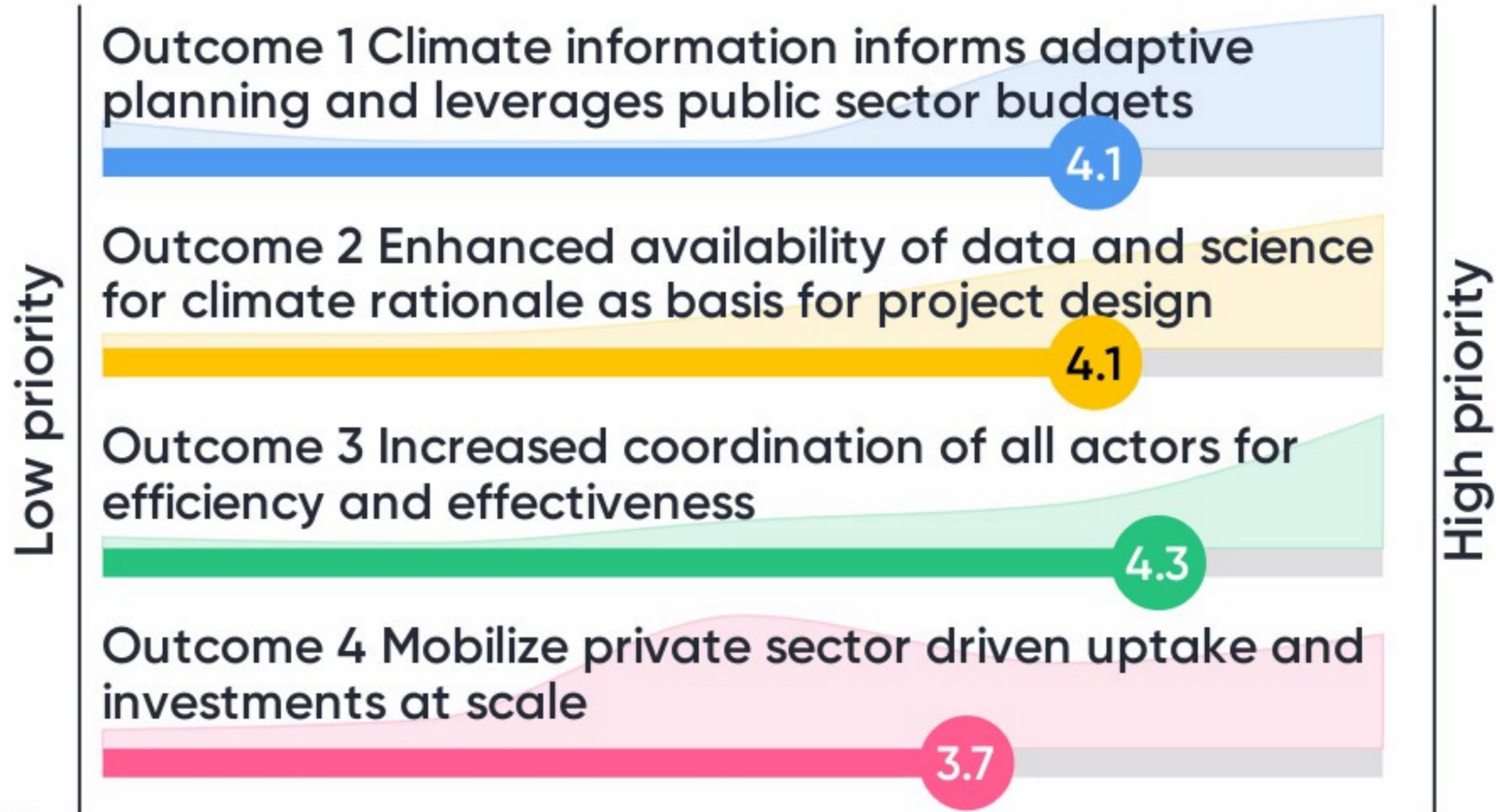


EMERGING IMPACT AREAS:

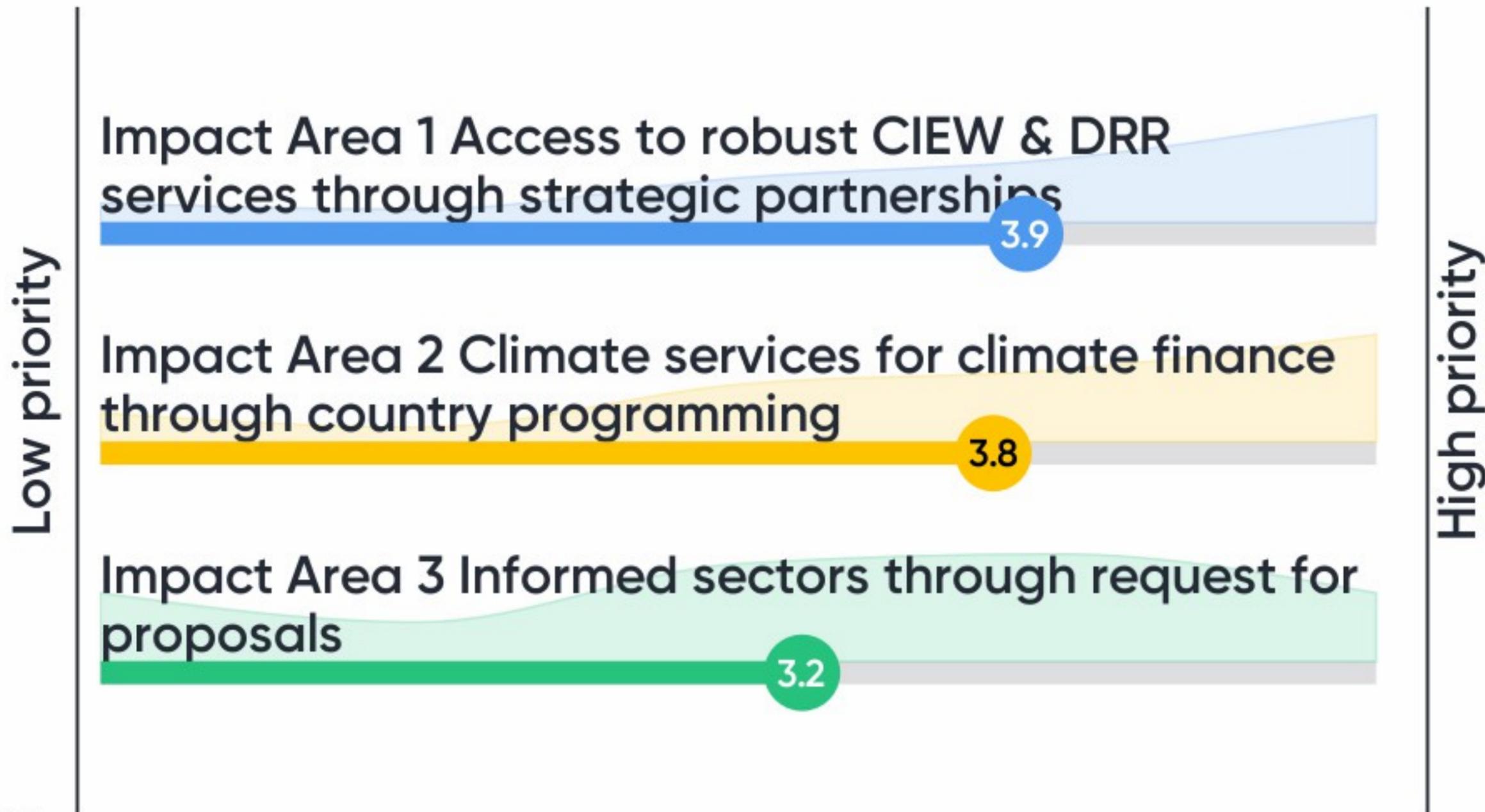
Translating challenges and opportunities into action



OUTCOMES: What are we trying to achieve?



IMPACT AREAS: Translating outcomes into actions



Q&A: What would you like to ask or say about the conceptual framework?

It should be complemented by the financing and implementation framework.

stronger links and leverage with other initiatives like gfcs crews alliance csi

To what extent is impact-oriented warning taken into account?

Excellent and well informed. The recognition of the importance of climate data and information as the basis for building climate resilience is well received.

Too Top Down. Where is "Country Capacity"?

How can GCF Assis countries to enhance private sector participation in climate related project development and financing

would be good to receive and have a chance to provide more detailed feedback in writing. There is a lot of experiences and capacities already in different organizations that could support better identification of gaps and where to build on strengths

It should be complemented by the financing and implementation framework

I see the GCF having strong potential to pull countries in, raise awareness and interest, gather proposals. Other organizations can then follow up with more targeted projects.



Q&A: What would you like to ask or say about the conceptual framework?

The State of Climate services report will provide a solid basis to identify the current status, capacities and gaps in climate services

Emphasize business case for climate information services, from a systemic point of view. If this comes early on, it will support multi-stakeholder and multidisciplinary approaches at the local level for project design and implementation.

More explicit linkages needed between GCFs support for NAPs and use of climate information to design funding proposals

Field missions to LDCs on these issues

Country capacities but also regional and global capacities and gaps should be taken into account

What regional networks/setup are you going to use if you opt for regional initiatives?

Between the interrelationships between EWS, DRR and adaptation, the framework should promote an integrate approach to ensure that not parts of the problem are addressed, but the full set of issues which should be part of EWS, DRR and adaptation

A strong call for free and open-access data in order to allow a broad group of actors to build on

Climate rationale should not be a conditionality for funding, nor should it be confused with attribution



Q&A: What would you like to ask or say about the conceptual framework?

Use Country Support Initiative as the means of implementation for increased country capacity.

How will you concretize coordination with existing initiatives and tap into existing technical expertise such as the one of CREWS?

Stronger integration of the humanitarian response community to the group of CCA, DRR and sustainable development communities.

Climate information and EWS depend on sustainably operationalized, complete systems. Important to avoid ad hoc solutions and rather build on and enhance existing systems through existing multi-stakeholder frameworks and initiatives.

How is exposure and vulnerability considered?

Is there investments fundings) in technology tranfer and knowledge management between Global, regional and national

I suggest to think already now about a monitoring and evaluatiin system to be able to justify the expenses

Our collective efforts contribute to resilience building. How do we better coordinate between various global initiatives that aim to local impact?

The presentation is very helpful and how can the GCF support countries and what is expected from countries to over come the challenges faced through GCF. How can you support countries in project preparation? How may countries can submit the proposal



Q&A: What would you like to ask or say about the conceptual framework?

Importance of supporting regional projects under the umbrella of the GFCS of WMO

It's very informative.

How can we accelerate action? Disasters are accelerating but too many people are still at risk - we need to sprint the last mile

It is necessary to have an integral approach of projects and assure sustainability of them

MetServices that do not have experience in designing projects must be supported. It is necessary to assure personnel to operate new system. It's mandatory to assure sustainability of the project under government support.

GCF should work side by side with WMO GFCS in order to optimize support to MetServices requirements. WMO should consider to use the Country Support Initiative (CSI) to be implemented in the near future to support MetServices real requirements.





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Session 2: Building a strong project pipeline

Moderator:

Maxx Dilley

Director, Climate Prediction and Adaptation

WMO



SESSION 2: Building a strong project pipeline

- How can countries identify and prioritize the CIEWS and risk financing services that they need?
- How do we ensure the complementarity of individual projects in order to create complete operational systems and associated services?
- How do we ensure last mile delivery of information to end users and stakeholders to ensure behavioral change and transformational impact?
- How can countries ensure the sustainability of CIEWS systems?



SESSION 2: Thoughts

How can the gaps in the value chain towards service provision can be overcome and how is service oriented funding secured.

Stronger consideration of the "Localisation" paradigm shift within Member States to govern disaster management.

Identify stakeholders, identify their indicators of performance (social, economic and environmental), identify causality between climate and indicators of performance, and among indicators of performance (to create synergies) > then tell the story

Development partners need to bring multi-disciplinary team to the countries, don't simply ask for multi-stakeholder participation when meetings are organized. This is to ensure that conversations (going both ways) can take place

We need new info: Risk is dynamic, climate change: new areas are affected by hazards, events are more frequent & or intense. Population growth & urbanization leads to higher Exposure Ecosystems decline increases hazards & vulnerability.

Is a "second look" on proposals an option to secure service provision

Concern about sectoral approach presented earlier, it leaves out all potential synergies of intervention and gathering stakeholders from different "thematic areas".

- How can countries identify and prioritize the CIEWS and risk financing services that they need?
 - Convincing politicians that they will lose political support (e.g. votes) if they fail to provide and make use of CIEWS at emergencies and others. .

Investments need to consider all 4 components of MHEWS rather than just aspects of the system. Work with regional agencies and orgs when engaging with countries. Do an assessment of what exists and identify what is needed



SESSION 2: Thoughts

- How can countries identify and prioritize the CIEWS and risk financing services that they need?
-Public awareness and support to CIEWS that drive politicians to do more for CIEW. Education is the key.

The coming together of sectors to formulate transformative proposals is great. A collaborative approach of climate finance partners in taking proposals from initial to advanced stages may also be revolutionary.

Hydromet Projects need to be built on and reflect best available WMO technical expertise

Hydrometeoric network enhancements and technological advancements for early warning improvements

- How can countries identify and prioritize the CIEWS and risk financing services that they need?
-Strengthening & enabling communities so that they take active roles not only at emergency but in normal periods.

- How do we ensure the complementarity of individual projects?- Individual projects should have common targets which can not be achieved without joint works by the multiple projects. Targets should be constantly monitored in coordination mechanism.

To foster long-Term sustainability, create incentives that support existing, well-functioning partnerships.

To provide effective preparation and early response to disasters, an operational framework from Continental, Regional and National level to be set up by stakeholders at Global, Regional, and national levels

Lots of lessons and knowledge gained in supporting national institutions in identifying CIEWS gaps, designing programmes and building on existing best practices with monitoring in place. Build on our lessons of working at the national level please



SESSION 2: Thoughts

• How do we ensure last mile delivery? - Education/awareness raising of individuals cum strengthening community's supporting functions to individuals. Grass-roots involvement of citizens/farmers/stakeholders in drafting municipal/community plans

Today projects proposal are made by the Accredited entity and the sectoral agencies with much collaboration with other agencies in particular NMHS. There is neither a collaboration with others other donors and accredited entity. Partnership is the w

• How can countries ensure the sustainability of CIEWS systems? Stronger linkage between climate services and sector practitioners. Support (even financial one) should be initiated from the both sides.

For Africa case, we recommend to urge Early warning services, Humanitarian organizations, and DRM agencies and stakeholders to take advantage of the existing untapped potential in Climate information from Climate Centres

The WMO country support initiative offers the opportunity to overcome the agencies coordination disruptive elements of gcf funding

Working with a multidisciplinary approach from the get-go will also help identify what type of tools and models may be needed (e.g. on ecosystem services, economics) to perform relevant forecasts (also for forecast-based financing).

Use GCF convening power, i.e. solicit proposals from consortia instead of single actors and incentivize joint proposals, e.g. from groups of countries through substantially higher support for such endeavours.

a

Where and which project to implement? It has to be based on a sound needs, capacities and gap analysis. The State of Climate services report can provide that basis



SESSION 2: Thoughts

To identify existing initiatives a thorough analysis needs to be done.

Institutional arrangements at national level was mentioned as a need. National frameworks for climate services are showing to be as successful mechanisms for this at national level. There are about 30 around the world so far

Take advantage of mechanisms being tested in CREWS.





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Session 3: Means of implementation

Moderator:

Markus Repnik

Director, Office of Resource Mobilization and Development

WMO



SESSION 3: Means of implementation

- How do we ensure coherence and complementarity of investments in CIEWS by global, national and local actors, including the private sector?
- What are the barriers to greater involvement of the private sector in CIEWS?
- What is the sweet spot for innovation in investments in CIEWS?
- How do we ensure decision-making and policy-making is informed by CIEWS to achieve the most impact? Across sectors and regions?



SESSION 3: Means of implementation

- What are the existing or planned mechanisms and initiatives that the GCF sector strategy should "glue together"?
- How to glue them together that the whole is bigger than the individual parts?



SESSION 3: Thoughts

What are the mechanisms to "glue together"? - Integrated Water Resources Management should be "gluing concept" to connect climate, water and DRR strategies.

What are mechanisms to "glue together"? - Regional Economic Commission (SADAC, SAARC, ECLAC, ASEAN, etc.) and UN Regional Existing commission are useful platform to propose/decide gluing strategies/projects.

How to glue them together that the whole is bigger than the individual parts? -GCF Strategy should be glued to sectoral plans at "sub-national" levels so that the strategy activates actions of regional/local governments.

A challenge is how to bring met departments into the development planning process. What glue do we create otherwise? To deliver projects more effectively, without knowing whether these projects will contribute to development (with no side effects)?

Rarely are the hydromet agencies the accredited agency under GCF - might be the reason why you don't see many applications.

Which benchmarks could be used to quantify the slightly overused terms of efficiency and effectiveness?

The WMO Country Support Initiative will support countries and development partners by acting as the "glue" through the provision of CIEWS integrated advisory

It is possible to centralize some activities to scale faster (e.g. global observations) but this has to be coupled with the generation of information relevant to local stakeholders (e.g. impacts on ag yield and income, estimated with local capacity).

There are pool of demonstrated projects related to CIEWDRRS and best practices which are worth to be supported and to be upscaled.



SESSION 3: Thoughts

Create a dedicated financing mechanism for hydromet systems to support specific services needed to achieve socio-economic benefits financed through sector focused country level investments. Total estimated global annual hydromet investment \$200-300m.

A one project one country one agency approach misses the regional and global components and capacities to support the national MetServices and to realise socio economic benefits of climate services in the sectors

The 'glue' should also be the demands driven by the end users, by the communities who need climate and weather information to develop preparedness and risk reduction measures - they should be our starting point

There are about 30 national frameworks for climate services providing the space for effective institutional coordination at national level

Climate information is the basic requirement for climate adaptation and mitigation measures , I support the need of dedicated funding for hydromet and EWS under GCF.

The Alliance for Hydromet Development offers an opportunity to come together under a minimum of principles of collaboration for hydromet development

WMO Country Support Initiative is an opportunity that will enable best available science and expertise to be brought in an integrated manner to all GCF hydromet projects promoted by different partners

The seat layout can be changed so that Moderators can incorporate comments in meindi into oral discussions. Too much challenge for moderators?

Engage with beneficiaries during project design so that they're not caught unaware during implementation.



SESSION 3: Thoughts

Climate or hydromet project proposal need expedites process or special process

Work with regional organizations when engaging with member countries. They'll be able to provide ongoing support to national counterparts during implementation and beyond project lifetimes.

Take advantage of coordination mechanisms being tested in CREWS.

Can we better learn from current practices of World Bank, WMO (CREWS, Hydromet Africa etc...)

What will the relationship be between CIEWS and CREWS?





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