United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Regional Perspective on Implementation Progress and Achievements: ClimDev-Africa

Joseph D. Intsiful (PhD)

Senior Climate Science Expert, UNECA

The Intra-ACP GCCA Programme Third regional Technical Meeting

Port Louis, Mauritius, 25 – 26 April, 2016

ClimDev-Africa

Outline

Part 1: ClimDev-Africa Context and Relevance

Part 2: ClimDev-Africa result areas

Part 3: Partnerships, impact and lessons learnt

Part 4: Towards Future Pathways: ClimDev-Africa Phase II

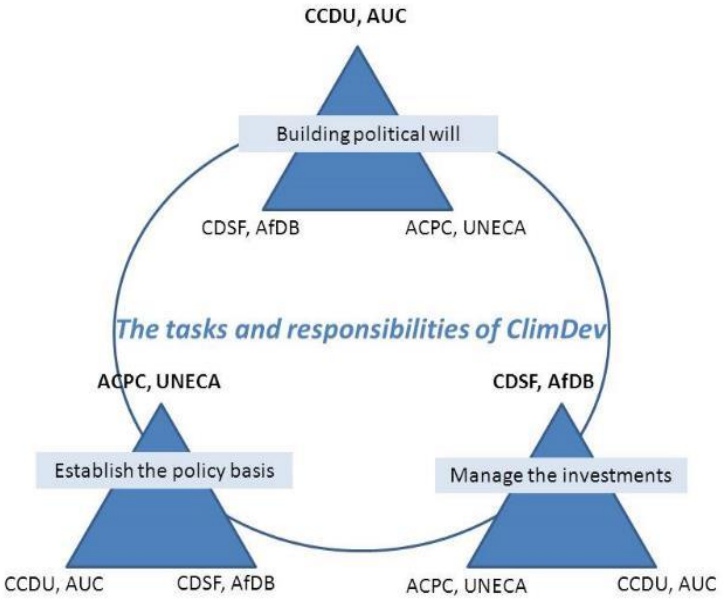
Part 1:
ClimDev-Africa Context and Relevance

ClimDev-Africa Vision

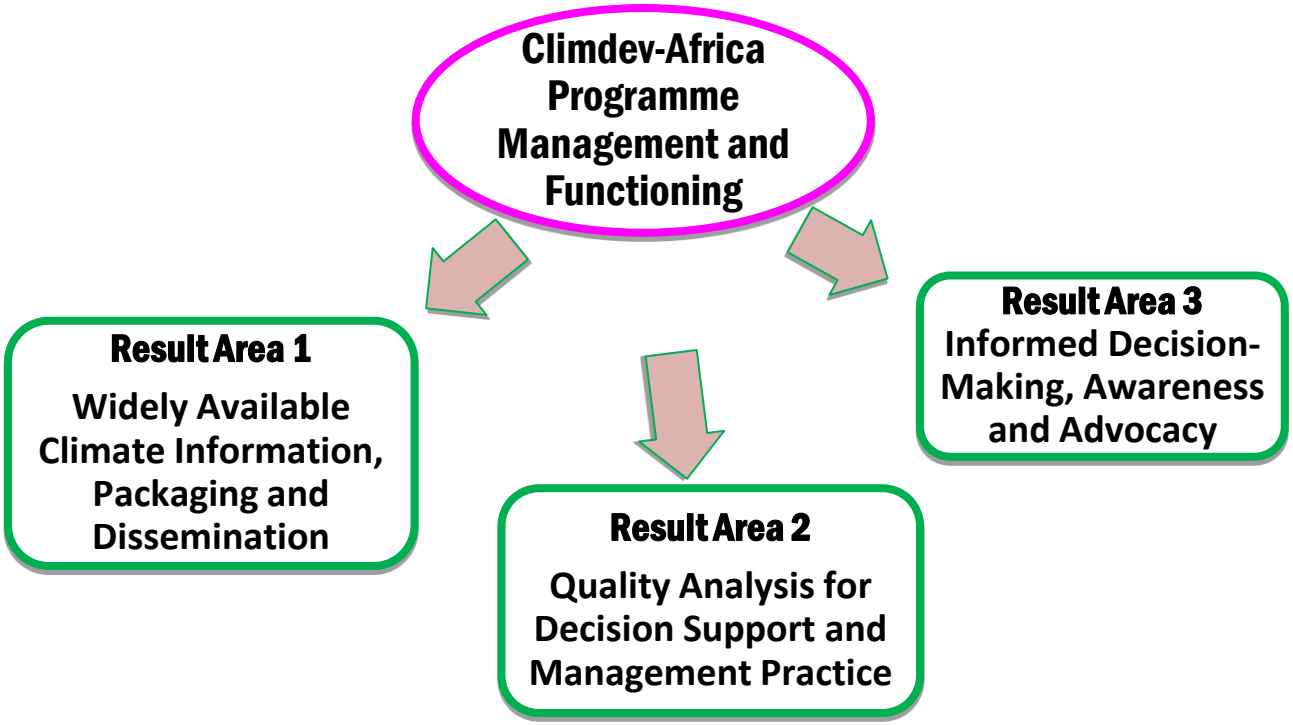
Sustainable attainment of poverty reduction and other SDGs in Africa through policies and decisions on practices in Africa that take full account of climate change risks and opportunities at all levels (regional, sub-regional, national, local, community and individual).

Relevance of ClimDev-Africa

- Unique in that it brings climate information & development together
- Conceptually relevant
- Reinforces Africa's development agenda
- Political buy-in at the highest level
- Combination of partners' strengths:
  - ECA to generate knowledge and analytical inputs to inform policy;
  - AfDB to demonstrate return on investments in climate information in order to optimize new investments in CIS;
  - AUC to enable policy formulation and uptake at the highest level



The ClimDev-Africa Programme is structured into three result areas



Part 2:
ClimDev-Africa result areas

United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Result Area 1

Widely Available Climate Information, Packaging and Dissemination

ClimDev-Africa

Technical support to pilot countries

- **Provided hydrological and meteorological equipment to Ethiopia, Rwanda and the Gambia**
- **Support provided to the 3 pilot countries in data rescuing, upgrading hydro-meteorological observational networks, early warning and data management systems.**
- **In Ethiopia, ACPC delivered 23 high capacity computers for the NMA, 20 Automatic Water Level Recorders and remote telemetry units, 1 database management software, and technical training was providing to experts from the Department of Hydrology of the Ministry of Water and Energy**
- **In Rwanda, ACPC delivered hydro-meteorological equipment and is assisted in setting up flood early warning systems in two watersheds, as well as 19 high performance computers, 15 hard drive disks and 5 scanners, 1 high performance computer and 1 database server**
- **Also in Rwanda, ACPC has implementing a project on vulnerability and risk assessment**
- **In The Gambia, ACPC delivered 4 water level measurement stations with telemetry, 3 ground water monitoring station with telemetry and a cellular base station are procured and one system installed with remainder under installation.**
- **The ENACTS (Enhancing National Climate Services) initiative was implemented in Rwanda and Gambia in partnership with IRI to meet the increasing demand for improved climate information and services.**

Flood early warning system in Gambia

Hydrological network in Ethiopia

Vulnerability index for Rwanda

ClimDev-Africa

Scaling up Pilot Activities - Making climate information widely available African-wide with specific focus on African SIDS

- Establishing a Helpdesk for technical support and services (resources and systems)
- Establishment of a High Resolution Continental Numerical Weather Prediction and Early Warning System for Africa (9km) with special focus on African SIDS (1km)
- Capacity Building, Deployments and Direct Engineering Assistance on Wireless Communication Platforms for Climate Information and Climate Services Delivery in African SIDS (Cape Verde, Comoros, Guinea-Bissau, Mauritius, Sao Tome and Principe and Seychelles)

- Establishing Climate Services Information Systems Africa-Wide to make climate information and services widely available
- Train existing and next generation of climate scientists and technicians to consolidate investments in climate information services (observing networks, e-infrastructure, early warning systems and data and information management systems

Workshops on Use of ACPC-ClimDev Numerical Weather Prediction and Early Warning System

- Workshop themes:
  - Comprehensive technology needs assessment in African SIDS and mainland countries to facilitate deployment of system
  - Establishment of community of practice and research themes for further enquiry
- Atlantic Ocean SIDS Workshop - Brought together 20 participants from African SIDS, Gambia, Senegal and experts from USA/NOAA, Iceland and ACPC/ClimDev-Africa:
  - Benchmarking of model performance based on forecasting of Hurricane Fred and associated storm surge
- Indian Ocean SIDS Workshop - Brought together 12 participants from African SIDS, Gambia, Ghana, Madagascar, Mauritius, ICPAC and experts from Iceland, ICTP and ACPC:
  - Benchmarking of model performance based on forecasting of Indian Ocean extremes and associated storm surge

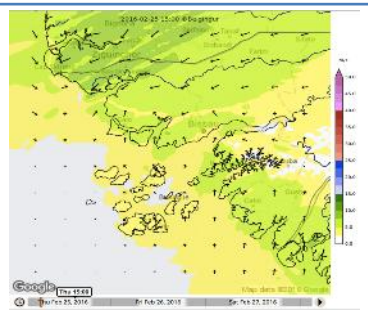
ClimDev-Africa

Setting up of ACPC/ClimDev-Africa Numerical Weather Prediction System and Climate Services Information Systems Africa-wide

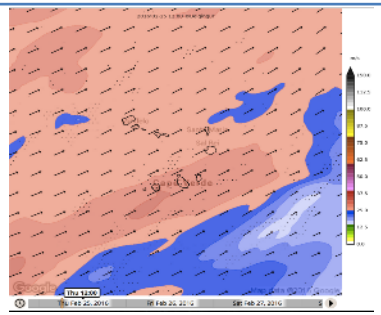
Hands on training for Cabo Verde on deployment and management of Numerical Weather Prediction System

New Operational Numerical Weather Prediction and Early Warning System for African Small Island Developing States (SIDS)

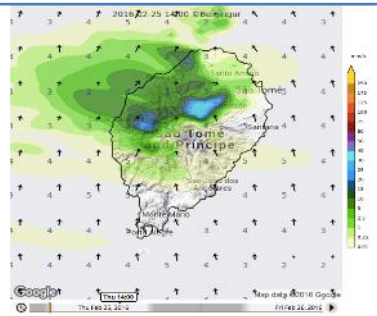
- **New High resolution 1 km** Operational Numerical Weather Prediction and Early Warning System for African SIDS
- Current systems are at **resolutions of 50km to 150km** and unable to predict fine **scale extremes**
- This is the **first time** such a system has been widely deployed across African SIDS and will revolutionize weather forecasting in Africa SIDS.
- African SIDS will now be able to generate **robust climate products and services** to meet their unique needs at the **appropriate scales**



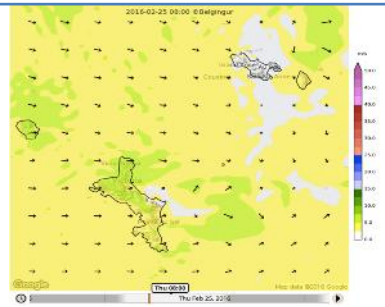
Guinea-Bissau



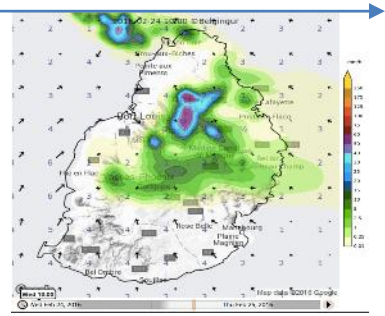
Cabo Verde



Sao Tome & Principe

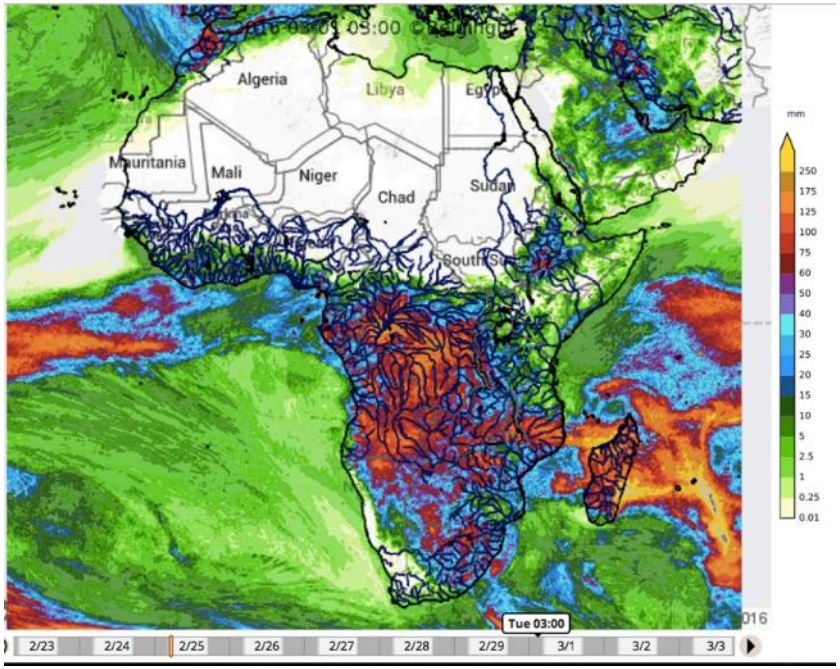


Seychelles



Mauritius

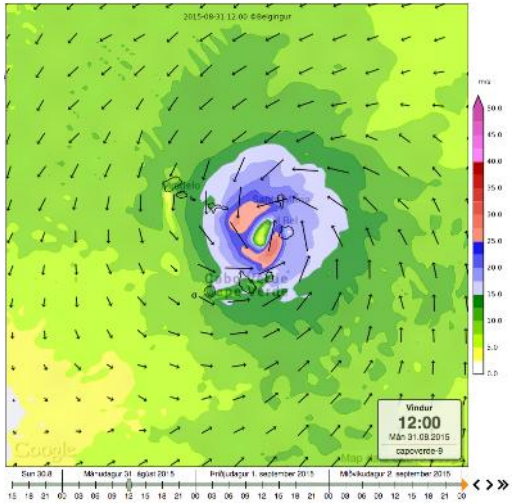
New African Continental –wide High Resolution Operational Numerical Weather Prediction and Early Warning System



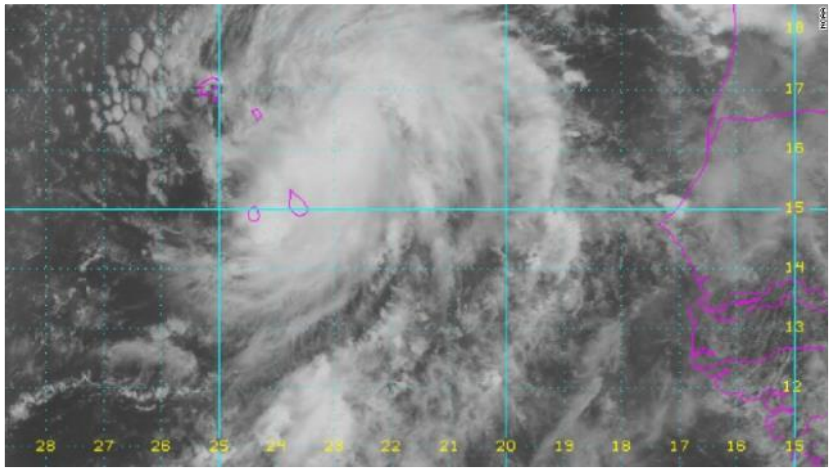
Accumulated precipitation from the High Resolution 9 Km African Continental Operational Numerical Weather Prediction and Early Warning System.

- Scaling up of the SIDS model
- The first time such a high resolution system has been widely deployed across Africa
- Initial results show very impressive results and further testing on-going at the RCCs (ICPAC, ACMAD, AGRHYMET and SADC-CSC)
- Envisaged to significantly improve the generation and delivery of climate products and services (e.g. disaster management, health and agriculture)

Model has significantly improved performance in operational weather forecasting – fine scale details of extreme weather



Forecast from ACPC/ClimDev model



Observed NASA satellite imagery

Model has a good performance in forecasting Hurricane Fred - First time a system has gone through Cape Verde

ICTP-ACPC African SIDS Workshop on Wireless Communication, Observing Networks and Internet of Things

Solutions to the communication issues faced by African Islands, such as last-mile connectivity, low speed Internet connections, intermittent energy availability and harsh environmental conditions.

20 participants from 6 different African Islands, RCCs and mainland Africa.

Outcomes:

- Identification of site characteristics, equipment and deployment schedules finalized for each SIDS
- Preparatory work towards 2nd workshop in February 2016
- Preparatory work towards proposed MSc in "Internet of Things(IoT) " (wireless communication, observing networks and data analytics)

United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Climate Research for Development (CR4D)

Vision: Catalyze multi-institutional and multi-disciplinary integrated, demand-driven, climate research and analysis that is responsive to users and development planning needs

Key Goals:

- Enhance ACPC's links with climate research and operational centers, as well as other stakeholders and initiatives in order to improve flow of relevant climate information and services for policymaking and development planning
- Facilitate multi-institutional and multi-stakeholder demand-driven applied climate research: Collaborative Platform for co-design, and co-production of climate information and services
- Mobilize and promote cross-disciplinary capacity development and training through partnerships with sub-regional, regional, international and Pan-Africa institutions and stakeholders
- Improve development and use of sector-specific climate-related decision support and/or translation tools

ClimDev-Africa

Current and Planned CR4D Activities

- Multi-Institution Pilot Research Projects on Sub-Seasonal to Seasonal (S2S) climate forecasting and applications in West and Central Africa

- Developing an inclusive collaboration network of key institutions, stakeholders, and experts to undertake a Pan-Africa 2 Degree Africa 2020 Climate Impacts Assessment (2016-2020)

- Establishing Six multi-institution and multi-stakeholder Regional Climate Research Partnerships (RCRP)-West, East, Central, North, South and African-SIDS as the implementation mechanism for the CR4D Platform
  - Two Regional Workshops to initiate the process (East and Southern Africa)

- Mapping Institutions , Initiatives, and Expertise on climate research and related applications since 2005

- Developing CR4D 5-Year Strategic Plan (2016/7 to 2020/1)

Priorities for future activities in Result Area 1: Climate Information Services

- Integrate within the Early Warning System an operational DRR data and information management system and practitioners handbook for African SIDS
- Build strategic partnerships with CR4D, African universities and research institutions to integrate systems into their processes
- Explore the use of innovative emerging technologies to strengthen NMHS and RCCs operational infrastructure and human capacity
- Development of sub-seasonal to seasonal climate prediction system for the Indian Ocean RIM countries and its extension to the Atlantic Ocean RIM countries – partnership between UNECA, UNOSAT, ISOR and WMO/GFCS

United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Result Area 2

Quality Analysis for Decision Support and Management Practice

ClimDev-Africa

Energy and technology

Objective:
Promote the enhanced deployment of renewable energy, energy efficiency and other environmentally sound technologies as climate change mitigation and adaptation strategies

3 pillars of energy and climate change action:

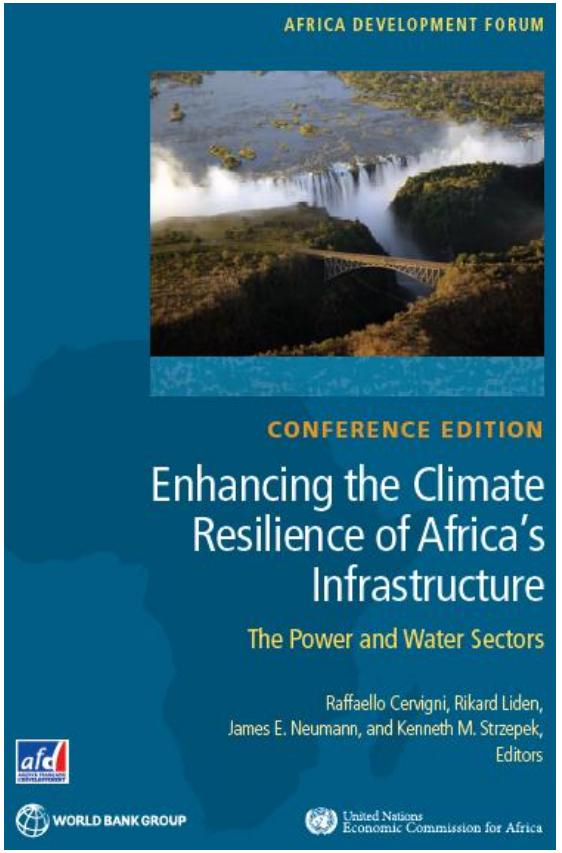
- Renewable energy
- Energy efficiency
- Carbon capture and storage (CCS)

Energy and technology

A Facility for Enhancing the Climate Resilience of Africa's Infrastructure (ECRAI / Afri-Res)

(in collaboration with the World Bank and AUC)

A Facility to support climate-proofing of investments in energy and other infrastructure through strengthening the capacity of African institutions (including national governments, river basin organizations, Regional Economic Communities, power pools, etc) to plan, design, and implement climate-resilient investments in selected climate-sensitive sectors



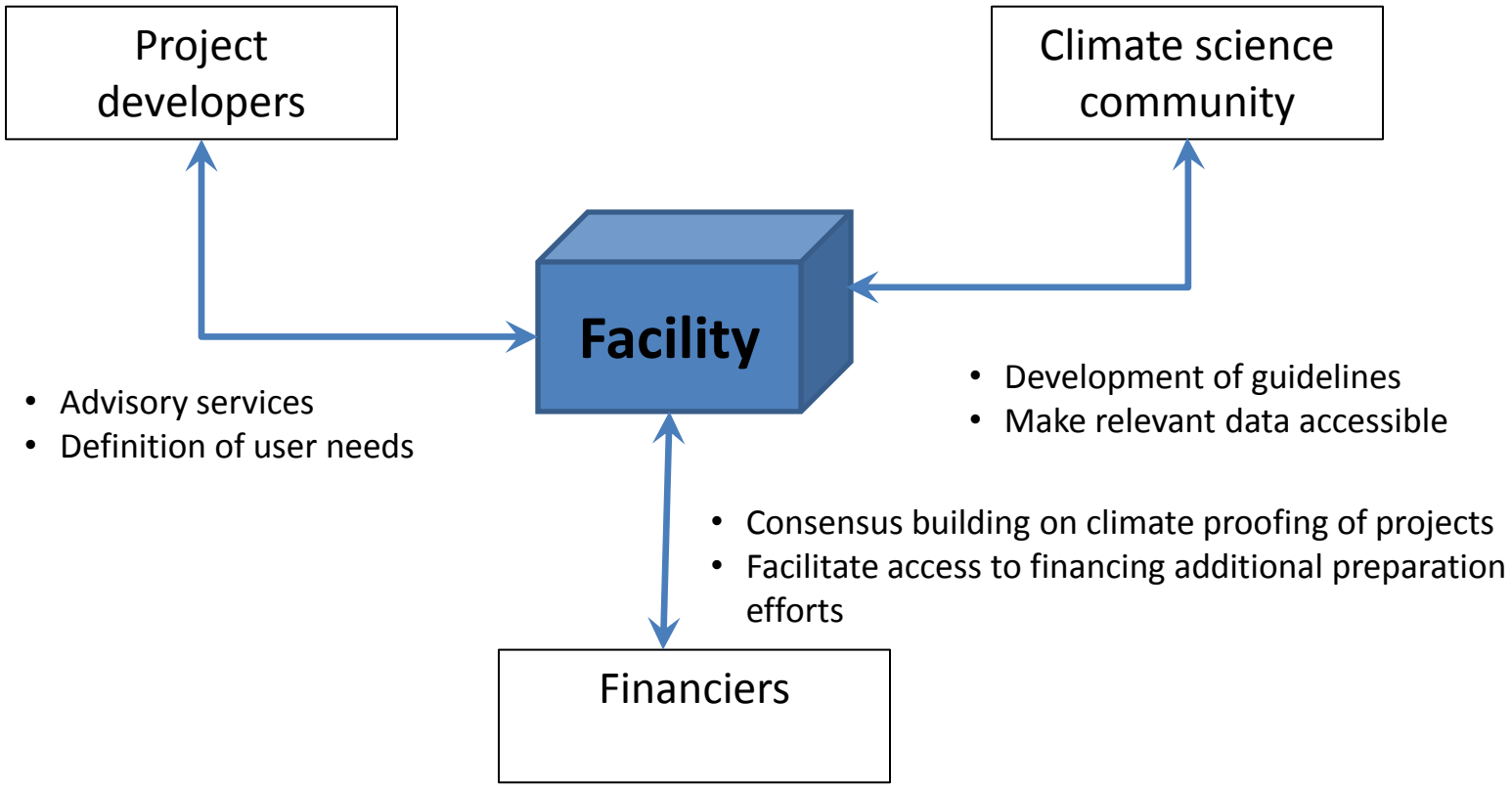
Energy and technology

Rationale for the ECRAI facility:

- Over USD 100 billion required for long-lived infrastructure in Africa over the next decade
- These investments are vulnerable to climate variability and change
- Appropriate planning and design needed to ensure these investments do not under-perform, derailing the continent's transformation and inclusive growth agenda
- The data, knowledge and technical capacity to plan and design climate resilient investments is presently inadequate

Energy and technology

Operational Framework for the ECRAI facility:



United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Selected Energy & Climate Events in 2015 – FFD3, Addis Ababa

Carlos Lopes, Achim Steiner, Hela Cheikhrouhou, Solomon Asamoah, among others discuss financing renewables in Africa

THIRD INTERNATIONAL CONFERENCE
FINANCING FOR DEVELOPMENT
TIME FOR GLOBAL ACTION

ECA Side Event

Unlocking Transformative Financing for Renewable Energy and Climate Resilience in Africa

From Evidence to Widespread Replication

Date: 14 July 2015, 6:00 pm - 8:00 pm
Venue: ECA Africa Hall

nDev-Africa

Selected Energy & Climate Events in 2015 – COP21, Paris

Nicholas Stern, Nick Hurd (MP), Hela Cheikhrouhou, Ngozi Okonjo-Iweala, Andrew Norton, Fatima Denton, Eric Postel, Kurt Lonsway discuss financing low carbon development pathways in Africa at COP21

Segolene Royal attends ACPC/IRENA event on climate change and the global renewable energy revolution; pledges support to Africa, including France's commitment to the Africa Renewable Energy Initiative

ClimDev-Africa

Energy and technology

Other programmatic areas:

- The energy, climate mitigation, adaptation and other co-benefits nexus analyses for all end-use sectors
- Tools, data and institutional strengthening and human capacity development for energy planning
- Enabling policies and regulatory frameworks for mainstreaming low-carbon energy strategies into national development plans
- Renewable energy and energy efficiency systems and business models for climate resilience in African Small Island Developing States
- The transition from traditional use of biomass to modern bioenergy

United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Result Area 3

Informed Decision-Making, Awareness and Advocacy

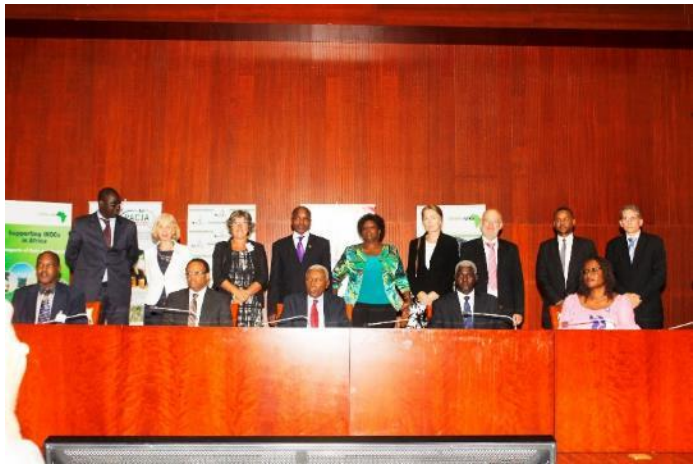
ClimDev-Africa

Policy Support

- ACPC provided various levels of support to different policy processes in Africa during 2015
- Policy support activities included:
  - Support to the Africa Group of Negotiators (AGN)
  - Support to member states for the development of INDCs
  - Promotion of dialogue on COP21 to support the development of common African positions
  - Support for capacity development among Young African Lawyers

Africa Climate Talks (ACT!)

- The ACT sought to create space for the democratization of climate governance by convening policy makers, civil society, and the private sector to discuss common African positions in the lead up to the Paris COP 21
- The 2015 ACT was held under the rubric “The Promise of Paris – A critical Inquiry into the issues, challenges and prospects of a post Kyoto climate framework for Africa”
- Co-organised with the University of Dar es Salaam, the meeting was attended by more than 300 participants



ACT!

- The meeting addressed 3 key issues:
  - Climate science and climate policy linkages: what has worked in Africa and why?
  - Financing for Climate, Technology Transfer and Capacity Building: What has been the experience of Africa under Kyoto and what needs to change in the post Kyoto framework
  - Africa in a Changing Climate: Opportunities and Constraints
- The meeting also had a solutions forum where African solutions to climate change were discussed

United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Fifth Conference on Climate Change and Development in Africa (CCDA-V)

- ClimDev Africa convenes an annual conference on Climate Change and Development in Africa (CCDA)
- The 5th Conference on CCDA was held in Victoria Falls, Zimbabwe in November 2015
- The meeting was attended by more than 400 Scientists, Policy makers and policy analysts, representatives of civil society and the private sector
- In addition to roundtables and panel discussions, 80 scientific papers were presented in 8 thematic streams focusing on different aspects of the climate challenge

ClimDev-Africa

African Pavilion

- ClimDev Africa partners collaborated to host the African pavilion at COP 21
- At least 80 events, including launches of major climate initiatives, round table discussions, panel discussions and presentations were held at the Pavilion over a 10 day period
- The pavilion hosted many meetings of the African negotiators to as the negotiation processes unfolded
- The pavilion also became the central meeting point for the different African interest groups participating in the COP

Part 3:
Partnerships, impacts and lessons learnt

Partnerships

- World Meteorological Organization (**WMO**)
- Global Framework for Climate Services (**GFCS**)
- African Centre of Meteorological Application for Development (**ACMAD**)
- Centre for the Regional Formation and Application of Operational Agro- Meteorology and Hydrology (**AGRHYMET**)
- Iceland GeoSurvey (**ISOR**)
- Regional Centre for the Mapping Resources for Development (**RCMRD**)
- West African Science Service Centre (**WASCAL**)
- International Centre for Theoretical Physics (**ICTP**)
- IGAD Climate Prediction and Application Centre (**ICPAC**)
- United Nations University -Institute for Natural Resources in Africa (**UNU-INRA**)
- Economic Community for West Africa States(**ECOWAS**)
- Kenya Institute of Public Research and Analysis (**KIPRA**)
- East African Community (**EAC**)
- International Renewable Energy Agency (**IRENA**)
- United Nations University - Institute for Natural Resources in Africa (**UNU-INRA**)
- Economic Community for West Africa States(**ECOWAS**)
- Kenya Institute of Public Research and Analysis (**KIPRA**)
- East African Community (**EAC**)
- African Group of Negotiators (**AGN**)
- Climate Analytics (**CA**)
- Institute of Development Studies (**IDS**)
- International Institute of Environment and Development (**IIED**)

Impacts

- Establishment of the African SIDS initiative and substantive technical support and services (CIS)
- Provided the policy space for dialogue, ideas & knowledge sharing
  - CCDA, ACTS, COM, COP, UN Climate Summit
  - Feeding back into ClimDev-Africa strategic orientation
- Influencing policy
  - AGN, Warsaw International Mechanism for Loss &Damage, AMCOW, CAHOSCC, AMCEN, AMCOMET
- Emergence of CR4D Programme
- Incremental growth in countries that have the capacity to provide quality climate services to a variety of sectors
- Establishment of flood early warning systems in pilot countries
- ENACTs (Ethiopia, Rwanda and The Gambia)
- Momentum is gathering in terms of strengthened early warning & DRR, through the support to RCCs
- Creation of demand for CIS:
  - 93 project submissions, 56 selected as bankable from first call of CDSF
- Capacity enhancement for African youth & Young lawyers

Lessons Learnt

- The normative basis for ClimDev-Africa needs to match with reality
  - It built upon a series of theoretical assumptions which were different on the ground
  - The assumption of a sequential relationship between Result Areas 1,2,3
  - What type of CIS intervention will support quality analysis?
- Development component (RA 1 ↔ RA3) is impetus for uptake of CIS
- Ambition needs to match with reality
  - "Widely available" CI – preparing the business case for CIS
  - CDSF operationalization issues
  - Staffing levels were inadequate
- Need for a nuanced understanding of implementation context
  - Uptake of CI to policy decision-making remains a universal challenge
  - Demand stimulation needs to be developed
- Need for balanced emphasis on CI and development aspect in programme implementation
- Need for a more comprehensive M&E system
- Need to account for evolving landscape of CI in Africa
- Transition from CI to CIS

Part 4:

Towards Future Pathways: ClimDev-Africa Phase II

WHY EMBARK ON CLIMDEV-AFRICA PHASE II?

To engage with the African decision making landscape

- Climate sensitive sectors drive growth
- Adverse CC impacts
- Increased investment in climate smart decisions (policies, technology choices, financial flows)
- Supply of CIS & capacity to use CIS needs to be enhanced

To harness the comparative advantage of emerging initiatives providing CIS in Africa

- Number of initiatives aimed at providing CIS emerging across Africa
- Need to harness the comparative advantage of each of these initiatives to scale up investment in CIS-development planning linkages

To capitalise on the strategic and operational opportunities provided by Climdev-Africa phase I

- Political mandate to invest in and promote use of CIS in decision making
- Tri-partite partnership provides opportunities to complete the CIS-development planning cycle
- Significant gains made in each result area
- Better understanding of the gaps and opportunities that need to be addressed to mainstream CIS into decision making processes in Africa
- Operational capacity ramped up

Strategic knowledge and communication to support policy programme delivery

ClimDev-Africa II will invest in strategic communication

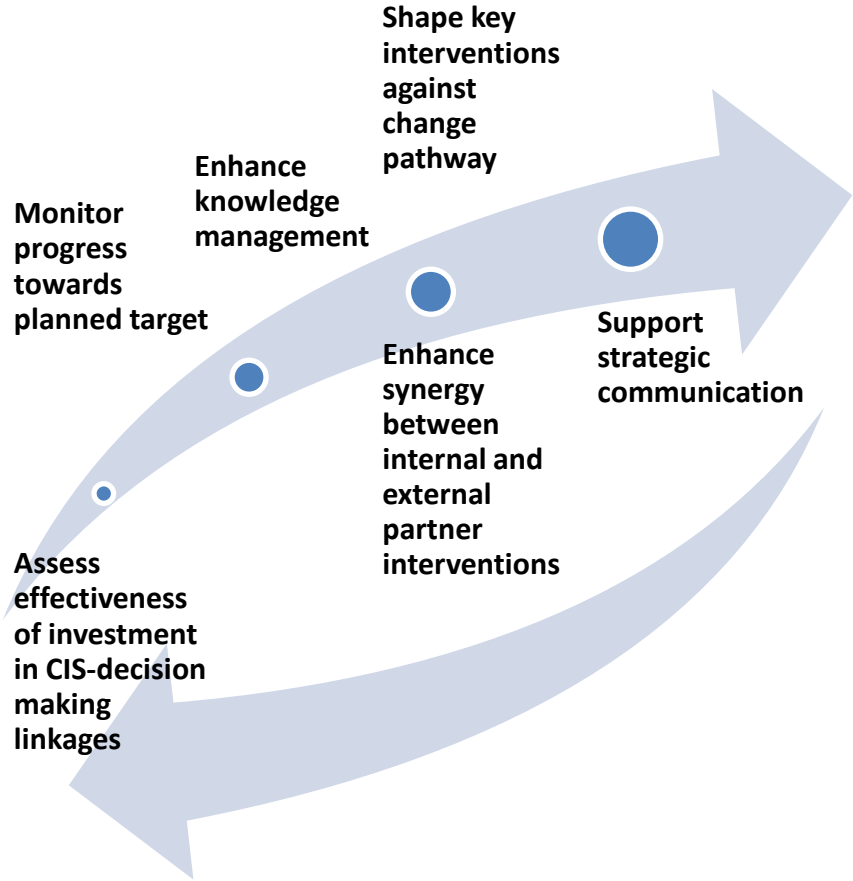
The communication strategy will also be strategic because it will be informed by learning derived from the MFEA and it will leverage the key points of policy influence in the African decision making landscape.

Monitoring and evaluation

A TOOL FOR MAKING CLIMDEV-AFRICA THE PARTNER OF FIRST CHOICE FOR LOW CARBON CLIMATE RESILIENT DEVELOPMENT

ClimDev-Africa phase II will build on its existing monitoring framework and evaluation approach (MFEA) and learning to:

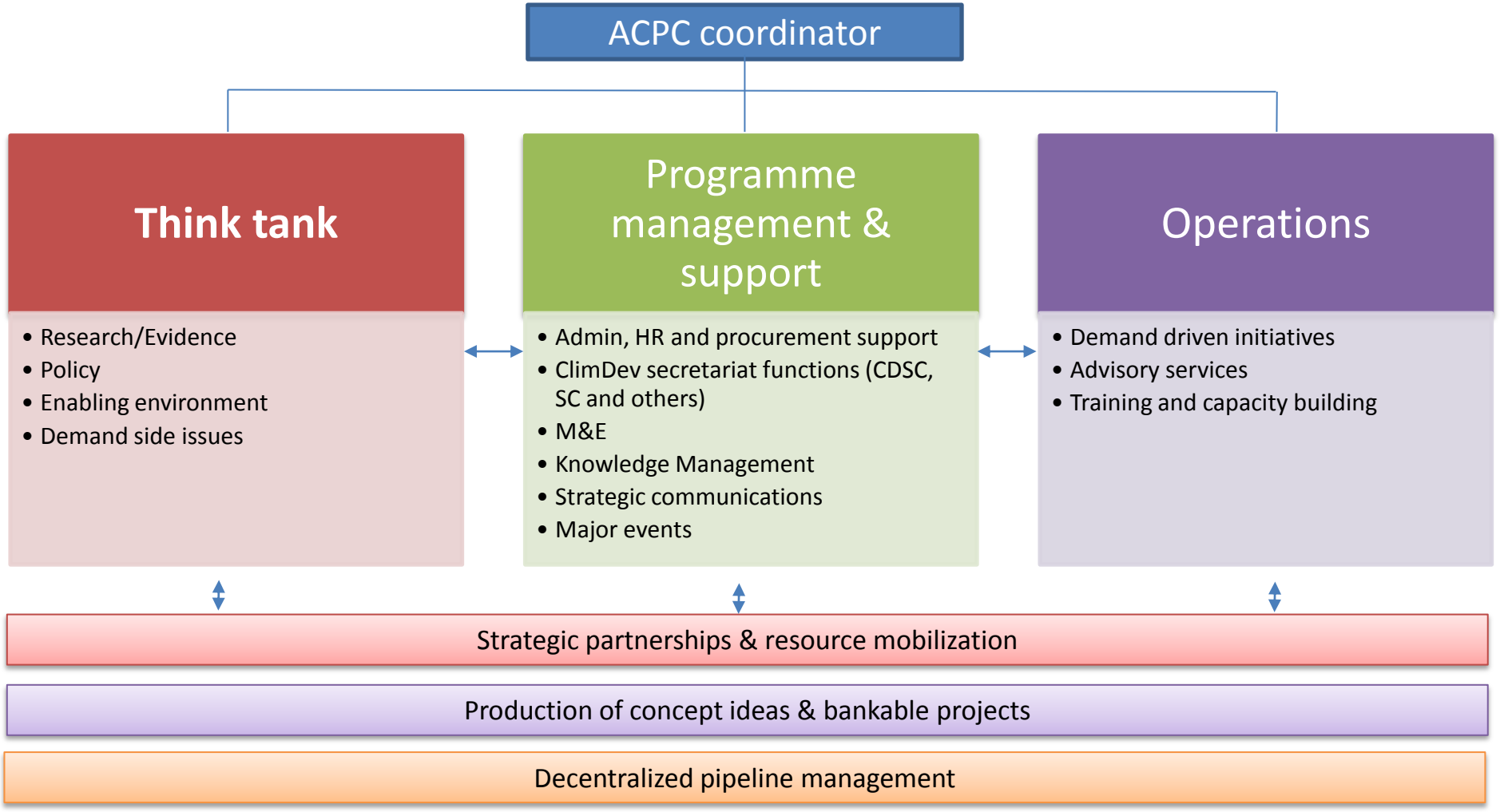
1. Monitor progress against planned target.
2. Assess the effectiveness of investment in CIS and decision making linkages
3. Shape key interventions
4. Enhance synergy between internal and external partner interventions
5. Enhance knowledge management
6. Support strategic communication



United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Delivery model to support new strategic and operational direction

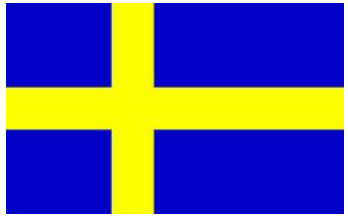


ClimDev-Africa

ClimDev-Africa Main Areas for Further ACP Support

- Consolidate the NWP and EWS system deployed in SIDS and coastal communities - **RCCs/RECS, UNOSAT, WMO/GFCS, UNISDR**
- Establish technical support and services facility for climate information and services delivery (implementation of GFCS) in SIDS and coastal communities – Socio-economic utility of weather/climate forecasts - **RCCs/RECs, WMO/GFCS, AMCOMET/AMCOW**
- E-infrastructure deployment in African SIDS and coastal communities (Internet of Things, observing networks, "Big Data" and Analytics) – **UNESCO/ICTP, RCCs, WMO/GFCS**
- Establish a Geo-spatial and remote sensing labs in SIDS and coastal communities for mapping and harnessing marine, aquatic and coastal resources for blue economy development – **RCMRD, MESA, RCCs/RECs**
- Consolidate the newly established Climate Research for Development and fellowship programmes - (**AMCOMET/WMO, RCCs/RECs, Research institutions and networks**)
- Support climate change and development governance in Africa and beyond (**African ministerial conferences, CCDA, ACTS, African Pavilion**) - **ClimDev-Africa, RECs/RCCs, AGRHYMET & COMESA**
- Support facility for Blue Economy development in Africa - **RECs/RCCs and Academia**
- Data, Information and Knowledge management (Legacy, lessons and best practices) – **Intra & Inter ACP**
- Coordination mechanism for ACP-GCCA in Africa - **ClimDev-Africa, AGRHYMET & COMESA**

Supported by



DFID Department for International Development

USAID FROM THE AMERICAN PEOPLE

NDF NORDIC DEVELOPMENT FUND