United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Enhancing the Climate Resilience of Africa's Infrastructure (ECRAI)

introducing

The Africa Climate Resilient Investment Facility (AFRI-RES)

Second Africa Climate Talks (ACT!)

22 – 23 March 2018

Addis Ababa

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NDF NORDIC DEVELOPMENT FUND
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About ACPC

Sustainable, inclusive and climate resilient development in Africa

Influencing, strengthening and enabling the transition to climate-resilient development in Africa through responsive policies, plans and programmes towards transformed economies, healthy ecosystems and human wellbeing

African Climate Policy Centre (ACPC)

Generating and delivering knowledge for low-carbon and climate resilient economies in Africa

Research and analyses that support climate-informed social and economic development in Africa	Advisory services and technical assistance for implementation of the Paris Agreement	Human and institutional capacities for climate-resilient development planning, policies and practices	Convening spaces for dialogue, voice and agency for effective climate response and development	Customized knowledge products to effectively communicate climate solutions to key constituencies	Value for money in programme management, implementation, monitoring, evaluation and learning

Need to invest in timely and quality CIS and climate-informed analytical frameworks for mainstreaming climate change into development planning, and build capacity of decision makers to use CIS in order to design and implement effective low-carbon climate-resilient development pathways.

Africa's development agenda as set out in Agenda 2063 and the UN 2030 Agenda for Sustainable Development seriously at risk from the adverse impacts of climate change. But climate change challenges can be turned into low-carbon climate-resilient development opportunities that deliver transformative and equitable development outcomes on the continent

Flagships

- **CCDA**
- **ClimDev-Africa**
- **CR4D**
- **AFRI-RES**

- **WISER**

Weather and Climate Information Services for Africa

- **Africa Pavilion**

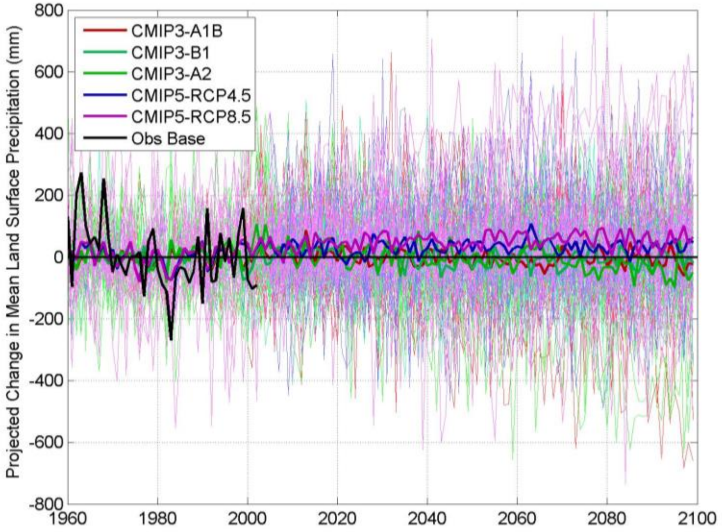
Why green climate-resilient infrastructure is important for Africa

- Huge deficit in infrastructure and infrastructure services – barrier to growth and development = opportunity to do it right and lead
- UN 2030 Agenda for Sustainable Development: Leave no one behind
  - Goal 9: building **resilient infrastructure**…. in support of global development.
- AU's Agenda 2063: The Africa We Want - a peaceful, prosperous and integrated Africa
  - Agenda 2063 emphasizes ***"world-class integrative infrastructure that crisscrosses the continent"…..***
- Infrastructure as enabler / catalyst for industrialization, trade and regional integration
- Requires 100s of billion dollars of investment in an climate-constrained future + **increasing requirement to disclose climate risks of assets**
- Doing it right can reap "greening dividend" = return on investment

Doing it right means tackling the challenge and capitalizing on the opportunities

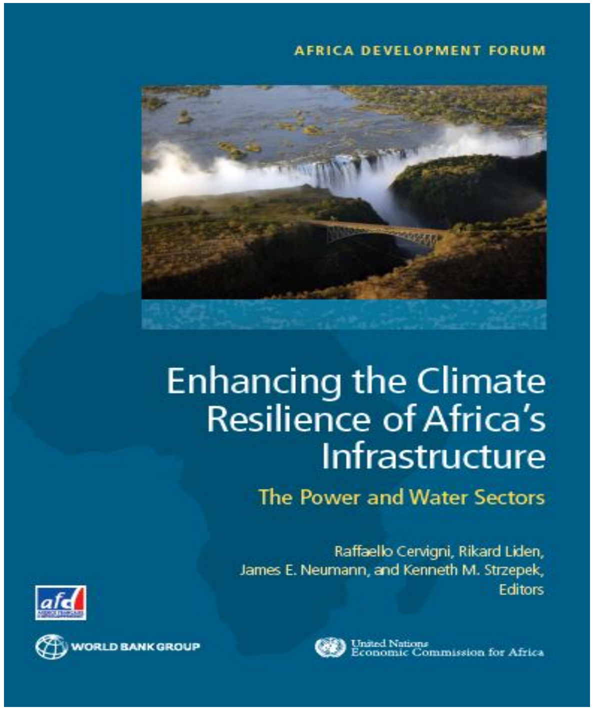
- How do you make “GOOD” infrastructure investment decisions TODAY
- So that the infrastructure CAN DELIVER services and return on investment both in today’s and TOMORROW’S CLIMATE ?

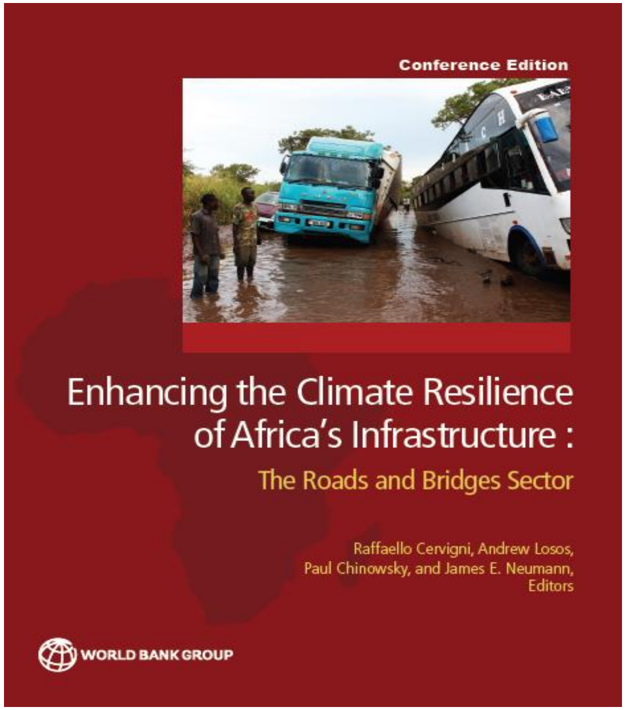
A very uncertain climate future



The data, knowledge and technical capacity to plan and design climate resilient investments are hugely inadequate on the continent

2 Joint World Bank / ECA Study on Enhancing the Climate Resilience of Africa's Infrastructure (ECRAI)

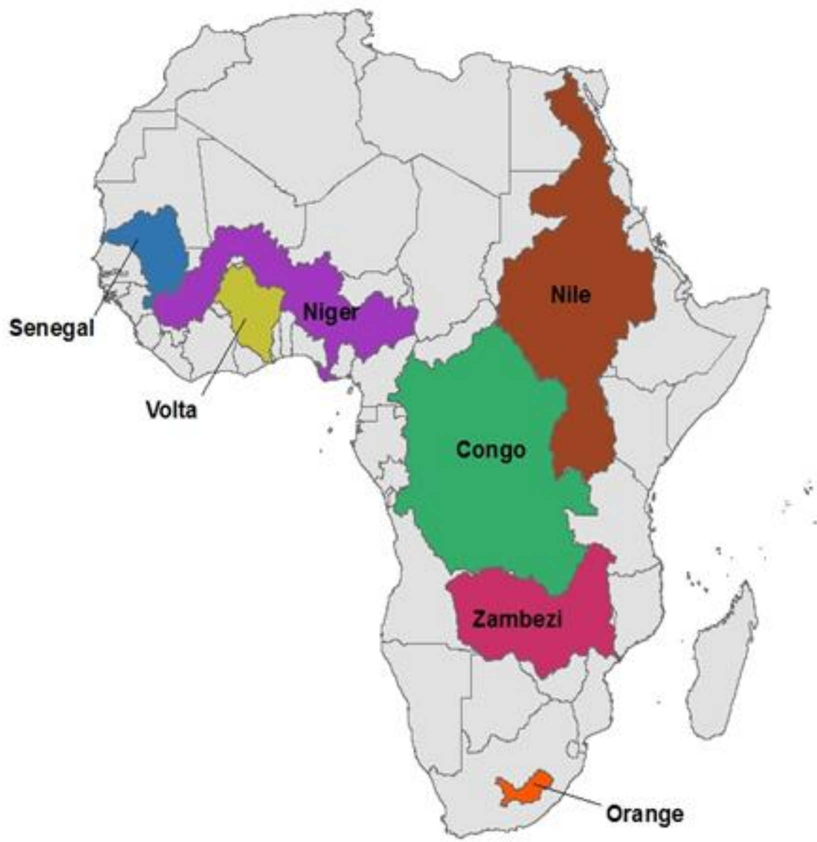




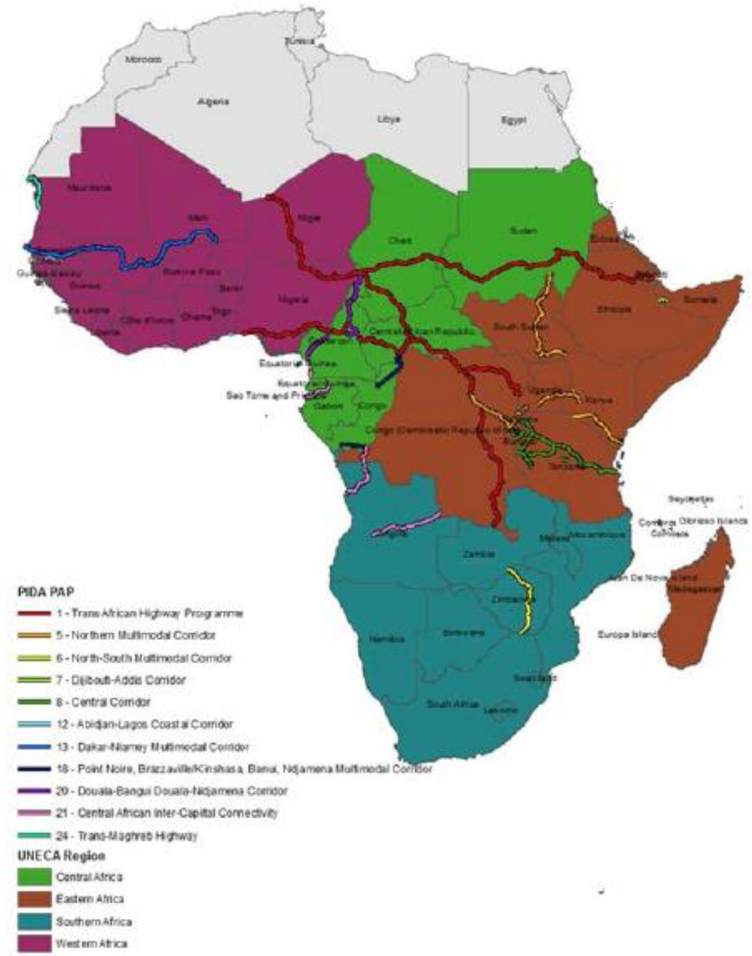
AFD Agence Française de Développement · Bank-Netherlands BNPP Partnership Program · NDF Nordic Development Fund · KfW Bankengruppe · UKaid

...focusing on PIDA and national plans

Seven River Basins



2.8 Million km of road investment



Some insights from the ECRAI studies:

Failure to integrate climate change in the planning and design of power and water infrastructure could entail:

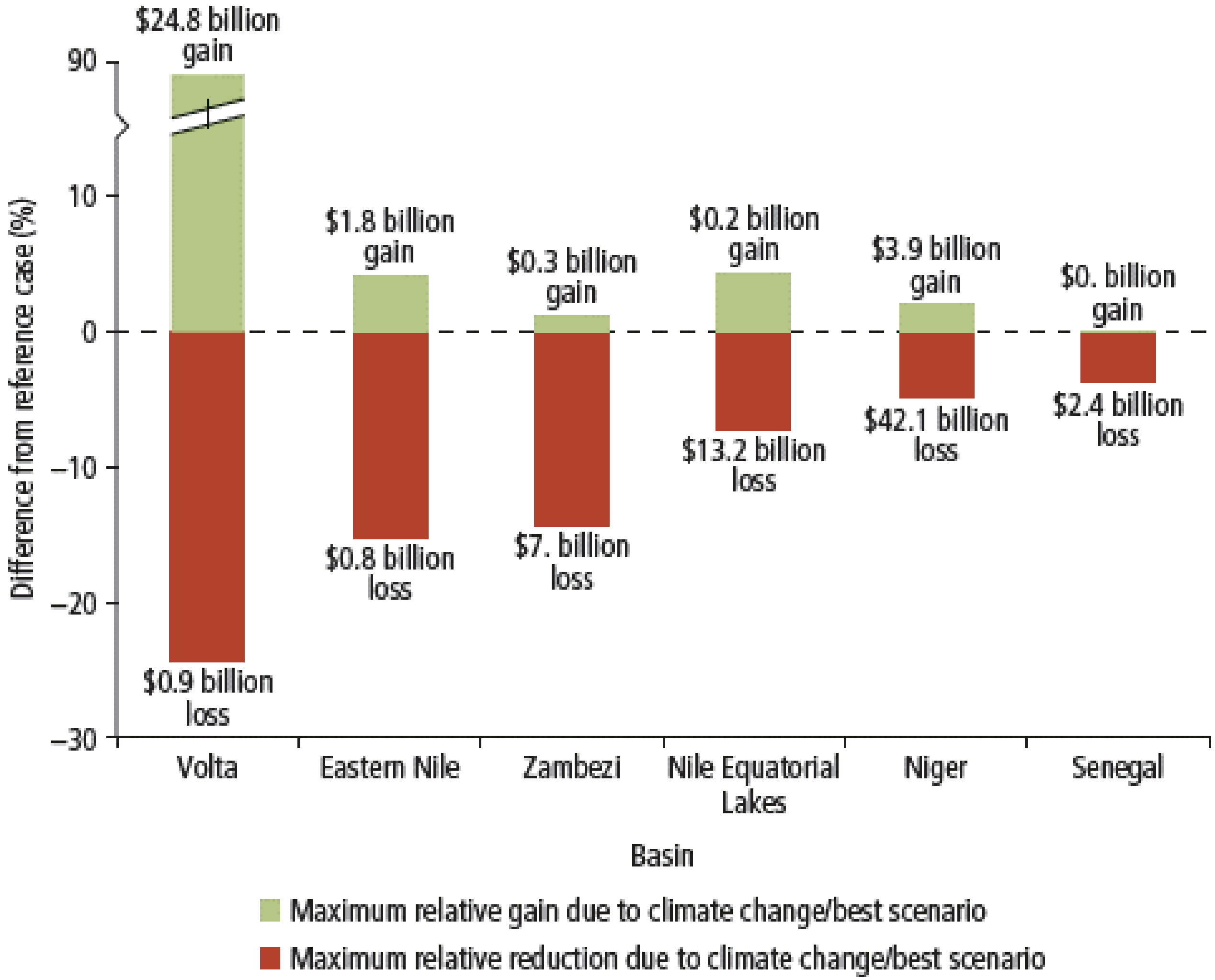
❖ In the **driest climate scenarios**:

- losses of hydropower revenues of between 5 and 60 percent (depending on the basin)
- increases of up to 3 times the corresponding baseline values in consumer expenditure on energy

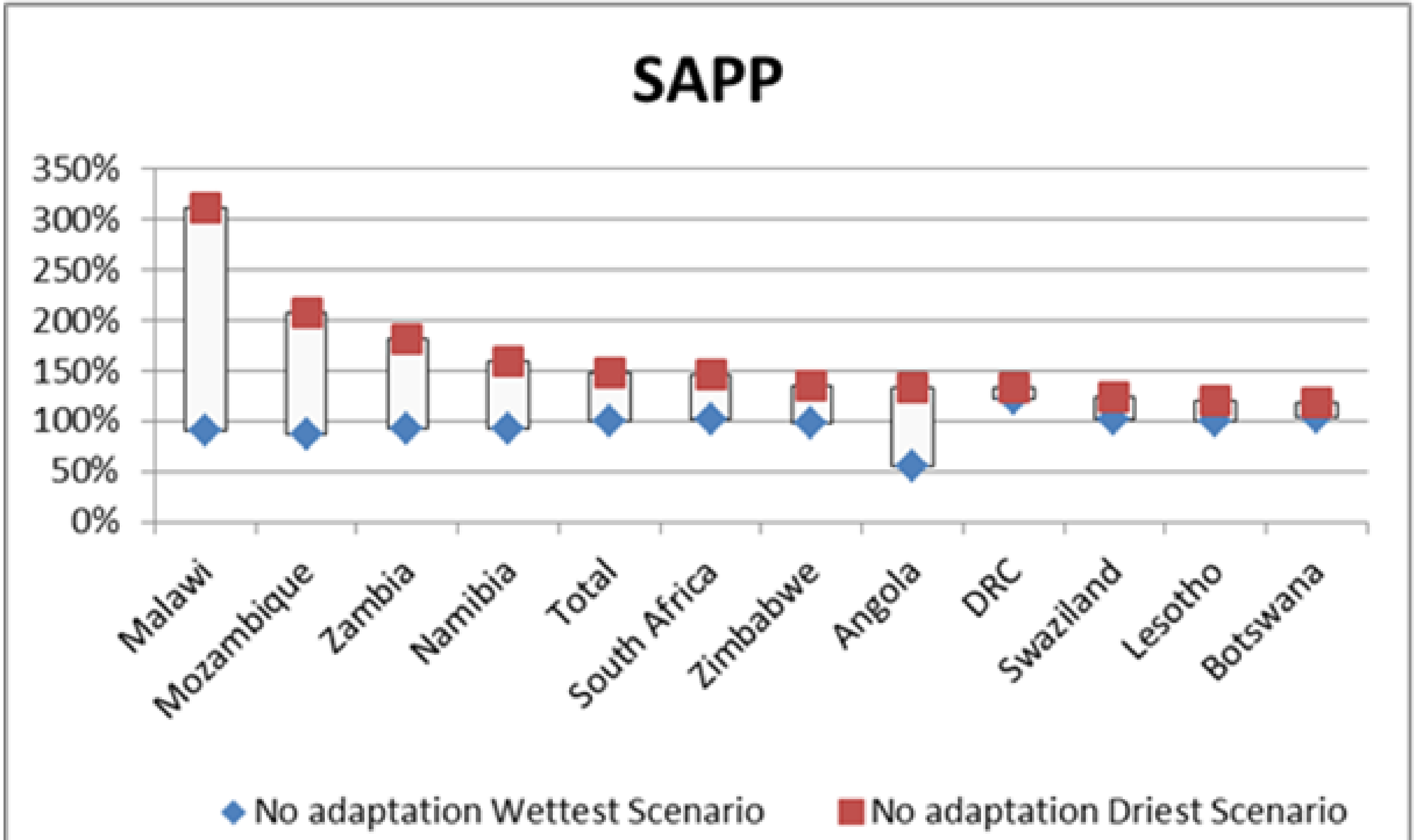
❖ In the **wettest climate scenarios**:

- business-as-usual infrastructure development could lead to foregone revenues in the range of 15 to 130 percent of the baseline value

Changes in hydropower revenues from climate change (present value 2015 to 2050)

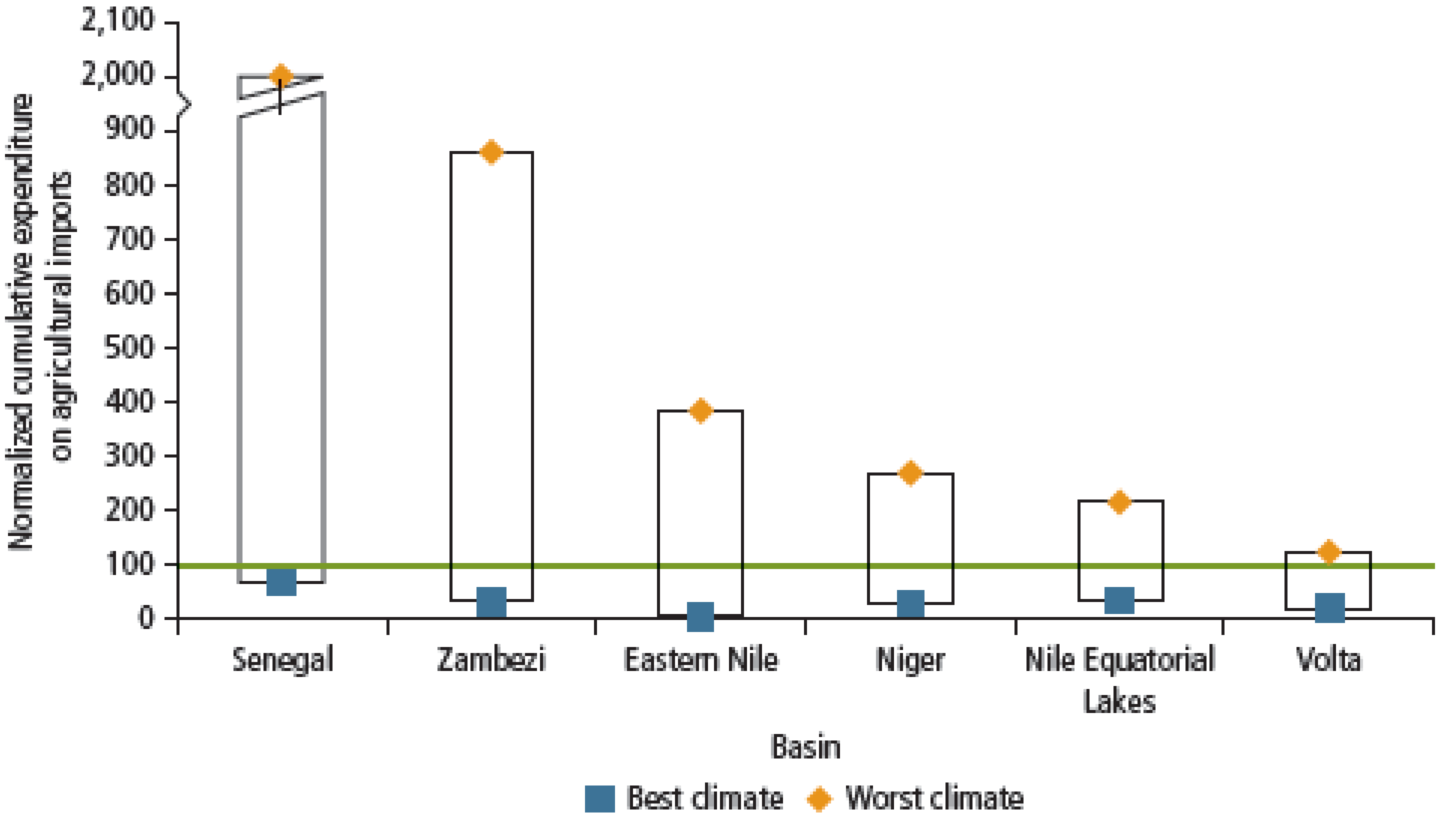


Cumulative consumer expenditure on electricity (no climate change case=100%)



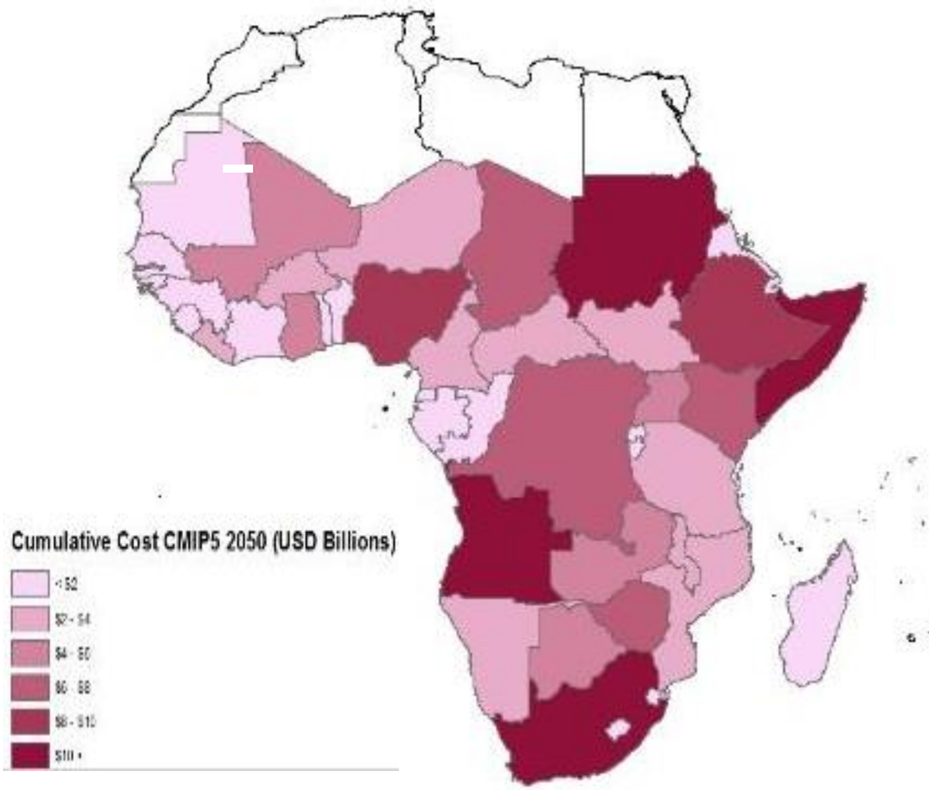
… agriculture…

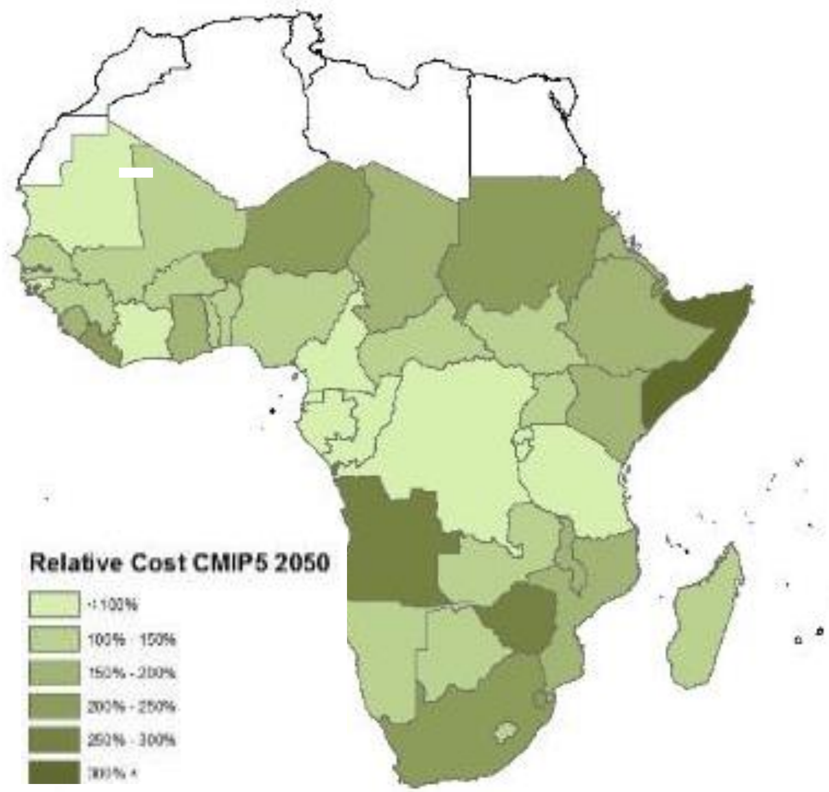
Cumulative expenditure on agriculture imports (no climate change case=100)



..and road transport

In many countries, high end of climate change impacts could result in at least a doubling of maintenance/repair cost..



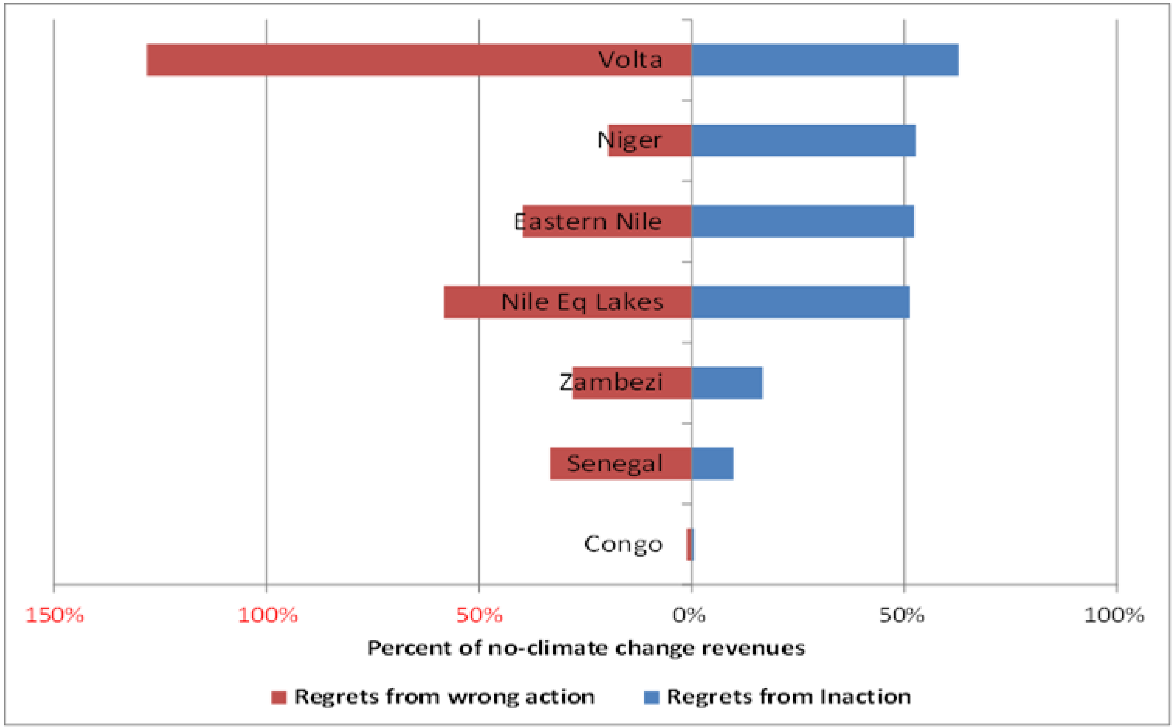


CMIP 5, 95th Percentile of cumulative O/M cost of existing network, 2015-2050

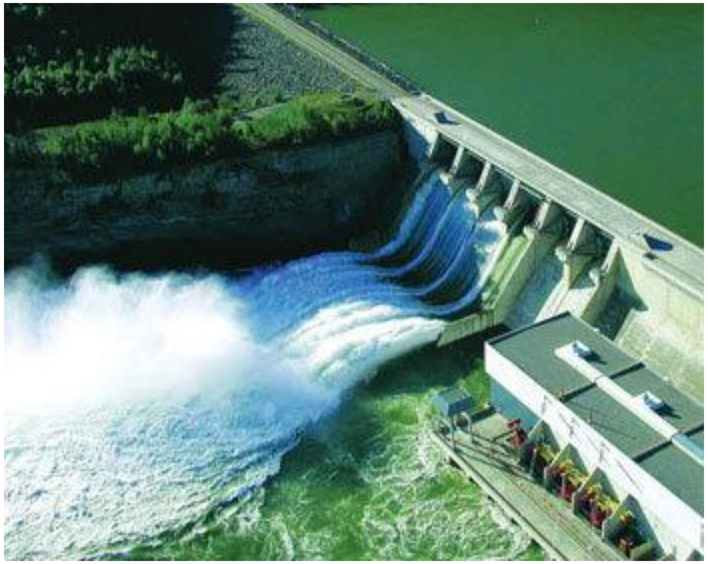
KEY ECRAI MESSAGE:

We need to adapt our road, power, irrigation infrastructure and make them more ***climate-resilient to ensure performance and return on investment***

...realizing that mal-adaptation can be
as bad as no adaptation



How to adapt?



- Roads
  - Increased culvert size
  - Increased base thickness or quality
- Power
  - Number, size of turbines
  - Sizing of reservoirs
  - Storage / regulation
  - Hybrid, etc
- Irrigation
  - Sizing of schemes
  - Canal design

..but three things are needed

1) An accepted, <u>common</u> framework of analysis

2) Tools/ data

3) Concrete applications to learn from

AFRI-RES: a solution to help address the challenge

AFRI-RES Objective:

Strengthen the capacity of African institutions (national governments, river basin organizations, Regional Economic Communities, power pools and development practitioners) to plan, design, and implement investments resilient to climate variability and change in selected sectors

A progression from ECRAI

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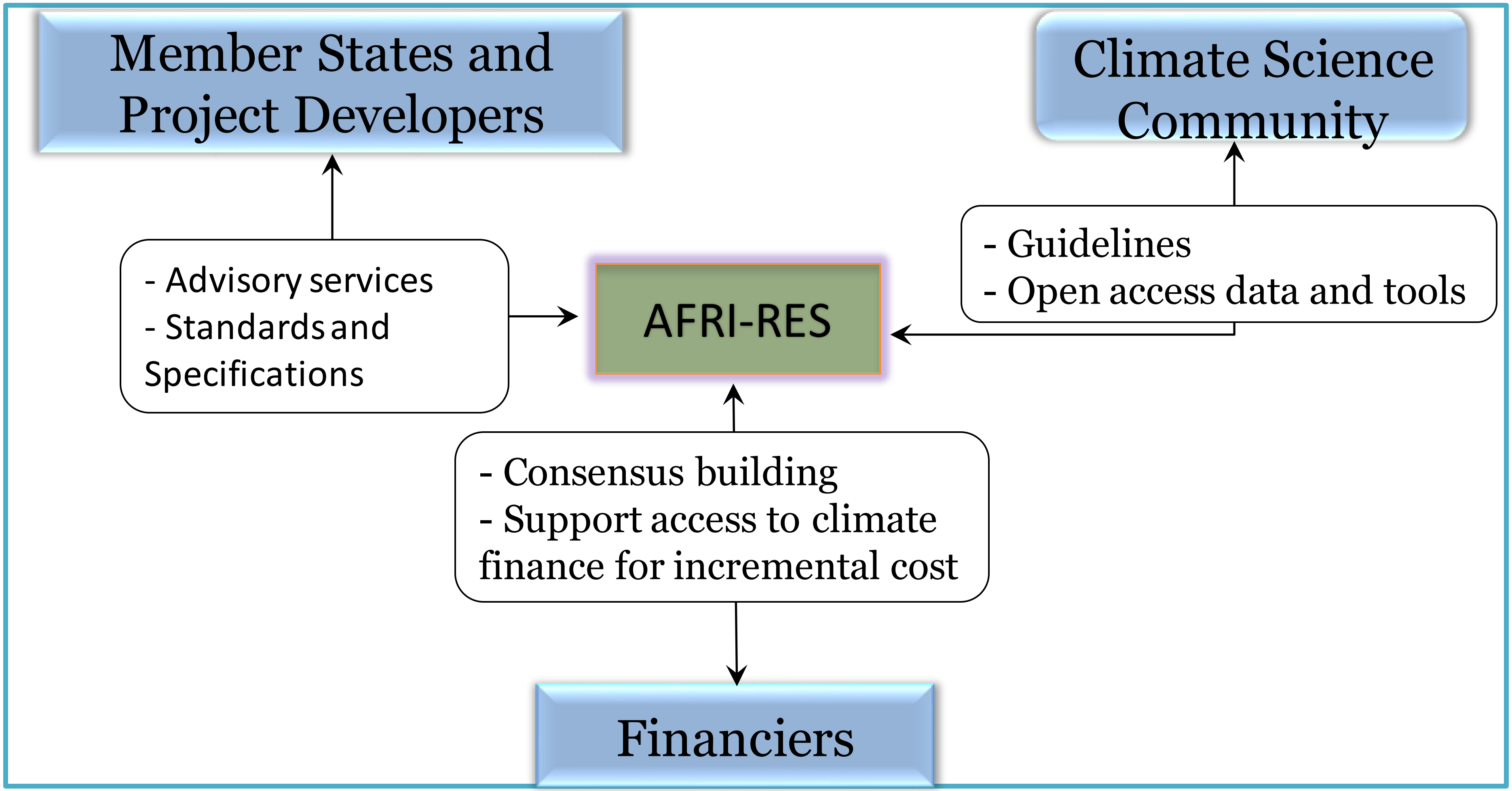
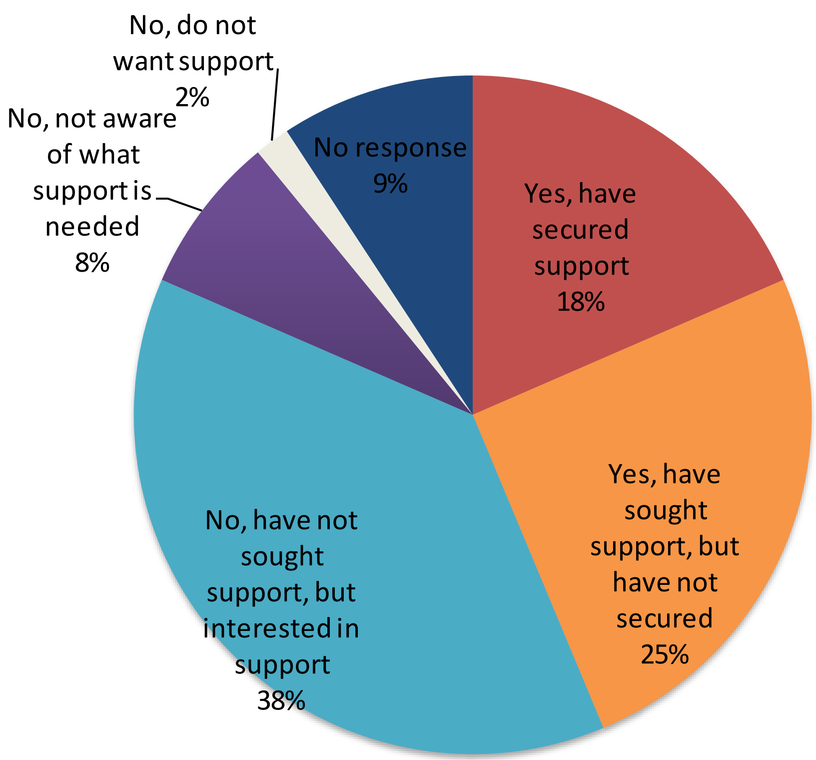
AFRI-RES VALUE PROPOSITION



Strong demand, largely unmet: practitioners survey

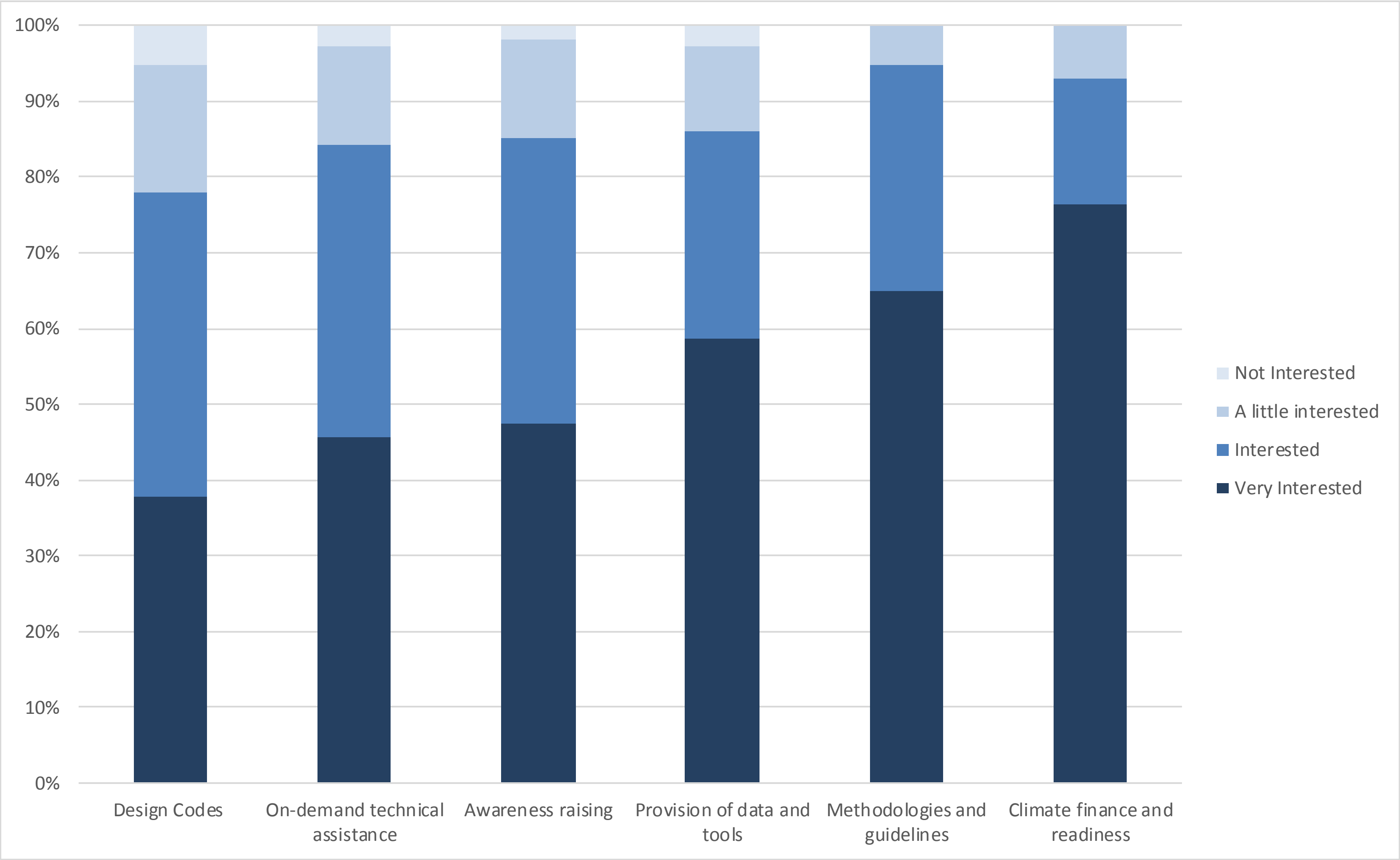
Have you sought support to integrate climate change considerations into planning and design of infrastructure?



Key observations

- 80% of respondents where interested in receiving support to integrate ICCPD services, but only 18% had secured support.
- 62% of respondents where interested or had actively sought support, but had not yet been able to secure it.
- While 8% where not aware or unable to specify what support they needed only 2% of respondents indicated they where not interested in receiving support.

Areas of work – Demand Mapping



AFRI-RES Activities

Upstream support

- Open data and knowledge platform
- Development of guidelines
- Compilation of good practices
- Support the emergence of standards in climate resilient project development

Downstream support

- Assistance in TORs preparation
- Quality assurance on technical reports
- Topping-up project preparation resources (directly, indirectly)
- Support for mobilizing incremental finance

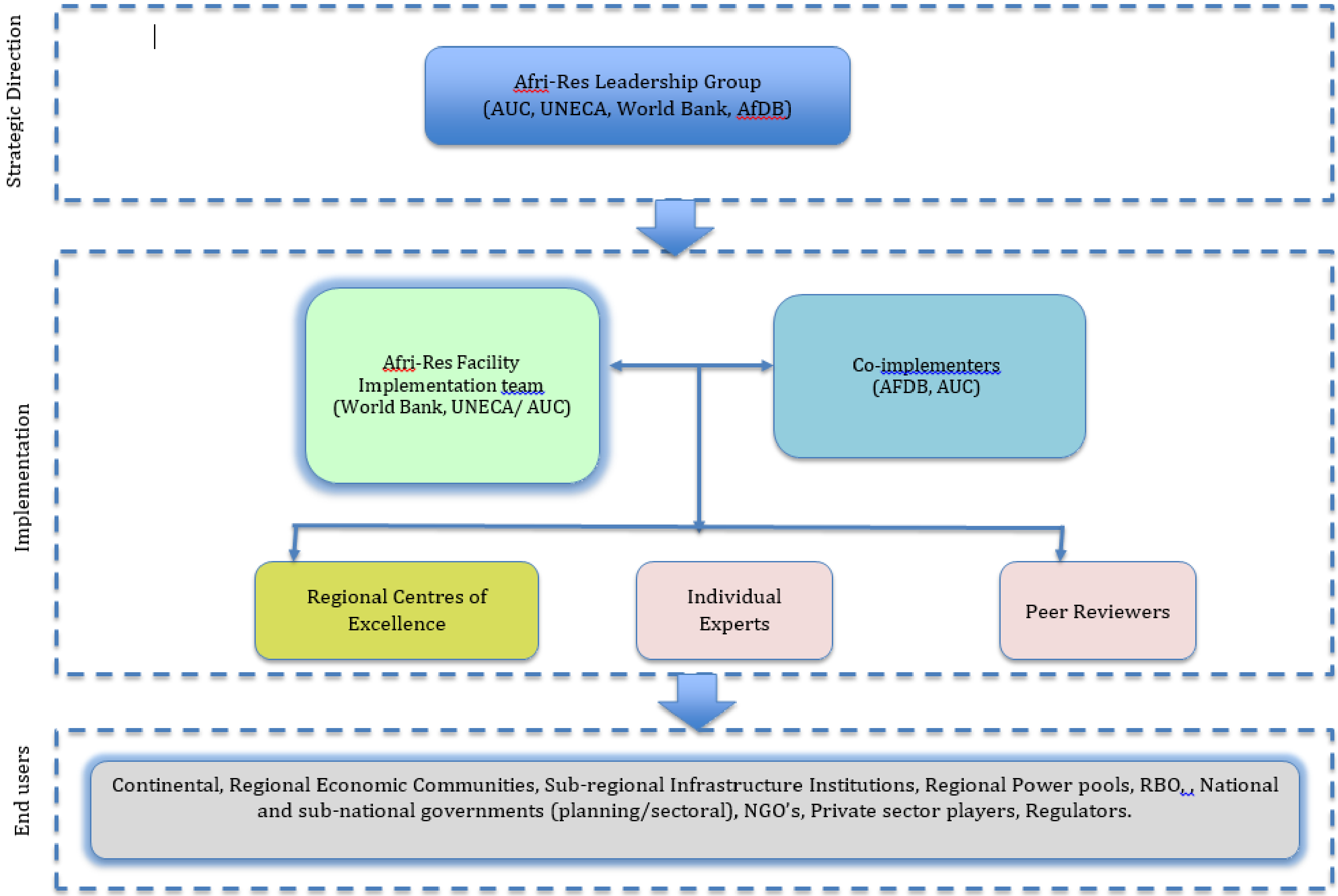
Areas of work

Nr	Area	Implementation lead
1	Project level technical assistance	World Bank / AfDB
2	Training, dissemination, advocacy and outreach	UNECA/AUC
3	Guidelines, standards and good practice notes	World Bank / AfDB
4	Climate Knowledge Portal	UNECA

Challenges and solutions: towards a result framework

	Current challenge	Facility action area	Target Outcome
DEMAND SIDE	1. Inadequate knowledge of the quanity and quality of end-users needs	Demand mapping and asssessment	The profile of potential end users is better defined and improves the targeting of further data and methdoloy development efforts
DEMAND SIDE	2. Too few practical applications of project planning and design under climatre change	Provide adisory services to selected project developers	A critical mass of concrete applications of methods for planning under climate risks is developed and genearte confidence among end users
SUPPLY SIDE	3. No widely accepted farmeworks/ methodlogies for decision making under climate risks	Develop guidelines and compilation of good practices	End users have adequate guidance for selecting the right approach to address their planning challenge
SUPPLY SIDE	4. Limited availabilty and accessibility of the data needed to apply the tools for decision making under climate risks	Targeted effort to make data more widely accessible, emphasizing the dimension of "what to do" with the data	End users have the right data for their project planning/ design activities

Implementation structure



Implementation Actors Framework

Expected benefits

1. Closing the gap between climate science and project design
2. Economies of scale in developing readiness and supporting project preparation: faster/ better adaptation
3. Gradual emergence of technical standards in project design for adaptation
4. Multiplication of resilience benefits across a wide range of financing mechanisms

Further Information

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THANK YOU