

Linkages Between Livelihoods and Economic Diversification to Build Resilience in the Context of Planning, Prioritizing and Implementing Climate Change Adaptation

- Emerging Research and Lessons from the PPCR

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Outline

1. State of Play

2. Livelihood and Economic Diversification under CC

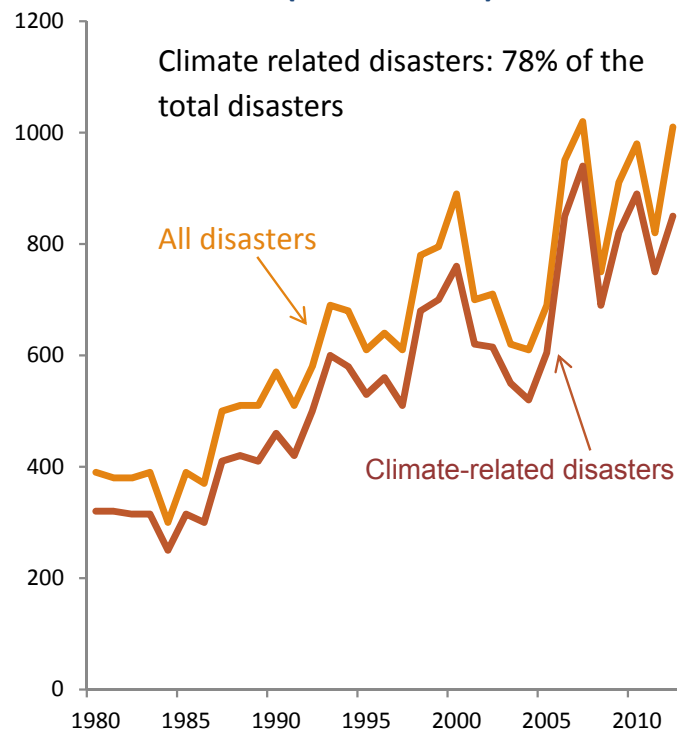
- Emerging Research Findings
- Push and Pull Factors at play
- Policy implications

3. Long-term resilience planning – Lessons from the PPCR

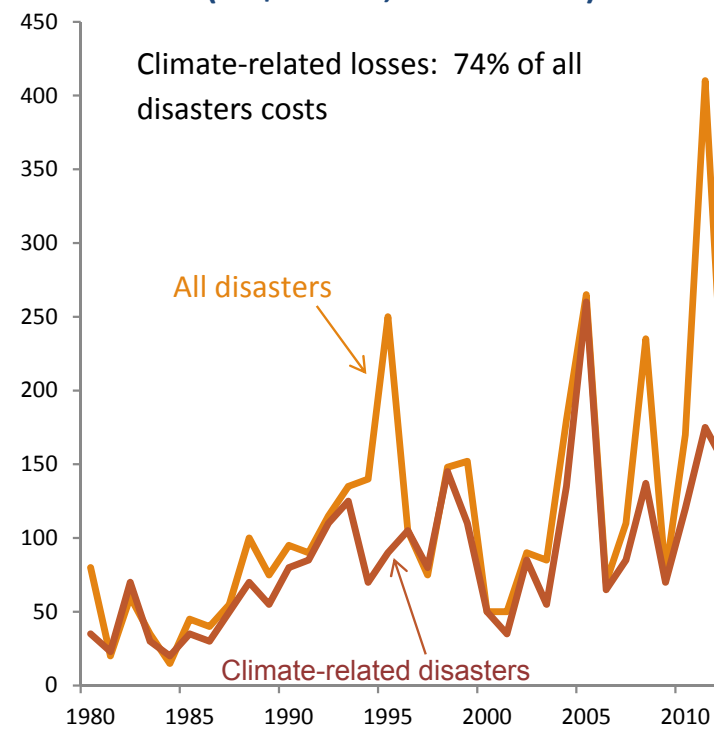
- Planning, Prioritization, Implementation - Key elements
- Case studies

Frequency & Costs of Extreme Events - Stunning and Growing

**Number of disasters worldwide
(1980 – 2012)**

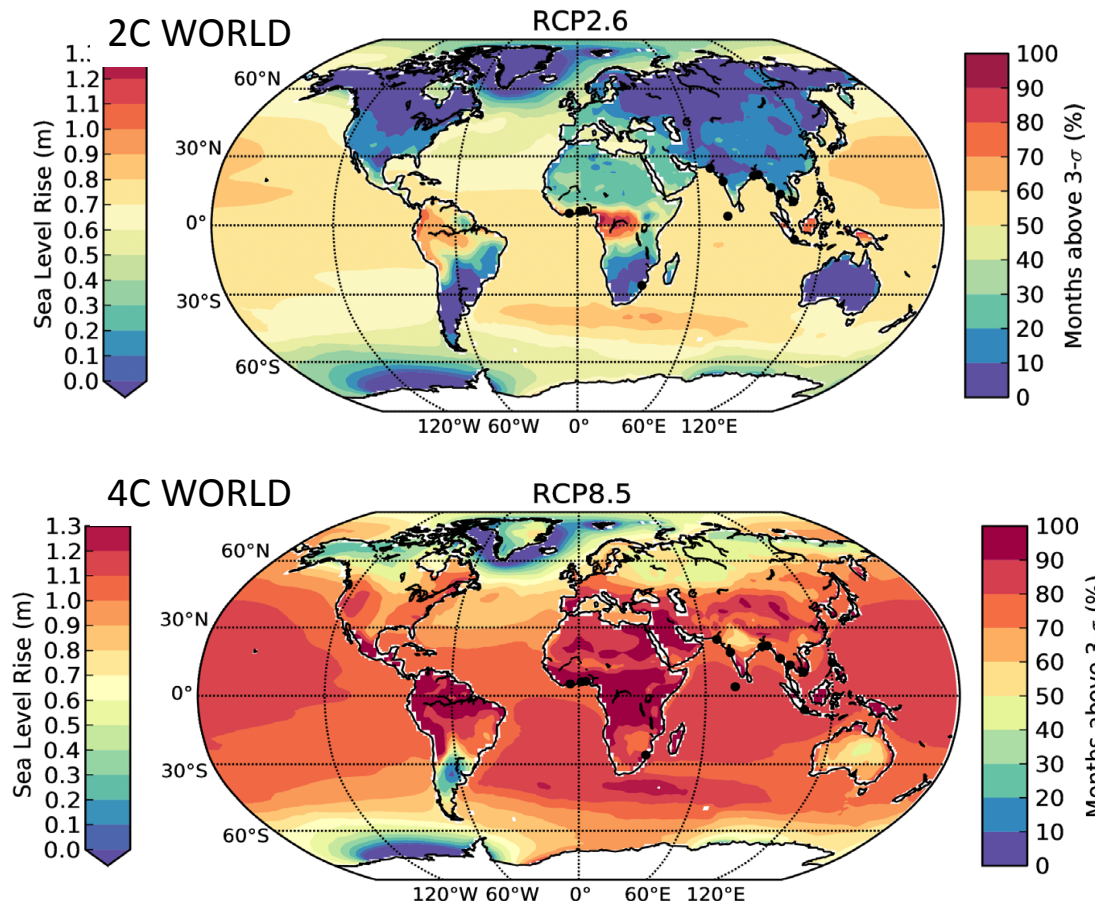


**Disaster-related losses
(US\$ billion, 2012 values)**



Source: World Bank estimates based on data from Munich Re © 2013 – as of January 2013

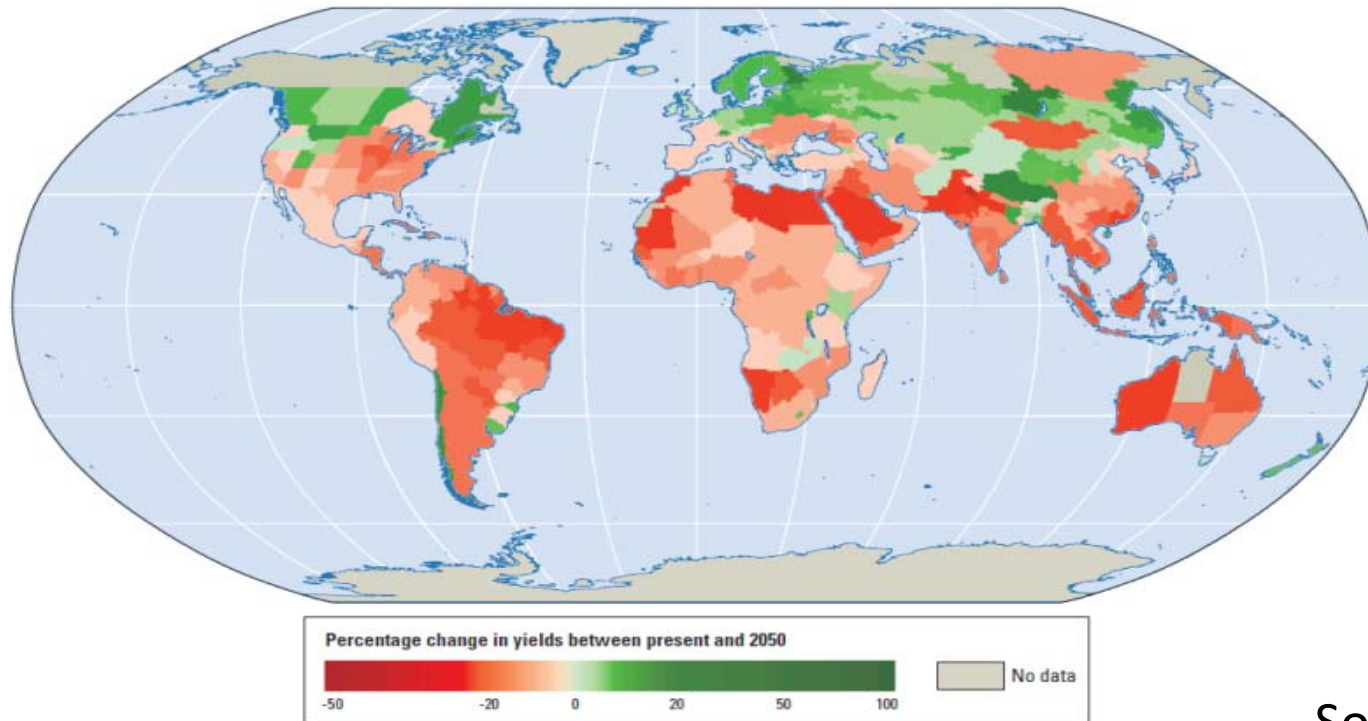
Challenge of our Generation



- Impacts already being felt, and the poor disproportionately affected

- Increased frequency of extreme and unprecedented heat events; sea level rise from 70cm to >1m

..Agricultural productivity will decrease in many regions and the poor will suffer most..



Source: WDR, 2010

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Case Study: Occupational Diversification as an Adaptation to Rainfall Variability in Rural India* (1)

□ Context:

- 70 percent of India's population living in rural areas in 2010, with 58 percent of the total numbers of workers employed in the agricultural sector
- local rainfall variability during the monsoon season comprises the primary source of production and income risks

□ Scope of study:

- **to investigate occupational diversification among household members as an adaptation strategy against the risks arising from the historical variability of local rainfall .**
- specifically, the extent to which occupational diversification is in response to “**pull**” factors such as expanded opportunities to earn higher wage rates in other sectors vs “**push**” factors such as limited access to credit and capital
- **push and pull factors: → Allocation of labor between activities on and off-farm: Understand which factor more important role**
- tradeoffs: Specialization vs diversification?

**Source: Skoufias, E; Bandyopadhyay S; and Olivieri S (2015) Occupational Diversification as an Adaptation to Rainfall Variability in Rural India. World Bank; See also: Bandyopadhyay, S., & Skoufias, E. (2013). "Rainfall variability, occupational choice, and welfare in rural Bangladesh." Review of Economics of the Household, DOI 10.1007/s11150-013-9203-z..*

Case Study: Occupational Diversification as an Adaptation to Rainfall Variability in Rural India (2)

- Results
 - High rainfall variability has strong negative effects on the agricultural focus of within household occupational choices
 - in areas with poor agro-climatic conditions, risky agriculture, and no insurance markets, **non-farm activities allow households to cope with severe downturns in agricultural productivity**
 - **predominance of the *ex ante* “push” factor rather than the “pull”** of higher potential earnings in the non-agricultural sectors
 - Diversification due to push factors → **more income security but at the cost of a lower level of welfare and overall growth**
 - CC → increased rainfall variability → serious consequences on welfare
 - prevailing risk mitigation strategies (developed through long exposure with the prior climate regime may become less and less effective)
- Concluding Remarks
 - Expand irrigation:
 - Our analysis confirmed that, where available, irrigation a major source of ex-ante rainfall variability risk mitigating strategy
 - Policies that improve access to education, credit, roads, and information may
 - Make agriculture more productive (focus on Ag stronger, push weaker)
 - Facilitate employment in high return Non-Ag sectors (“pull” factors stronger)
 - However, results were not robust (to alternative specifications). More work needed.

How do these “push” and “pull” factors play out in resilience planning? (1)

Example 1: Niger: Community Action Program for Climate Resilience (PPCR) (\$63M)

- At appraisal:
 - A **direct correlation made between increased resilience** of agro-pastoral systems, improved **productivity over time and increased revenues**.
 - Underlying assumption: on farm/livestock income increase by 15%; and non-farm/livestock by 3%

- Project components include:
 - Integrating climate resilience practices into agro-sylvo-pastoral system and local populations’ social protection measures – **address “push” factor**; enhance pull factor
 - Mainstreaming climate resilience into dev. strategies at local and national level – **address “pull” factors**

How do these “push” and “pull” factors play out in resilience planning? (2)

Example 2: Strengthening Climate Resilience in Zambia and the Barotse Sub-Basin (PPCR) (\$36M)

- At Appraisal, recognized
 - the need to balance the effectiveness of **autonomous adaptation** – actions initiated by communities based on their local knowledge of past climate instability;
 - with **transformational adaptation**, to address climate risks that communities may not have faced before.
- Project Design
 - **Risk-based planning and mapping to enable local governments and communities to visualize options** for the future expansion of their settlements and infrastructure (e.g. stay in place, and adapt; retreat to safer areas; or opt for temporary structures (planning))
 - **Seeking to diversify livelihoods of the most vulnerable** while at the same time investing in local innovators who, by virtue of their personalities, education or experience, may already be experimenting with more resilient crops (on farm) or less climate sensitive livelihoods (off farm; diversification)

⇒ Projects addressing push & pull factors for livelihood diversification & long term resilience at local & national level
⇒ Bottom-up and top-down

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Key Lessons from the Pilot Program for Climate Resilience

Shaping Climate Resilience for Transformational Change



PPCR Objective For Targeted Pilot Countries/Regions:

Objective

The **objective** is to mainstream resilience into core development planning

Goal

With a **goal** to support transformation through innovation at scale



PPCR Facts at a Glance

PPCR Countries

Bangladesh, Bolivia, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Yemen, Zambia, The Caribbean Region (Dominica, Grenada, Haiti, Jamaica, St. Lucia, St. Vincent and the Grenadines), The Pacific Region (Papua New Guinea, Samoa, Tonga)

\$1.3 billion
pledged to date

for 75 projects

18 country programs ongoing; 10 new countries underway

47 Projects Approved = **\$779 million** = **\$1,048 million**

PPCR Financing Co-Financing



3.5 million

People expected to benefit

From Bangladesh's project to enhance climate resilience of coastal infrastructure in 12 rural districts, supported by \$30 million from PPCR.



8,000

Farming families expected to benefit

From Mozambique's Baixo Limpopo Irrigation and Climate Resilience Project, supported by \$15.8 million from the PPCR.



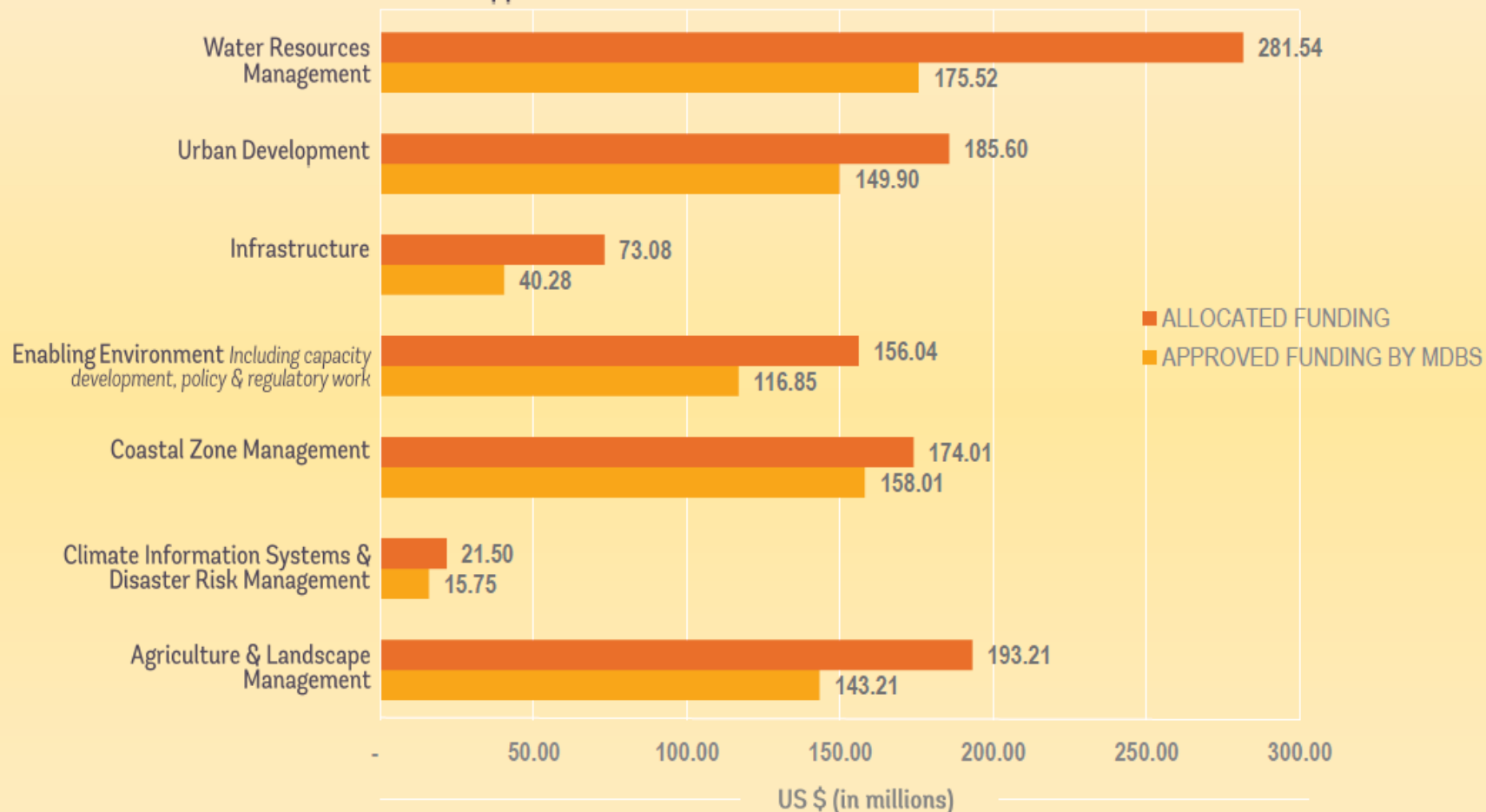
708,000

People expected to benefit

From Niger's project to sustainably manage and control water resources for increased food production in 10 rural districts, supported by \$2.2 million from the PPCR.



PPCR Supports Resilience across Sectors



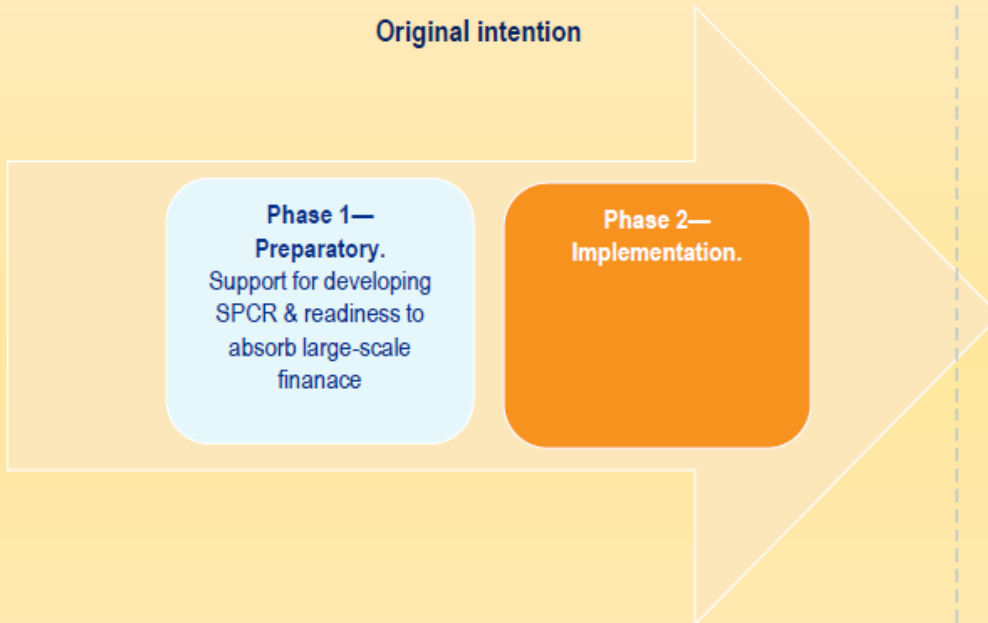
Data as of December 31, 2014. Source: PPCR Semi-annual Operational Report, May, 2015



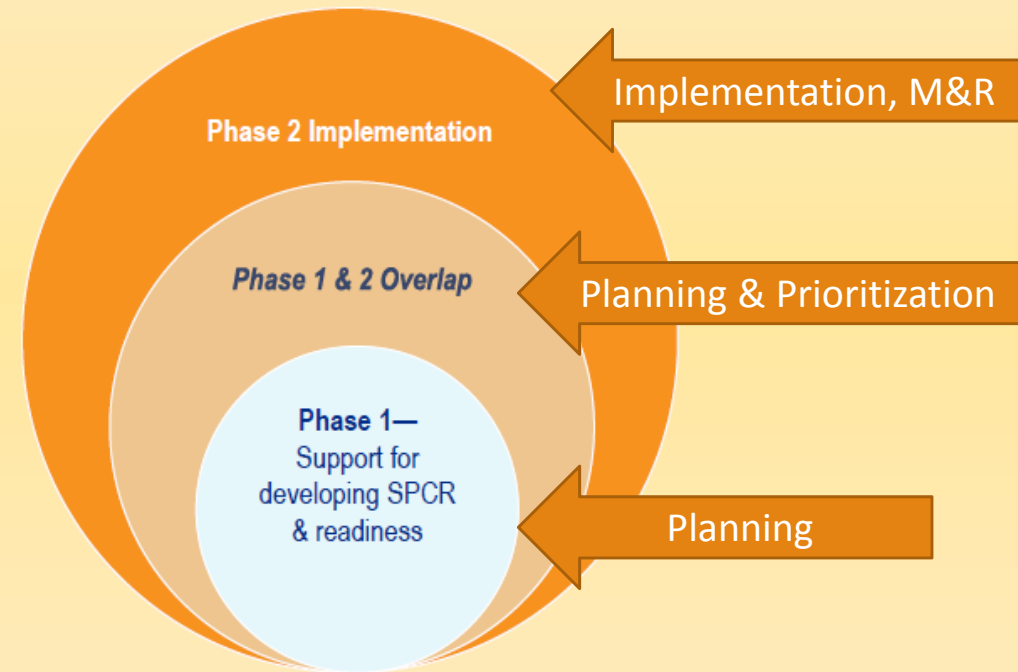
PPCR Phase 1 and 2—Evolving Relationship

Evolution of Phase 1

Original intention



Evolution of Phase 1 into a “bridge mechanism”



➡ Long term vision; critical role of Phase 1, SPCR development



TOP 10 Lessons

of the PPCR are clear, and not only relevant to resilience programs but reflect the essence of good development.



1. **Coordination across multiple sectors supported with leadership** from the highest levels of government was the most effective approach for shaping a program of resilient investments, and is promising for implementation effectiveness and anticipated scaling up.



2. **All countries were able to shape investment plans and priorities based on their experiences and evidence with current climate variability and impacts.** The PPCR continues to be instrumental in bolstering the evidence base of knowledge for future impacts; a critical factor for accelerating resilient development.



3. The expectation of **linked and leveraged funds at scale** through formal MDB collaboration and Phase 2 grants and concessional loans was **pivotal for country buy-in. Planning grants alone would have been insufficient.** Both **linked** investments and **leveraged** investments were **instrumental in advancing and catalyzing countries resilience pathways.**



4. Many SPCRs are fostering **transformational investments and policy reforms** going beyond Phase 2 investment funds. This advanced partnering with bilateral and country-based funding sources, **spurred policy reforms,** and furthered the **incorporation of resilience** at the national, regional and local levels.



5. **Mandatory and documented stakeholder engagement built ownership and support for the planning and investment selection process.** The PPCR built new pathways in some countries and enhanced existing structures in others;

already enhancing positive relationships during implementation of specific investments.



6. The periodic **dedicated learning and exchange fora** among PPCR pilot countries have proven especially valuable. These help **build credibility and professionalism** of participants while **sharing practical experiences** and engendering shared South-South experiences.



7. Upfront **technical assistance and targeted advisory services** has been **critical for overcoming barriers to engaging the private sector** on climate resilience. This includes piloting new modalities of climate adaptation, validating their commercial viability, and creating an enabling environment for successful investments.



8. The simplified set of **5 core resilience indicators for PPCR monitoring and reporting** is seen as a practical and viable framework and several countries are beginning to see the benefits of tracking overall national progress towards resilient development.



9. The program's **ability to evolve and be responsive to country capacities, political structures, and overall development regimes** was pivotal for acceptance. The PPCR played a catalytic role in countries whose adaptation planning was nascent.



10. **Regional approaches** have the potential for **bolstering country-based programming with implementation synergies.** National-level strategy linked with concrete investments ensured sustained engagement with countries.



Lesson 1: High-Level Coordination across Multiple Sectors

Coordination across multiple sectors supported at the **highest levels of government** was the **most effective** approach for shaping a program of resilient investments, and is **promising for implementation** effectiveness and anticipated **scaling up**. **Learn more.**

L1

Learn more



Othe lesson slides

Lesson Quick Links: [Lessons](#): [L1](#): A) [Sub-Lessons](#) B) [Case Studies](#) C) [What-to-Do/Avoid](#)



Overview of PPCR Modalities for Coordination Across Multiple Sectors

Basic approach to interagency coordination

PPCR Countries using this approach

Climate Change Committee or Council

Bangladesh, Grenada, Nepal, Saint Lucia, Samoa, Tajikistan,* Tonga, Yemen,* Zambia*

Environment, Sustainable Development, Planning Committee or Council

Dominica, Haiti, Mozambique, Niger

PPCR Steering or Coordination Committee

Caribbean Region,* Grenada,* Jamaica,* Nepal,* Niger,* Saint Lucia,* Saint Vincent & the Grenadines,* Samoa,* Tajikistan

Technical Team or Working Group

Cambodia, Dominica,* Grenada,* Jamaica, Nepal,* Papua New Guinea, Tajikistan,* Tonga, Zambia*

*Countries denoted with * did not have an interagency mechanism before PPCR





PPCR Sub-Lessons on High Level Coordination Across Multiple Sectors

- Best when leadership for developing multi-sector approaches rests with the Ministry of Finance or comparable institution given influence at highest levels of Government, **authority over major sector ministries**, and experience dealing with MDB finance (e.g. **Zambia**, Samoa, Cambodia, **Mozambique**).
- Leadership by **Environment ministries** with responsibility over natural resources or water infrastructure can be effective (e.g., **Bolivia**); but **more challenging** without such responsibilities.
- **Climate change councils**, climate adaptation project implementation units, and similar structures **can accelerate** planning process if strongly supported by senior government officials (e.g., **Niger**; **Yemen**; St. Lucia).
- **While coordination and integration** is key at National level for programmatic delivery, **implementation of investments** follow the normal route through **relevant line Ministries**.

For *What-to-Do* for High-Level Coordination across Multiple Sectors [click here](#)



Zambia: on High-Level Coordination across Multiple Sectors through Ministry of Finance

Organizational structure vis-à-vis senior officials and sector ministries?	<ul style="list-style-type: none"> CC Secretariat led by Ministry of Finance (MoF) as the cross-sectoral platform is being formalized. MoF had proven experience in working and influencing investments across-sectors. Early recognition of transformative nature of PPCR and influence on development planning.
Why did it work for planning?	<ul style="list-style-type: none"> Preparation of investment plan overlapped timing with the national development planning cycle. Cross-sector coordination mechanism led by MoF quickly recognized positive influence of investment \$ in Phase 2.
Will it work for implementation?	<ul style="list-style-type: none"> Promising since PPCR structure is being utilized to access funds from GCF.
What was Bank/MDB role?	<ul style="list-style-type: none"> Advisory and facilitation on establishing and strengthening the new institutional arrangements and coordinating mechanism. Technical assistance and capacity building to strengthen decentralized (national, provincial and district levels) implementation and coordination across sectors.
Other points?	<ul style="list-style-type: none"> Strong political buy-in leveraged three-fold additional national budget allocation in FY15 compared to FY14 for PPCR specific investments.
Other countries with comparable structures?	<ul style="list-style-type: none"> Samoa and Cambodia; where PPCR supported mainstreaming in national/sub-national development plans.





Lesson 2: Assessing Vulnerability to Climate Risks and Hazards

All countries were able to **shape investment plans** and **priorities based on their experiences and evidence with current climate variability and impacts**. The **PPCR** continues to be instrumental in bolstering the evidence base of knowledge for future impacts; a critical factor for accelerating resilient development. **[Learn more](#)**.

L2

Learn more



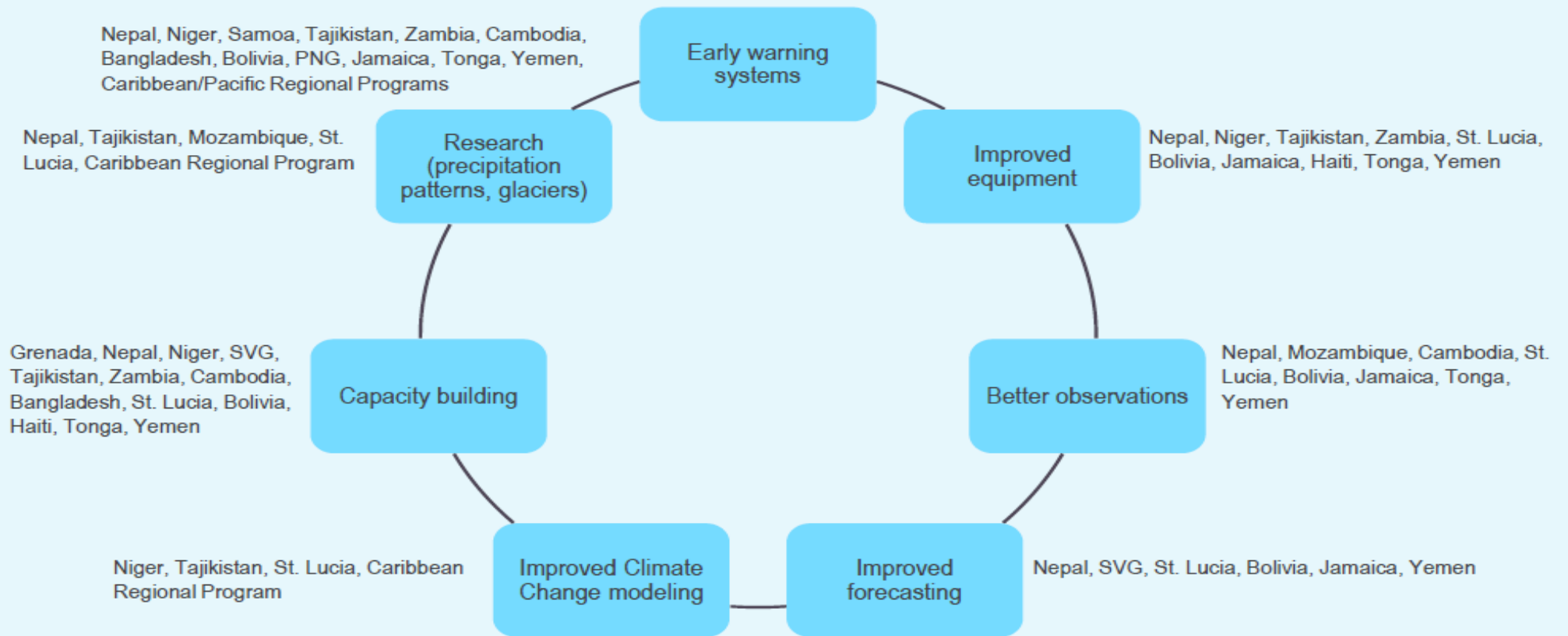
PPCR Lessons on Assessing Vulnerability to Climate Risks and Hazards

- Each PPCR country had a **sufficient base of knowledge** to inform the preparation of their investment plan to bolster climate resilience—from experience with climate related disasters, analytical work to projections of climate impacts on critical sectors.
- Countries with an **advanced understanding** of sector risk were best suited to identify truly transformational investments (e.g., **Mozambique**; Zambia; Samoa).
- Equally important: **awareness of climate** and other disaster risks in the general population, reflecting impact on key economic sectors. High-level awareness by government, and the response of donors to recent disasters, were key complementary factors (e.g., Samoa; Tonga).
- Countries where climate risks are already being felt at critical sectors were able to quickly **target PPCR resources** to those sectors (e.g., Niger for food security, Bangladesh on coastal embankments).
- All PPCR countries requested financing for strengthening of **HydroMet services** as a foundational element in refining their understanding and management of risks.

For *What-to-Do: Assessing Vulnerability to Climate Risks and Hazards* [click here](#).



Hydrometeorological Investments Identified as a Critical Pillar for Enhanced Resilience by all PPCR countries



What-to-Do: Assessing Vulnerability to Climate Risks and Hazards

- ❑ **Don't be dissuaded** by a purported lack of data or models to assess risk.
- ❑ Recognize that the **base of information** on climate risks and vulnerabilities has advanced greatly in recent years and is contained in National Communications to the UNFCCC, and through many third-party organizations.
- ❑ Learn from the **growing network** of practitioners.
- ❑ Recognize that nearly **all countries will benefit** from investments and capacity building for improved weather and climate services, though staffing and maintenance of such infrastructure and generation of dedicated climate services remains a challenge.
- ❑ Empower/encourage decision makers to **engage early on with service providers** and the users of weather and climate data, information and services to ensure effectiveness of long-term investments in system improvement.



Lesson 4: Transformational Investments and Policy Reforms

Many SPCRs are fostering **transformational investments and policy reforms** going beyond Phase 2 investment funds. This advanced partnering with bilateral and country-based funding sources, **spurred policy reforms**, and furthered the **incorporation of resilience** at the national, regional and local levels. **[Learn More](#)**.

L4

Learn more



PPCR Lessons on Transforming Sectors

- Many SPCRs are **fostering policy reforms** through incorporation of resilience in national and sub-national development planning (e.g., Bangladesh; **Zambia**; Cambodia; Bolivia).
- Bank Development Policy Operations can support reforms both broadly and in key **vulnerable sectors** identified in the SPCR (e.g., **Mozambique**).
- Some SPCRs were successful at mobilizing significant **regional and municipal co-funding** within a country (e.g., **Bolivia**).

For What-to-do: Transforming Sectors click here.



Mozambique: A More Resilient Roads Sector

Critical PPCR investments	<ul style="list-style-type: none"> • Piloting planning approaches, designs and maintenance approaches that will strengthen the resilience of rural roads infrastructure and efficient integration for improved accessibility in the Zambezi valley. • The PPCR spurred the development of climate resilient national roads standards to achieve transformative impact at national level.
Key factor spurring sector transformation	<ul style="list-style-type: none"> • Recurrent climate-related impacts from floods on transport, agriculture and other sectors– average \$400M annual losses. • An estimated \$US2–11 million per year increase in maintenance costs of unpaved and paved roads from precipitation and temperature changes.
Spin-off effects	<ul style="list-style-type: none"> • Government has also introduced a reform that now requires mandatory screening of all new roads investments. • New climate resilient road standards. This was included as a policy reform in the Climate Development Policy Grant—and is triggering other sectoral reforms.
Other factors	<ul style="list-style-type: none"> • Ministry of Public Works and Housing is called for screening of all road operations.

What-to-Do: Transforming Sectors

- Lay the groundwork through technical assistance, non-lending services and Development Policy Operations.
- Show the benefits for building sector resilience beyond pilot projects and response only to near-term disasters
- Move from projects to supporting improved sector regulations and design standards.



Lesson 8: PPCR Early Lessons on Monitoring & Reporting

L8

Learn more



The simplified set of **5 core resilience indicators for PPCR monitoring and reporting** is seen as a practical and viable framework and several countries are beginning to see the benefits of tracking overall national progress towards resilient development. **[Learn More](#)**.



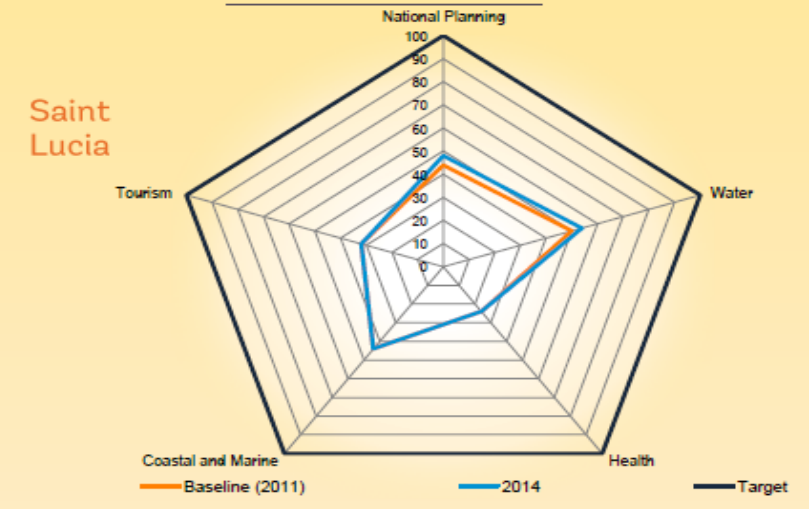
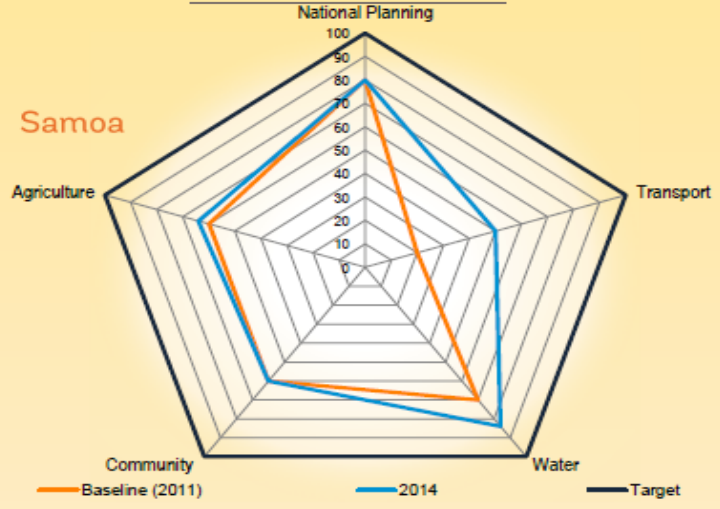
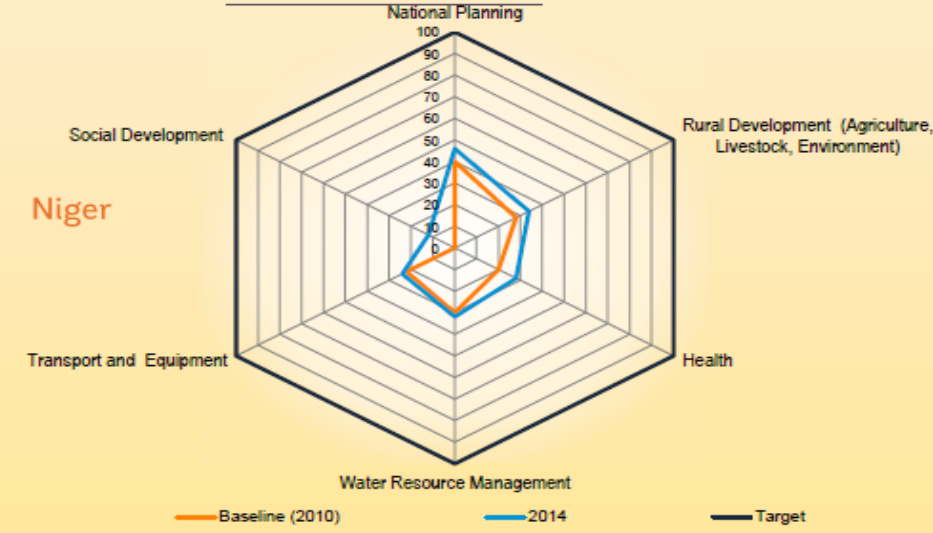
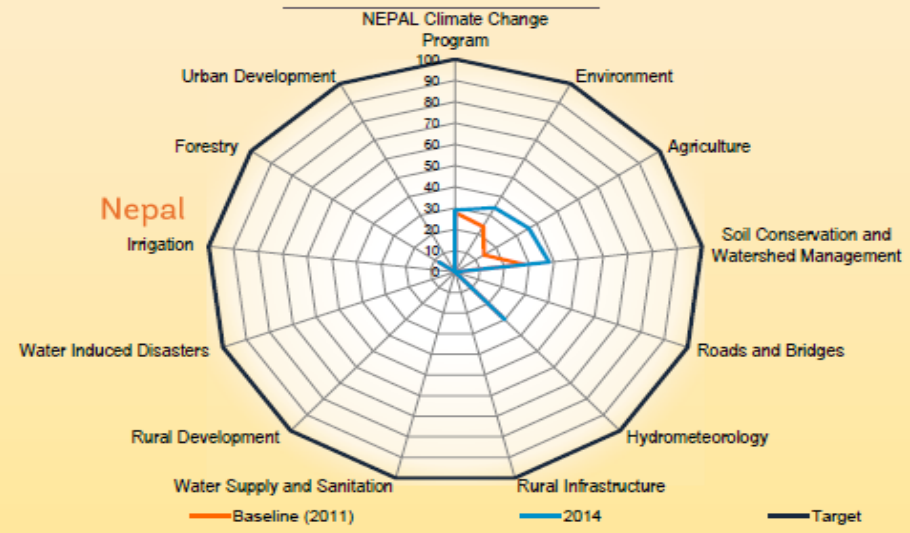
PPCR Lessons on Monitoring and Reporting

The five core indicators to track programmatic progress on resilience are:

1. Degree of Integration of climate change in national, including sector, planning.
2. Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience.
3. Quality and extent to which climate responsive instruments/investment models are developed and tested.
4. Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR supported tools, instruments, strategies and activities to respond to climate variability or climate change.
5. Number of people supported by the PPCR to cope with the effects of climate change.



Setting Targets and Monitoring Progress on Integration of Climate Change into National & Sector Planning



Source: PPCR 2014 Results Report



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8. The simplified set of **5 core resilience indicators for PPCR monitoring and reporting** is seen as a practical and viable framework and several countries are beginning to see the benefits of tracking overall national progress towards resilient development.



9. The program's **ability to evolve and be responsive to country capacities, political structures, and overall development regimes** was pivotal for acceptance. The PPCR played a catalytic role in countries whose adaptation planning was nascent.



10. **Regional approaches** have the potential for **bolstering country-based programming with implementation synergies.** National-level strategy linked with concrete investments ensured sustained engagement with countries.

The lessons reflect common themes across all PPCR countries and there is complementarity among lessons which include both public and private sector experiences.

For a full display of all the lessons, sub-lessons and case studies visit:
<http://www.climateinvestmentfunds.org/cif/learning-and-events/Publications>

Sample pages of lessons



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- 3 Linking and Leveraging Investments
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Purpose & Approach of this Knowledge Product

Distill, sharpen, & frame for dissemination, lessons learned from the design and early implementation of the PPCR to demonstrate relevance to mobilizing climate resilience through existing, new, and emerging programs and instruments to initiate transformation at scale.

1

Learn more ▶

Thank you

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