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**GLOBAL
RESILIENCE
PARTNERSHIP**

An aerial photograph of a coastal city, likely Cape Town, South Africa, showing a mix of urban buildings, green spaces, and a golf course. A large, semi-transparent green circle is overlaid on the center of the image, containing the title text. The circle is surrounded by several thin, overlapping green lines that create a sense of motion or a network.

Resilience Evidence Forum 2023 Synthesis Report

Acknowledgements

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We are deeply saddened to acknowledge the passing of Dr Hannington Odame, after a sudden illness on the evening of 20th June 2023. Dr Odame was the Founder and Executive Director of the Centre for African Bio-Entrepreneurship (CABE), Kenya, and the Regional Coordinator for East Africa of the UK FCDO-supported Africa of the Agricultural Policy Research in Africa (APRA) Programme and the Future Agriculture Consortium (FAC). On behalf of the entire Resilience Evidence Forum community, we extend our deepest condolences to Dr. Odame's family, friends, and colleagues at CABE and beyond.

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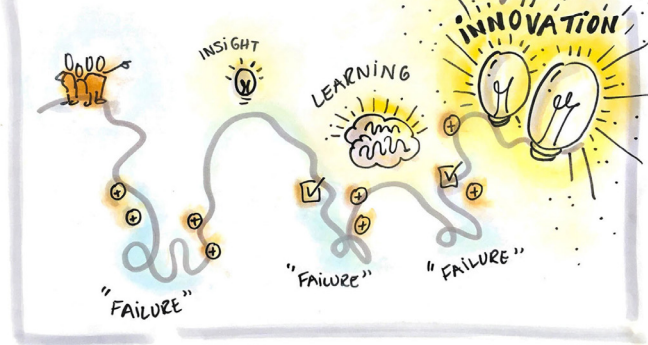
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PROMOTE A Positive Failure Response



THERE IS SIGNIFICANT **LACK** OF FUNDING

HAVE \$ 29 Bn.
NEED \$ 340 Bn.

ARE WE ASKING THE RIGHT QUESTIONS...

TO DO POLICY MAKING?
MUST TAKE A SYSTEMIC VIEW!

Communities are SELF-DEFINING.
(SHOULD NOT be DEFINED by an OUTSIDER.)

RESILIENCE LOOKS DIFFERENT FROM DIFFERENT PERSPECTIVES.
AND THIS MEASUREMENT MUST TAKE THIS INTO ACCOUNT AND ENGAGE COMMUNITIES AT EACH LEVEL AND STAGE.

RESILIENCE IS NOT A ONE FITS ALL APPROACH. It needs to be CONTEXTUALISED

WIDENING PERSPECTIVES ABOUT RESILIENCE EVIDENCE

MULTIPLE POINTS OF VIEW on URBAN RESILIENCE EVIDENCE.

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Executive Summary

Over the last decade, resilience has continued to be elevated as an analytic, programmatic, and organising concept in the development and climate discourse and practice. In line with this, approaches to measuring resilience have proliferated, giving rise to a nascent evidence base on both the impact of resilience programming and the sources of resilience that explain why some households, communities, systems, and countries fare better in the face of shocks and stresses than others.

Despite clear progress, significant challenges and gaps remain. The demand for resilience evidence has grown exponentially as conflict, COVID-19, and the accelerating impacts of climate change have reversed development gains on a massive scale and pushed hundreds of millions of people into crisis levels of poverty and hunger. Given this complex risk landscape, it is key to generate evidence on what works, what doesn't, and for whom, and how we can tell the difference between the two when it comes to building resilience.

The Resilience Evidence Forum was a three-day interactive gathering that took stock of the latest evidence on resilience and its implications for policy and programming. The largest ever gathering on resilience evidence and measurement, the Forum convened over 200 in-person participants and over 1,000 further participants joined virtually, took stock of existing evidence and needs sparking further collaborations and capacity exchange across geographic contexts, sectors, and actors. Participants included USAID headquarters and field-based staff, implementing partners, non-governmental organisations (NGOs), United Nations and international organisations, donors and Global South government officials, universities, private sector, community-based and research organisations.

This Synthesis Report presents the findings and insights from the Resilience Evidence Forum. It reports on the key messages that emerged from the Forum, based on the latest evidence and methodological advancements across different scales of analysis, as well as different cross-cutting themes. Lastly, it highlights emerging principles and priorities for resilience evidence and puts forward key implications and next steps for investment, policy, and decision-making.

” *With climate and other shocks becoming more frequent, severe and overlapping, there is an urgency to getting smarter, faster in terms of knowing what works when it comes to building resilience. The sheer number and diversity of participants joining the Resilience Evidence Forum – from all walks of life and regions of the world – reflects that others feel that urgency too. At USAID we will continue to try new approaches and improve our evidence base – applying that learning ourselves and sharing it with others. And we will continue to promote convenings like the Forum, to learn more about what others are doing and learning, and promote collaboration and partnership needed to drive equitable growth and well-being in an increasingly unpredictable world.*

– Dina Esposito, Feed the Future Deputy Coordinator for Development and USAID Global Food Crisis Coordinator

Without equitable, radical collaboration and commitment to evidence that informs decision-making, policy, and investment, we will continue to face barriers in protecting and supporting environments and communities that can flourish even in the face of change and uncertainty. The Resilience Evidence Forum was a significant moment for taking stock on where we are and where we need to go in strengthening resilience.

– Dr Nathaniel Matthews, Chief Executive Officer, Global Resilience Partnership

Welcome

KEY PERSPECTIVES & [FRAMING]

RESILIENCE:
THE ABILITY TO MANAGE & ADAPT TO [CHANGE] and [ADVERSITY] WITHOUT COMPROMISING THE FUTURE

SHOCKS!
ARE THE NEW NORMAL.

COVID 19
CONFLICT
CLIMATE CHANGE

FOR SUCCESS WE NEED A...
STRONG EVIDENCE BASE

CO-PRODUCTION OF KNOWLEDGE (COMMUNITIES)
RANGE OF METHODS & APPROACHES
MEETS DIVERSE EVIDENCE NEEDS!

BUILDS TRUST

THERE IS SIGNIFICANT LACK OF FUNDING

HAVE \$ 29 Bn. NEED \$ 340 Bn.

STORIES

RESILIENCE?
WE NEED TO... ASK: WHAT DO PEOPLE NEED?

COMMUNITIES TALK ABOUT WHAT RESILIENCE MEANS TO THEM!

EXCUSE ME!

DATA'S POWER

ISSUES: HEAT FLOODS

BOTTOM UP! APPROACH!

ASK US! COMMUNITIES

PRIVATE SECTOR
DO WELL BY DOING GOOD

DONOR JUSTIFY TO TAX PAYER. THEIR \$\$ HAVE AN IMPACT!

RESILIENCE MEASUREMENT IS REALLY HARD!

BALANCING DIFFERENT EVIDENCE NEEDS.

Emerging Insights & Themes

RESILIENCE LOOKS DIFFERENT FROM DIFFERENT PERSPECTIVES.
AND THIS MEASUREMENT MUST TAKE THIS INTO ACCOUNT AND BRIDGE COMMUNITIES AT EACH LEVEL AND STAGE.

RESILIENCE IS NOT A ONE FITS ALL APPROACH. IT NEEDS TO BE CONTEXTUALISED.

WIDENING PERSPECTIVES
ABOUT RESILIENCE EVIDENCE

WAY FORWARD

FROM RESILIENCE EVIDENCE CO-PRODUCTION TO CO-OWNERSHIP

PEOPLE & HOUSEHOLDS

NEED:
FINANCIAL INCLUSION
SOCIAL PROTECTION
SOCIAL ASSISTANCE
INSURANCE
REQUIRES POLITICAL WILL & PRIVATE SECTOR ENGAGEMENT

Urban
THE VALUE OF CROSS-POLLINATION BETWEEN URBAN & RURAL ECOSYSTEMS AND DIFFERENT APPROACHES.

rural

COMMUNITIES
CREATE HYBRIDS OF:
INDIGENOUS KNOWLEDGE
SCIENTIFIC KNOWLEDGE
OPENING TO POLICY SPACE
INVEST IN COMMON PLATFORMS.

PARALLEL TRACKS
PEOPLE & HOUSEHOLDS
COMMUNITIES
URBAN SYSTEMS
SOCIO-ECOLOGICAL SYSTEMS
MARKET SYSTEMS & VALUE CHAINS

URBAN SYSTEMS
COMPLEX ENVIRONMENTS
REQUIRE A SYSTEMATIC UNDERSTANDING OF GOVERNANCE (Should community expanding?)

SOCIO-ECOLOGICAL SYSTEMS
HUMANS ARE INSEPARABLE FROM NATURE!
STRENGTHEN RESILIENCE OF NATURAL SYSTEMS IN ORDER TO BUILD PEOPLE'S RESILIENCE
USE MULTIPLE APPROACHES

MARKET SYSTEMS
RESILIENCE DEPENDS ON STRONG MARKET SYSTEMS
ENABLE value addition
BUILD enduring supply
CREATE enabling environments
La Policy & Peck

DAY 2.
Light bulb Moments.
"OUR COMMUNITY HAS GROWN!"
WE NEED DATA TO SHOW PROGRESS

BROADENING OF THE TENT

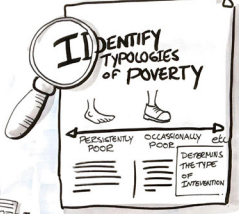


BUILDING BRIDGES
to increase
UTILITY, UPTAKE
& ACCOUNTABILITY

ALL METHODOLOGIES HAVE
THEIR CHALLENGES & LIMITATIONS



USE MIXED
METHODS



LEARNING From FAILURE



CURRENTLY:
"SUCCESS" = DONOR
FUNDING

"So we avoid
talking about and
LEARNING from FAILURE"

FAILURE
LEADS TO...

DEEPER UNDERSTANDING
AND INSIGHT

LEARNING

INNOVATION!
"FAIL FAST,
OFTEN,
AND CHEAP"

FRONTIERS OF EVIDENCE

WE NEED
SHARED PRINCIPLES
& FRAMEWORKS

NOT
SHARED
METRICS.

WE NEED
PLATFORMS to
SHARE DATA
& EVIDENCE.
(E.g. resiliencelinks.org)

AVOID DUPLICATION.

WHO are we measuring for?

DATA
MUST MEET THE NEEDS
OF THE EVIDENCE USERS.

NEED SEX
DISAGGREGATED
DATA!

WOMEN ARE DISPROPORTIONATELY BURDENED BY SHOCKS!

- PUT WOMEN at the CENTRE
of INTERVENTIONS

INCREASES
OVERALL
RESILIENCE



AGRICULTURE

IS a REAL DRIVER
of ECONOMIC GROWTH
and RESILIENCE

CHALLENGES & SOLUTIONS
ARE COMPLEX

REQUIRE a wide
range of ACTORS
& INTERVENTIONS.



EVIDENCE

EVIDENCE

FORUM

Cape Town
20-22 June
2023

THERE ARE
MULTIPLE FORMS
OF EVIDENCE!

BRINGS
HOPE
- CREATES
DIALOGUE
- BRINGS
LIFE to PROCESSES



ART
STORIES
NATURE

Communities
are SELF-DEFINING.
(SHOULD NOT be DEFINED
by an OUTSIDER.)

RESILIENCE
& GROWTH
DO NOT
NEED
to be
TRADE-OFFS.
- How do we
MEASURE THEM
TOGETHER?

COMMUNITIES
CAN ALSO
COLLECT
& ANALISE
DATA



USAID
BEST PRACTICE
EVIDENCE

Closing Remarks.



RESILIENCE WORK
CONTINUES TO GROW...
Our GOAL remains, HELPING
COMMUNITIES & COUNTRIES
THRIVE!

INCLUSION

LOCAL
OWNERSHIP
& AGENCY

EQUITY

RESILIENCE is COMPLEX
& MESSY!
- WHERE DO we
WANT to GO?

ONE or TWO
THINGS WE
CAN AGREE
ON?

AGREE ON...



ARE WE
ASKING THE
RIGHT QUESTIONS...
TO DRIVE
POLICY MAKING?
MUST TAKE A
SYSTEMIC VIEW!



About the Resilience Evidence Forum

Objectives and design principles



The objectives of the Forum were to:

- Strengthen the global community of resilience professionals by creating the space for deep learning and connection.
- Socialise the core principles and priorities for resilience measurement and evidence that emerged from the [2022 Advancing Resilience Measurement Consultation Report](#), as well as the work of key knowledge partners.
- Build momentum and identify key evidence gaps and opportunities for learning and innovation with regards to the priorities identified as most pressing to be addressed within the next 3 to 5 years.
- Identify priority areas and approaches for investment and decision-making that reflect the values, objectives, and ways of working supported by evidence.

In developing the programme, we were guided by the following design principles:

- **Equity, diversity, inclusion.** The Forum centred considerations of equity and inclusion as part of the process design and aimed to help navigate the diversity of practices, perspectives, disciplinary lineages, and ways of knowing in relation to resilience.
- **Connection and trust building.** Advancing collaborative actions requires trust and connection building. The Forum provided a key opportunity to ensure that the individuals and the organisations are connected into building a shared endeavour.
- **'In-person first' experience.** In response to the need for further connection and trust building among resilience professionals, we focused on delivering a highly interactive, fun, and engaging experience for in-person participants. Sessions were livestreamed, and the case study library and all recordings are available on the dedicated [online platform](#).
- **Learning lab.** The design maximised the potential offered by peer learning to ensure the participants learnt from each other's projects or cases. This was achieved through using facilitation processes such as Open Space Technology, Case Clinics, Fishbowl, and World Cafe.

What We Mean by Resilience

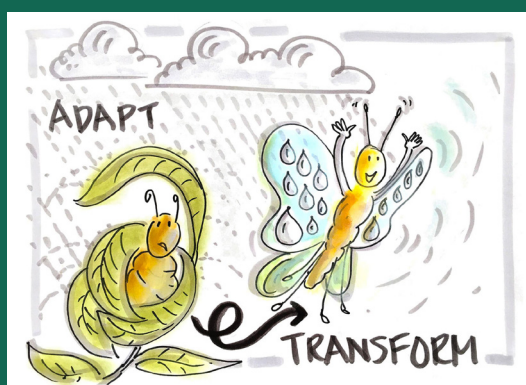
The Resilience Evidence Forum used the definitions of its two co-hosts, USAID and the Global Resilience Partnership, as follows:

”” *The ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.*

– [USAID Resilience Policy](#)

”” *Resilience is the capacity to persist, adapt, and transform in the face of change. This is supported by five key attributes that reinforce resilient systems: diversity, redundancy, inclusivity and equity, connectivity and modularity, and adaptive learning.*

– [Global Resilience Partnership](#)



Taken together, the definitions recognise both the importance of addressing shocks and stresses in the here and now, as well as critical considerations of the longer-term, systemic transformations required to enable just and sustainable societies. In this context, resilience evidence should be framed in relation to wellbeing outcomes in the context of both shocks and stresses over time, as well as the longer-term systemic transformations.

During the Resilience Evidence Forum, conversations sought to distinguish between **resilience measurement**, as a set of context- and shock-specific qualitative and quantitative approaches, tools, and methods that seek to establish the relationship between resilience and its critical determinants, and **resilience evidence**, as the available bodies of knowledge that establish which interventions work and which don't, and how we tell the difference between the two. Resilience evidence is framed as broader than measurement as it seeks to mediate between the needs and priorities of evidence producers and its users, and support evidence-informed action (including and not limited to the domains of policy and decision making, practice, and investment).

REF2023 in Numbers...

1000
online participants

140
organisations represented

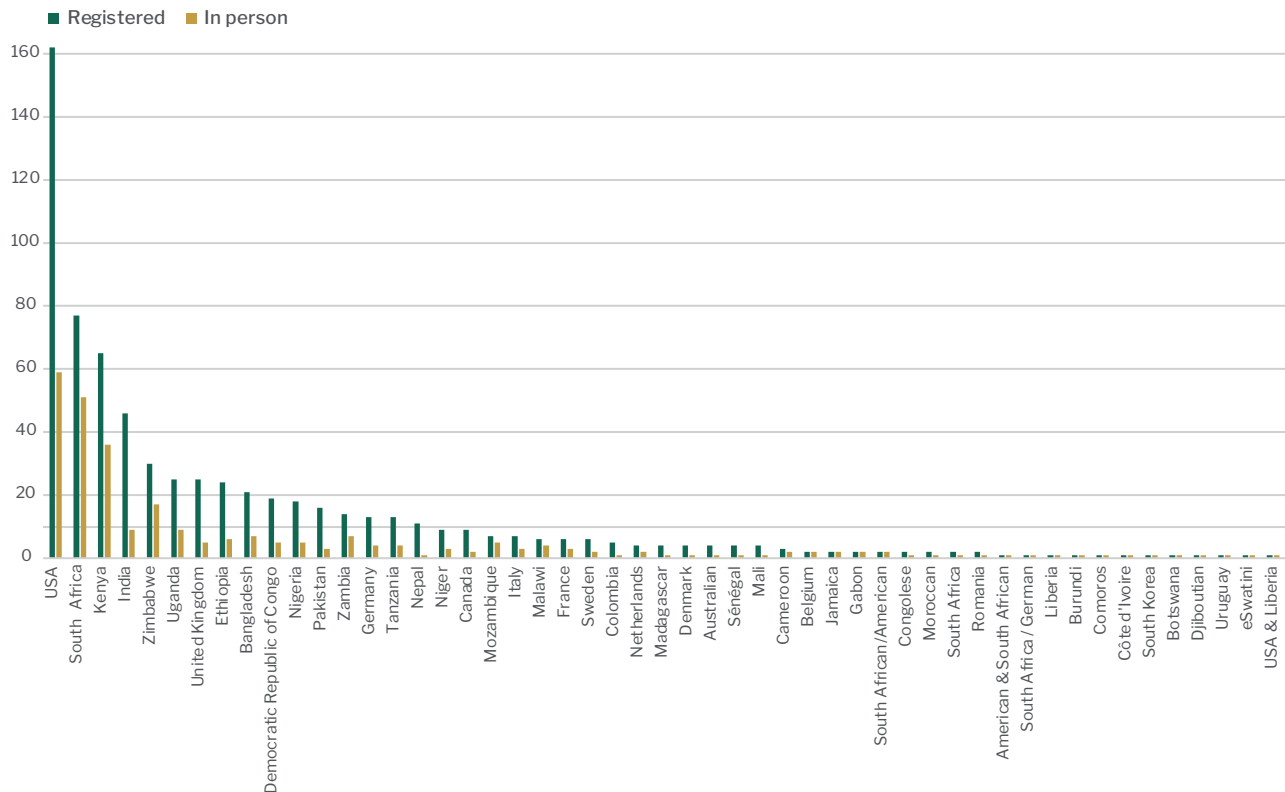
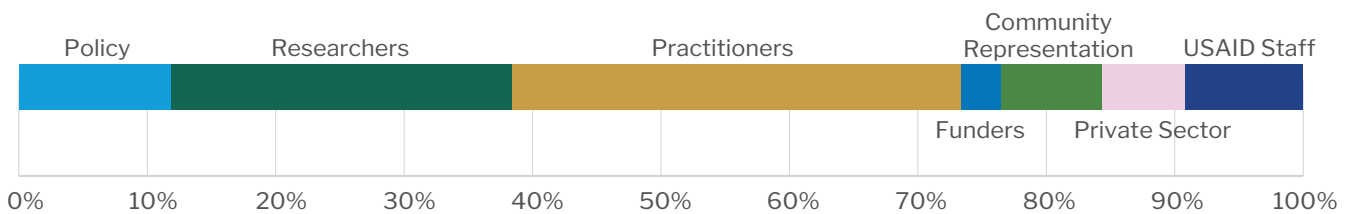
200
in-person participants

20
parallel sessions

80
contributors & speakers

7
plenary sessions

Participants Overview



Key Messages

The Resilience Evidence Forum uncovered the magnitude of resilience building initiatives in different geographies, using different approaches, and working with different communities. The largest gathering to date of resilience measurement and development professionals, the Forum took stock of the latest advancements and methodologies to assess what works, what doesn't, and for whom in strengthening resilience.



The Resilience Evidence Forum took place in a context of a continued and significant lack of funding for climate resilience-building efforts. While estimates of the climate adaptation and resilience needs range from [\\$160 billion to \\$340 billion annually, less than \\$50 billion](#) is spent annually, with less than 2% being contributed by the private sector. While interventions, approaches, methods, and tools for resilience-building are proliferating, the impacts of compound shocks and crises are also increasing. Investing in resilience building bears the potential to minimise losses of lives and livelihoods, while also reducing humanitarian need. This reaffirms the need to take stock of what works, what doesn't, and how we can tell the difference between the two, which the Resilience Evidence Forum has sought to meet.

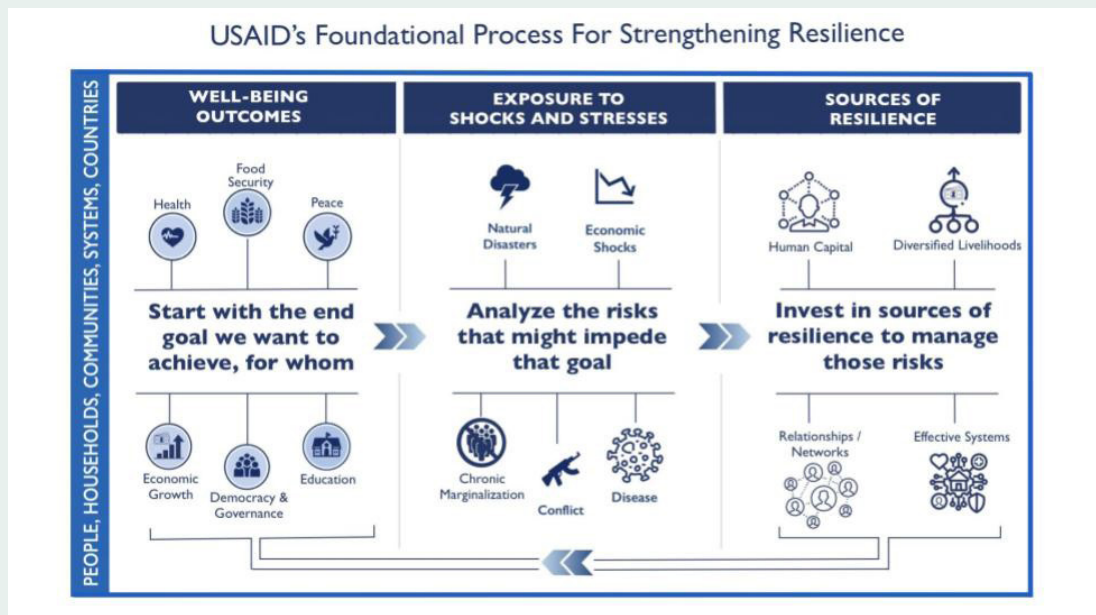
There has been an expansion in the definitions of resilience evidence, what counts as evidence, and whose evidence counts. Across the board, progress has been reported in advancing the evidence bases across units and scales of analysis (people and households, communities, urban systems, market systems and value chains, socio-ecological systems) and thematic areas (conflict, women's leadership and gender, health, sustainable poverty escapes, food systems). **What counts as evidence** is an area that has seen a considerable expansion with increased recognition of the importance of mixed-methods, combining quantitative methods (e.g., surveys, questionnaires, experiments) and qualitative methods (e.g., citizen science, action research, or arts-based methods). Alongside, there has been an expansion regarding **Whose evidence counts**, as lived experiences and local and Indigenous knowledge are increasingly recognised and integrated as core to evidence-building processes. However, this expansion in the definitional nature of evidence has led to challenges regarding efforts in standardising resilience measurement and indicators. Balancing the needs for evidence legitimacy, credibility, and salience is a key unresolved tension in contexts where stakeholders perceive and value these differently. This emerges as a key area that will require collaborative action from donors, the private sector, policy makers, governments, community based organisations and leaders, and research organisations to negotiate this tension to satisfy evidence needs, avoid duplication of efforts, and focus resources and investments.

” It is very important that the stories of resilience get told in the language of those impacted the most and that we learn to work with those stories, pull out what we need from that and don't take a top-down approach to resilience evidence.

– Dr Shehnaaz Moosa, SouthSouthNorth

Effective implementation is challenge- and context-informed. Successful efforts to strengthen resilience presented during the Resilience Evidence Forum depict integrated, multi-sectoral, and multi-disciplinary processes that address interconnected challenges in specific contexts. The past years have witnessed increasing calls for taking ‘whole system’ transdisciplinary approaches to resilience challenges, which are starting to materialise into processes and programmes that explore how to put this into practice. Examples include case studies discussed as part of the tracks, as well as the suite of cross-cutting sessions on [conflict](#), [health systems](#), [food systems](#), [sustainable poverty escapes](#), and [women's leadership, gender, and inclusivity](#). However, the evidence base linking advancements in ‘whole system’ approaches to long term transformative outcomes is nascent and will require adequate support to monitor and measure how short-term resilience gains can enable long-term ‘system level’ transformative outcomes.

Conceptual Framework Underpinning the Event Programme



The Resilience Evidence Forum used USAID's most recent Resilience Conceptual Framework as a scaffold to organise the discussions during the event, as well as to form the underpinning structure of the reporting document. The Resilience Conceptual Framework shows the relationship among risk¹, sources of resilience, and wellbeing outcomes that informs the understanding of resilience and guides programming and measurement.

1. While the USAID framework uses the term 'natural disaster', discussions at the Resilience Evidence Forum recognised that while hazards are natural, disaster events are compounded by human factors such as the global use of fossil fuels, the destruction of the environment, unplanned urbanisation and poverty.

This has informed the design of **five associated tracks**:

- Sources of resilience for people and households
- Sources of resilience for communities
- Sources of resilience for cities and urban systems
- Sources of resilience for socio-ecological systems
- Sources of resilience for market systems and value chains

Building on the tracks, **five cross-cutting sessions** addressed key themes as follows:

- Women’s Leadership, Gender, and Inclusivity
- Health Resilience
- The Role of Agriculture in Creating Resilient Food Systems
- Sustainable Poverty Escapes
- Conflict

Across these five tracks, the following **three key questions** were addressed:

- What is the latest evidence?
- How do we collect, analyse, and mobilise the evidence bases?
- Who are the evidence users and producers and what needs do they have?

A final set of cross-cutting sessions discussed **implications and next steps** across the following dimensions:

- Policy
- Investment
- Measurement

	Day 1	Day 2	Day 3
	Registrations / Coffee		
9:00 - 10:30 SAST	WELCOME Key perspectives and provocations framing the Resilience Evidence Forum	FIRESIDE DISCUSSION What might the emerging themes mean? What are their implications for different knowledge users and producers?	PLENARY WORKSHOP Co-creating a set of Resilience Evidence Principles and Priorities
	Coffee Break		
11:00 - 12:30 SAST	PLENARY WORLD CAFE Introducing the tracks and the latest resilience evidence	PARALLEL TRACKS Needs and priorities for evidence users and producers (WHO) <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="border: 1px solid black; padding: 2px;">People & Households</div> <div style="border: 1px solid black; padding: 2px;">Communities</div> <div style="border: 1px solid black; padding: 2px;">Urban Systems</div> </div> <div style="display: flex; justify-content: space-around; font-size: x-small; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Socio-Ecological Systems</div> <div style="border: 1px solid black; padding: 2px;">Market Systems & Value Chains</div> </div>	CROSS-CUTTING SESSIONS Next steps and implications for: <div style="display: flex; justify-content: space-around; font-size: x-small; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Policy</div> <div style="border: 1px solid black; padding: 2px;">Investments</div> <div style="border: 1px solid black; padding: 2px;">Resilience Evidence</div> </div>
	Lunch		
13:30 - 15:30 SAST	PARALLEL TRACKS Latest evidence (WHAT) and methods (HOW) Sources of resilience for: <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="border: 1px solid black; padding: 2px;">People & Households</div> <div style="border: 1px solid black; padding: 2px;">Communities</div> <div style="border: 1px solid black; padding: 2px;">Urban Systems</div> </div> <div style="display: flex; justify-content: space-around; font-size: x-small; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Socio-Ecological Systems</div> <div style="border: 1px solid black; padding: 2px;">Market Systems & Value Chains</div> </div>	CROSS-CUTTING SESSIONS <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="border: 1px solid black; padding: 2px;">Gender & Inclusivity</div> <div style="border: 1px solid black; padding: 2px;">Health</div> <div style="border: 1px solid black; padding: 2px;">Food Systems</div> </div> <div style="display: flex; justify-content: space-around; font-size: x-small; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Sustainable Poverty Escapes</div> <div style="border: 1px solid black; padding: 2px;">Conflict</div> </div>	CLOSING Concluding discussions and next steps
	Coffee Break		
16:00 - 17:30 SAST	PLENARY SHARING BACK & SENSEMAKING	PLENARY SHARING BACK & SENSEMAKING	
	WELCOME RECEPTION	FAILURE FESTIVAL & RECEPTION	



Resilience Evidence Stocktake: What, How, and for Whom?

1. Sources of Resilience for People and Households: Livelihoods, Financial Inclusion and Social Protection

Key messages

- The evidence on sources of resilience that explain why some people and households fare better in the face of shocks than others is compelling, but is nascent and in need of validation.
- The question of What resilience evidence is good enough? can be a productive conversation opener for evidence users and producers to better collaborate.

The evidence on sources of resilience that explain why some people and households fare better in the face of shocks than others is compelling, but is nascent and in need of validation. This track presented the latest evidence that expands and further validates what is known about these sources of resilience. This includes sources of resilience that people and households rely on when shocks and stresses overwhelm their capacity to manage on their own, such as social capital and shock responsive safety nets.

The question of What resilience evidence is good enough? can be a productive conversation opener for evidence users and producers to better collaborate. Evidence producers on the panel recognised the need to consider their audience's unique uptake requirements, objectives, and differences from the outset and the need to tailor measurement approaches accordingly. In this case, employing mixed-methods measurement becomes essential, where substantive qualitative analysis complements robust quantitative data to reveal representative stories of resilience. Additionally, incorporating remote sensing data can enhance the analysis. As circumstances evolve, the focus on resilience building shifts towards addressing recurrent crises and interconnected shocks rather than isolated events. Further bottom-up conversations on what resilience visions and aspirations different community groups have could continue to unlock relevant evidence for action.

What is the latest evidence?

Evidence presented depicted how introducing digital platforms to integrate social insurance and social assistance can yield positive spillover effects. Understanding household income levels in relation to formal/informal labour through household survey data can be an important first step for social protection policymakers in a country. Low- and middle-income countries face a significant challenge as a substantial number of people are engaged in the informal economy, lacking social protection – a phenomenon often referred to as the "missed middle". However, many individuals in these countries do have the ability to save. Leveraging digital systems, especially mobile money, can effectively reduce operating costs and enhance accessibility to savings mechanisms. Trust in the scheme is crucial to encourage participation, and offering incentives and bundling services can further boost uptake rates. Ensuring scale and cost-effectiveness is critical for the scheme's viability and success. Rwanda's [Ejo Heza scheme](#), a defined contribution scheme established by the Government of Rwanda, has reached 27% coverage of the working-age population in four years, of which 87% of savers worked in the informal sector.

Access to finance work has moved Northern Kenya along the investment spectrum, from humanitarian assistance to impact investing. The progression towards impact investing has seen capital being lent to financial institutions for onlending to micro, small, and medium-sized enterprises in counties within Kenya's Frontier Counties Development Council (FCDC) region.

Successes on the demand side included an increase in population access to financial services from 11% to 74% over a 10-year period (that had numerous other shocks) and a decrease in people living in poverty from 76% to 68%, which can be considered as evidence of the role played by increasing access to financial services. On the supply side, success included introducing lenders to the region, supporting counties through capacity support and strategic lending. Supply side progression included USD\$97 million leveraged, 15,200 jobs created, with 52% of the value of loans made to women and 9% to youth.

In pastoralist areas, there is a need to be gender intentional through combining women’s asset building with asset protection. To ensure that investments in resilience-building are sustainable, asset building has to be backstopped with asset protections (such as insurance or savings interventions). For example, a four-year randomised control trial of the [Rural Entrepreneur Access Project \(REAP\)](#) in Samburu County showed a 320% increase in women’s productive assets, a 32% increase in family cash income, and a 510% increase in women’s savings. However, adequate livestock insurance design schemes are needed to ensure that these gains are not lost during a climate shock. Gender intentional approaches, such as the [Village Insurance Savings Account \(VISA\)](#) approach, demonstrate that group structures provide cost-effective ways to offer education on financial products, reduce transaction costs for financial institutions by bundling demand, and employ social mechanisms to encourage savings and repayment of loans.

Utilising a multi-year, spatially diversified randomised controlled trial spanning two African countries, results show that bundling drought tolerant seeds and financial technologies can boost the resilience and productivity of small-scale farmers who are exposed to significant risk. The analysis reveals that both moderate droughts and severe yield losses negatively impact the resilience of control group households, with lasting effects. Drought-tolerant seeds bundled

with insurance provided significant protection against moderate drought events, preventing long-term drops in farm productivity. Meanwhile, satellite-based index insurance offsets the enduring consequences of severe yield losses not mitigated by the drought-tolerant seeds. Farmers who witnessed the efficacy of both technologies subsequently increased their agricultural investment, leading to improved incomes. However, those who did not experience the benefits of these risk management technologies were hesitant to adopt them in the following season. These findings highlight the valuable synergy between genetic and financial risk-mitigating technologies, as well as the challenge of promoting sustained adoption when the benefits are perceived to be occasional.

”Shock-responsive social protection is a great approach, however on its own it is not enough, as it will only support survival and not resilience. The important learning from COVID-19 is the need to have systems for social protection and guaranteed income in place to reach scale beyond programmes and ensure processes are rights-based.”

– Dr Stephen Devereux, Institute of Development Studies (IDS)

A frame from the Index-based Livestock Takaful picture book, which is a consumer education tool used by the [Feed the Future Innovation Lab for Markets, Risk and Resilience](#) and their partners in Samburu, Kenya to illustrate how Family Insurance works. Learn more [here](#).



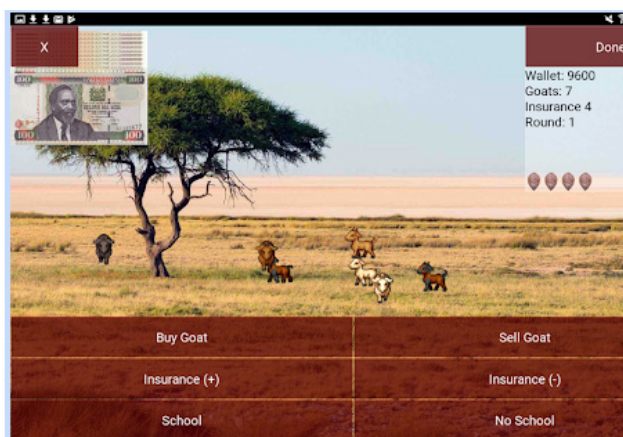
INDEX-BASED LIVESTOCK TAKAFUL (IBLT)
IBLT FOR FAMILIES

How do we collect, analyse, and mobilise the evidence bases?

The contributions of social protection to resilience are strongest where program objectives match the design and implementation capacity to deliver programmes in a predictable and timely way. If social protection fails to meet standards of timeliness, predictability, accuracy, flexibility, it may help people in the short term but it does not serve as a source of resilience in the longer term. To avoid this, investing in communication strategies, utilising aggregators, and employing behavioural nudges are essential. Moreover, keeping the scheme's design simple is a key consideration to promote understanding and engagement. Conducting a [Social Insurance Delivery Chain](#) mapping of voluntary schemes helps identify operational bottlenecks, enabling efficient problem-solving. Additionally, setting SMART (specific, measurable, achievable, realistic, and timely) goals and regularly reviewing progress are essential for monitoring and taking necessary actions to ensure the scheme's effectiveness and sustainability.

The use of [high frequency phone surveys during COVID-19](#) depicts a low-cost method that can be quickly deployed. Data collection between April 2020 and through 2022 in 90+ countries (diverse income groups/regions), saw almost 500 survey rounds, representing more than 2.5 billion people. Advantages include the ability to maintain a panel of households for frequent and repeated data collection and being able to use multiple sampling frames to cover different population groups. The method helped inform COVID-19 recovery projects such as cash transfers or livelihoods support, as well as supporting outreach efforts to tackle vaccine hesitancy. Limitations include an imperfect baseline, limits to representativeness from sample bias (such as phone access or respondent selection), while short surveys and ex-post harmonisation can be resource-intensive.

A [Recurrent Monitoring System \(RMS\)](#) can tell a complex story through data in a more nuanced approach. An RMS differs from traditional monitoring in three ways: what they collect data on, when the data is collected, and how/ why the data is collected. Specifically, RMS is a longitudinal monitoring system that collects quantitative and / or qualitative data on shocks/ stresses, resilience capacities and wellbeing outcomes over at least three cycles. To date, at



Screenshot of SimPastoralist gameplay, a tablet-based game that simulates ten seasons of buying and selling goats with the additional options to insure them against drought. First tested in Samburu County, Kenya, in 2019, the game helps explore a new type of insurance for 'family units' instead of 'livestock units', supporting the family's collective welfare. According to the most recent insurance sales data, the Family Insurance approach led to a 20% increase in the number of families who bought insurance, while those who purchased the insurance increased the amount insured by 40%. The app is available for [free download](#).

least 19 different RMS's have been implemented in over 13 countries. Limitations include the need to set clear objectives, delayed timelines, and identifying correct sampling strategy.

The [Resilience Index Measurement and Analysis \(RIMA\)](#) is a tool used to calculate the resilience capacity index, based on four main pillars: social safety nets, adaptive capacity, assets and access to basic services. It is intended as a methodology that contributes to a framework for humanitarian and long-term development initiatives to build food secure and resilient livelihoods. [RIMA-II "Shiny RIMA"](#) is a web-based Excel data tool that simplifies the calculation of the resilience capacity index, which has covered 40+ countries to date. Data points are collected across four key sources of resilience: 1) Knowledge; 2) Investment in agricultural infrastructure; 3) Diversification of crops and production; 4) Strength of local organisations. These in-person surveys take time and are costly, but shiny-RIMA can help identify sources of resilience and can be implemented relatively simply.

Who are the evidence users and producers and what evidence gaps and needs do they have?

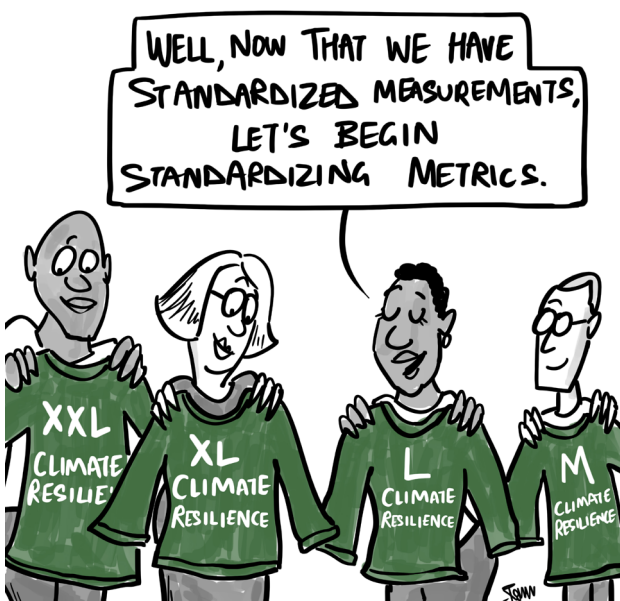
Three evidence users shared reflections from a country-level (Zimbabwe), regional (Intergovernmental Authority on Development

(IGAD) region in Eastern Africa), and global (USAID) perspectives on whether resilience measurement approaches are delivering on their specific user needs and priorities. Evidence needs and questions include:

- Through the Southern African Development Community (SADC) [Regional and National Vulnerability Assessment and Analysis Programme](#) Committees, 15 countries (including Zimbabwe) were supported to allow resilience evidence to inform decision-making at various levels of government and help ensure “that the people and the community are masters of their own destiny”.
- In the IGAD region there have been multiple failed seasons and significant cross-border movements, how can you account for this with counterfactuals? How can the evidence produced be used to design investments that allows the community to have access to resilient market systems, food systems and infrastructure? Evidence users at IGAD need to have the data aggregated at the regional level while also being disaggregated at the country level. IGAD funders, lenders and constituent countries need evidence about where, how, and why resilience interventions work to ensure communities are better off.

At a global level, there is a frequent mismatch between approaches to programming and evaluation methods. Programming for resilience has evolved over the past decade in many positive ways. This increasingly uses localised, layered, systems approaches to match the unpredictable and dynamic context in areas of recurrent crises. Households and communities can be displaced, new interventions and actors are added and later removed, start and end dates are not in sync across a portfolio of projects, etc. Evaluation methods haven’t changed to keep pace, often using experimental designs more appropriate for the laboratory or research farm. This poses challenges for crystallising resilience evidence across scales into compelling and unassailable insights that can be shared with donor senior leadership. In turn, they require these insights to continue making the case for resource mobilisation for resilience to relevant governments and political leaders, who often lack subject matter knowledge, but are key actors in the decision and finance chain.

Live cartoons drawn during the Resilience Evidence Forum by artist [Rohan Chakravarty](#)



2. Sources of Resilience for Communities: Community-led Approaches

Key messages

- Local people and communities, especially women, youth, disabled, displaced and Indigenous peoples, are key producers of resilience evidence and need to be recognised and supported accordingly.
- Communities already have the agency to adapt and make decisions in the face of change, but often need support in the form of appropriate data, knowledge, information and resources to further strengthen adaptation and resilience actions.
- There are a number of tried and tested co-production methods, approaches and frameworks that enable communities to act as partners in evidence building and measurement, however gaps between 'local' and 'global' evidence sets persist.

Local people and communities, especially women, youth, disabled, displaced and Indigenous Peoples, are key producers of resilience evidence and need to be recognised and supported accordingly. The [Principles for Locally Led Adaptation](#) have been signed by over 100 organisations committing to place communities at the centre of science, policy, practice, and investment of adaptation, resilience, and development programmes. However, these communities continue to be treated as "beneficiaries" in projects and interventions that focus on a top-down transfer of technology, finance, and knowledge. This track took stock of evidence, emerging methods, tools and frameworks seeking to redress this imbalance, and discussed how to strengthen the agency and efficacy of communities.

Communities already have the agency to adapt and make decisions in the face of change, but often need support in the form of appropriate data, knowledge, information and resources to further strengthen adaptation and resilience actions. Co-produced evidence with marginalised groups as partners can further strengthen their agency and efficacy to act. While not a straightforward process, measuring the changes in agency of the most marginalised communities can provide a critical parameter to track progress of locally led adaptation.

There are a number of tried and tested co-production methods, approaches and frameworks that enable communities to act as partners in evidence building and measurement, however gaps between 'local' and 'global' evidence sets persist. Evidence gaps are often cited as an impediment in the design, planning,

and implementation of resilience interventions. For example, gaps in climate models lead to blind spots in disaster risk reduction and early warning systems, affecting the climate resilience of communities. In the pursuit of common ground across evidence scales, the role of communities as both users and producers of evidence is being clarified. Prioritising community perspectives, collaborative wellbeing definitions, and inclusive measurement methods can bridge the gap between local realities and global goals. Establishing clear success metrics in partnership with communities is crucial for effective measurement, avoiding the imposition of unfamiliar methods or extractive research practices.

What is the latest evidence?

The increasing effects of climate change are affecting local and Indigenous knowledge bases. For example, [rural farmers in Umzingwane, Zimbabwe](#) who heavily rely on traditional methods for building and using climate information, face challenges due to climate and ecological changes that affect their sources of knowledge and information. Additionally, inadequate access to timely and accurate climate services in remote areas undermines their trust in modern services. The lack of documentation of Indigenous knowledge bases poses the risk of losing the valuable knowledge across generations. To address this, the creation of a publicly accessible Indigenous knowledge database could provide an opportunity to preserve and pass on the valuable knowledge to future generations.

Global data collection processes are beginning to incorporate Locally Led Adaptation considerations, acknowledging the importance of local and Indigenous knowledge and experiences through community consultations.

However, local stakeholders, including communities and local governments, still require reliable data on climate forecasts, risks, vulnerabilities, and climate finance opportunities at an appropriate scale to inform locally led adaptation planning and implementation. The limited availability of downscaled data in many regions, due to insufficient institutional capacity of national meteorological and hydrological services, hinders the uptake of locally led adaptation. Addressing these challenges requires a collaborative approach between communities and scientists to effectively translate and utilise data. Organisations such as [Green Hut Trust](#), [CABE](#), [Mathematica](#) or [SERVIR West Africa](#) provide examples of supporting locally led adaptation to enhance climate resilience outcomes, building bridges between local and global knowledge for community benefit and innovation capacity. It is crucial to go beyond generic capacity building and technical competence in measuring efforts, emphasising knowledge generation, design, and implementation. Effective governance of knowledge relies on knowledge brokers or innovation brokers to create space, seek

opportunities, and incentivise engagement by relevant actors throughout innovation and knowledge spaces, promoting the integration of local and global knowledge and practices to ensure knowledge utilisation.

“We cannot eradicate traditional knowledge, we have to make traditional and scientific knowledge work alongside.”

– Cinderella Ndlovu, Green Hut Zimbabwe

Local and Indigenous knowledge can be enhanced by integrating climate services and data to adapt to a changing climate. There is an opportunity to support traditional knowledge holders and scientists to complement each other’s knowledge, rather than eradicating traditional knowledge. Public consultations can serve as a meeting point for community involvement and mutual agreement, but are only a starting point to the integration. Strengthening communities’ capacities to innovate involves negotiating and managing information and resources, fostering interactions with global knowledge. Effective communication of scientific knowledge to non-scientists is crucial,

Murals developed as part of the [#ArtforResilience](#) initiative.





Aranya Design Community Consultations part of the [#ArtforResilience](#) initiative.

employing approaches that make sense to them. Facilitators are needed to coordinate interests within communities and encourage interactions with local and national governments, scientists, policy makers, and market mediators. For example, understanding community needs requires a [human-centred design approach](#), combining quantitative methods like the [Market System Resilience Index \(MSRI\)](#) with [participant interviews](#) to align interventions with community demands and desired visions. SERVIR's [Service Planning Toolkit](#) is another example of user need assessments and local stakeholder engagement to identify, understand and address development challenges. Establishing a long-term understanding of communities involves grasping their languages, social norms, gender roles, and power dynamics to foster mutual understanding between communities and other stakeholders.

"When working with communities to collect evidence, we need to prioritise creating connections with communities through long

term communication in their languages, active listening, and observation."

– Kazi Jawoad Hussain, iDE

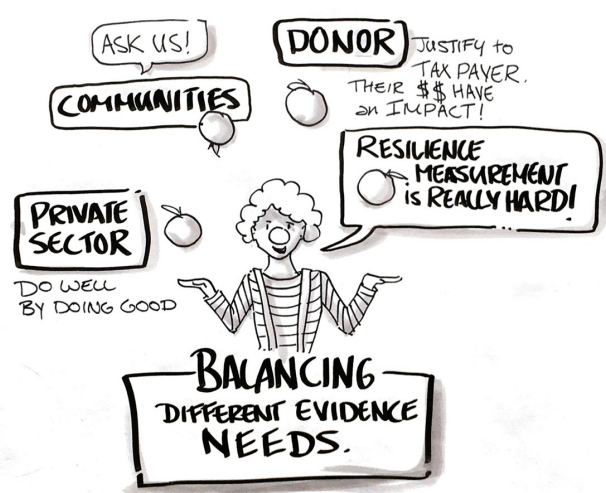
How do we collect, analyse, and mobilise the evidence bases? (HOW)

"Evidence-building is as much about tugging at heart-strings as it is about appealing to the brain cells."

– Communities track participant

Co-creation is a slow but essential process that can take different forms such as games, citizen science, and arts-based approaches. Methods that draw on cultural heritage, arts- or performance-based methods can support the codification of evidence in creative and engaging ways. Participatory theatre, dance, music, film-

making, photo voice, [murals](#), or [games](#) can be used as methods for evidence-building along with communication and engagement. For example, [games used in exploring groundwater management](#) in Andhra Pradesh, India, increased the likelihood of community rules governing groundwater. The games simulated crop choice and consequences for the aquifer. These were followed by a community debriefing, which provided an entry point for discussing the interconnectedness of groundwater use, to affect mental models about groundwater. Games can also serve as an impact assessment tool, testing rule-based measures in treatment and control groups through choice based games or [help inhabit the complexity of climate risk management decisions, and explore then test a range of plausible futures](#). Using cartoons or music to facilitate cross-generational communication can enhance climate change communication and the accumulation of evidence. An illustration of this can be seen in the ["Knowledge into Use" \(KIU\) awards](#), which seek innovative and creative approaches to promote the utilisation of resilience knowledge.



Facilitating and supporting young people to harness community voices and Indigenous knowledge provides multiple benefits – from improving adaptation and resilience planning and implementation to fostering a stronger sense of ownership and agency. Recognising the diversity within communities, is essential to engage broadly and create accessible dialogue for different groups. Therefore, translating data and information into multiple languages becomes imperative to ensure inclusivity and reach a broader audience. Involving children and young people in dialogues with their

parents and educators can foster clear and engaging conversations departing from traditional researcher-centric approaches. An example of this approach is demonstrated by [Aranya Design, a KIU awardee](#), who collaborated with students and educators from three local government schools from a small Indigenous hamlet in Sarodhi, a village in the Valsad district of Gujarat, in India. They created a zine and activity book for students to learn about their Indigenous knowledge and ecological heritage, while also learning about scientific methods to examine plants, soils, hydrology and landscapes.

"Resilience measurement is complex for communities, if we need to include communities, we need to keep it easily operationalised and useful."

– Simon Garikayi, CARE

The usefulness of binary questions in resilience measurement raises tensions and highlights the importance of mixed methods. While various indicators exist (such as [coping strategies index](#), [food consumption score](#), [access to credit](#)), the narrative surrounding these is crucial to understanding the context; the how, why, and who is involved in reaching a particular conclusion. Context plays a significant role in supporting the validity of yes/no responses and understanding their implications. While the complexity of resilience measurement for communities presents an opportunity to develop a simplified user-friendly approach that serves their needs, striking the right balance between simplicity and depth remains a challenge. Understanding and improving feedback loops between evidence production and its use is important to operationalising locally led adaptation, however this is not currently an established practice.

Who are the evidence users and producers and what evidence gaps and needs do they have?

"We can't place the burden of evidence on communities when we are privileged"

enough to be able to do the hard work. We need to acknowledge that privilege and play the role of facilitators, listeners, chroniclers and advocates for communities who can't reach the high towers of policy and research."

– Dr Gina Ziervogel, African Climate & Development Initiative, University of Cape Town

Among evidence users and producers, there is a need to introspect about the role of the expert, evolving from a 'knower' (of best practice of solutions, technology and funding) to a 'learner, listener, and facilitator' of evidence-building processes. Climate, development, and humanitarian professionals need to be open to a change in mindsets, involving unlearning preconceived notions and roles. This does not imply a retreat, but a fundamental change in the roles professionals play. Efforts to enable locally led adaptation must ensure that communities are not 'set up to fail' – saddled with new roles and responsibilities, but without the enabling conditions, skills, capacities, and resources that are key to the success of resilience initiatives. For this, professionals must ensure the enabling environment is set in place, as well as adequate spaces for communities to experiment in safe-to-fail conditions.

Ensuring a successful operationalisation process of Locally Led Adaptation Principles requires more evidence on what enables or hinders shifts in the relative agency of different actors. Alongside being placed and supported in leadership positions, the progress of local actors needs to be tracked to understand what are the enablers that local communities require to assert their rights. This process needs to be facilitated with care, kinship and reciprocity towards the communities involved and ecosystems.

Diversity, one of the five essential attributes of resilience, needs to be understood through different intersectional lenses. In evidence building, it is key to approach it mindfully by surfacing and considering the communities' different viewpoints (in themselves dynamic)

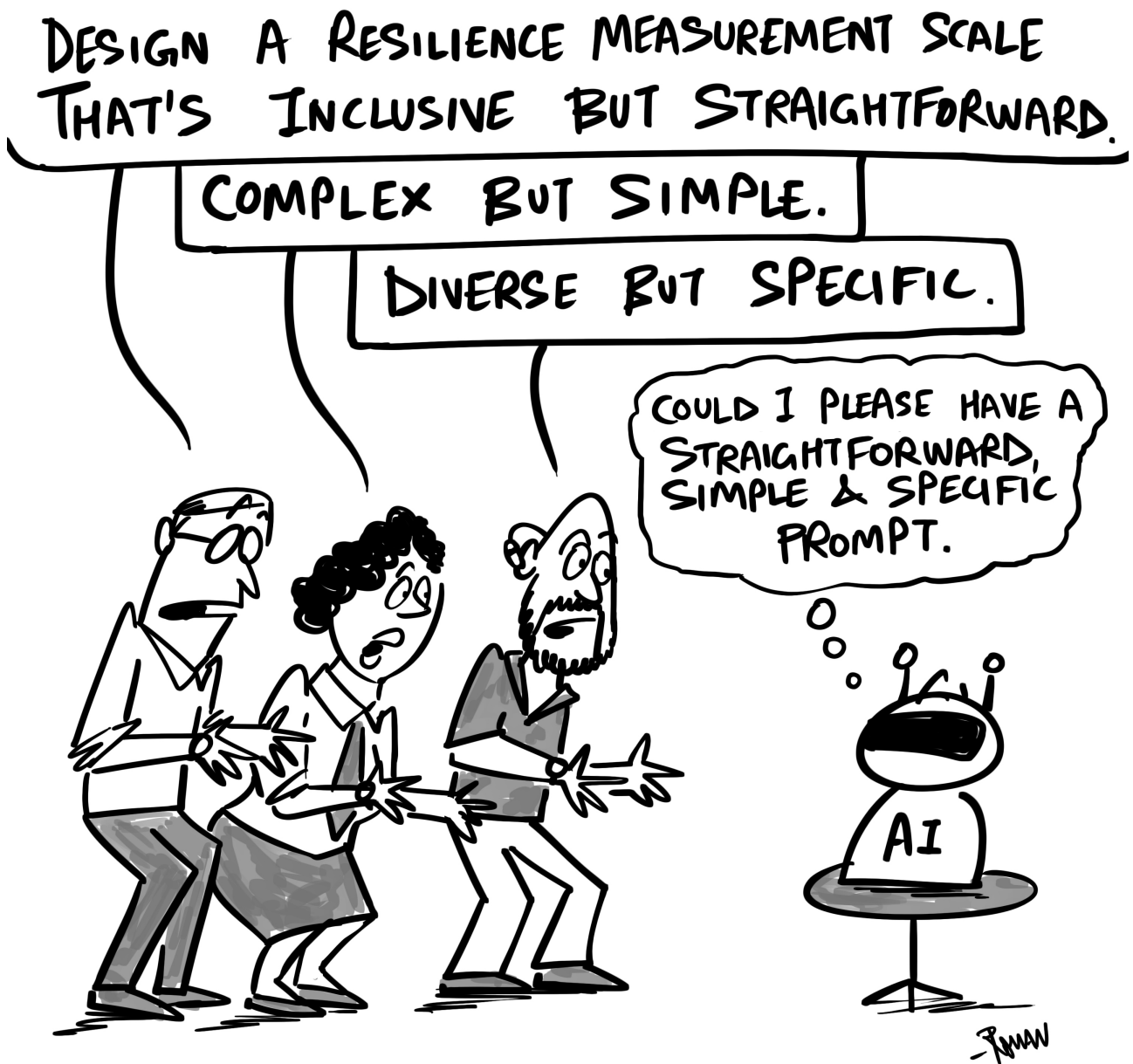
rather than working on the basis of stakeholder assumptions. For example, in the context of food, farmers might prioritise diversity over high yields, which can be contrary to donors who might assume that increased yields are the main aim when measuring resilience. Embracing diverse perspectives and actively including communities in defining success and the adequate parameters for measuring it can enable more inclusive and effective implementation, ensuring the wider uptake of solutions. Balancing the needs for evidence legitimacy, credibility, and salience is a key unresolved tension in contexts where stakeholders perceive and value these differently and emerges as a key area that will require collaborative action from donors, the private sector, policy makers, governments, community based organisations and leaders, and research organisations.

"Resilience indicators need to be ground truthed with what kind of data or evidence communities need. For instance, 'Greenness' (the normalised difference vegetation index (NDVI) used in remote sensing maps) as an indicator is not enough unless it is corroborated with ground-truthed evidence of whether the plant species contributing to the 'greenness' are native or invasive, beneficial or harmful to native flora, fauna, crops, livestock, and ultimately, farmers' lives."

– Dr Hannington Odame, Centre for African Bio-Entrepreneurship

Solutions that emerge from existing wisdom among communities can be valid evidence. Fair and just evidence-building processes, that included listening and co-production of solutions emerging from local, traditional or indigenous

knowledge are as important as the outcomes. Experts need to acknowledge their own privilege of knowledge, funding and identity in capturing and using evidence. Vocabulary and language, information transparency and triangulation of data collected with existing knowledge of communities (such as through [ground-truthing of satellite data](#)) are important parameters to consider in building evidence on resilience. Acknowledging the relevance of locally-grounded evidence-building can also inspire decision making at wider scales by highlighting principles for resilience evidence grounded in local experiences.



Live cartoon drawn during the Resilience Evidence Forum by artist [Rohan Chakravarty](#)

3. Sources of Resilience for Urban Systems: Informality, Adaptation, Rights, Conflict and Displacement as Key Evidence Areas

Key messages

- Urban resilience encompasses a range of interconnected issues and interventions, among which informality, climate adaptation, rights, conflict, and displacement are crucial action areas to ensure just and equitable resilience outcomes.
- There is evidence that community-based data collection in informal settlements is robust and that various tools and methods can be used depending on need so that the evidence produced is relevant for users.
- Collaborative evidence building processes must expand beyond community-led data collection and analysis and ensure the same ethos is deployed in urban decision-making, policy development, programme implementation, as well as monitoring and evaluation.
- Successful urban resilience programmes and processes are designed to maximise social cohesion co-benefits and enhance integrating planning approaches beyond single, quantifiable outputs.

There is evidence that community-based data collection in informal settlements is robust and depending on need, various tools and methods can be used to help ensure that the evidence produced is relevant for users.

However, there is a need to empower civil society organisations to better advocate for participatory governance, so that informal settlements can be recognised in institutional records and formal governance structures, and to ensure that the evidence produced is used for inclusive policy and planning processes. The institutionalisation of engagement processes between decision makers and urban communities must tackle the trust deficit between evidence producers (urban communities, civil society organisations) and evidence users (funders, policy makers, municipalities) when mobilising evidence into policy, investment, and decision-making.

“We need to build trust between urban evidence producers (communities) and evidence users (municipalities) – civil society organisations can be a bridge for that.”

– Siraz Hirani, Mahila Housing Trust

Collaborative evidence building processes must expand beyond community-led data collection and analysis and ensure the same ethos is deployed in decision-making, policy development, programme implementation, as well as monitoring and evaluation.

To achieve this, there is a pressing need to provide adequate resources to support shifts towards locally-led urban governance. Addressing the discrepancy between current approaches to informality and the reality of urbanisation trends and patterns predominantly concentrated in informal settlements requires changes to policy frameworks, investment strategies, and decision-making processes. Integrating formal and informal urbanisation logics, along with their respective stakeholders, is paramount for success. Evolving these urban processes requires engaging with regional and national governance levels and financial flows to ensure the alignment between scales and policies.

“The characteristics and challenges of informal settlements have been well articulated and we all know them. They remain the same no matter what slum be it Ouagadougou or in Rio, but

our role now is to build the communities' capacity for partnerships so that they can build evidence, find local solutions, and address their challenges. For this we should invest in processes, not only in single-item projects that count the number of water pumps or toilets installed."

– Joseph Muturi, Kenya Urban Poor Federation and Slum Dwellers International



Urban resilience programmes and processes must be designed to maximise social cohesion co-benefits and enhance integrated planning approaches beyond single, quantifiable outputs.

Operating in a complex risk environment requires an understanding of interconnected challenges, as well as complex, cascading risks. Implementation processes should maximise potential co-benefits even when aiming to tackle a single hazard. For example, land tenure and affordable housing interventions need to address water and basic services access; intra- and inter-community tensions need to be addressed alongside vulnerability to hydro-meteorological

hazards; alongside these, urban crime and violence patterns need to be understood and addressed as they can severely undermine resilience implementation efforts. Evidence gathered during urban resilience implementation shows the importance of actively partnering with community-based volunteers to establish social cohesion and a common understanding of resilience. Furthermore, implementation programmes must ensure they are anchored in integrated planning processes, rather than providing piecemeal upgrading that focuses on a single, quantifiable output (such as the number of water pumps or toilets provided, or the number of dwellings upgraded).

What is the latest evidence?

Through structured discussions with over 100 organisations, the [Adaptation Research Alliance \(ARA\)](#) identified urban heat and water excess/scarcity as key issues. Urban heat adversely affects low-income urban residents, especially the elderly and marginalised individuals working in the informal economy, while water excess or scarcity presents critical challenges for informal settlements and urban and peri-urban farming communities. These hazards are exacerbated by development issues, including inadequate infrastructure, risk-blind urban planning, deficient basic services, as well as conflict and displacement. This highlights the need to focus on slow onset events as opposed to the current focus on evidence building related to extreme events, with an emphasis on previously overlooked shocks and stressors such as conflict, crime, violence, and displacement. These need to be addressed along with hydro-meteorological hazards to accurately understand urban risk and pathways of building resilience.

A citizen science study of [urban heat in South African cities \(Johannesburg and Ekurhuleni\)](#) revealed that neighbourhoods face sharp disparities in heat intensity. The hottest neighbourhoods were found to be primarily in townships. Indoor heat exposure presents an increasing risk in informal settlements, as temperatures inside wood-frame, corrugated-iron homes were observed to be 8°C higher than in modern brick or concrete homes. The study produced evidence that actions by urban planners, neighbourhood associations, health systems, and weather forecasters can protect citizens and infrastructure during heatwaves. As actions to address heat impacts have already been set out in the [Climate Action Plan](#) (Johannesburg) and the [Climate Change](#)



Contrasting green space abundance and housing quality between neighbouring city quarters: Kya Sand and Bloubastrand, as green cover varies from 0-15% (townships) to 40-60% (prosperous suburbs). Source Google Earth.

[Response Strategy](#) and [Green City Action Plan](#) (Ekurhuleni), the newly collected evidence will further support implementation and prioritisation.

Using evidence generated during initial implementation, enabled USAID Zimbabwe's urban resilience program to adapt to better address contextual issues. The initial implementation approach encompassed a range of strategies, including interventions focused on economic recovery, such as unconditional cash transfers, livelihood diversification, small grants, and market linkages. Additionally, efforts were made to facilitate access to formal banking services and address social protection issues, including responses to child abuse and gender-based violence. Valuable lessons were drawn from this phase, highlighting the need to expand verification samples to address challenges related to mobility, settlement planning, and physical addresses. Social protection concerns related to drug and substance abuse were identified, and an increase in reported cases in non-implementation areas was noted. Conditional assistance was found to effectively reduce dependency syndromes, and recognising that 65% of residents were under 35 years old, the approach shifted towards a focus on youth programming. Community-based volunteers, particularly Youth Champions, played a vital role in building social cohesion and trust. Subsequently, the revised implementation approach underwent significant changes, transitioning from

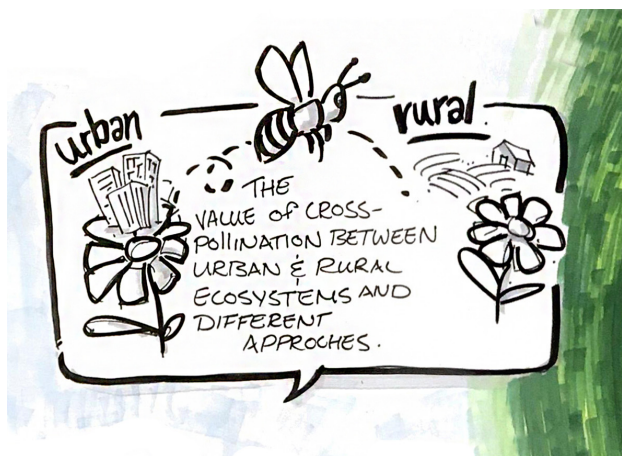
unconditional to conditional cash transfers, moving from general market linkages to targeted urban-rural connections, and shifting from reactive to proactive social protection measures. This included a renewed emphasis on addressing drug and substance abuse and extending gender-based violence interventions to include men. Additionally, a new intervention area was introduced, focusing on empowering youth through vocational, entrepreneurship, life skills, and digital skills training. These shifts underscore the pivotal role of community-driven evidence collection in understanding the unique challenges of informal settlements and designing more effective interventions.

How do we collect, analyse, and mobilise the evidence bases?

“There is a need to evolve tools, methods, and approaches to understand risk and gather evidence by combining new generation digital data approaches and analog approaches.”

– Dr. Aditya Bahadur, Adaptation Research Alliance / IIED

To enhance our understanding of risk and resilience, it is essential to blend qualitative and quantitative tools and methods. Existing methods (surveys, modelling, field monitoring, census extrapolation) suffer from various drawbacks, such as the lack of certainty in climate models providing actionable evidence for policymakers, insufficient granularity in census data, and data veracity challenges in participatory approaches. To address these shortcomings, we must integrate these methods with a new generation of 'decentralised' data collection approaches that empower those experiencing climate impacts to contribute actionable evidence and data. Digital techniques, remote sensing, big data, and machine learning can play a crucial role in assessing hazards, for example through utilising mobile data for urban heat analysis, capturing exposure through volunteer geographic information systems (GIS), and gauging vulnerability using mobile airtime recharge information. Moreover, analogue approaches centred on genuine co-production, such as self-surveys by residents living in informal settlements and urban labs, can complement digital strategies to create a comprehensive and robust framework for understanding risk and building resilience.



“To prioritise the deployment of resources, infrastructure, and services, local and national authorities require evidence of where the most vulnerable people live and what their needs are.”

– Daniel Sullivan, City of Cape Town

Urban profiling and enumeration are key methods for evidence gathering as they can ensure that stakeholder needs are collected, analysed, and mobilised into action. This approach has been successfully utilised by the [University of Lagos in partnership with JIPS](#). Another example is the [Slum Dwellers International \(SDI\)'s Know Your City](#) long-standing profiling programme, which helped debunk assumptions about informal settlements through community organising and the collection of household-level slum enumeration. For example, since 2017, residents of Mukuru – one of the largest informal settlements in Nairobi, Kenya



Youth data collector from the National Slum Dweller Federation of Uganda. Photo credit: Slum Dwellers International

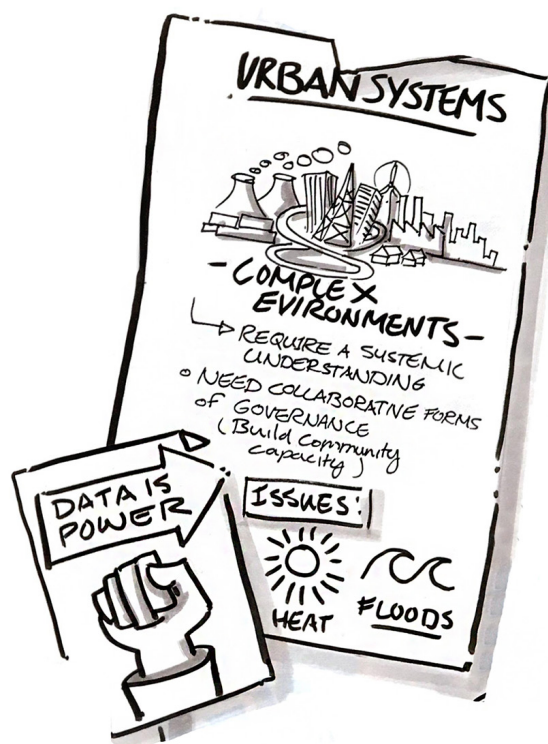
– undertook an ambitious, groundbreaking participatory upgrading process known as the [Mukuru Special Planning Area \(SPA\)](#). Led by the Kenya Slum Dwellers Federation, this process organised over 1,000 groups in 21 cities and towns, which took part in a community-led enumeration process and used it to inform the development of the area-based upgrading plan. The federation's enumeration data also revealed a debilitating poverty penalty as slum residents in Mukuru were shown to pay some 45-142% more for electricity, 172% more per cubic metre of water, and more per square metre for a shack than middle class housing residents do for formal housing.

Who are the evidence users and producers and what evidence gaps and needs do they have?

Policymakers and the donor community remain blind to current urbanisation patterns that are predominantly informal. Informal settlements have increased in numbers and size yet they are not recognised and recorded in official policy and government frameworks and therefore not budgeted, planned, or accounted for. This inadvertently means that access to basic services including healthcare remains limited. Informal urban communities also face other intersectional challenges including high crime rates and high vulnerability indicators.

While urban communities report being ‘over-researched’, donors and policy-makers report a lack of evidence regarding which urban resilience interventions work best. This can be partly attributed to research agendas of academic institutions being divergent from the evidence needs reported by donors and policy-makers. This leads to donors and policy-makers often commissioning their own studies to address evidence gaps, which further leads to communities reporting extractive data collection processes leading to research

fatigue and disillusionment. There is a key need to standardise data collections and ensure that communities take the lead in evidence production, analysis, as well as its translation into policy proposals and decision-making.



4. Sources of Resilience for Socio-ecological Systems

Key messages

- Social-ecological resilience (SER) is the capacity to live, develop and flourish with change and uncertainty and not just the ability to "bounce back" to status quo.
- A common challenge in strengthening resilience arises when interventions tend to frame nature as separate from people, overlooking the intricate interactions between social and ecological elements.
- A SER lens should not be apolitical and the tools, methods and approaches used in resilience assessments need to reflect this as power mediates many resilience capacities and attributes.
- A justice/equity lens can help identify both sources of, and barriers to resilience to inform key leverage points for action

Social-ecological resilience (SER) is the capacity to live and develop with change and uncertainty and not just the ability to "bounce back" to status quo. Socio-ecological resilience emphasises the inseparability of people and nature, involving the capacity to absorb shocks and avoid tipping points, navigate surprises and unintended outcomes, keep options alive, innovate and transform in the face of crises and traps.

A common challenge in building resilience arises when interventions tend to frame nature as separate from people, overlooking the intricate interactions between social and ecological elements. This track took stock of recent advances in SES resilience science and practice that provide insights on the attributes and types of interventions that can underpin truly resilient sustainable development that is integrated with our life-supporting biosphere, and examined



how SES resilience is reshaping the practice of sustainable development to better engage in complex contexts.

A SER lens should not be apolitical and the tools, methods and approaches used in resilience assessments need to reflect this as power mediates many resilience capacities and attributes. Speakers in this session highlighted specific frameworks, methods and tools which can help to better understand vulnerability contexts, lived realities and where and how to intervene to strengthen resilience capacities to better anticipate, absorb, adapt and transform to change.

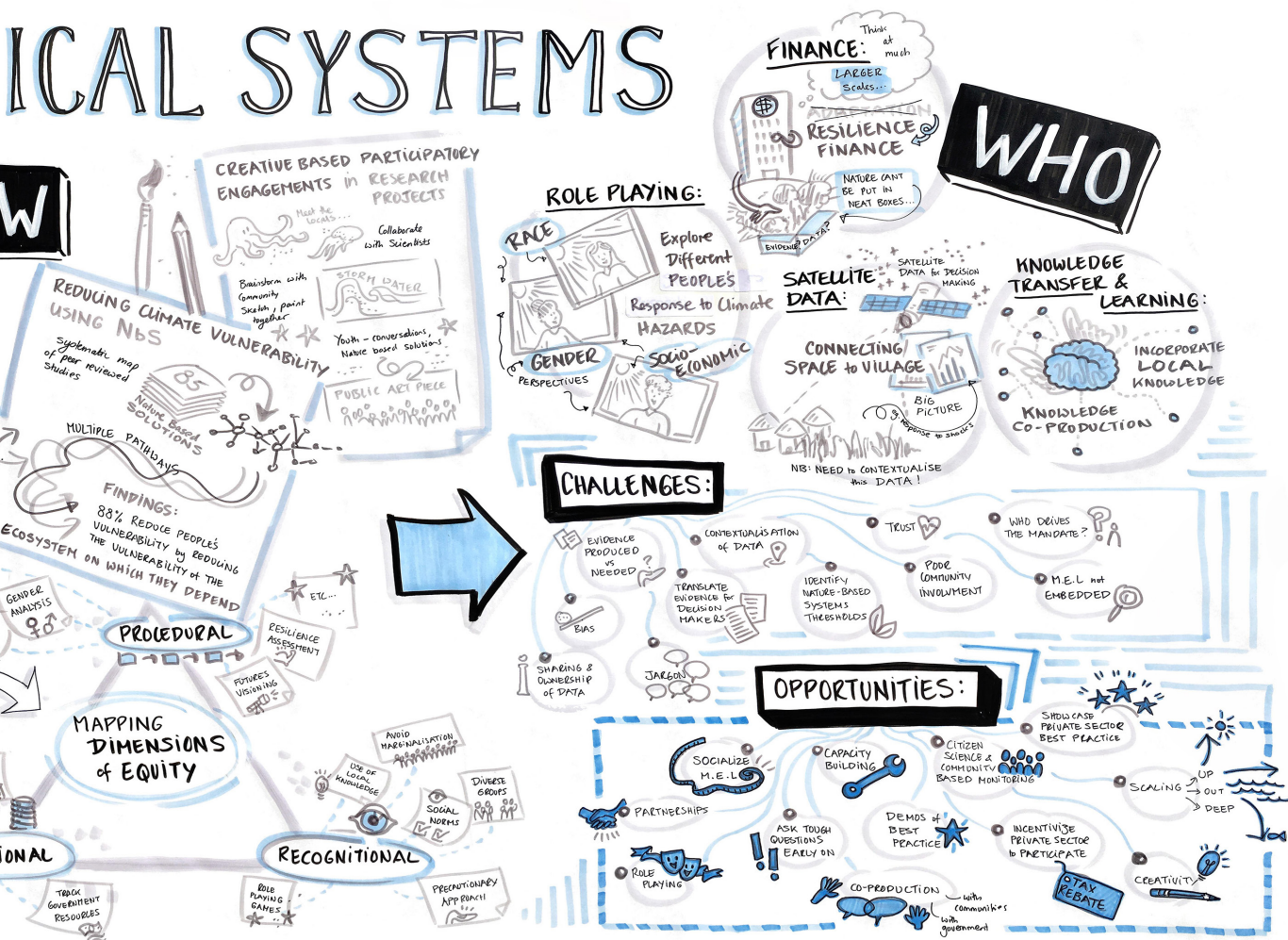
A justice/equity lens can help identify both sources of, and barriers to resilience to inform key leverage points for action. Understanding multiple dimensions of justice and equity in terms of procedural, distributive, recognitional and contextual justice can enable a more nuanced understanding of where resilience building actions need to take place, and who should be involved with what resources. A justice/equity lens is also useful for screening any specific intervention to better understand who benefits and who is potentially burdened by the activity.

What is the latest evidence?

Resilience is not just about bouncing back but includes capacities to persist, adapt, and transform in response to changes. A recent study examining COVID-19 response strategies found five essential attributes for resilience-building: diversity, redundancy, connectivity, adaptive learning, and inclusivity. It identified several limitations and challenges in building resilience, including trade-offs related to the perceived financial costs and benefits of resilience measures, and the need for transformative action and staying within planetary boundaries. The study provides evidence-based interventions that individuals, organisations, and governments can take to build resilience, such as fostering diversity and redundancy in systems, investing in early warning systems and adaptive learning processes, promoting social learning from past crises, and aligning resilience-building efforts with sustainable development goals.

Visual summarising the track sessions by [Graphic Harvest](#).

ICAL SYSTEMS



“Transformation provides the space for novel ways of stewarding our ecosystem while creating livelihoods, however transformative innovation challenges the existing systems in many ways. We are both trying to build sustainable resilience while breaking the resilience of unsustainable systems – I think how we work through this is an interesting dilemma.”

– Dr Nathaniel Matthews,
Global Resilience Partnership

A new conceptual framework explores the impact of Nature-based Solutions (NbS) on social-ecological systems (SES) resilience to reduce climate variability. It consists of two parts: first, a typology of mechanisms influenced by NbS within the SES, shaping overall resilience. Second, it focuses on adaptive outcomes, measured as Non-Catastrophic Adaptations (NCAs), reflecting the system’s ability to respond effectively to changes without tipping into catastrophe. This comprehensive approach enables systematic analysis of the relationship between NbS, resilience mechanisms, and adaptive outcomes, informing decision-making, policy formulation, and effective NbS interventions for sustainable and resilient SES. Existing evidence on NbS adaptation strategies in forests indicates that these interventions have a positive impact on various underlying mechanisms within SES, thereby supporting overall resilience. NbS in forests show promising results in enhancing NCAs related to flood, erosion, and wildfire control. However, it’s important to note that trade-offs may arise in certain cases, such as balancing water supply with flood and erosion control. Despite these trade-offs, the evidence highlights the potential of NbS in forests to bolster SES resilience and address key environmental challenges.

The case study conducted in the city of Cape Town’s response to the 2015-2018 drought and the COVID-19 pandemic in 2020-2021 underscores the importance of integrating social and ecological dimensions in resilience planning and management. It identifies [five interrelated adaptive governance capacities](#) necessary for building a rapid and effective systemic response to future extreme events within city government. These capacities

include the ability to respond to hazards and risk systemically, the need for system-level data, flexible governance mechanisms, project execution skills, and the ability to partner with civil society and the private sector. Adaptive governance recognises the dynamic interactions between human activities and the environment and aims to enhance the capacity of urban systems to adapt and respond to changing conditions.

A [technical paper](#) developed by the Urban Ecosystem-Based Adaptation (EBA) working group identified solutions in the Global South, which address issues such as restoring hydrological regimes and creating ecological corridors. Formed by researchers and practitioners, the group aims to identify practical examples of urban EBA planning and implementation, emphasising climate justice. From these case studies, seven social principles for urban EBA emerge (Participation And Inclusiveness, Capacity Building, Fairness And Equitability, Integration Of Indigenous And Local Knowledge, Livelihood Improvement, Gender Consideration and Appropriateness Scale), which should be deliberately considered during and integrated into the design, implementation and evaluation phases of urban EbA interventions as a standard project component.

How do we collect, analyse, and mobilise the evidence bases?

Through the [Transforming Social Inequalities Through Inclusive Climate Action \(TSITICA\)](#) project, a [framework](#) was developed to investigate how projects can effectively address and reduce inequality and inequity, while enhancing the adaptive capacity of marginalised community members and identifying livelihood resilience. It seeks to explore ways in which these projects can provide more secure livelihoods for vulnerable populations and move beyond the current ‘status quo’ towards transformative, systemic changes that promote justice and fairness within communities. The framework was used across 30 climate change adaptation projects across Kenya, South Africa, and Ghana to identify strategies and interventions that can lead to meaningful and sustainable improvements in social equity and resilience.

“Structural vulnerability is really important for understanding the urgent needs that people have and



Mural as part of arts-based approaches for resilience by [CARECREATIVE](#).

can help us understand what needs to be strengthened if we want to become more resilient.”

– Dr Gina Ziervogel, African Climate & Development Initiative, University of Cape Town

A study focusing on understanding the mechanisms through which Nature-based Solutions (NbS) can effectively reduce vulnerability to climate change impacts, particularly in the rural Global South, analysed 85 nature-based interventions across various ecosystems and climate impacts. The research applied an analytical framework based on people’s social-ecological vulnerability to climate change, considering a number of pathways for vulnerability reduction: social and ecological exposure, sensitivity, and adaptive capacity. It highlights the importance of social dimensions in NbS effectiveness and equity. By understanding the distinct social and ecological pathways through which vulnerability to climate change is reduced, the research demonstrates the potential to harness the multiple benefits of working with nature as a powerful tool for climate resilience in a warming world.

Arts-based participatory engagements in research projects foster innovative and inclusive approaches to research, allowing diverse perspectives to be expressed and shared. Through collaborative processes, participants contribute to and co-create visual representations that enhance the understanding and communication of complex scientific concepts. Examples include [CARECREATIVE](#), who [infuses science with artistic elements](#) to co-create murals and participatory processes and videos and [role playing through climate and society games](#).

”The importance of intersectional approaches is that diversity of experiences, motivations, and knowledge held by different communities can create comprehensive solutions.”

– Zizipho Royi, Climate & Development Knowledge Network

SERVIR, a collaborative initiative between NASA, USAID, and leading technical organisations, leverages satellite data to address pressing challenges in food security, water resources, weather and climate, land use, and natural disasters in Asia, Africa, and the Americas. This partnership uses over 20 accessible satellites and extensive research to connect the power of Earth observation data with local decision-makers for strengthened, resilient development outcomes. By linking space technology to practical applications, SERVIR demonstrates the potential of satellite data in assessing changes in vegetation and ecosystem resilience. Through strategic data collection and advanced analysis, it correlates satellite observations with ground data in regions like Ethiopia, Niger, and Zimbabwe, effectively measuring resilience from space, by assessing the efficacy of development interventions such as [halfmoon constructions](#) for rain retention and soil improvement. This data-driven approach allows for before-after analysis, revealing substantial positive impacts on vegetation in developed areas. The availability of free and open satellite data, Landsat archives starting in the 1980s, enables the analysis to retroactively assess the prior vegetation conditions. Satellite data also facilitates the connection between vegetation changes and crop yields, enabling improved project design and impact forecasting. The transparent and objective nature of satellite data supports evidence-based decision-making, ensuring measurable changes that transcend opinions and thereby bolster sustainability efforts in vulnerable regions.

Who are the evidence users and producers and what evidence gaps and needs do they have?

Integrating social dimensions in Nature-based Solutions and Ecosystem-based Adaptation needs to consider how different factors (such as ecosystem service usage) contribute to vulnerability. However, tensions arise from balancing social and ecological pathways in Ecosystem-based Adaptation, due to different power dynamics and barriers such as limited resources and institutional support, and coordination. While Ecosystem-based Adaptation actions have ecological outcomes, it is key to consider social dimensions, such as social adaptive capacity and social sensitivity. Establishing trust between different stakeholders and ensuring ownership and sharing of data can

be challenging, particularly when multiple actors are involved in data generation and utilisation.

“The financial sector, including other sources of funding, have not fully understood that nature cannot be neatly put into a box. There is a huge amount of contextual understanding, social, historical, biophysical, ecological.”

– Ameil Harikishun, Climate & Development Knowledge Network

Attempts to develop robust and standardised approaches for economic and financial analyses of Nature-based Solutions and Ecosystem-based Adaptation projects face challenges in accounting for non-financial value flows.

Categorising nature into traditional asset classes poses difficulties in appraising nature-based investments and quantifying their impacts scientifically. The lack of a robust and standardised approach to assessing economic and financial analyses is apparent, and this issue extends to including non-monetary and qualitative dimensions of value. To address these challenges, there is a call for knowledge brokers to facilitate stakeholders in aligning the diversity of values cohesively. Additionally, the financial sector and funding sources need to engage with non-traditional stakeholders, requiring effective knowledge brokering to convene partnerships between downstream private sector entities and other stakeholders, such as farmers and local governments.

Leveraging satellite data sets and remote sensing technologies provides opportunities to demonstrate the effectiveness of resilience initiatives.

However, these remote sensing, quantitative methods need to be accompanied by qualitative methods to mitigate potential for data to be manipulated or misused, highlighting the need for transparency and ethical data practices in resilience evidence production and use. Managing and interpreting large volumes of data can be complex and time-consuming, especially for diverse users with varying levels of expertise in data analysis and interpretation. Constant exposure to data and information can also lead to information overload and decreased motivation to engage with evidence. Overcoming this challenge requires finding ways to present information in a concise and engaging manner.

5. Sources of Resilience for Market Systems and Value Chains

Key messages

- A market systems approach can strengthen resilience through the use of business models and market forces that address development and humanitarian challenges at scale.
- The resilience of the market system and the resilience of the communities that they serve are inextricably linked.
- Local private sector stakeholders play a key role during shocks, as they are often more resilient than larger counterparts and able to maintain functioning market systems.

A market systems approach can strengthen resilience through the use of business models and market forces that address development and humanitarian challenges at scale. The track explored how evidence is used to design and implement market-based approaches that reach communities with products and services that not only manage the shocks and stresses, but that support pathways to becoming more resilient. The track focused on a stakeholder-based (including investors, producers, suppliers, agents, distributors, consumers, and others) approach to reduce the risk.

“It’s important to tell businesses that their own resilience depends on the resilience of the systems around them.”

– Ralph Hamann, University of Cape Town

The resilience of the market system and the resilience of the communities that they serve are inextricably linked. The creation of stable and resilient value chains is informed by incentives that support shared-value relationships that should drive investment in building resilience along all levels of the chain. It is necessary for markets to reinforce the development gains that we seek to make, as investments in livelihoods also support the longevity of businesses. We are increasingly seeing how business principles are fostering positive impacts on livelihoods (not just CSR strategies or development initiatives). As there has been an increase in the motivation and means of the private sector to become more significant actors within resilience building, embedding resilience within the business strategies and building smallholder farmers into the market system is a key next step.

Local private sector stakeholders play a key role during shocks, as they are often more resilient than larger counterparts and able to maintain functioning market systems.

As businesses increasingly track indicators related to the resilience of their value chains, including tracking signals related to climatic, economic and energy risks, sustainability and resilience building is increasingly embedded within business strategies. There is a key role to be played by the local private sector who, due to closer connections and more rapid feedback mechanisms, are often more resilient than the larger private sector market. In times of shock, it is often the smaller local private sector that maintains that functioning of the market system. Collaboration between knowledge intermediaries, in terms of data sharing and collaborative partnerships, can facilitate improved market systems.

What is the latest evidence?

“Recognising the power within a community can have a resilience dividend that is broader than the initial progress.”

– Jen Abdella, Near East Foundation

Creating value-add within value chains can enable transformative change for the growing communities, while improving operational transparency, decreasing risk, and building value chain resilience. Case studies shared by McCormick & Company, one of the world’s largest spices and flavour producers, depict the positive impact of needs-based, holistic interventions to

support growing communities. Under the [Grown for Good Framework](#), they aim to increase the resilience of over 35,000 farmers by 2025. This is measured by increasing skills and capacity, income, access to financial services, education, and nutrition and health, and achieved through multiple interventions. For example, McCormick purchases vanilla beans as cured rather than raw from the growing communities. As the cured beans have a higher value, the farmers receive a higher purchase price which improves their income and livelihoods. Taking a holistic approach to supporting growing communities also includes investing in infrastructure for remote communities such as the vanilla-growing communities in Madagascar. Through [building or rehabilitating local schools and libraries](#), children from farming families have improved access to education. As a result of these multiple interventions, McCormick has greater operational transparency, which decreases risk and builds supply chain resilience.

"Well functioning markets provide important safety nets to help people prepare for and manage challenges before, during and after things go wrong. These are the types of functions we need to support in less developed market contexts."

– Margie Brand, Vikāra Institute

There is an overlap between managing market risks and building social capital in communities, as transformation requires changes in communities' decision-making processes, and potentially coping strategies. Private sector organisations need to identify behavioural patterns in communities that indicate a desire for a shift and then support and facilitate this shift, rather than initiate it. This needs to build on existing patterns and flows to avoid 'reinventing the wheel', which could be counterproductive and disengage businesses. For example, [pastoralist communities in parts of East Africa](#) have traditionally used cattle to manage their risks by strengthening communal networks and as an asset of value. Cattle were not sold to generate wealth, but rather kept as an asset and as a way to strengthen community networks. Due to climate and population changes, this traditional management method was becoming increasingly unviable. In response to this, communities began to shift their risk management approach to focus

on wealth and income generation through shifting away from the sale of cattle to goats, migration, as well as diversification of livestock investment. Understanding these social and cultural changes is key to strengthening the resilience of market systems, as well as establishing whether market systems interventions improve resilience at the household and community level.

"There seems to be an assumption that if we want markets to be more resilient and mature, that informal needs to change to formal. And I think that, in places that are struck by conflict and stressors, there are a lot of good reasons why people operate within informal systems."

– Herman Brouwer, Wageningen Centre for Development Innovation

Understanding the reasons behind businesses operating in the informal market is crucial for bolstering local market systems.

Strengthening market systems to support vulnerable households and communities involves empowering businesses to invest more in their small-holder supply chains or low-income customer base in a manner that aligns with their business goals. This includes providing support to the small local private sector, as they possess the resilience to sustain the provision of inputs and services during uncertain times, owing to their close connectivity and rapid feedback mechanisms with households. Establishing connections between the local private sector and larger counterparts can yield significant positive outcomes. How do we collect, analyse, and mobilise the evidence bases?

The [USAID Market Systems Resilience \(MSR\) Assessment Framework](#) considers four structural domains and four behavioural domains to assess resilience of market systems.

This framework has been used in multiple countries in Africa, Asia, Eastern Europe, and Central America in both conflict-affected and stable contexts. The MSR Assessment Framework has been applied in both sector-wide assessments as well as on specific value chains to feed into programmatic design.

The [Market Systems Resilience Index \(MSRI\)](#) covers 11 determinants of resilience and has been conducted in more than seven different countries. It also uses human-centred and

participatory research approaches to integrate local definitions of resilience. It provides key insights into different groups of people and how they interact with the market. This index provides insight into how the market can shape interventions to build resilience.

The ABCD Framework (Agency, Buffering, Connectivity, and Diversity) aims to address five main challenges in assessing how food systems' resilience is affected by interventions:

1) the delineation of the system; 2) identification of the factors that support resilience; 3) finding indicators to assess these factors; 4) analysing the current state of food systems' resilience; and, 5) projecting food systems' resilience into the future. The assessment framework confronts these challenges through a set of five steps that support a structured inquiry.

"Sometimes, the best quantitative data is not what convinces people. In resilience, many of our measurements are proxies – in many situations they don't help us understand what resilience means to a person. The role of qualitative methods and storytelling is really important in tracking someone's narrative over time."

– Elisabeth Farmer, CARE Ethiopia



Storytelling serves as a valuable tool for illustrating changes over time and capturing diverse market systems resilience perspectives. Unfortunately, stories are often an afterthought

and restricted to human interest stories of success for communications purposes, which does not constitute evidence. To achieve an effective measurement approach, a combination of mixed methods is recommended. Amalgamating traditional and non-traditional datasets and types of knowledge, can substantially reinforce the evidence base on market systems resilience approaches. This can facilitate a deeper understanding of the complexities and trade-offs involved and enhance the effectiveness of resilience initiatives.

Who are the evidence users and producers and what evidence gaps and needs do they have?

Resilience building innovations should seek to understand the root causes that drive market actors, in particular those whose behaviour is perceived as 'deviant'. For example, if a middleman's actions are predatory to the farmers, there is a need to understand the root causes that drive predatory behaviours as a key step towards transforming actors' behaviours in the system. For this to be possible, partnerships between private sector, community associations, national entities, and universities are essential in building more resilient market systems, as business resilience and success are dependent on that of the systems around them.

Increased partnerships to mobilise knowledge, funding, and investment can support locally led adaptation and transformation. An example of this is the [Adaptation Fund-UNDP Innovation Small Grant Aggregator Platform \(ISGAP\)](#), which supports the development and diffusion of innovative adaptation practices, tools, and technologies by partnering with civil society organisations and non-governmental organisations. The programme currently has 45 grantees who, through knowledge sharing, collaboration and implementation, are leading locally led adaptation in their respective communities. Partnerships between local organisations and universities can provide a valuable opportunity for sharing knowledge, technical expertise, and real-world experiences, with the example of the [Feed the Future Innovation Lab for Markets, Risk and Resilience \(MRR\)](#). MRR develops and tests financial and market innovations that take the most promising agricultural tools for families in developing economies from the lab to the field.

Resilience Evidence Stocktake: Cross-cutting Themes

Women's Leadership, Gender, and Inclusivity

The confluence of recent crises — from intensifying climate change to the COVID-19 pandemic to the war on Ukraine — have had different and often disproportionate impacts on women in all their diversity and exacerbated gender inequality. Even before the latest food price crisis, COVID-19 had pushed an additional 47 million girls and women into extreme poverty, at least 126 million more women than men were experiencing food insecurity, and the incidence of gender-based violence (GBV) had increased.

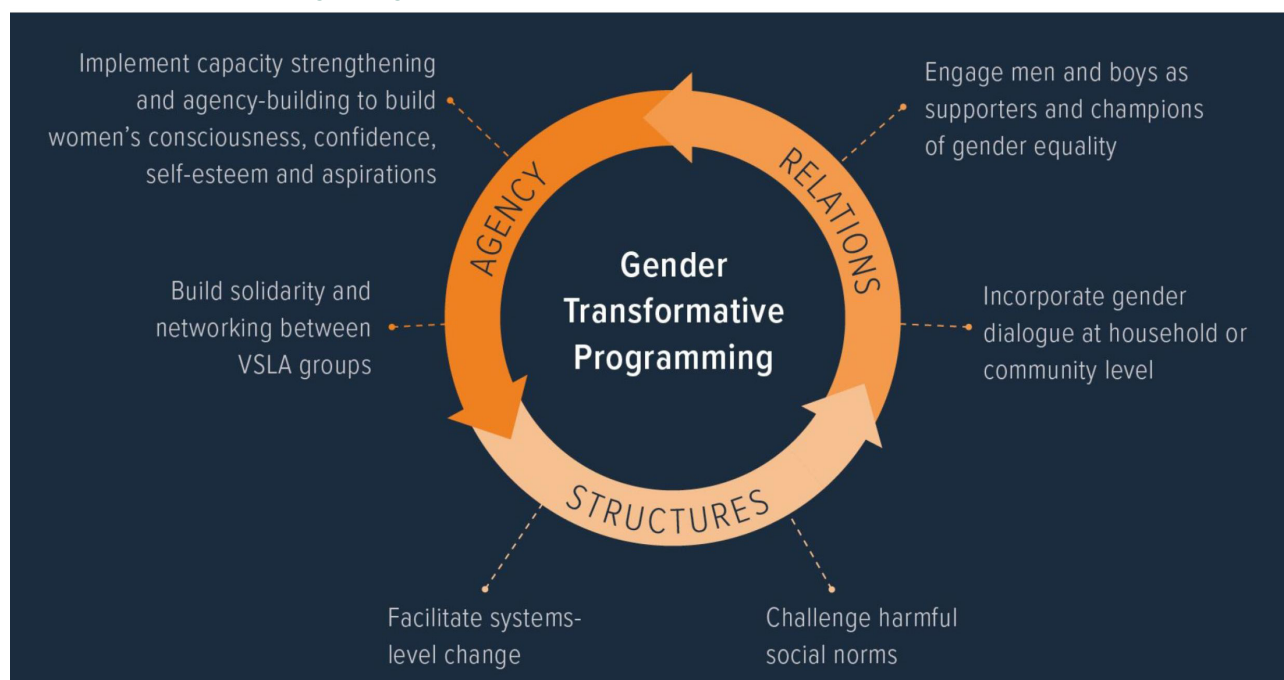
"Climate hazards should not be examined in isolation; they need to be understood through different proxies of risk, not only related to climate but also equity, to understand women's vulnerabilities and exposures."

– Carlo Azzari, IFPRI

that men and women experience disturbances, their resilience capacities, and their preferred responses. Exposure and sensitivity to disturbances depend largely on gendered roles in food systems, including along agricultural value chains, and the food environments in which men and women live. For example, a study on [women's access to agriculture extension in India and Nepal](#), showed that almost a third of women's primary sources of agricultural information were inaccessible or unavailable during COVID-19 lockdowns. As women's reliance on formal extension services was already very low pre-COVID-19, reliance on social networks and groups to deliver agricultural information increased. Nearly 50% of women farmers in both countries reported negative impacts on agricultural productivity due to unavailability of information. Increasing women's resilience capacities—which tend to be lower than men's—through investments in education, information and financial services, employment opportunities, and women's agency, can improve food security and nutrition outcomes and increase their contribution to food system resilience.

Research on the [gender dimensions of resilience](#) highlights differences in the ways

[CARE's Gender Transformative Programming Framework](#).



Resilience programming needs to critically question and challenge discriminatory gender norms and rules through gender transformative approaches (GTA). Evidence gaps on the gendered dimensions of risk and resilience continue, particularly in relation to climate change. Similarly, while progress has been observed, there remains a need for sex-disaggregated data for monitoring and evaluating the impacts of interventions. Leveraging existing systems and structures to integrate gender responsive or gender transformative approaches will support sustainable and inclusive resilience-building, however, more evidence is required to establish the link between social protection and adaptation and livelihood transformation and resilience over the longer term.

"A Gender Transformative Approach plays an important role in building and driving resilience. When we are talking about gender transformation, we are moving beyond individual empowerment towards building collective agency and starting to critically challenge and question discriminatory gender social norms."

- Opper Maravanyika, CARE

Climate hazards should not be examined in isolation, but jointly with women's vulnerability and exposure, to inform where to target and where and to whom investments should be directed at. This presents a promising approach for improved targeting, taking both socio-economic and climate risks into account. For example, [a study on women's labour contribution under heat stress](#) reveals that heat waves and droughts reduce the number of hours worked by 40% and 14%, respectively. For women farmers, the reduction in work intensity due to heat waves is 40% less across all African countries. Women's labour intensity in agriculture is increasing relative to men's, under worse conditions. Such evidence and hotspot mapping methodologies (such as the [Gender-Climate-Agriculture Hotspot method](#)) can support organisations aiming to effectively target investments to both address climate adaptation and advance gender equality.



Health Resilience

"When health is affected, absolutely everything is affected. You can't have a resilient economy, you can't have a resilient environment, and you can't have a resilient society or community without health. Health, the environment, economy and social development are inextricably linked, while the majority of things that determine health lie outside the health sector."

– Dr Saqif Mustafa, World Health Organization (WHO)

Health resilience is defined by USAID as the “ability of peoples, households, communities, systems, and countries to mitigate, adapt to, and recover from shocks and stresses, in a manner that reduces acute and chronic vulnerabilities, and facilitates equitable health outcomes”. Historically, adaptations to methods and tools used in the food security and assistance sectors have facilitated advancements in resilience measurement, analysis, and evaluation for health sector programming. Efforts to address evidence and learning gaps in resilience measurement, evaluation, analysis, and learning (MEAL) for health are gaining momentum, driven by the critical need to enhance health sector preparedness and response in the face of complex challenges. Understanding how health metrics and analysis can be integrated into resilience programming led by other sectors reveals barriers and opportunities to foster collaborative and integrated solutions.

"The Data Systems That ‘Flex’ research conducted by UNICEF revealed that public-private partnerships, strong government leadership and coordination, strong existing structures and capacities, and critically, adequate funding, were the key enablers during the peak of the COVID-19 pandemic."

– Ralf Moreno Garcia, UNICEF

Global guidance and evidence on health sector resilience measurement and analysis are emerging, but are under-tested and often under-equipped for real-time use. This includes not only systems-level measurement and analysis, but also measurement and analysis at the community and household levels. The [Health Systems Resilience Indicators toolkit](#), launched by the World Health Organisation, aims to support

countries in building and sustaining health systems resilience at national and subnational levels, covering policy, planning, operational services, and evaluation. It is adaptable to different contexts and aligns with the goals of universal health coverage (UHC) and global health security. Serving as a compendium of technical resources, it provides countries with clear guidance on conceptualising and implementing health systems resilience to enhance their ability to respond to challenges effectively. While there has been some advancement in measuring national health priorities through a package of health resilience indicators, the unit of action needs to prioritise building capacities within national systems.

"In health systems resilience, we are building on previous Recurrent Monitoring Systems (RMS) resilience work to understand whether there are unique coping strategies to health shocks that are relevant for the wider health sector."

– Dr Cougar Hall, Momentum Integrated Health Resilience (MIHR), Brigham Young University

There is a need for significant investment in the development and testing of resilience metrics and analytical tools for health to strengthen global learning and evidence on their added value in advancing health outcomes, and to advance equity-driven, risk-informed, shock-responsive programming for health. Notably, [MOMENTUM Integrated Health Resilience \(MIHR\)](#), a project implemented by USAID, is the first to adapt the Recurrent Monitoring Survey (RMS) methodology and tools for health outcomes and the measurement of health resilience. By adopting frequent data collection practices, MIHR works to strengthen health resilience and ensure the continuity of quality, respectful, maternal, newborn, and child health

(MNCH), voluntary family planning (FP), and reproductive health (RH) health care in shock-prone fragile settings. It operates in contexts characterised by conflicts, disasters, and shocks, causing disruptions in essential health services from family planning to routine immunisation, safe deliveries, and health supply management. In collaboration with local organisations, governments, and development partners, MIHR works to bolster health resilience, reducing vulnerabilities and achieving equitable health outcomes.

"Nutrition is central to health resilience and surge capacity is a critical component of maintaining resilience in health systems. There's a really important need for anticipatory action so that acute malnutrition can be addressed."

– Dr Nancy Mock, University of Tulane

While health and nutrition are both critical drivers and outcomes of resilience, they are often not considered in multisectoral resilience programming and measurement. The USAID Resilience, Evaluation, Analysis, and Learning (REAL) Award has been working to address these gaps by integrating the role of implementing nutrition interventions through both the food and *health systems* into resilience programming and measurement frameworks. A recent REAL discussion note [explores this bidirectional relationship between nutrition and resilience](#), as nutrition is both an input to resilience and an outcome of resilience. Strengthening resilience capacities plays a crucial role in [positive nutrition outcomes](#). For example, improved early warning systems linked to nutrition monitoring, caregiver networks can help protect children's nutrition as a mitigation measure, as well as a stronger recovery. Improved nutrition also contributes to resilience. For example, nutrition-sensitive interventions need to address underlying causes (such as a diversified and adequate diet, livelihood diversification and women's empowerment), as well as nutrition-specific interventions (such as vitamin A supplementation or the consumption of a diversified diet that meets nutritional needs).

While pandemic responses were initially focused on prevention, control, and treatment, [studies of COVID-19 responses](#) depict major impacts on food availability and accessibility, including [on childhood malnutrition and](#)

[nutrition-related mortality](#). Health systems resilience needs to consider anticipatory surge capacity (e.g., to deliver health service during surges in demand, and to manage early warning and early action systems), while ensuring that this surge capacity is built into routine primary health care platforms and systems. Linking these platforms and systems with those from other sectors, like agriculture, WASH, and education, is also critical. These include mainstreaming nutrition with other resilience initiatives such as livelihood interventions, safety net programmes, or through advocating for, and strengthening systems that enable using nutritional vulnerability as targeting criteria for social protection and safety net programmes.

"In humanitarian settings, data becomes even more critical in ensuring children's survival."

– Dr Oscar Onam, UNICEF

Despite the importance of administrative data and significant investments in many countries, many remain unable to fully report against key routine monitoring indicators, and data quality can limit the utility of available data. Where data is available, these systems are frequently either under-utilised or are unable to 'flex' to meet changing needs – especially in the context of a rapid onset health emergency. The importance of administrative data has been highlighted by the global impact and demand for data during the COVID-19 pandemic. The [Administrative Data Maturity Model \(ADaMM\)](#) assists countries to benchmark the maturity of their national administrative data landscape and set priorities across sectors, including the health sectors. This provides governments and partner agencies such as UNICEF with a framework for prioritising system investments, sets benchmarks, helps identify what "good systems" look like, while helping donors assess the capacity to absorb proposed investments.

The Role of Agriculture in Creating Resilient Food Systems

Agriculture plays a key role in creating resilient food systems – through drought-tolerant and pest-resilient seeds, efforts to reduce post-harvest losses and increase agriculture productivity, all the while considering the natural resource base and impacts of climate change. Building resilient food systems is essential to meeting an increased agricultural demand for a growing global population. Agricultural decisions have wide-ranging implications beyond the sector, underscoring the importance of understanding trade-offs within the [Water-Energy-Food nexus](#), as well as the Humanitarian-Peace nexus. For example, examining the [impact of the Russia-Ukraine war on poverty levels in Sub-Saharan Africa](#) reveals the importance of planning and targeting response interventions during times of crisis. While there are divergent approaches for agriculture-led growth, the end goal remains consistent – achieving sustainable agricultural productivity and enhancing food and nutrition security.



Agriculture plays a crucial role not only in boosting rural incomes and improving livelihoods, but in driving entire economies. According to the [2022 Annual Trends and Agrifood Outlook report](#), there is evidence that in developing countries, 1% growth in agriculture can stimulate industrial growth by 1.0% to 1.3% and a 1% increase in export growth raises the industry growth by up to 1.8%. An example from the Sahel region highlights that every additional US dollar of crop sales has the potential to raise

the rural economy by up to US\$2.5, as 10% in agricultural sector growth can accelerate poverty reduction by 7.0%. This demonstrates the significant impact of agriculture on economic development and poverty alleviation in various regions.

"Agriculture is the most selfless sector as it drives every other sector in the economy."

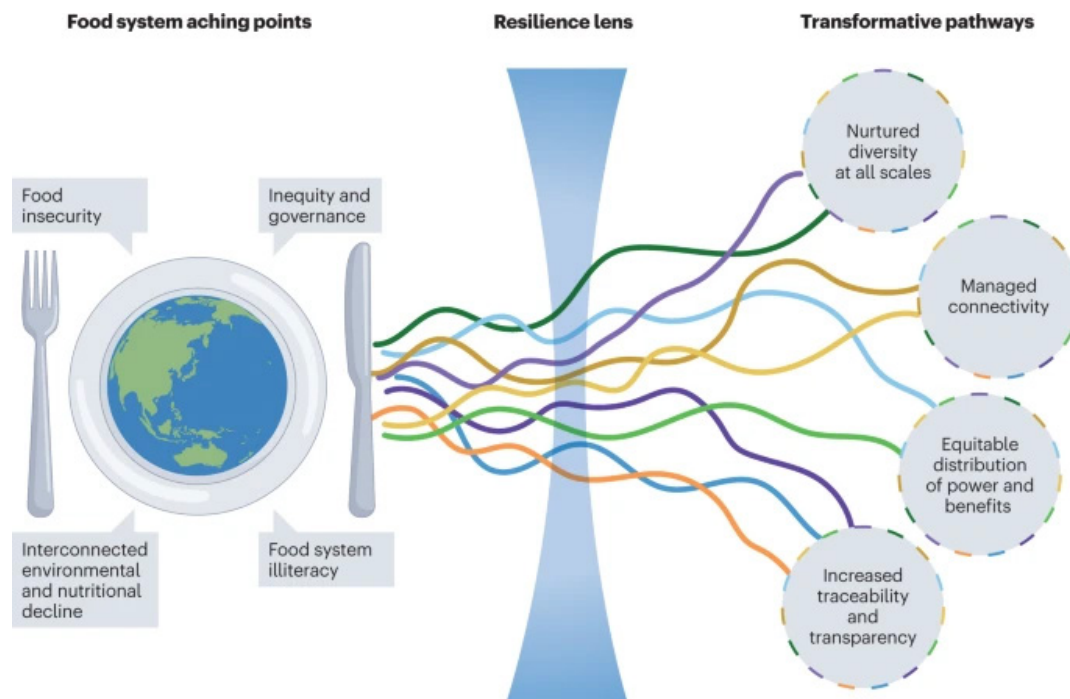
– Dr Ousmane Badiane, AKADEMIYA2063

As agricultural and food value chains are rapidly transforming, African farmers require a supporting environment to address evolving challenges. The emerging African processing sector serves as the main bridge between farmers, domestic demand, and international exports. For farmers to thrive, it is crucial to ensure access to the processing industry. While in the past value chain challenges included ensuring a smooth production flow from rural areas to urban centres (geographic distance), which required improvements in roads, trade and marketing policies, farmers cooperative structures, and storage facilities. However, today the key [challenge lies in the degree of sophistication required for a product to enter the market](#). This involves field level technology and enterprise development, technology acquisition, access to capital, and skill development, all of which play an essential role in enabling farmers to connect with the market effectively.

"We can't separate agriculture from food systems, we can't separate food systems from water, energy, and infrastructure systems."

– Dr Laura Pereira, Wits University and the Stockholm Resilience Centre

Food systems resilience lies at the heart of health and sustainability challenges, with significant negative changes observed in the past decades. A [study of food systems from a socio-ecological \(SES\) perspective](#) between 1961 and today, reveals major changes to the volume, nutrition, and safety of food systems. These



Four food system aching points and the transformative pathways that emerge when reframed through a resilience lens.

changes have almost halved undernutrition while doubling the proportion of those who are overweight. They have also resulted in the reduced resilience of the biosphere, pushing four out of six analysed planetary boundaries beyond the safe operating space. The analysis illustrates that consumers and producers have become more distant from one another, with substantial power consolidated within a small group of key actors. To address these challenges, a shift from volume-focused to quality and nutrition-oriented production is essential, along with reduced antimicrobial use and enhanced transparency between producers and consumers. Tackling [key aching points](#) such as food systems illiteracy, promoting food security, and addressing inequality and governance issues are vital for equitable access to healthy food, markets, and technology. This highlights the necessity for a [redistribution of resources that extends](#) beyond innovation within agriculture and food systems, to address intragenerational equity (ensuring fairness among current generations), intergenerational equity (equitable food systems for future generations), and interspecies justice (considering the impact on nature) as part of broader '[Earth system justice](#)'.

"There is a lot we can tell about the resilience of the food system by what is on the plate."

– Dr Namukolo Covic, International Livestock Research Institute

Climate smart agriculture focuses on enhancing resilience, mitigation, and productivity and profitability. Enhancing resilience can be achieved through diversified farming practices, improving soil health, and increasing knowledge. Improvements in [seed based technologies](#) and [soil fertility management](#) can increase food systems resilience by identifying and combining appropriate diagnostic and management solutions so farmers can identify their soil needs and apply appropriate seed treatment solutions. However, the delivery of seed technologies to farmers presents [several challenges](#) that need to be addressed. Mitigation focuses on reducing the negative environmental impacts of agricultural systems by promoting increased resource use efficiency. Productive and profitable farming systems can be supported through closing yield gaps, boosting productivity and incomes of farmers, and improving access to markets. Building value chains for [crop rotations](#) can help improve soil health, however they need to be supported through the introduction of resilient financial services that combine inputs, finance, and insurance to help farmers de-risk, access credit, quality inputs, new crop value chains, and index-based livestock insurance.

"If we want to measure the effectiveness of food systems, we need to examine how well they are fulfilling their purpose. Food

systems are called food systems because they should be delivering food to the plates. However, they should deliver healthy nutritious diets onto our plates, and do so sustainably. Livestock, therefore, plays a role in achieving this objective as part of the overall food system.”

– Dr Namukolo Covic, International Livestock Research Institute

Livestock plays a significant role in delivering healthy and nutritious diets in a sustainable manner within the broader food system.

Enabling a sustainable livestock system is imperative, particularly in Sub-Saharan Africa where productivity is currently low. This transformation requires innovations, such as [improved genetics](#), feeds, foraged resources, and enhanced production services. Climate risks

present a major challenge in livestock production, especially for communities in drought-stricken areas like the Sahel and Horn of Africa, where livestock serves as primary livelihood. Tools such as [index-based livestock insurance](#) have been successfully implemented in Kenya and Ethiopia, and have proven effective during crises such as droughts, enabling governments to collaborate with scientists to predict pasture availability and with private sector insurers to mobilise livestock insurance for farmers. In [Ethiopia’s poultry sector](#), scientists conducted consultations with local communities to understand their preferences. [Communities favoured dual-purpose breeds](#) over the broilers and layers, which scientists initially considered more suitable. After implementing this community-driven approach, there was a 123% improvement in egg production and a significant 95% increase in meat production, demonstrating the key role partnerships play in ensuring effective implementation. However, key outstanding evidence gaps remain regarding how to equitably address trade offs between scaling livestock production and the impact of livestock on ecosystems and climate.



Sustainable Poverty Escapes, Graduation, and Migration

“So much resilience, as you can all imagine, painstakingly gained pre-pandemic was lost during these years, indicating how fragile progress has been. Judging by the scarcity of the discourse around it, or indeed the scarcity of the discourse around poverty, it seems that during the pandemic guarding resilience has not really made it into the policy mainstream in low- and middle-income countries.”

Pre-pandemic resilience gains were lost during COVID-19, revealing the fragility of progress.

Sustainable poverty escapes encompass long-term strategies and targeted interventions to lift individuals and families out of poverty, addressing root causes and providing social protection, education, skills training, and productive resources for lasting economic and social development. The graduation approach, also referred to as economic inclusion, complements these efforts by offering comprehensive support to the most vulnerable households, ensuring a holistic approach to poverty reduction. The session delved into the multifaceted aspects of economic inclusion, poverty escapes, and the adaptive role of migration as a strategy. These interconnected topics were unified by their shared emphasis on identifying sources of resilience that surpass technical sectors, encompassing critical elements such as women’s empowerment, social capital, agency, and mobility.

There is inadequate focus on resilience in low and middle-income countries, stressing the necessity of establishing resilience at individual, household, and community levels with strong crisis support systems. The [Chronic Poverty Report 2023](#) explores pandemic impacts globally, citing examples such as Cambodia’s extended social protection during COVID-19, India’s concessional credit to farmers and fishers supported by the restructuring of bank loans, and Bangladesh’s integrated response to Cyclone Amphan and COVID-19 that included a vulnerability-informed system of evacuation shelters for three million people. In Zambia’s case, intrapreneurship, formal employment, assets, and social protection were factors revealed to contribute to poverty escapes, while limited access to health services, lack of access to social cash transfers, increased cost of living, inflation and capital depletion further contributed to poverty entrapment. The report

– Andrew Shepherd, Chronic Poverty Advisory Network

advocates for context-specific responses, pre-crisis investments, and increased integration of resilience strategies. To improve crisis outcomes, the report calls for action to address inflation, enhance social protection, increased political commitment, and social and health protection funding.

Economic inclusion (or graduation) initiatives must be seamlessly woven into broader development strategies, catering to a diverse range of individuals across income levels. These efforts focus on enhancing income and assets for lower-income groups. Such programmes have a wide scope, aiming to boost self-employment, household productivity, and empower women and youth. Effective scaling hinges on attention to programmatic aspects, integration within institutions, and expansion through government partnerships. The [State of Economic Inclusion Report 2021](#) offers a comprehensive view of uplifting the economically disadvantaged. Covering 75 countries and supporting over 90 million people, these programmes are increasingly important as governments now lead the scale-up of economic inclusion interventions, often building on pre-existing national programs such as safety nets, livelihoods and jobs, and financial inclusion, with 93% of the total beneficiaries covered by government programs. The report’s significance lies in its in-depth analysis of programmes, target groups, and organisational hurdles, alongside detailed case studies and multi-country costing studies for effective integration in national systems.

Time-bound and sequenced economic inclusion approaches demonstrate not only poverty reduction but also enhanced food security and empowerment. The [“Graduating to Resilience”](#) programme systematically employs a household-focused strategy targeting chronically food insecure households. By building confidence and capabilities, this multifaceted approach

positively influences both women and other household members. Results have been promising, with 73% of households graduated out of food insecurity and fragility. During COVID-19 61% of the graduated families maintained or quickly regained their food security (or other well-being), further proving their resilience. Group coaching has proven cost-effective and conducive to social cohesion. However, certain vulnerable groups may not achieve graduation and require social assistance protection grants due to dependencies or chronic illnesses. Implementing clear, time-bound, sequenced plans within poverty reduction programs yields comprehensive outcomes, such as a decrease in poverty, and an increase in food security and individual empowerment. Effective adaptation across countries hinges on extracting lessons from successful models and tailoring them to local contexts.

BOMA's Rural Entrepreneur Access Project (REAP) in Northern Kenya is a successful example of sustainable poverty escapes.

Originally aiming to support pastoral women establish thriving businesses, improve education opportunities for girls, and enhance food security, it expanded its scope to tackle extreme poverty levels in Africa's drylands. The key lies in cohesive coordination and a multidimensional approach, focusing on economic inclusion, climate resilience, urban programming, and migration and displacement issues to uplift vulnerable populations, promote sustainable livelihoods and drive community development. REAP is now being scaled and adapted to achieve maximum efficiency and aims to positively impact the lives of three million women, youth, and refugees by 2027.

Different types of social capital can be a household's or a community's first line of defence against shocks. Social capital, or the networks and resources available to people through their relationships within groups (bonding social capital), between groups (bridging social capital), and with groups in positions of power (linking social capital) was found to be important in helping households and communities deal with shocks in a number of countries. However, social capital can erode over time due to continual exposure to shocks; for example, in Ethiopia, after three consecutive years of droughts, households had fewer resources to share ([PRIME project](#)), while in Nigeria, some community groups could not help non-members due to financial constraints ([Rural Resilience Activity](#)). In Niger and Burkina Faso, households stated that when shocks affect everyone, it creates

limits to solidarity mechanisms, highlighting how in worsening risk environments, external shock responsive safety nets are critical. Collecting household-level data on social capital is difficult. For example, in Somalia, people do not talk about how much social capital they have individually but will talk about community-level social capital. This highlights the need for survey and interview questions at both household and community levels.

Migration from low-income countries should be reframed as an opportunity with associated risks and rewards, rather than a development failure. [A study by Mercy Corps analysing programs in Niger and Nepal](#) explores this misconception, emphasising the socioeconomic implications of not harnessing migration's potential. Economic migration, constituting about 90% of international migration, holds positive socioeconomic outcomes like improved living conditions, education investments, food security, asset accumulation, and poverty reduction. Research has consistently shown that migration and remittances can yield positive socioeconomic and development outcomes at both national and household levels. However, development efforts often overlook this potential, viewing migration, particularly across borders, as a problem rather than an opportunity. Another study in Zimbabwe, showed instances where [migration served as a critical adaptive strategy for individuals and communities facing poverty](#), and economic uncertainties, providing a dynamic response to changing circumstances and opportunities for upward mobility. The report concludes with actionable recommendations for policymakers, aid actors, and donors on how to effectively utilise and leverage economic migration for sustainable development.

"As these programs come from different sectors and very different contexts, they take a long time to build and don't just happen overnight. So often one of the big critiques that we see when we are presenting these programs is that these are not a 'silver bullet'. However you cannot design these programs purely in isolation, you have to think about broader continuity."

– Colin Andrews, Partnership for Economic Inclusion

Conflict

Conflict and violence are underpinned by a systemic degenerative cycle, whereby they often arise in resource-deprived or food-insecure environments, while further draining resources and human capacities.

This undermines social cohesion and economic activity, preventing the long-term planning and investment that poverty-alleviation and sustainability efforts require, highlighting the need for [conflict sensitive tools and methods for programming](#). In recent years, resilience approaches have increasingly been implemented in fragile and conflict-affected contexts, while resilience has also been discussed as a means for, and a key part of, peacebuilding efforts. But thinking in this space is in its infancy and there is a need for more and better evidence on what builds transformative resilience beyond “bouncing back” in conflict-affected contexts. Incorporating conflict-sensitive and resilient approaches should encompass explicit objectives related to humanitarian development and peace. In contexts characterised by fragility, the manifestation of multidimensional risks underscores the necessity of adaptable programs. Conflict often triggers migration, which in turn diminishes social cohesion. Consequently, programs must intentionally focus on enhancing conflict management capacities, facilitating peace negotiations during conflicts, and fostering the rebuilding of trust. Tailoring programs to each area’s unique challenges, such as [Near East Foundation](#)’s collaborative natural resource management in [Mali](#) and revolving loan funds in [Syria](#), provides context-driven, comprehensive solutions.

“For successful resilience interventions in conflict areas there is a need to not neglect the household scale, as many times conflicts start already within households, so we need to pay attention to gender inequalities. We should recognise and strengthen the role of women in resilience building and as peacemakers in conflict affected areas.”

– Prof Dicta Ogisi, SPARC

The “[Evidence Gap Map](#)” (EGM) serves as a knowledge management tool focusing on impact evaluation and systematic reviews of interventions and outcomes against covariate shocks, stressors, and recurring crises in low- and middle-income countries. The

outcomes of the EGM are rooted in strategic resilience approaches, encompassing adaptive, authoritative, and transformative capacities. The analysis of evaluations in conflict settings reveals the prevalence of multi-component interventions, posing challenges in identifying effective combinations. Evidence is limited, apart from the findings from the five high- and medium-confidence systematic reviews, which show that cash transfer and psychosocial interventions have positive effects in conflicts related studies. The implications for researchers, commissioners, and policymakers underscore the significance of prioritising high-quality impact evaluations and considering context-specific factors when interpreting individual study findings.

“When mapping interventions to address climate change in conflict affected areas, we see that most interventions focus on psychosocial aspects and not many studies include resilience indicators such as the diversification of income. Psychological and cash transfer interventions seem to have positive impacts in conflict regions.”

– Miriam Berretta, 3ie

[Reliance on markets and social systems, adaptability to shifting contexts, and the potential for transformative approaches that advance peace, are critical areas to resilience in conflict settings.](#) Findings from studies

conducted by Mercy Corps across Africa and the Middle East emphasise the significance of [local economies and social connections](#) as primary coping mechanisms during conflict. The need to prevent conflict-related shocks and foster transformative capacities is also emphasised, requiring measures like conflict mediation and inclusive governance. The application of evidence-based approaches is

illustrated in [northeast Nigeria](#), where a poultry market development program supported local communities by establishing breeding units and offering subsidies to marginalised households, resulting in positive outcomes in livelihood diversification and [nutrition](#). In the Democratic Republic of Congo (DRC), an integrated approach combining violence prevention, market systems, and food security programming was implemented in North Kivu, boosting confidence in managing future shocks, particularly among women and youth. The dual approach to land governance and agricultural market access in North Kivu resulted in increased investment and improved future wellbeing.

Financial inclusion, starting with village-level savings and loan associations (VSLAs), remains foundational in conflict settings, as it strengthens social ties and enables internal risk-sharing mechanisms within these groups.

The spectrum of conflict environments, ranging from conflict-prone to active war zones, calls for tailored approaches to risk management. In certain contexts, such as Nigeria, insurance can be viable even in highly conflict-affected areas with vibrant agro-food systems. However, it's essential to recognise that informal economies may not easily fit into the insurance market, leading to a need to explore alternative risk transfer options, such as social protection for businesses. Evidence indicates that in conflict-affected areas lacking functional financial systems such as Syria, [revolving loan funds](#) customised for seasonal needs can enhance access to capital, yielding positive impacts on socio-economic resilience.

Recognising and strengthening traditional systems ensures more just and effective governance, fostering a way forward for inclusive and community-centric development.

Traditional governance systems, led by chiefs, traditional rulers, and women leaders, hold a deep understanding of a community's dynamics and have strong bonds among the local population. They can effectively administer resources and financial support, exemplified by the success of the village insurance savings accounts. Loans provided by the traditional ruler or council are more likely to have lower default rates, as they have intimate knowledge of the families and can utilise social mechanisms, such as land recovery, to ensure loan repayment. In contrast, federal government policies may lack effectiveness at the local level

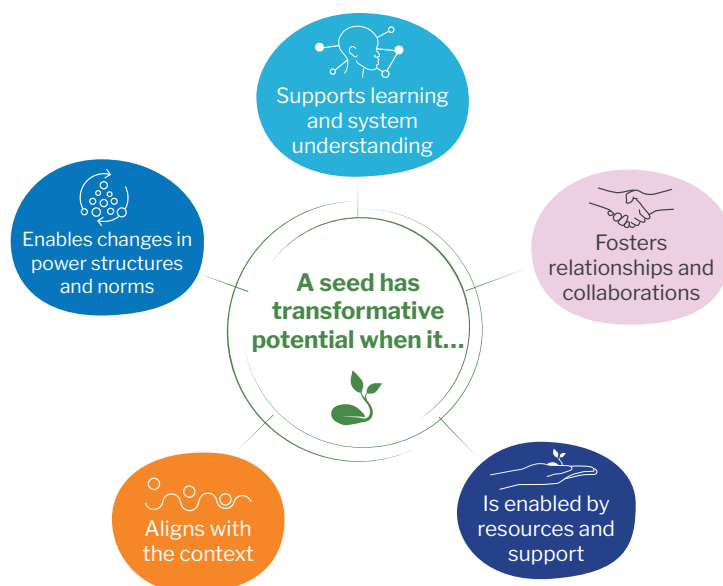
due to perceived distance and detachment from communities.

"It is vital to treat local producers and traders as key partners and facilitate market linkages to ensure economic activity in conflict settings."

– Olga Petryniak, Mercy Corps East Africa

The [Seeds of Peace](#) initiative explores the capacity of grassroots peace initiatives to drive significant transformative change in peacebuilding efforts. An innovative assessment framework that combines diverse knowledge sources and insights from research and practical experiences allows a holistic evaluation of the impact of local initiatives on transformative change processes. The framework comprises five dimensions of transformative potential: contextual alignment, available resources and support, learning and systemic understanding, fostering relationships and collaborations, and changes in power structures and norms. Understanding power dynamics in fostering resilience lies in adopting a comprehensive approach that considers internal and external barriers and available resources. External support may prove insufficient if the intricacies of power dynamics and internal obstacles are disregarded, potentially leading to corruption and new obstacles. Insights from diverse agricultural systems globally highlight the significance of resilience in facing expected fluctuations and social shifts.

[Seeds of Resilience for Peace and Stability framework](#)



Implications for Investment, Policy, and Measurement

Investing in Systems that Reduce Risk

Donors and agencies committed to strengthening resilience must invest in shock-responsive social protection systems while evaluating their performance, considering factors like timeliness and targeting.

Additionally, prioritising downward accountability and localisation commitments is crucial, shifting the accountability of measurement and evidence towards communities as the primary users. To achieve this, support is needed for wider testing and adoption of evidence-building methods that involve communities in the production and use of evidence, leading to adjusted funding and reporting requirements.

To inform internal prioritisation and funding allocation processes, donors and investors must consolidate evidence bases in sector-specific, actionable formats. It is imperative to consider the long-term socio-ecological resilience building and incorporate the value of nature in decision-making processes. Equally important is ensuring investment decisions account for distributional impacts, providing adequate support to vulnerable communities and regions. Climate justice principles should guide investment strategies to promote equity and fairness.



Continuous improvement efforts are necessary in the resilience evidence journey, requiring regular data updates. Existing data sharing platforms for resilience evidence include [Resilience Links](#), OpenData from USAID (reference number ADS579.6), [Community Action Collab platform](#), and the [Resilience Platform](#).

The private sector should invest in value addition based on relationships within their supply chains to stabilise and build more enduring supply networks. Investing in measuring and managing resilience and transformative change within the supply chain, along with economic opportunities, is essential. Empowering community associations within the supply chain allows them to respond effectively to market signals and facilitate access to finance to meet their needs. Collaboration among development agencies, business networks/associations, regulatory bodies, and universities should be fostered through increased time and funding investments to deepen partnerships with diverse actors.

Critical evidence gaps remain in gender-inclusive and transformative resilience programming, especially regarding climate resilience. Therefore, increased investment and integration are required to mainstream nutrition and health information in resilience measurement systems. Additionally, farmer-centric resilience financial services that combine inputs, finance, and insurance are needed to de-risk farmers, provide access to credit, quality inputs, new crop value chains, and index-based livestock insurance.

To account for the resilience of people and households beyond program end dates, development actors should plan for follow-up studies at least two years after the program concludes. Conflict mitigation interventions should focus on supporting and strengthening local markets and social systems. Lastly, informed assessments of bottom-up and small-scale initiatives are essential to identify promising resilience dimensions and drive transformative change in communities, guiding donor organisations in investing in these initiatives to address overlooked resilience aspects.

Policy Approaches to Integrating Principles of Diversity and Equity in Multi-sector Programming

Resilience evidence building based on local and contextual conditions can provide insights to support policy design, monitoring and progress assessment in decision making at bigger scales. The [Global Goal on Adaptation](#), the [Global Stocktake](#) process, and the implementation of the [Sharm-El-Sheik Adaptation Agenda \(SAA\)](#) can all be informed by evidence building processes and methodologies grounded on local perspectives of what evidence is deemed relevant. Additionally, they can inspire measurement frameworks relevant to support decision making and track progress on resilience implementation at the global level such as the [Race to Resilience Metrics Framework](#). Evidence can also be used ex-ante to inspire policy design at country levels through its integration in Nationally Determined Contributions (NDCs) or National Biodiversity Strategies and Action Plans (NBSAPs).

The collection of evidence and data should prioritise the needs of communities rather than being driven by donor requirements. To ensure that evidence effectively informs policies, strong partnerships that go beyond engagement are essential. Involving stakeholders throughout the entire process, from design to implementation and measurement, is crucial. Incorporating multiple feedback loops and [adaptive leadership](#) ensures that the data gathering approach aligns with the actual needs of people.

"In the process of evidence production for policy, we need to look at stakeholders as partners and not beneficiaries and involve them in all the stages of a program."

– Joseph Muturi, Kenya Urban Poor Federation

Co-production can bridge the divide between evidence needs of users and the demands and desires of evidence producers. By engaging communities, donors, academia, and NGOs in collaborative spaces, new knowledge can be generated to effectively link research to action and improve resource utilisation. Particularly, cities often face resource limitations for data collection as integrated urban planning requires different evidence bases to be consolidated. Leveraging quantitative methods and remote sensing data alongside qualitative, participatory studies can address this challenge and foster a sense of co-ownership. Establishing dedicated funds and

incentives for community-led data collection is essential to building capacities for Locally-Led Adaptation. By providing financial support as well as non-financial incentives communities are encouraged to actively participate in data gathering and analysis efforts. Additionally, while in some contexts there may be ample evidence available, duplication and restricted data access among partners is a key priority that needs to be addressed.

Advancing actionable evidence (needs-driven and solution-oriented) requires improving the visibility and wayfinding between evidence bases and identifying and prioritising key gaps. The [Global Shield initiative](#) exemplifies a principled and inclusive approach to development, focusing on [pro-poor principles](#) such as impact quality, complementarity, equity, and ownership. The application of an Evidence Gap Analysis allows for an examination of resilience to shocks, identifying successes, areas with thorough examination, and gaps and opportunities. Taking a country-by-country approach, the Global Shield engages stakeholders to assess existing implementation and insurance risk modelling, enabling countries to express their specific needs and demands for insurance and implementation, leading to targeted and impactful interventions. However, such initiatives need to address the significant disconnect between national reporting and efforts to mainstream citizen science and community-led data collection, analysis and reporting.

"Risk finance and transfer are the key bridge in addressing Loss and Damage and adaptation finance."

– Kay Tuschen, GIZ

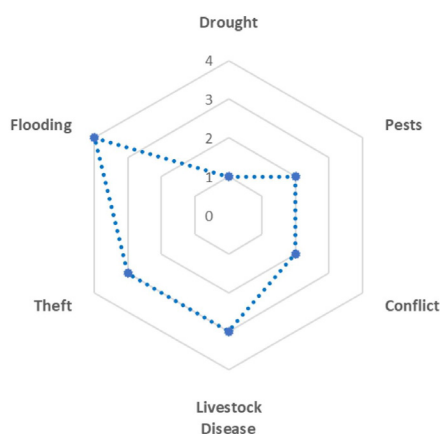
[Risk finance and risk transfer are interconnected and can provide an integrated approach to address adaptation and Loss and Damage financing.](#) Risk financing is of growing interest to a wide range of development and humanitarian actors searching for solutions to bridge a growing global post-disaster financing gap. However, the process of gathering, analysing, and presenting risk management information is compressed in tight timelines. Given the limited time to gather substantial evidence and provide comprehensive recommendations, there is a need for quick decision-making and ex-ante preparation and intervention planning.

Measurement Frontiers

The session explored frontier issues and measurement gaps in resilience measurement from the perspective of different users and producers of evidence:

- The World Food Programme (WFP) is adopting a **subjective measurement of resilience** due to challenges in capturing changes along the resilience results chain. To address this frontier, two innovative approaches are being piloted. The **Resilience Capacity Score** measures a household's perception of their resilience capacities to generic or country-specific shocks and stressors. As WFP's activities can contribute to building, restoring and/or maintaining key capitals and capacities in vulnerable households, this indicator specifically refers to four dimensions of resilience capacities (namely: anticipatory, absorptive, adaptive, transformative) and five livelihood capitals (human, financial, social, political, and informational) that support the different resilience capacities. Additionally, the **Shock Exposure Index** gauges the overall level of exposure to various shocks experienced by households. These new methods hold promise for enhancing the understanding and assessment of resilience in WFP's programs.

Shock exposure index



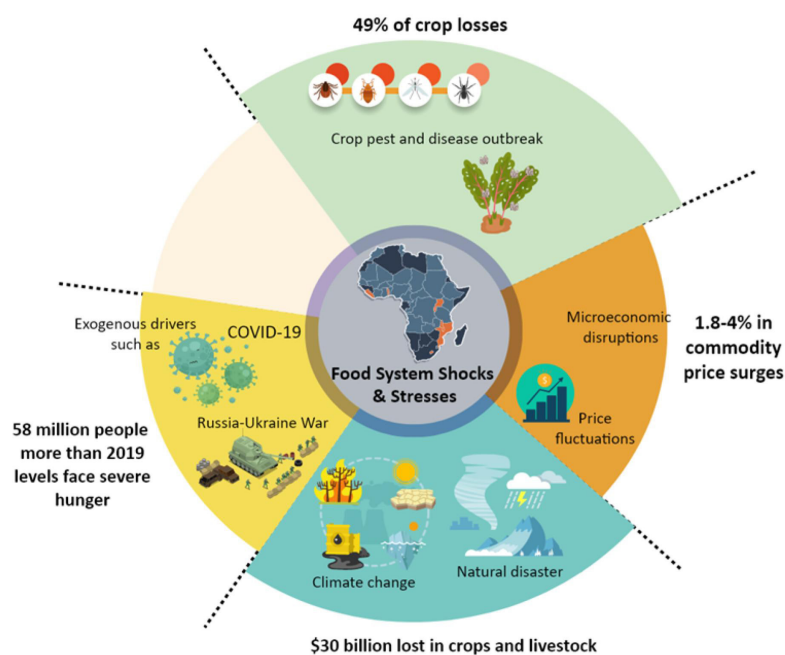
Resilience capacity score



- In implementing resilience activities in contexts prone to shocks, it is important to consider the role that **psychological safety and social dynamics** play in helping cope with shocks and stressors. Resilience measurement indicators encounter complexities arising from unmeasured social dynamics, for example through tracking indicators through Recurrent Monitoring Systems. The bonding social capital index is key, but complex to determine as neglecting relations between people, social trust, and beliefs, as well as difficulties in seeking help, can weaken the index. Measuring the ability to recover from shocks requires considering factors such as actual production versus conflicts in land ownership and issues surrounding the equitable distribution of the harvest. For a comprehensive analysis, it is essential to incorporate other aspects and social dynamics. To overcome this frontier, community visioning processes can help build trust and a shared vision, reinforcing group governance and its functionality.
- Unravelling the intricacies of complex, compound shocks poses significant challenges for **system-level resilience measurement**. When faced with multiple shocks that differ in nature and independence, understanding their impact on resilience and designing effective resilience programs becomes challenging. For example, [food security shocks](#) have been treated as either identical (all shocks are the same and therefore can be addressed with a one-size-fits-all approach) or as independent (one

food security shock does not affect the occurrence or magnitude of another). This can lead to ineffective interventions and exacerbate the vulnerability of populations already at risk. Measuring system-level resilience is not a straightforward sum of its components, as innovative ways to measure and evaluate the diverse components of multiple shocks are required.

- **Evidence is needed to support all six phases of Locally Led Adaptation** (assessing climate risk; planning; financing; implementing; monitoring and evaluation; reporting), however challenges exist in fulfilling needs such as downscaling global climate data, translating climate risks to expected impacts, incorporating hyper-contextual data while protecting privacy, and data needs after the planning stage, especially in the context of limited financing. Solutions need to focus on 1) improving understanding of climate data sources, their relevance and applicability and on interpreting the data, rather than developing new tools; 2) on documenting and increasing access to the richness and detail of the data generated by planning efforts in close collaboration with communities and organisations; 3) developing a common framework for resilience measurement across varied contexts that builds on citizen science.



- Measuring climate adaptation using a resilience-informed, **Capacities Approach**, seeks to go beyond measuring climate adaptation actions and finance to assess whether (or not) households and communities are adapting or are better adapted to the accelerating impacts of climate change. A Capacities Approach focuses on measuring the resources, assets and abilities (broadly defined) that enable households, local systems, institutions and landscapes to absorb, adapt and transform in the face of climate change and variability (and other shocks and stresses) without compromising their current and future well-being using high frequency, recurrent monitoring, Earth observation and remote sensing, triggered qualitative inquiry, modelling of future scenarios and outcomes.

Emerging Principles and Priorities for Resilience Evidence

The Resilience Evidence Forum sought to test whether, as a growing community of resilience professionals, we can arrive at a shared set of principles and priorities for resilience evidence. It is important to note that this builds on significant previous efforts such as the development of the [Resilience Measurement](#)

[Principles](#) (2014), the development and adoption of [Principles for Locally Led Adaptation](#) (2021), the peer-reviewed [Resilience Measurement Principles](#) (2021), and the [Consultation Report on Advancing Resilience Measurement](#) (2022). The below principles and priorities for resilience evidence emerged.

A note on language

During the Resilience Evidence Forum, conversations sought to distinguish between resilience measurement, as a set of context- and shock-specific qualitative and quantitative approaches, tools, and methods that seek to establish the relationship between resilience and its critical determinants, and resilience evidence, as the available bodies of knowledge that establish which interventions work and which don't, and how we tell the difference between the two. Resilience evidence is framed as broader than measurement as it seeks to mediate between the needs and priorities of evidence producers and its users, and support evidence-informed action (including and not limited to the domains of policy and decision making, practice, and investment).

By **principles**, we mean a set of considerations to support stakeholders towards making appropriate decisions and inform intervention design, decision-making and governance design, implementation, learning and associated monitoring and evaluation processes. Resilience Evidence Principles aim to help navigate the following questions:

- What do we mean by resilience evidence?
- What does 'good' resilience evidence look like?
- Whose resilience evidence counts?

By **priorities**, we mean a set of specific actions for resilience evidence that are measurable, achievable, relevant, and (ideally) time-bound. While different groups and constellations undoubtedly have their own thematic, sectoral, or geographic resilience evidence priorities, the Resilience Evidence Forum sought to test whether as a collective we could agree on a small number of shared 'umbrella' priorities for resilience evidence.

Principles

No evidence about us, without us

People, households, and communities must be central to how the evidence is collected, analysed, and mobilised in decision-making, investment, and policy. To strengthen the resilience evidence bases in meaningful and equitable¹ ways, it is essential that people, households and communities are central to the collection of data, as well as the onward process of evidence analysis and its utilisations in decision-making, investments, and policy formulation. This process of evidence co-production is key to fostering ownership, empowerment, and accountability, which enhances the likelihood of effective implementation.

Mixed methods, plural ways of knowing

Deploy transdisciplinary, qualitative and quantitative methods to strengthen evidence bases, while fostering mutual trust and respect between local, Indigenous, and scientific ways of knowing. A transdisciplinary approach that integrates diverse qualitative and quantitative methods can consolidate robust and comprehensive evidence bases for resilience. By combining scientific methodologies with local and Indigenous knowledge systems, a more holistic understanding of resilience can be attained, however this requires mutual trust and respect to be built. Recognising the value and validity of multiple ways of knowing ensures that evidence captures the complexities and nuances of the local context. Embracing mixed methods enables communities to contribute their knowledge and enriches the evidence base with their lived experiences, cultural wisdom, and traditional practices. In turn, investments in counterfactual mixed-methods impact assessments are vital to warrant claims of impact and to understand causal mechanisms for resilience building. Combining these creates more inclusive and representative bodies of evidence that can inform effective and culturally appropriate resilience strategies.

Actionable evidence at the appropriate scale for decisions, policy, and investment

Ensure that the evidence collected is actionable, demand-oriented, and fit for the purpose of the decisions, policies, or investments it seeks to inform. To bridge the gaps between evidence and action it is essential to ensure that the evidence collected is not only rigorous and reliable, but directly relevant and actionable for the decisions, policies, or investments it seeks to influence. This entails developing an understanding of the different evidence approaches that might be needed at different points in the lifecycle of an intervention, and ensuring a healthy balance between design, implementation and its evaluation. This also entails making evidence available that is relevant across governance scales. By engaging funders, investors and policymakers early in the evidence-building process, evidence can be tailored to meet their specific needs, making it demand-oriented and fit-for-purpose. Actionable evidence is key to increasing private sector commitments from the current baseline of [2% of climate adaptation and resilience finance](#). Moreover, creating a safe environment for learning from failure is a key companion evidence base to enable effective implementation and scaling.

² Multiple dimensions of equity need to be considered, such as [distributive](#) (the distribution of costs, benefits, burdens, and rights derived), [procedural](#) (the degree of involvement and inclusiveness in rulemaking and decisions) and [contextual](#) (the surrounding social conditions, such as power dynamics, gender, education, that influence the actors' ability to gain recognition, participate in decision making, and lobby for fair distribution).

Priorities

Co-produce the evidence that matters

Advance the evidence bases (including associated approaches, methodologies and indicators) on longer term transformative resilience objectives and capacities. For instance, shifts to locally-led governance and financial management, increase in community agency and efficacy, shifts in wellbeing, increase in gender transformative outcomes, the relationship between private sector, markets systems, and household/community resilience, shifts in socio-ecological and nature-positive/regenerative outcomes, as well as the evidence bases on how and in what circumstances these shifts lead to improved resilience outcomes. Where evidence gaps are identified, prioritise, testing and iterating solutions supported by investments in fit-for-purpose mixed methods approaches.

Shared responsibility to identify and address evidence needs and demands in equitable and transparent ways

While the resilience evidence bases are steadily growing (across disciplines, scales, geographies, and units of analysis), there is a lack of commensurate finance flowing into resilience programming. To tackle this, **funders** (including but not limited to donors, public and private sector funders/investors, multilateral, philanthropies, international financial institutions) need to better articulate the evidence needs that would enable them to significantly increase financial flows to resilience programming, **researchers** (including but not limited to academia, as well as wider research commissioners such as think tanks, or local/national government departments) need to generate actionable robust evidence regarding which interventions work and in what contexts, while **practitioners** (including but not limited to development, climate, and humanitarian actors) need to demonstrate willingness to test approaches and evolve practice based on the latest evidence. Together, they need to broker equitable partnerships with communities in ways that support the localisation of resilience implementation, within which resilience professionals enable and facilitate action.

Improve wayfinding among resilience evidence bases

Create better interconnections between resilience measurement and evidence bases and connect them into processes such as the Global Stocktake, the Global Goal on Adaptation, Race to Resilience, National Adaptation Plans, Nationally Determined Contributions (NDC) and National Biodiversity Strategies and Action Plans (NBSAP), the Sendai Framework for Disaster Risk Reduction, the Kunming-Montreal Global Biodiversity Framework, national/regional/urban Climate Action Plans, the Global Shield Against Climate Risks, Universal Social Protection 2030, as well as the Sustainable Development Goals. Building bridges between non-state resilience action and the reporting needs of state actors can facilitate further funding and support for adaptation and resilience. This hinges on bridging the gaps between evidence producers and users across the evidence-to-action chain through translation, facilitation, and brokering. Ensure the interoperability between (or explore the consolidation of) evidence platforms and open access evidence that can serve as repositories across funders, themes, geographies, shocks, stressors, including peer and grey literature.

Taking this forward

Below we list initiatives, coalitions, alliances, and working groups who are taking forward actions related to the priorities above:

- **Adaptation Research Alliance:** Supports action-oriented research that informs adaptation solutions and generates investment and opportunities for action research between the funders, researchers, and practitioners that make up their membership.
- **Africa Research and Impact Network (ARIN):** ARIN is establishing the Locally-Led Adaptation Metrics Platform for Africa (LAMPA) where contextual initiatives on assessing adaptation activities in Africa will be shared, discussed, and synthesised towards global frameworks.
- **Climate and Development Knowledge Network:** Mobilising knowledge, capacity and leadership in the global South to improve the well-being of the most climate-affected people through working with public, private and non-governmental sectors in support of locally-owned and - led climate resilient action.
- **Race to Resilience Metrics Framework:** The Race to Resilience developed a pioneering and people-centred metrics framework to monitor and evaluate the impact of non-state actors and their initiatives towards increasing the resilience of 4 billion people by 2030.
- **Resilience Evidence Coalition:** Following the Resilience Evidence Forum, the Resilience Knowledge Coalition is evolving into the Resilience Evidence Coalition to support the mobilisation of the learnings from the Forum. The Coalition hosts the [Resilience Platform](#), a collaborative online space to capture, access, co-create, and advance the latest resilience evidence.
- **Resilience Hub:** The Hub brings together a global community with diverse perspectives and experiences to share knowledge, co-create solutions, and catalyse action. As the main pavilion for climate resilience and adaptation at COP, the Hub aims to drive the conversation and agenda around resilience and place locally-informed, equitable resilience solutions for people and nature at the heart of the COP process. It also aims to amplify the local voices of the most vulnerable and climate affected through the incorporation of Regional Hubs as an integral part of the programming and delivery of the Resilience Hub.
- **ResilienceLinks:** A learning space that supports humanitarian and development professionals (such as researchers, governments, development partners and practitioners working across sectors) with the tools to take an evidence-based approach to identifying areas of investment and intervention that can have the greatest impact on strengthening resilience.

- **Global Partnership for Universal Social Protection to Achieve the Sustainable Development Goals (USP2030)**: Jointly initiated by the World Bank and the International Labour Organization to transform the SDG Agenda’s vision of universal social protection into reality. USP2030 has grown into a worldwide alliance which, for the first time, brings together governments, international and regional organisations, social partners and civil society organisations, in a shared commitment towards ensuring social protection for all.
- **The Global Shield Against Climate Risks**: A social protection and insurance-based finance mechanism for loss and damage outside the UNFCCC process, the Global Shield will provide pre-arranged financial aid that can be rapidly deployed to respond to disasters like the devastating flood that occurred in Pakistan in August 2022. It will help expand the financial protection instruments for governments, communities, businesses and households. These instruments will minimise the impacts of disasters by helping vulnerable economies become more resilient, ensure sustainable development and protect lives and jobs.



