

## Session 455

---

# Capturing the impact of community-level resilience-building interventions: a framework for resilience measurement, monitoring and evaluation

---

Jung Hee Hyun  
IIASA

---

Adaptation Futures 2023 acknowledges that the conference is taking place in Tiohtià:ke/Montréal on unceded Indigenous lands. The Kanien'kehá:ka Nation is recognized as the custodian of the lands and waters where members of the global community on climate change adaptation gather today.

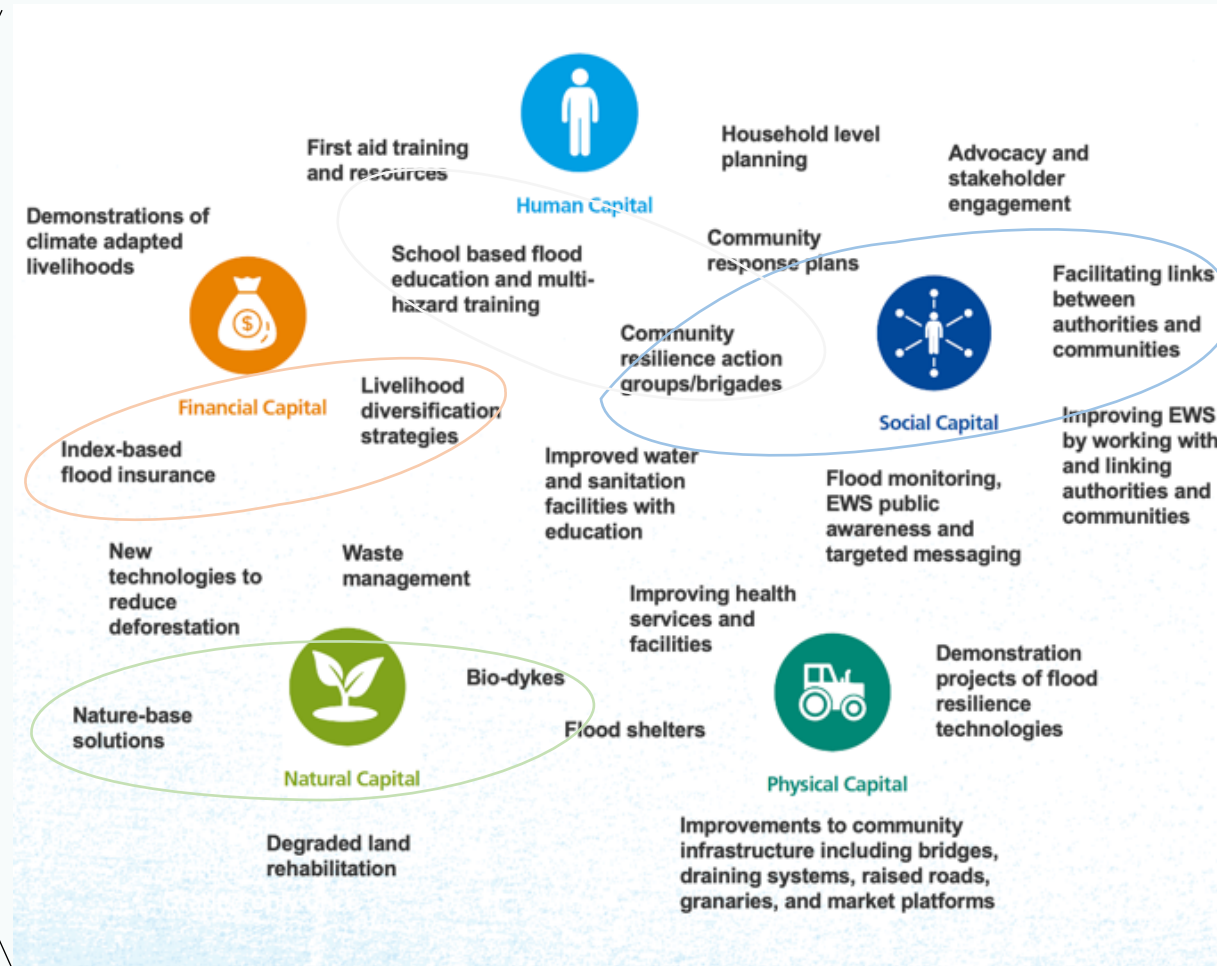
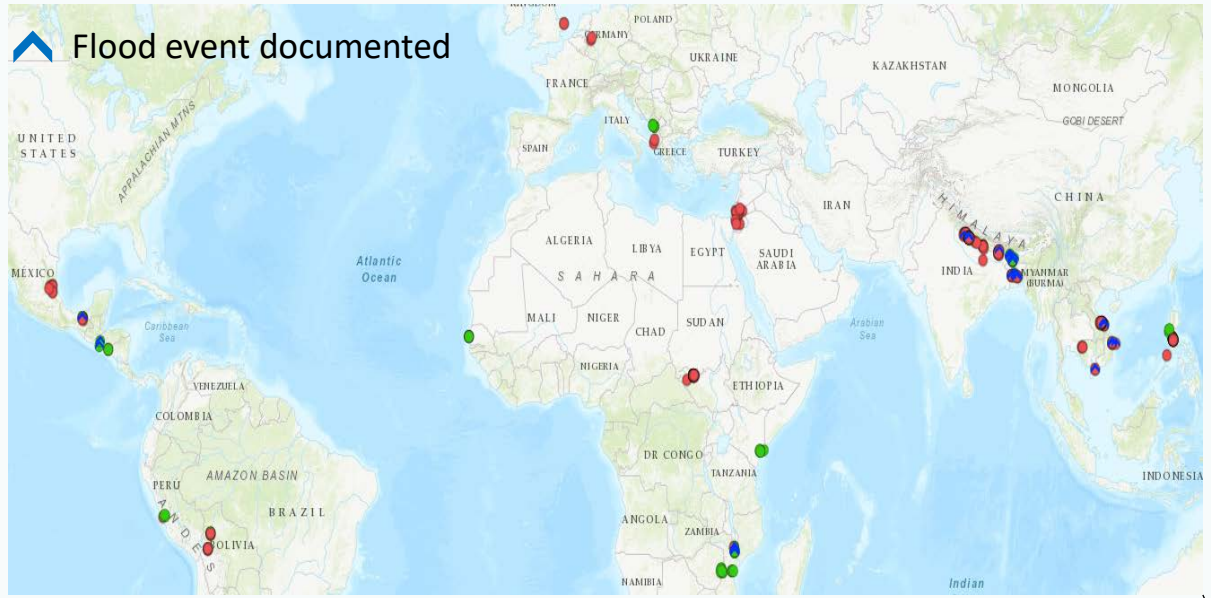
Adaptation Futures 2023 reconnaît que la conférence se déroule à Tiohtià:ke/Montréal sur des terres autochtones non cédées. La Nation Kanien'kehá:ka est reconnue comme gardienne des terres et des eaux où les membres de la communauté mondiale de l'adaptation aux changements climatiques sont réunis aujourd'hui.

[#AdaptFutures23](https://twitter.com/AdaptFutures23)

# A snapshot of Alliance Interventions

- Interventions Questionnaire filled out by implementing partners focused on capturing the content of programming than an evaluation
- 168 intervention documented (2022-23) across 19 countries

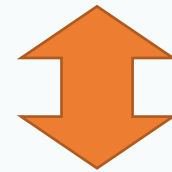
● Intervention documented
 ● No intervention documented



## So what...?

What are we doing  
and how/why?

- **What:** interventions categorization, resilience-building measurement method
- **How/why:** DM process



Do we continue to  
do what we do?

**What do we infer from our evidence to further support substantive and enduring resilience-building interventions?**

# Intervention measurement

## Adaptation field

- Large variation according to governance level
  - Sector-based, urban, LLA
- Climate impact-, risk-, vulnerability reduction measure based
- Institutional demand for streamlined inventories, toolkits
- *Referenced sources:* Global center on adaptation's LLA portal, CTCN, UK adaptation inventory, etc.

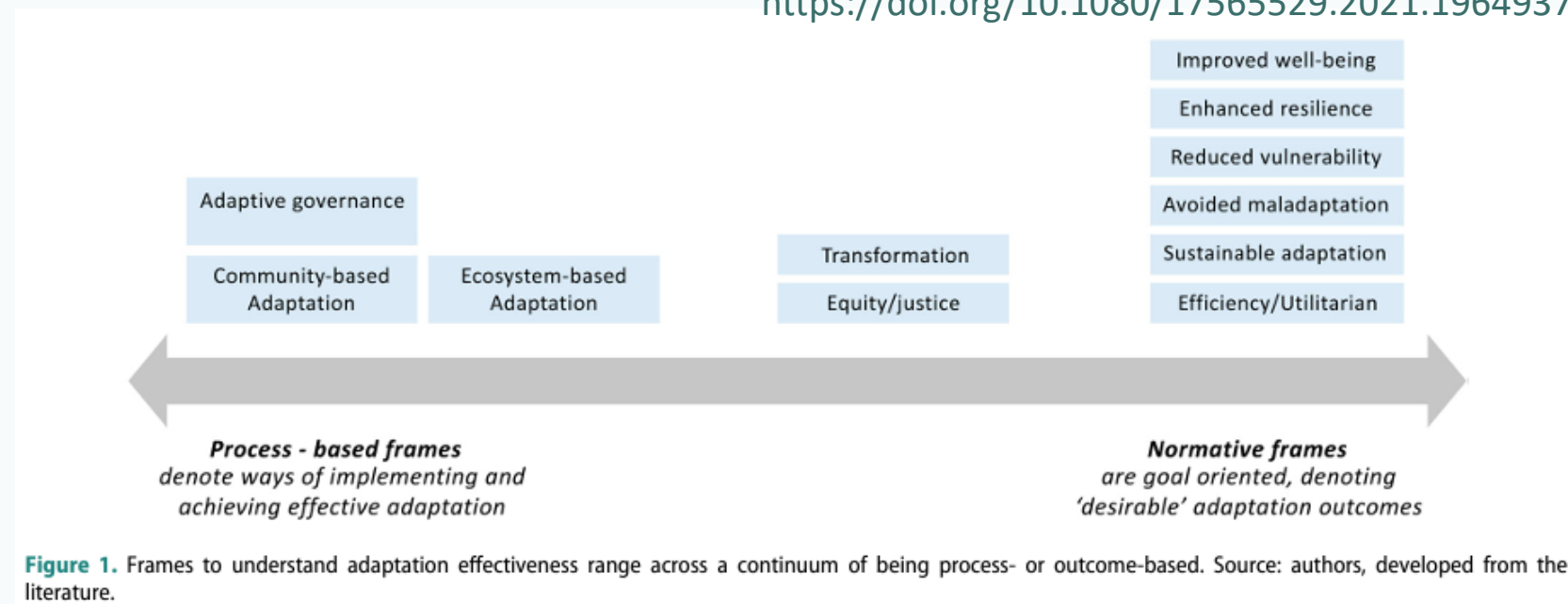
## Resilience field

- Socio-ecology, DRR, systemic risk, development contexts
- Fewer empirical evidence and efforts to catalogue
- *Referenced sources:* FAO, OECD, USAID, Mercy Corps, EU HORIZON projects, etc.

*“In the context of climate adaptation challenges, resilience can be seen as a ‘mobilizing metaphor’ (Bene et al., 2018) or as a ‘bridging concept’ (Deppisch & Hasibovic, 2013)” (Angheloiu and Tennant, 2020)*

- *fosters transdisciplinary dialogue between traditionally disparate communities (i.e. DRR, emergency response, community development, ecology, engineering)*
- *‘actionable knowledge’; ‘knowledge in practice’*
- *A characteristic of adaptation outcomes (i.e. principles of LLA – flexible, influence, etc.)*

# Adaptation effectiveness, benefit frameworks



**Figure 1.** Frames to understand adaptation effectiveness range across a continuum of being process- or outcome-based. Source: authors, developed from the literature.

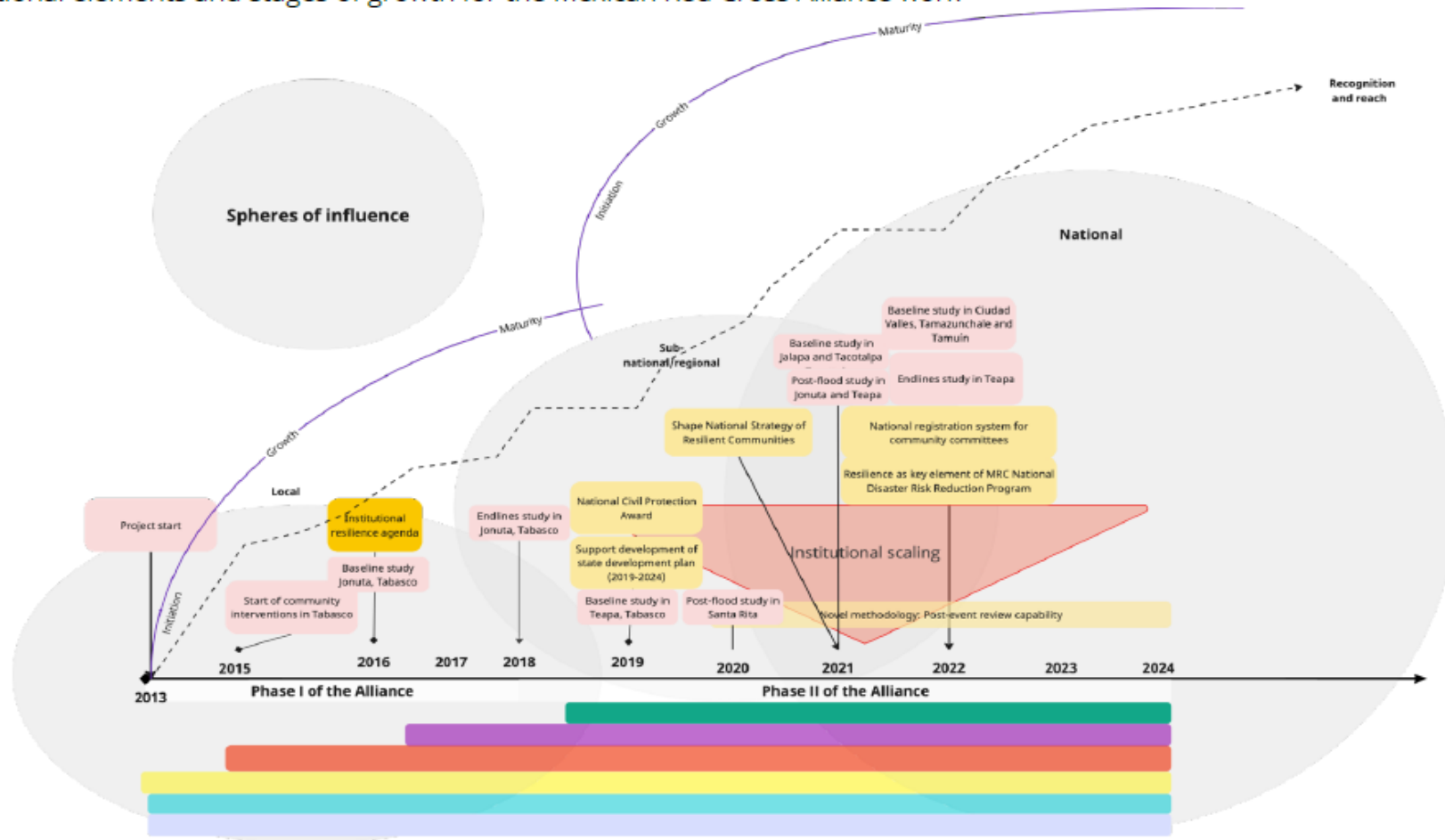
## The adaptation benefits typology.

Adaptation Benefit	Description	Example Actions
Exposure Benefits	Reduces or modifies the exposure of people and activities to climate change impacts to limit negative impacts	Channelizing waterways Coastal protection Early warning systems Evacuation, retreat, or migration Flood and storm shelters
Sensitivity Benefits	Reduces or modifies the sensitivity of critical activities and assets to climate change impacts to limit negative impacts	Installation of irrigation Risk shifting tools like insurance Crop switching Erosion control Introducing GMOs
Adaptive Capacity Benefits	Increases the ability of people to adapt to climate change impacts that cannot be avoided	Knowledge sharing Extension services Climate services Microcredit and microfinance

<https://doi.org/10.1016/j.crm.2023.100479>  
Carr and Nalau (2023)

# How are Alliance interventions designed?

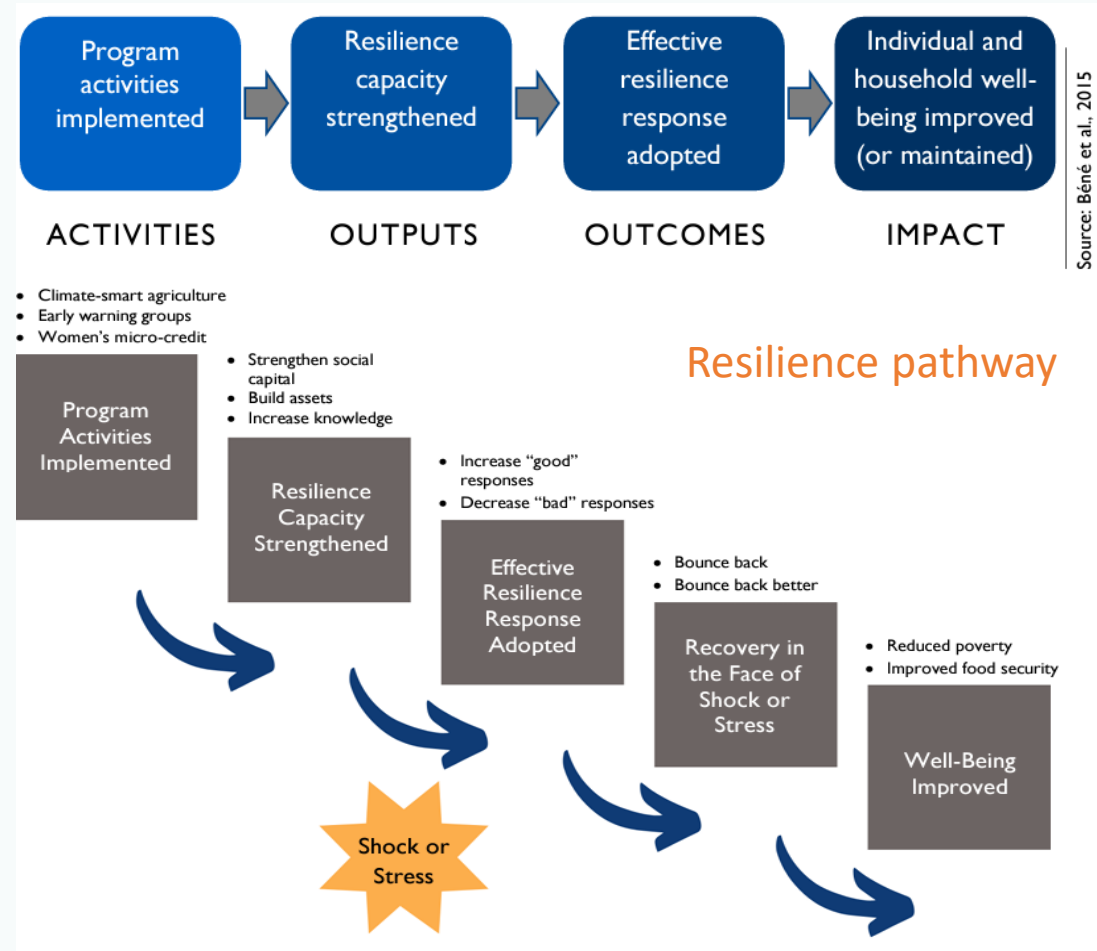
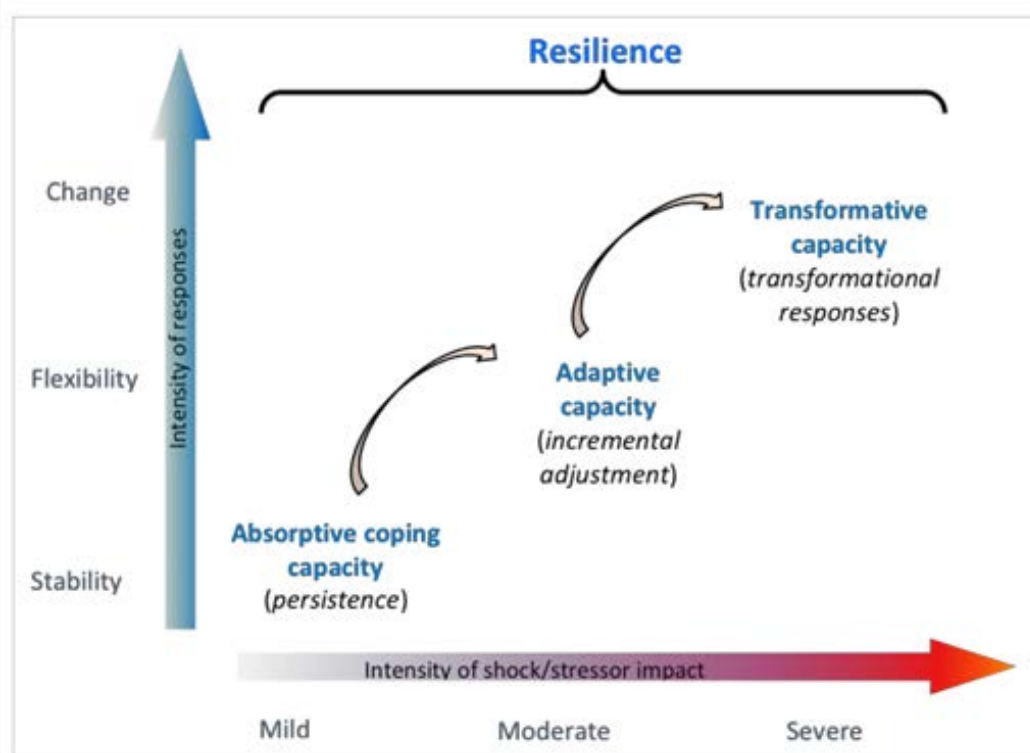
Foundational elements and stages of growth for the Mexican Red Cross Alliance work



- Community level data - support and buy-in at different scales.
- Participatory practice built from FRMC process
- Multi-year approach fosters relationships and learning, trust
- Source of challenge and delays
- Limit to scaling

# Resilience-building approaches

Resilience is the result of absorptive, adaptive and transformative capacities (Frankenberger et al., 2013; Bene et al., 2015)

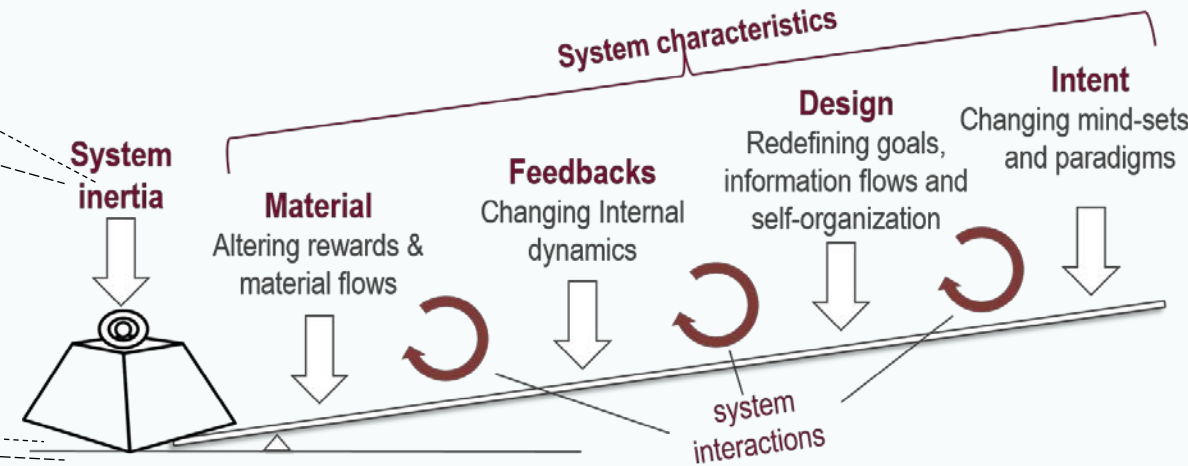
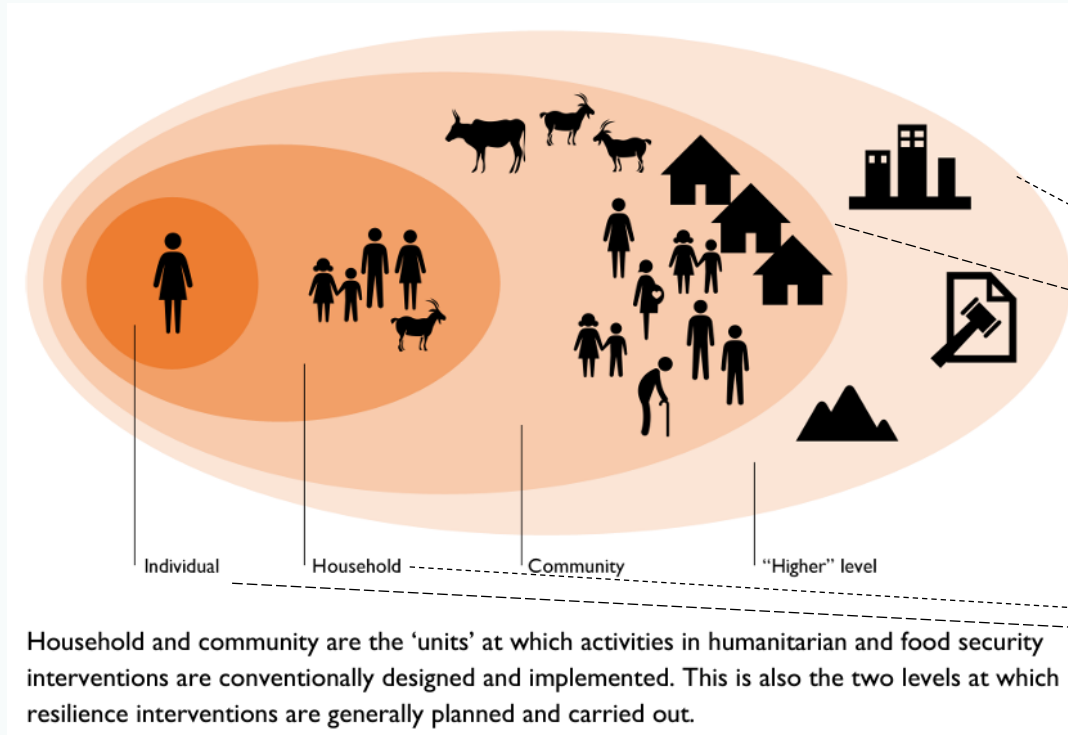


Source: Béné et al., 2015



# Resilience-building measurement considerations

Leverage points for sustainability transformation  
(Meadows, 1999; Abson et al., 2016)

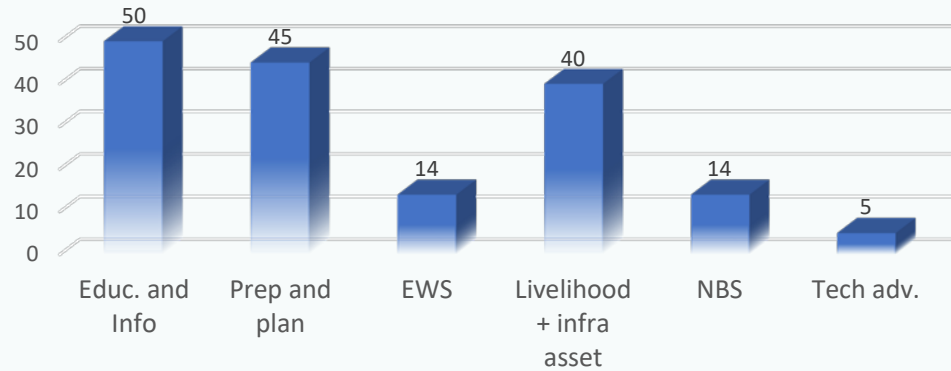


Cross-scale, process, indicator-based

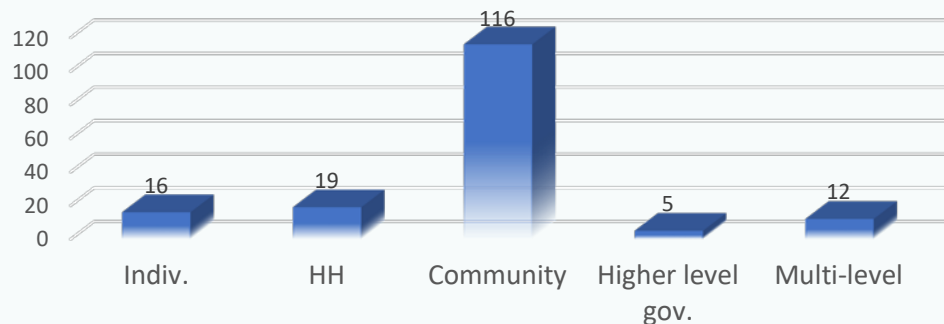


# A snapshot of Alliance Interventions

## BY TYPE (N=168)



## BY LEVEL (N=168)



Positive linear

1

Inverse linear

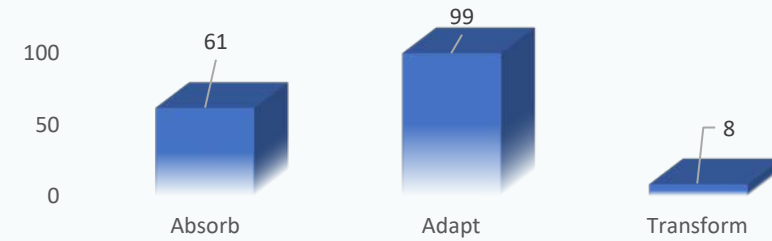
2

3

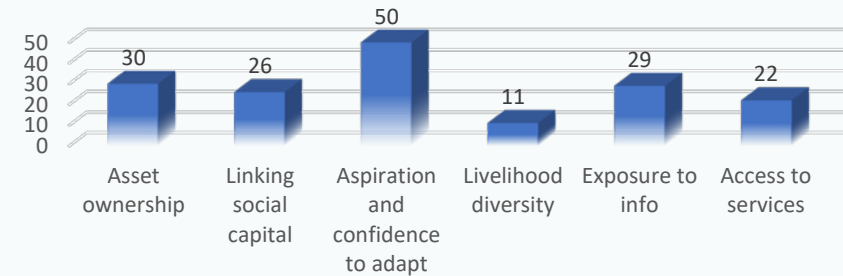
Inverse linear, quadratic

4

## BY CAPACITY (N=168)

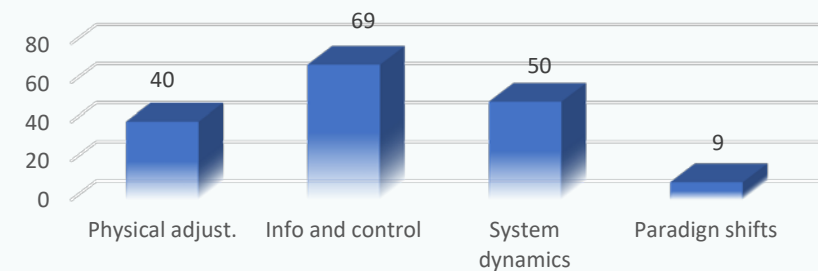


## BY RESILIENCE INDICATOR (N=168)



?

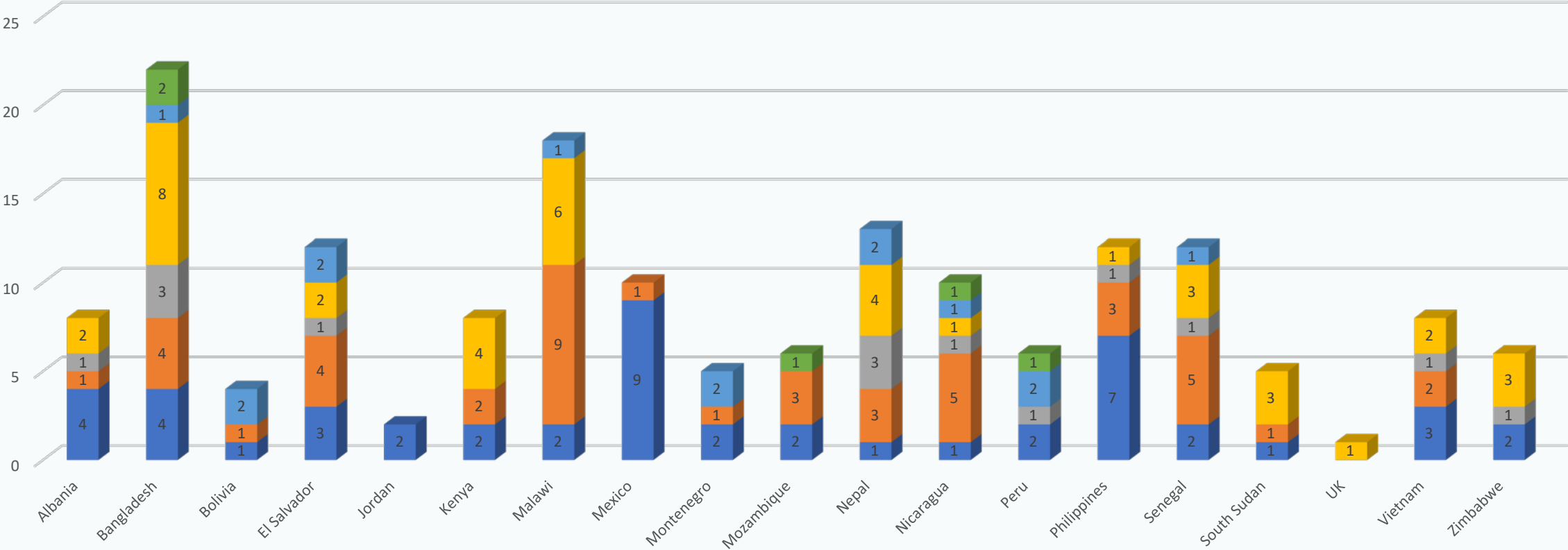
## BY LEVERAGE POINTS (N=168)



# A snapshot of Alliance Interventions

By country

Edu; Plan; EWS; Asset; NBS; Tech

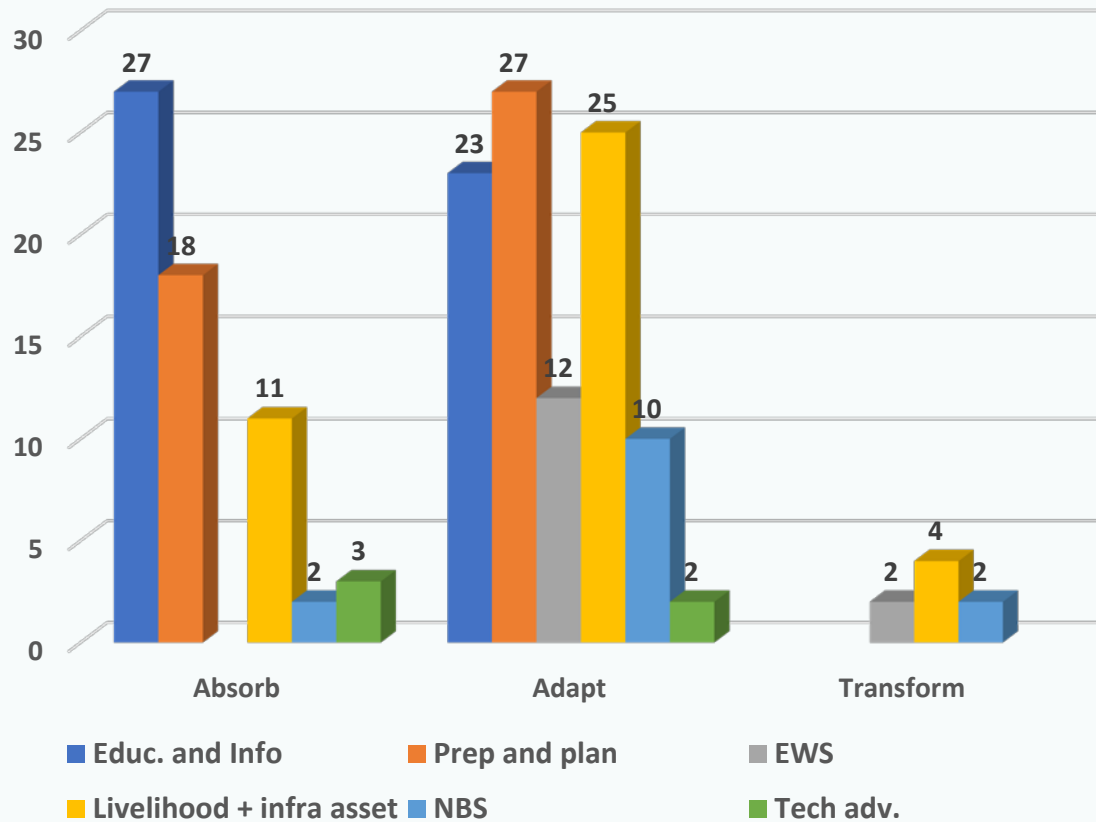


# A snapshot of Alliance Interventions

Positive linear

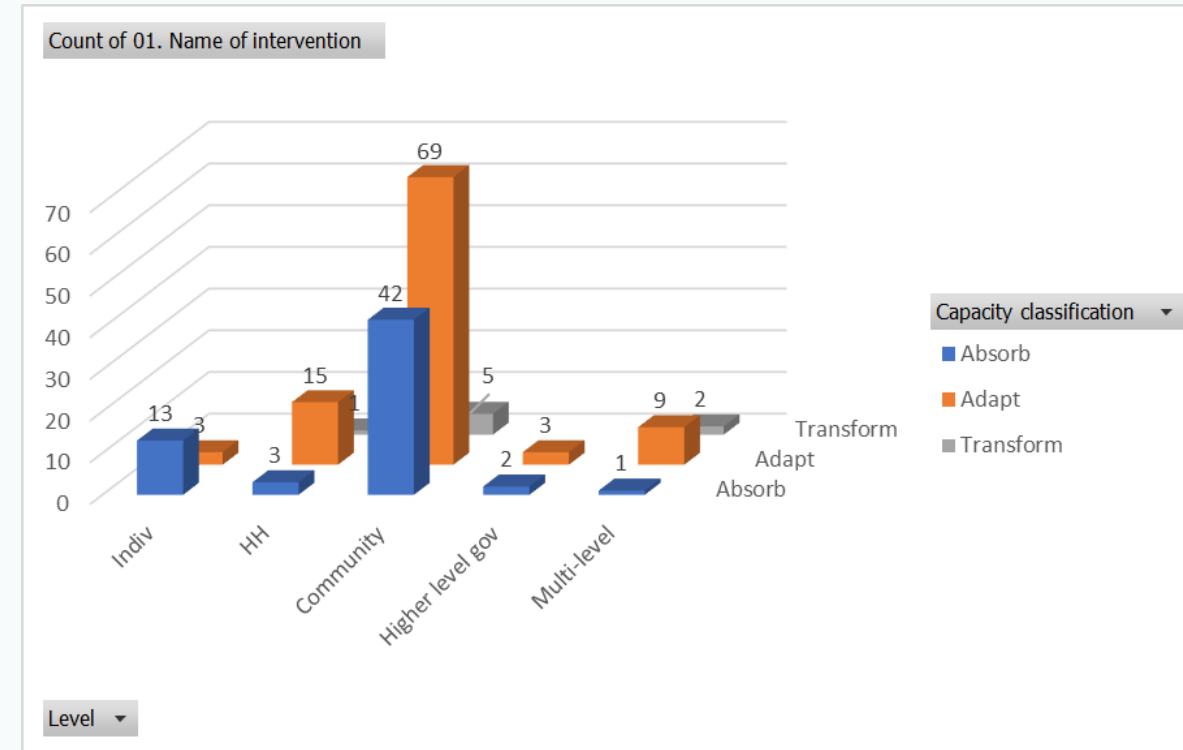
1

Built capacity by type of intervention



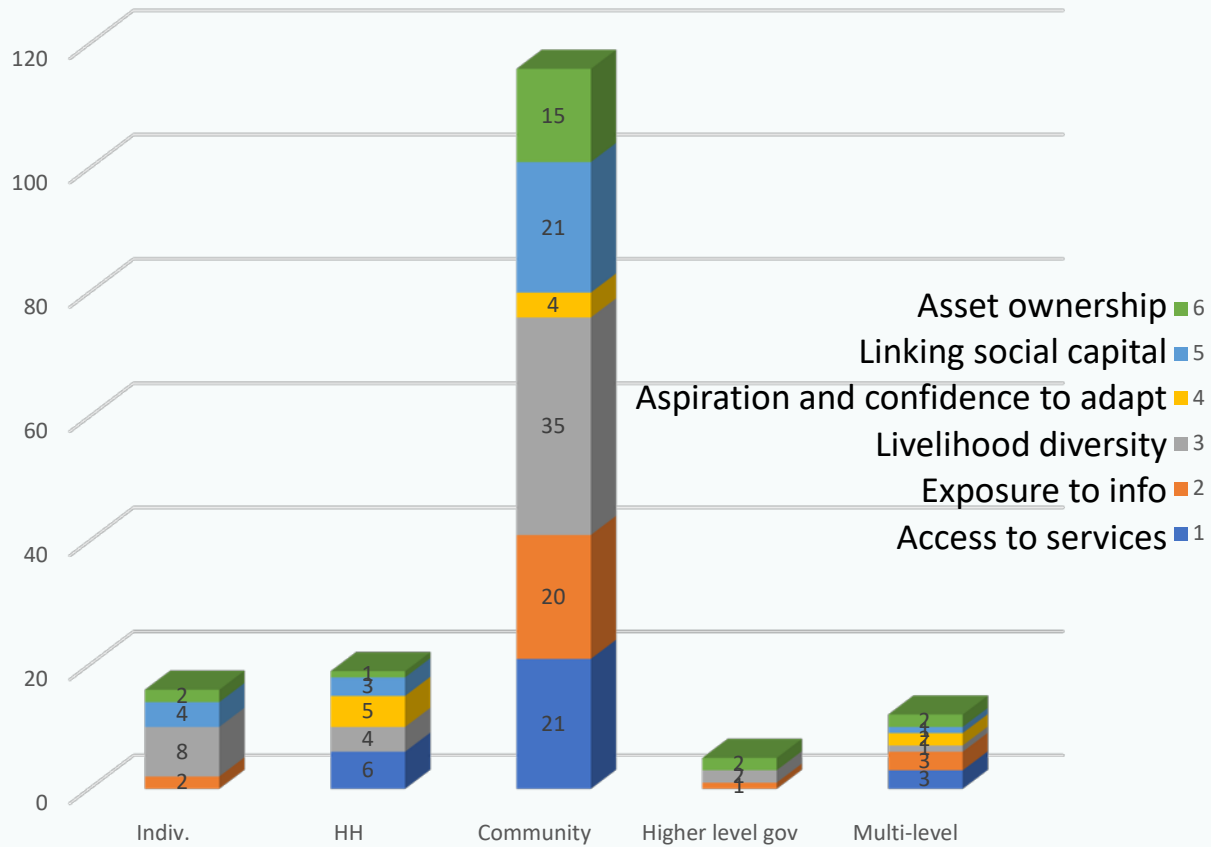
Negative linear

2

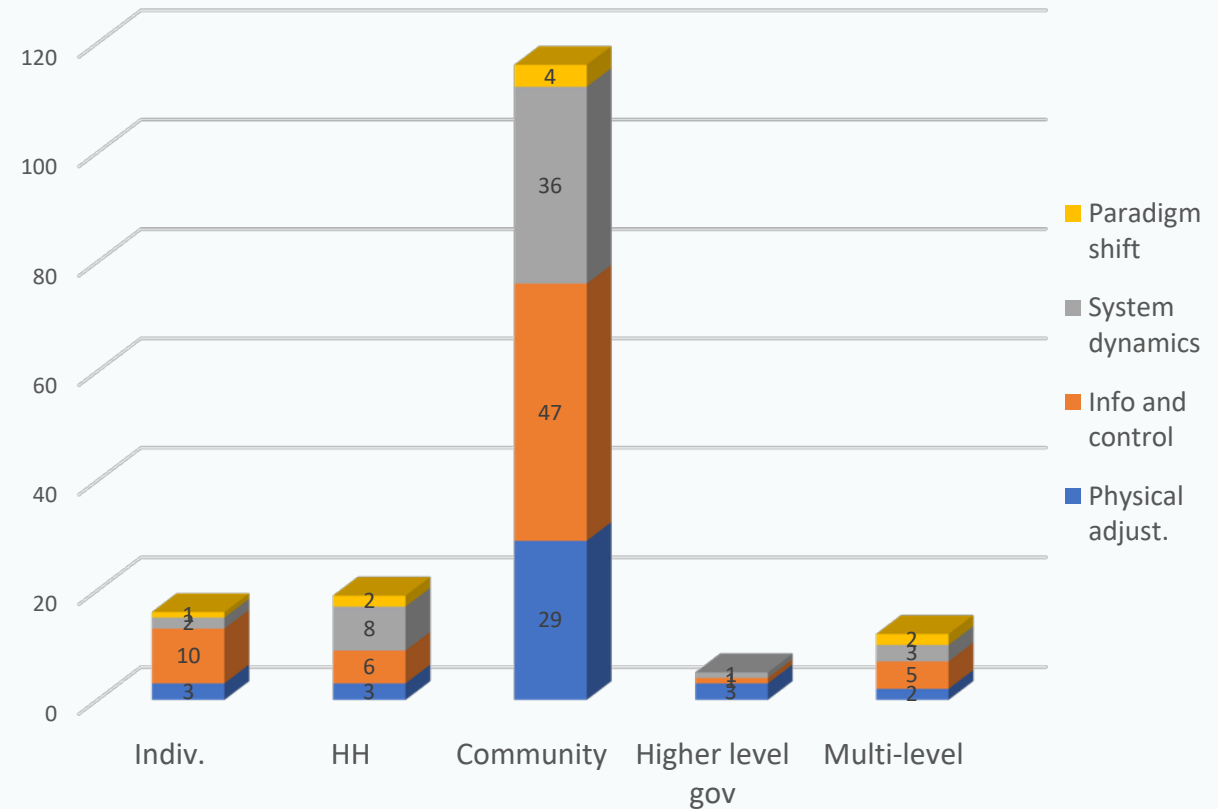


# A snapshot of Alliance Interventions

## 3 Negative linear

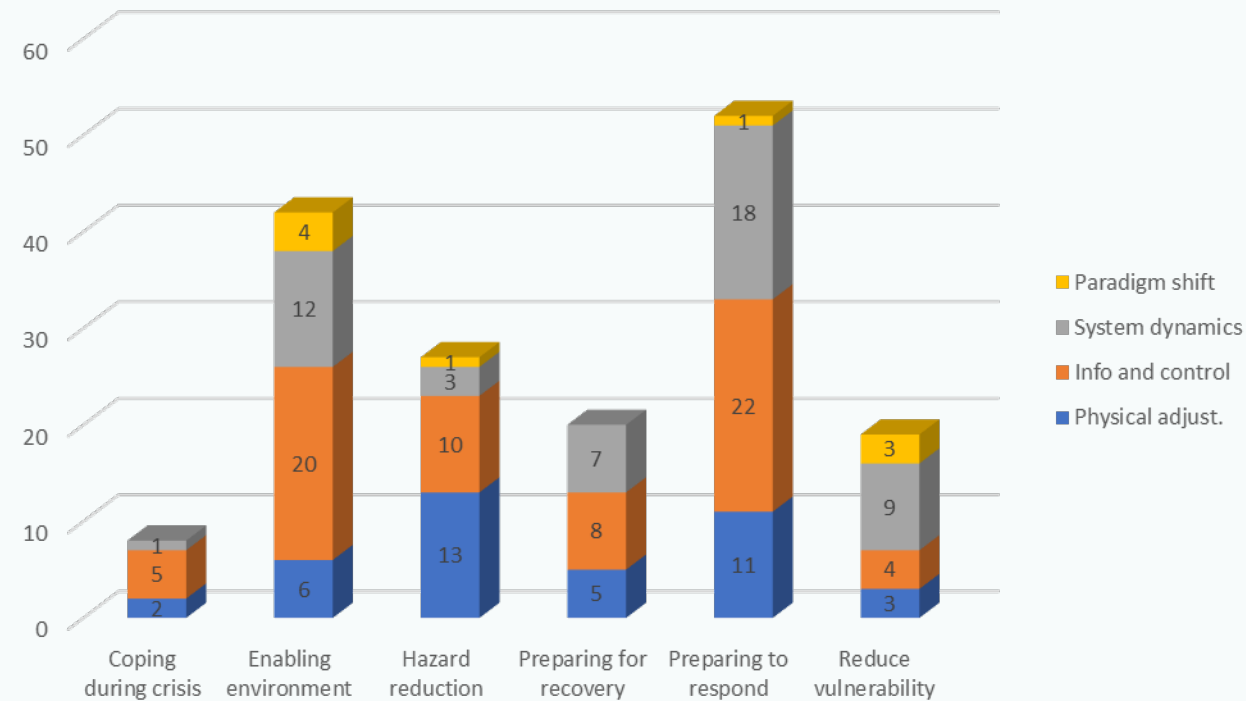
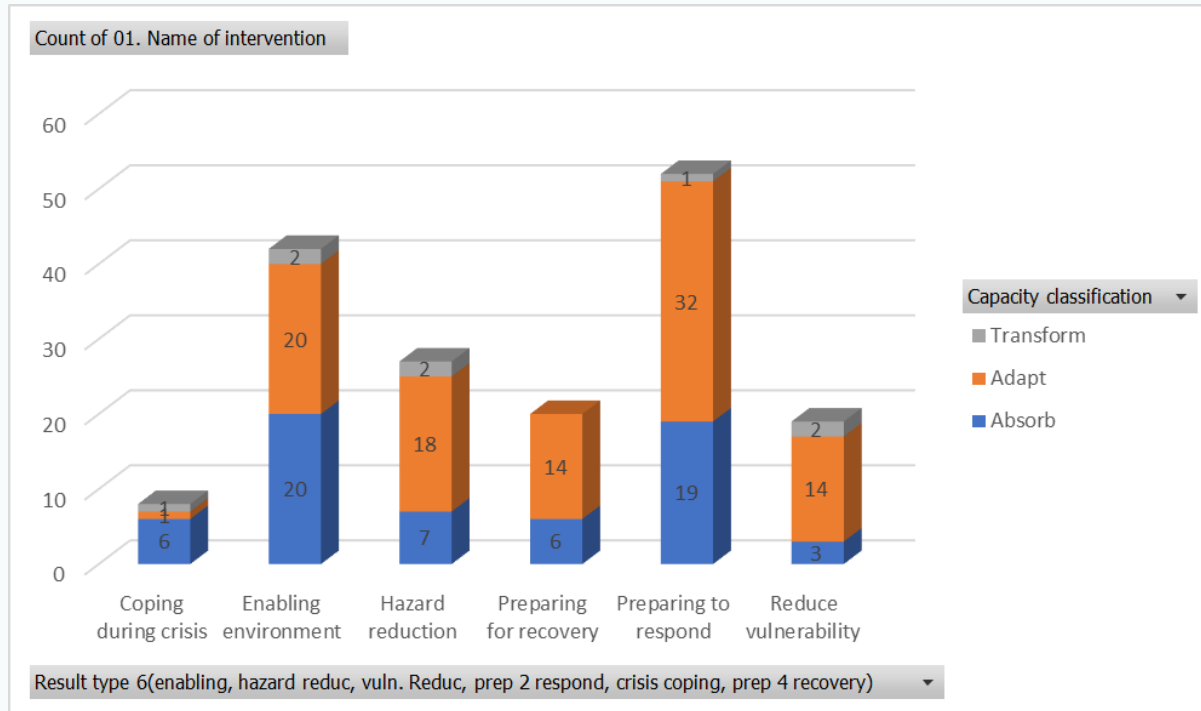


## 4 Inverse linear, quadratic



Scale dependent!

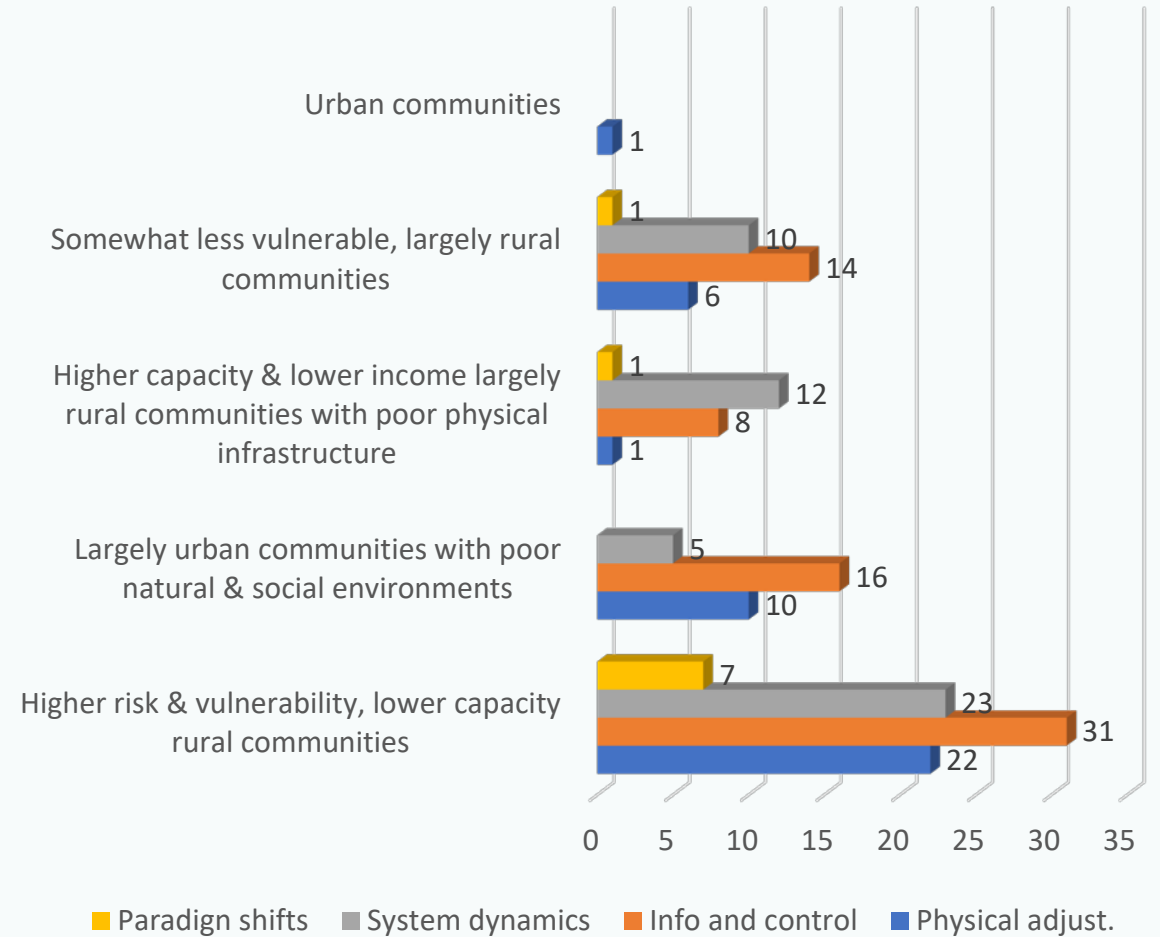
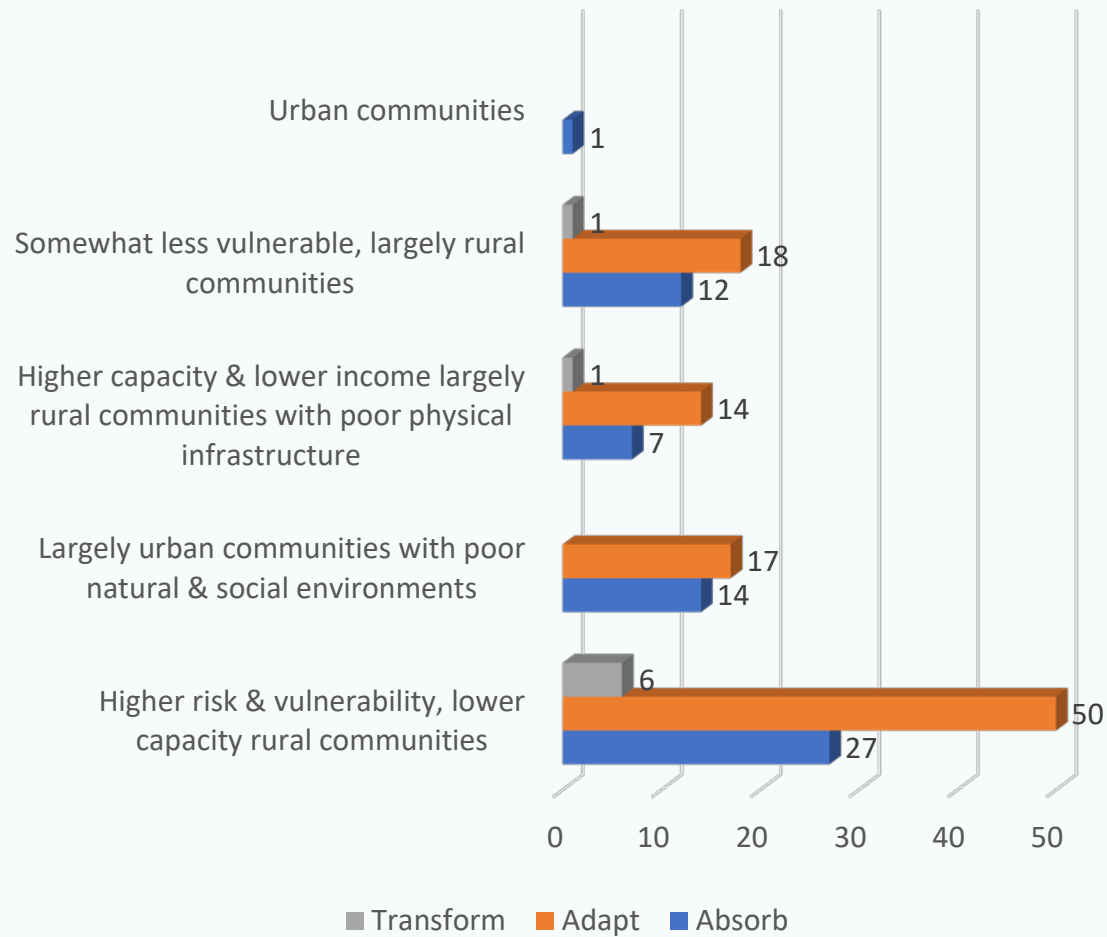
# Targeted resilience capacity and leverage by DRM cycle



Spectrum...

- Adapt to Absorb vs.
- Physical adjustments to system dynamics leverage points

# Targeted resilience capacity and leverage by community cluster



# Framework for measuring resilience-building interventions



Table 1: Types of Resilience Capacities at Different Levels

	Absorptive	Adaptive	Transformative
<b>Individual</b>	<b>Psychological</b> Risk Aversion	Aspirations Risk Tolerance Confidence Motivation	
<b>Household</b>	<b>Financial</b> Savings Credit Assets		
<b>Community</b>	<b>Livelihoods</b> Crop Insurance	Agricultural practices Input markets Market information Vocational skills Financial literacy Contract farming Diversified income sources	Roads Market infrastructure Extension Services Irrigation infrastructure Financial Institutions
<b>Regional</b>	<b>Disaster Risk Management</b> Emergency response structures Early warning information Climate/weather information Local conflict management structures		Flood protection infrastructure Green infrastructure Social Safety Nets - cash, in-kinds
<b>National</b>	<b>Health</b> Hygiene & sanitation Health Insurance	Public health monitoring	Water infrastructure Energy Health Facilities
	<b>Social</b> Local group networks Local borrowing	Trade networks Producer organizations intercommunity arrangements	Equitable household decisions Gender equity and inclusion Social equity and inclusion
			<b>Governance</b> Policies & regulations Local budget allocations Institutional accountability Active civil society Integrated Water resources management Law enforcement

*Cross-scale, process, systems change (leverage) indicator-based*



---

# Thank you!

---

---

Adaptation Futures 2023 acknowledges that the conference is taking place in Tiohtià:ke/Montréal on unceded Indigenous lands. The Kanien'kehá:ka Nation is recognized as the custodian of the lands and waters where members of the global community on climate change adaptation gather today.

Adaptation Futures 2023 reconnaît que la conférence se déroule à Tiohtià:ke/Montréal sur des terres autochtones non cédées. La Nation Kanien'kehá:ka est reconnue comme gardienne des terres et des eaux où les membres de la communauté mondiale de l'adaptation aux changements climatiques sont réunis aujourd'hui.

[#AdaptFutures23](#)