

Evaluating projects ex-post & Emerging sustainability and resilience

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Training material Part 2

Introduction

Ex post evaluation process overview at the Adaptation Fund

STEPS		CONTENT	
PART 1	PREPARATION (slide deck 1)	AF team intro, <u>Preparatory training</u> , Data consulted, Theories of Change / Sustainability drafted, Outcome(s) chosen Inception report drafted	
PART 2	DESIGN (slide deck 2)	Drafting of evaluation approach, <u>Training for fieldwork</u> – data collection methods selection, overview of data analysis tools Inception report finalized	
PART 3	EXECUTION	Evaluation fieldwork & findings analysis with support of AF-TERG consultants, Evaluation report, Sharing of results and dissemination of report	
PART 4	DISSEMINATION AND LEARNING	Sharing findings with specific audiences, Depicting evidence via 2-page memo/summary, videos, photos; Presentation(s) and learning events	

PART 2 Design of the ex-post evaluation

Fieldwork design

ata collection method

Data analysis - sustainability

Data analysis - resil

Part 2: Design of the ex-post evaluation

Objective and expectations: what will you learn?

OBJECTIVES:

- Inform the evaluators' initial evaluation approaches
- Train on data analysis tools to understand sustainability and resilience better
- Train on data collection methods / approaches selectively based on methods knowledge / rigor proposed



CONTENTS:

- FIELDWORK DESIGN & CO-CREATION
- 2.2 DATA ANALYSIS : SUSTAINABILITY TOOLS
 - **3 DATA ANALYSIS : RESILIENCE TOOLS**



Contents

- Stakeholder mapping analysis
- Site selection
- Evaluation questions set during co-creation
- Ex post timetable



Recap: What are pre-fieldwork co-creation activities and deliverables?



Co-creation process deliverables

Draft Inception Report		Final Inception Report		Accompanying Materials
IE and national counterpart understanding of the ex post purpose, scope and design (approach)	Assess data quality/availability and choose outcome(s) to evaluate based on learning value /	Discuss and agree on the best methods and approaches to evaluate the chosen outcome	Finalize field work preparations (site selection, stakeholder lists, logistics, local support, etc.)	Consider, collaborate, and plan for targeted knowledge products; sharing and learning of results and analysis
(approach)	interests	outcome	support, etc.)	results and analysis



Mapping Sectors, Shocks, Stakeholders Mapping Vulnerability - Example



ILLUSTRATIVE STAKEHOLDER INTERVIEWEES OR SECTORAL OR SHOCKS MAPPING:

- Natural Shocks: Ministry of Environment, local government, INGOs, meteorology researchers, local water users
- Financial Shocks: Ministry of Economic Development, private sector, INGOs, local farmers, etc.

nfluence/Power of stakeholder

Verify the Theory of Sustainability with Stakeholder Mapping Analysis

- Who are the key stakeholders now who influenced or who were influenced by the project outcomes?
- What are their respective levels of interest in the goals of the project now?
- What are their respective levels of influence or power (relative to other stakeholders) in affecting the goals of the project?

High Power, Low Interest	High Power, High Interest
Meet their needs	Key player
Keep Satisfied	Engage Closely
Low Power, Low Interest	Low Power, High Interest
Least important	Show consideration
Minimal effort	Keep Informed

Interest of stakeholders

YOU CAN UPDATE AND VERIFY THE STAKEHOLDER ANALYSIS WITH FIELDWORK (see next slide)

Stakeholder mapping analysis tool - example



Explore whether identified stakeholders were engaged in the project, and how/in what ways:

- Did their engagement in the project's results change ex post (their power and/or interest)?
- If yes, When? Why? And how does this change affect their participation, resources, etc., now?
- Have (new) key stakeholders emerged since project closing?

Examine how did their power and interest since project closing influences the sustainability of outcomes:

- Did activities or results change?
- Did their level of participation or resources change?

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• Did new outcomes emerge?

Mapping project activities' intensity to narrow down site selection





Mapping project activities helps narrow down site selection options

<u>Mapping concentration and isolatability</u> - Where are the project areas, and where were the activities located? Where are the most sectoral participants concentrated?

Identify the concentration of different activities. Higher concentration areas make better fieldwork

NGO1 NGO2 NGO3

Show geographic isolatability of AF project (regarding other organizations *concurrently* implementing projects)



Setting up your evaluation questions during co-creation





- What activities or results **last, still function?**
- **Assumptions** made at (or after) closure
- **Unexpected outcomes** (including maladaptation)
- **Emerging outcomes** (new paths to good results)
- How the outcome's sustainability was affected by shocks, stresses, underlying systems
- **Sustainability ratings** level of accuracy?
- Lessons for next design for sustainability, and for resilience

Stakeholders to decide in co-creation: Are these all priorities for the project and its stakeholders?



Understanding barriers and drivers of sustainability

- Depth and breadth of local **ownership**
- What resources, capacities, and partnerships sustained results
- Shifts in **power relationships**
- Differentiated experiences of women / men, rich/ poor, young/ old
- Uptake of final evaluation recommendations
- **Lessons** for this and other projects

What other questions came from the cocreation process?

Co-Creation Logistics Planning

Before going to the field, the IE and evaluator should make sure there is preparation on logistics

Key considerations of logistics and staffing needing IE help:

Multi-sectoral team	Select a multi-sectoral team, women/men, with differentiated sectoral and language expertise, and translator(s) if needed
Distances to sites	Consider distances to sites given funding and timing; consider vulnerability to climate change
Site visit logistics	Plan logistics such as hotels, plan visits with communities, and clear funding / per diem with national partners if needed
(Former) Staff support	One former staff member from the project should accompany the evaluator to the field for introductions and context both qualitative and/or quantitative phases.
Debrief logistics	Plan debrief logistics in each region including site, invitees, dates, then HQ

Recap: Ex-post evaluation timetable - SEIE mixed-methods example

Date	Task
Weeks 0-3	Preparation
	Part 1 Training on ex-post sustainability and resilience evaluations Theory of Change/ Sustainability, etc. Draft
	inception report is completed, received, and analyzed to inform co-creation process. Stakeholders agree on
	evaluation approach and sector/ site focus of the ex-post evaluation.
	Part 2 Training on fieldwork and methods considerations; what is needed logistically (data, fieldwork) & for learning.
	Methods customized to finalize inception report.
Week 4-6	Fieldwork
	Team trained, tools pre-tested, sites informed of visit, and methods selected in final inception are used. Days per site
	depend on methods (can range from 3-8 days/site).
	Consultations with AF sustainability and resilience experts during each site visit to confirm data quality and to
	address any outstanding questions at that site and/or for the next sites
Week 7	Debriefing
	Preliminary debriefing done in communities pre-leaving.
	Regional or national-level debrief and confirmation of results done at the end of fieldwork.
	Analysis, preliminary debrief with AF team.
Weeks 8-9	Analysis & Write-up
	Writeup and additional analysis with AF team, preparation for co-creation stakeholder HQ debrief presentation.
Weeks 10-11	Review
	Draft document shared; feedback given. Revisions/edits as needed with review panel/response matrix.
Week 12	Presentation
	Presentation to AF and co-creation IE/NIE and report finalized, including 2 page local debrief document.

2.2 - Data analysis - Sustainability framework

Contents

- Verify the Theory of Sustainability (TOS)
- Analyze findings through the Sustainability Framework
- Sustainability Tools and Analysis
- Emerging Outcomes and Unintended Outcomes
- Sustainability Check List

Recap Theory of Change to Theory of Sustainability: Belize





Recap: Analyzing sustainability through the sustainability framework



Example Project Overview: Samoa ex post evaluation

PROJECT TITLE: *Enhancing resilience of coastal communities to climate change"* **PROJECT DATES:** 2013-2018

FOCUS: improving infrastructure in coastal communities and assisting districts with coastal infrastructure management planning

IMPLEMENTING ENTITY: UNDP

EX POST FIELDWORK: November 21- January 22

SCOPE OF EVALUATION:

Seven infrastructures built

- •Site 1: Salei'a 1 km rockwall and Salei'a 28m bridge
- •Site 2: Manase twin 35m wave breakers and Manase 90m rockwall
- •Site 3: Vaiala 0.66km seawall
- •Site 4: Salimu/Musumusu 2.2km road and 1km rockwall





TIP: Tracing outcome sustainability without measured outcomes – Samoa Theory of Sustainability (TOS) Example

	Planned output	Actual output	Actual outcome?
assets	140km coastline and riparian streams introduced with resilient shoreline and	The Vaiala Seawall (0,66 km) and the Saleia Rock Wall (1 km) were both completed	Data linking to actual outcomes: Seawall construction is having mixed
nent 2	flood protection measures, including vegetation planting in at least 60 km coast and 50 km of riparian streams, and beach replenishment techniques	Barely 3 km out of the planned 10 km of the new road for Salimu/Musumusu were constructed to protect critical sections of the access road prone to coastal erosion	results on tourism: it allows the protection of touristic infrastructures, but it also contributes to sandy beach destruction, reducing tourism Planned outcome ToS : Increased protection of
Compo	coastline	Replanting coverage was equivalent to 18.9 hectares covering 14 sites	the road from coastal erosion
RISKS: need to replenish/repair wave breakers after storm surges		Replanting has a positive environmental impact with the limitation of erosion, flooding and preservation of biodiversity	
RISKS: possible acceleration of sandy beach removal, contributing to ecosystem damage.			Planned outcome ToS : Alleviation of flooding of main roads and properties during heavy rain
1 w	. Identify examples in the final evalu with the outcome and intermediate states of secural entropy of securate e	IS2: Infrastructure to manage impacts induced by climate change and variability on	

shoreline, water supply, and road

access are strengthened and can

endure climate shocks

- 2. Check actual outcomes of seawall construction and replanting
- **3.** Check data on risks in order to know if the outcome was sustained *e.g. is there beach erosion, is the infrastructure weak*?

Findings: Samoa project ex post evaluation

EX POST SUSTAINABILITY

Five years after construction, the structures across four sites remain physically intact but some structures showed signs of deterioration.

Sustainability practices for maintenance of walls and roads were diverse. Most structures were adequately maintained at household, village, and government levels, but some were not maintained even given deterioration.

Conditions driving sustainability:

- High ownership
- Partial maintenance
- Capacities not evaluated







Infrastructure site 3: Vaiala seawall - no visible defects (landside view, left; seaside view, right)

Infrastructure site 4: Salimu/ Musumusu rockwall - rocks are crumbling into wetlands and water is collecting on the road

Project	Sustainability	Resilience	Impact
Samoa	 Medium-High sustainability High ownership Assets generally maintained although a few instances of deterioration 	 Various levels of resilience Passive barriers (negative) were observed Some resistance characteristics (positive) were observed 	Adequate protection (decreased vulnerability but risks still high) All seven structures evaluated addressed vulnerabilities and enhanced the adaptive capacities of communities regarding shoreline (coastal) and flood (wetland) hazards.

Ex: Analyzing sustainability in Samoa (2013-2018, Coastal Management/DRR)



STRATEGY

CONTEXT Backdrop of the strategy and results

Supporting sustainability throughout implementation

Context and Strategy: Questions to ask

ADAPTATION FUND



VERIFICATION OF SUSTAINABILITY

CONDITIONS DRIVING SUSTAINABILITY

Enabling sustainability, including emerging outcomes

Conditions Driving Sustainability: Desk review vs Ex-post Fieldwork

Sustainability assessment	Findings from desk review – projected likelihood of sustainability		Findings from fieldwork, including emerging – verification	
Ownership Sustained motivation; who benefits from the intervention enough to sustain it locally? Who is using it/ demanding it?)-		
How is the intervention being resourced to be sustained? Are these financial, in-kind, technical, or other?		YOU WILL FILL IN THIS TABLE WHEN DOING YOUR		
<u>Capacities</u> What are the necessary project knowledge and skills to be transferred to national stakeholder partner? How will training be sustained for specific sectoral behavior change among new entrants onward?		SUSTAINA ANAL See data template	ABILITY YSIS input for full	
Partnership What continued project knowledge and skills are needed from which stakeholder partners? What local contracting with direct and indirect partners are needed to sustain project operations?		CUDI		23



CONDITIONS DRIVING SUSTAINABILITY

Enabling sustainability, including emerging outcomes

Conditions Driving Sustainability: Desk review vs Fieldwork - Samoa

Sustainability assessment	Findings from desk review –	Findings from fieldwork,
	projected likelihood of	including emerging –
	sustainability	verification
Ownership Sustained motivation; who benefits from the intervention enough to sustain it locally? Who is using it/ demanding it?	Community Integrated Management (CIM) Plans are to lead to local ownership and locally determined sustainability activities (e.g. planting, road clearing)	Ownership of passive asset infrastructure not as vita bit CIM plans not approved. Some local maintenance (planting and rockwall maintenance good but internal floodwall was broken because caused flooding near homes, so bad.
Resources How is the intervention being resourced to be sustained? Are these financial, in-kind, technical, or other?	No mention of other donor investments other than concurrent CIF /PPCR grants (not overlapping). CIM Plans are to foster local investments of both government and personal funds to maintain assets	Other (World Bank) donors invested in rockwall trench repairs at bridge. No CIM plans launched. Little was locally invested other than labor to maintain some plantings adjacent to seawalls and some rock repairs. The Ministry of Roads gave no support.
Capacities What are the necessary project knowledge and skills to be transferred to national stakeholder partner? How will training be sustained for specific sectoral behavior change among new entrants onward?	CIM Plans are to foster local maintenance investments in infrastructure and natural upkeep through work groups	One rockwall and one seawall had local groups planting plants, palms, cleaning rubbish from a mix of public funds and personal labor, and one tourist operator-maintained seawall but only to minimize harm
Partnership What continued project knowledge and skills are needed from which stakeholder partners? What local contracting with direct and indirect partners are needed to sustain project operations?	Ministry of Roads are to maintain roads, communities are to maintain assets via CIM Plan local inputs with some government grants. No mention of training to maintain assets by locals	Ministry uninvolved entirely, Some local communities maintain assets, others not. New capacities were needed (trenches) to maintain floodwall fixed after being broken.

CONDITIONS DRIVING SUSTAINABILITY

Enabling sustainability, including emerging outcomes



The final evaluation of the **FORECCSA** project projected a **very positive sustainability rating.**



YOU WILL VERIFY THIS SUSTAINABILITY PROJECTION FROM THE FINAL EVALUATION BY LOOKING AT OWNERSHIP, CAPACITIES, RESOURCES, AND PARTNERSHIPS Note: No partnerships were found in the sustainability rating

SUSTAINABILITY PROJECTION

Mapping other (incl' non-climate) external stresses and shocks

Global Shocks

- Exchange rate
- Trade policies
- Price hike/ drop National Shocks of commodity
- ...

- Coup or political unrest
- Earthquake Local Shocks
- Inflation
 - •••

• Flood

...

- Landslide
- Violence/Gang Activity



Asian Financial Crisis (1997)

Map out your stresses and shocks

DISTURBANCES

Endured by the outcome(s)

Sustained (?) Outcome(s) Emerging (?) Outcome(s)

Field verification: emerging vs. unintended outcomes - Ecuador example



Sustained
(?)Emerging
(?)Outcome(s)Outcome(s)

Uncovering unintended results: example of infrastructure assessment

Do not forget to check unintended outcomes

- Negative externalities of the infrastructure construction e.g. Displacement of people, creation of harmful income practices (e.g. local sand removal) ultimately harming the infrastructure)
- Environmental impact of the use of infrastructure e.g. Road and electricity grid extensions are closely related to deforestation. Opening a road will result in more charcoal production and the towns to which it links.
- Shocks and stresses generated by the infrastructure

e.g. A road leads to deforestation, deforestation leads to an increased risk of landslides (e.g. a sea wall might lead to water behind the sea wall not having tides anymore, impacting wildlife and thus livelihoods.)





Reviewing sustainability



Sustainability Checklist

- Context What are the types of capital influencing sustainability? What were assumptions made by the project about positive trajectories after closing/ex-post?
- Strategy- What was most sustained and relevant from the original design? Was adaptive management used during implementation to foster durability? Did risk management play a role? Was exit planned and well-done? How did sustainability ratings hold up in reality?
- □ **Conditions driving sustainability** Is it locally owned? Are there resources and partnerships sustaining results? How are capacities to continue implementation being developed? By whom?
- □ **Disturbances & evaluation of risks** What shocks and stresses affected sustainability? How and what was done to mitigate them?
- Emerging sustainability outcomes What new pathways to sustain results through revised design or implementation did local participants and partners create? What does this show about relevance? Any maladaptation or other unintended outcomes?
- □ Impact(s) AF: Was vulnerability to climate change reduced through the sustainability of results? MIE/NIE: Was their (possibly different) desired impact achieved?

Stretch and drink break



Questions?

Contents

- Going from Sustainability To Resilience
- Analyze findings through the Resilience Framework
- Resilience Tools and Analysis
- Resilience Checklist

Learning across Sustainability and Resilience Tools – Vulnerability example



Sustainability Questions:

Is the <u>vulnerability</u> that the project was designed to address - through the outcomes achieved - STILL reduced/improved? E.g.

- Are there resources allocated and partnerships working to sustain results?
- Are capacities being built among local actors to lead, and are 'new entrants' being trained?
- Are there signs of local or national 'ownership' either via expected pathways in the Theory of Change or <u>new</u> emerging outcome pathways? Etc.....

Given what was sustained, is it climate resilient?

Resilience Questions:

Has <u>climate vulnerability</u> been reduced / well-being or livelihoods improved?

- Has the quality / availability / relevance / use of climate information increased?
- Have capacities to use climate information improved (skillsets, decision-making, plans, policies, practices)?
- Has exposure or sensitivity gone down as a result of that use?

Analyzing resilience through the resilience framework



Example Project Overview: Ecuador ex post evaluation

PROJECT TITLE: Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in the Pichincha Province and the Jubones River Basin, FORECCSA

PROJECT DATES: 2011-2018

FOCUS: Food Security, including sub-sectors: (i) land rehabilitation; (ii) protection; (iii) regeneration; (iv)

reforestation; (v) water management; and (vi) storage structures

IMPLEMENTING ENTITY: UN World Food Programme

EX POST FIELDWORK: May - June 2022

SCOPE OF EVALUATION: Three Parishes with food and water interventions

Site 1: Nabon – water catchments, catchments/pipes (1.30 km/378 families), family gardens (105 families)
Site 2: Cochapata – 3 communal reservoirs, pipes (2.50 km/400 families), family gardens (54 families)
Site 3: Celén (too few interviewees to collect data) – catchments/pipes (4.10 km/75 families), family gardens (200 families)



Findings: Ecuador ex post evaluation

EX POST ADAPTATION & RESILIENCE

Four years after project closing, the water piping and reservoirs at the three visited sites remain intact (though a landslide in Nabón resulted in a collapsed municipal water line, leaving people to extract from the river to replenish their reservoirs).

Sustainability practices for maintenance of reservoirs and pipes were sufficient and communal. **Most structures were adequately maintained**, and in Cochapata they provided a valuable source of water, especially during dry periods (but insufficient in Nabón).

Observed RRT characteristics:

- Redundancy from reservoirs in Cochapata, not Nabon
- At Scale Large water and food storage at Cochapata; Nabón faced outmigration
- Flexibility Cochapata was testing new crops (coffee)
- Feedback loops/continual Cochapata reservoirs maintained by younger generation

Rehabilitated reservoirs in Cochapata

Project	Sustainability	Resilience	Impact
Ecuador	 Medium level of Sustainability High ownership for reservoirs, pipes; low ownership for family gardens Weak/ absent partnerships Water assets communally maintained; private food production not maintained 	 Low level of Resilience, Low-Medium levels of Adaptation Water access improved; some adaptive value Few resilience characteristics were observed; some resistance characteristics observed 	Improved provision of water for specific families, low agricultural impact largely due to outmigration (decreased vulnerability but risks still high) All water structures evaluate addressed climate vulnerabilities and enhanced the adaptive assets. Food security measures did not reduce climate vulnerability.





Abandoned garden in Nabón

Example: Analyzing resilience in Ecuador – FORECCSA (2011-2018)



DISTURBANCES

Addressed by the sustained outcome

Climate Disturbances – example intervention

Climate change stresses

Gradual and/or cyclical changes in:

- Temperature
- Rainfall, rainfall patterns
- Sea level (rise)

Climate change shocks

Sudden ((un)expected) events:

- Hurricane or Typhoon
- Tornado
- Flood
- Storm Surge
- Seasonal Drought



EXAMPLE - Outcome: Improve food security for drought prone region


DISTURBANCES

Addressed by the sustained outcome

Climate Disturbances– example map





Resistance – Resilience – Transformation

SYSTEMS & R-R-T

Systems and RRT Typology – Mauritania Example



Project Name: PARSACC PROJECT – Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Mauritania

Country: Mauritania

Years implemented: 2014 - 2019 (5 years)

Project component 1 (C1):

Support technical services and the communities they serve to (a) better understand climate risks, their impact on livelihoods and food security and (b) facilitate participatory decentralized adaptation planning

Project component 2 (C2):

Design and implement concrete adaptation measures identified through community adaptation planning that aim to combat desertification and land degradation

Project component 3 (C3):

Design and implement concrete adaptation measures identified through community adaptation planning that aim to diversify and strengthen the livelihoods of the most vulnerable population

- Government technical services
- Adaptation plans
- Risk monitoring system
- Dune fixations
- Reforestation
- Water retention structures
- Trainings
- Cereal banks
- Fuel efficient stoves

SYSTEMS & R-R-T

Resistance – Resilience – Transformation

Systems & RRT Typology – Mauritania Example

Systems Context and trends	Structures	Function
Human systems: Context: project focuses on pastoral, agro-pastoral and rainfed	C1 & C3 Decentralized and participatory adaptation planning C3 Diversified livelihoods	d C1 Better understanding of climate risks/impacts by targeted communities
agriculture production		U WILL FILL
Nexus: Context: fragmentation of agricultural plots, unequal access to land (especially vulnerable groups,	C2 & C3 Concrete adaptation ac W C1 (Inadequate) agricultural pra (poor processing and conservati	HEN DOING YOUR RESILIENCE ANALYSIS
women)	Se	e data input Indate for full
Natural systems: Trend: isohyet (@250mm) moving farther south	C2 Land/soil and arable land desertification, land degradation	table il and hydrological cycle

Evaluating resilience : Systems & RRT Typology



Resistance – Resilience – Transformation



Resistance – Resilience – Transformation

SYSTEMS & R-R-T

Applying the resilience framework : R-R-T Typology - example

Species translocation out of native range for anticipated future conditions

Some individuals migrate to new ranges and populate

Protected areas established in current. native range



TRANSFORMATION

RESISTANCE



SYSTEMS & R-R-T

Resistance – Resilience – Transformation

Discuss R-R-T typology

Position on R-R-T Typology	Findings from desk review – projected strategy/adaptation approach	Findings from fieldwork- verified strategy		
Transformation: Actions designed to advance transition towards new structures and functions				
Resilience: Actions designed to improve the capacity of a system to return to desired past or current structures and functions, while generating or utilizing some new elements			THE RELEVANT CELL(S) WHEN DOING YOUR RESILIENCE ANALYSIS	
Resistance: Actions designed to maintain current/ historical structures and functions			See data input template for full table	



SYSTEMS & R-R-T Resistance – Resilience – Transformation

Discuss R-R-T typology – Mauritania example

Position on the RRT	Explanation (note: desk review findings only)
Transformation	n/a
Resilience	Human systems – social capital and partnership building – overall capacity of the human systems to manage climate risk improved, new structures (coordination among actors who were not previously) and functions (partnering and working towards common interests, understanding climate risk).
	Livelihood diversification – IGAs and reinvestment into the community, increased economic autonomy of women; designed to return to current or past structures and functions by restoring income opportunities lost from drought, land degradation.
Resistance	Human systems – EWS – incomplete and in draft form, not fully executed.
	Human systems – soil and water conservation; structures and functions put in place to passively maintain past/current structures and functions.
	Natural systems – protected lands, fixing dunes, agriculture lands, watershed, forests, vegetation cover; all designed to actively maintain current and historical structures and functions; some use for humans but also some to allow for recovery of ecosystems.
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ADAPTATION

How assets and capacities are used

Analyzing adaptation – climate information

You are looking for evidence of:

Improved...

- Relevance of

- Accuracy of
- Timeliness of
- Uptake of
- Access to

...climate information.







This...

New met stations installed provide meteorological data on rainfall and other seasonal shifts

Early warning system (EWS) developed for flooding events

Expected temperature and precipitation change incorporated into sector policy

Enables this:

With training/ data interpretation, farmers know when to plant/harvest for minimal crop loss

Community can mobilize to minimize deaths and property loss

Infrastructure can be designed with necessary heat/extreme event robustness

Analyzing adaptation – climate vulnerability

You are looking for evidence of:

Reduced ...

- Exposure: Degree to which you are unprotected
- Sensitivity: Degree to which you're affected/fragility

And

Improved...

 Adaptive Capacity: Ability to respond

...by/to climate disturbances.



With training/ data interpretation, farmers know when to plant/harvest for minimal crop loss

Community can mobilize to minimize deaths and property loss

Infrastructure can be designed with necessary heat/extreme event robustness



EXAMPLE Questions to consider:

- Are the farmers able to make full use of the data available?
- How and in what ways has the data (not) been useful?
- Did farmer's income increase as a result? If it did, how was this income spent? (school, housing, other?)
- Did having the met data lead to any unexpected results? Etc.
- What happens to community members whose land/property is lost in the flood?
- Where do survivors go/live temporarily? After that?
- Are there funds and systems in place for maintenance of the EWS?
- Are the most vulnerable community members benefitting? Etc.
- Is the new policy/are the new requirements enforced?
- Are there funds for maintenance?
- Who has benefitted from the new infrastructure and how are those benefits distributed? Etc.

Most vulnerability is tied to unmet development needs and not climate change

CHARACTERISTICS

What characteristics the outcomes exhibit

RRT Characteristics – template

Resistance-Resilience-Transformation characteristics	Findings from desk review – projected characteristics	 Findings from fieldwork – verified characteristics 		—
Redundancy				
(Creating a duplicate or back-up system to support resilience to climate disturbances if/when one option fails)		-	0-	
Diversity			¥	
(Reflecting a wide and deep variety of actors and inputs working toward common goals in complexity and climate resilience)			YOU WILL FILL IN THE	
At Scale			RELEVANT	
(Providing the temporal or spatial scale needed for natural and/or human systems to maintain or change their functions and/or structures in the face of climate disturbances)			CELL(S) WHEN DOING YOUR	
Flexibility			RESILIENCE	
(Demonstrating flexibility – around an equilibrium – in approach and strategy towards reaching common objectives)			ANALISIS	
Continual				
(Providing or developing communication, and/or coordination to sustain results)				

Explore characteristics of RRT – CONTINUAL

Does anything about the sustained outcome reflect this characteristic?



Example Questions

- E.g. What kinds of communication, and/or coordination has developed at this project site to sustain results?
- Does information get to whomever needs it to respond to climate impacts at this project site? Is it done in a new or different way because of the project?

Examples

CHARACTERISTICS

What characteristics

the outcomes exhibit

- Coordination mechanism: Established and active cross-sector and representative national committee or group to facilitate long-term planning and short-term decision-making at the sector/subsector specific level
- Open communication channels: Regular (multi) village level representative meetings around addressing specific local climate risks and corresponding response measures



CHARACTERISTICS

What characteristics the outcomes exhibit

Explore characteristics of RRT – CONTINUAL example

Example questions to consider

How and in what ways were the final communication activities (that were sustained post-project) "innovative" ?

> What behavioral changes and resource allocation changes resulted from the communications?

What decision-making was informed by information gathered and/or shared through these activities?

EXAMPLE: Country/project

Samoa: "A large number of the most innovative communication activities started at the very end of the project, missing out opportunities to generate knowledge and lessons learned as well as to increase interest and CCA sensibility." (Final Evaluation)

At scale

Dynamic

Explore characteristics of resilience – <u>AT SCALE</u>

Does anything about the sustained outcome reflect this characteristic?



Remember to consider both time and space

Continual

At scale

Diverse

Flexible

Redundant



Technical Evaluation Reference Group ADAPTATION FUND

Example Questions

- Temporal scale: e.g. Did sufficient time pass in order to see desired results (especially for natural systems)? In what way(s) did the outcome change the speed responsiveness to climate disturbances at the project site?
- Spatial scale: e.g. Is there a cluster of sites that together comprise of a substantial benefit at a regional or national scale? Did the project results change the impact of the climate disturbance?

Examples

- Mangrove: Adequate time for restoration of a natural buffer to climate disturbances
- Early warning system: Increased speed of (human) responsiveness to climate risks...
- Afforestation: Area of restored natural resources is large enough to support ecosystem services
- Storm surge (sea) wall: Hard infrastructure provides a physical buffer from a targeted climate disturbance... 50

CHARACTERISTICS

What characteristics the outcomes exhibit



CHARACTERISTICS

What characteristics the outcomes exhibit

Explore characteristics of resilience – <u>AT SCALE examples</u>



Explore characteristics of resilience – DIVERSE

Does anything about the sustained outcome reflect this characteristic?



Example Questions

Human systems: e.g. Does the project site show inclusion for women and girls, disabled, poor, and/or other marginalized groups? Does the site reflect diversity or diversification in other ways?

 Natural systems: e.g. Is ecological biodiversity a factor in sustaining results? Remember to consider both human diversity and biodiversity

Examples

CHARACTERISTICS

What characteristics the outcomes exhibit

- Engagement of marginalized groups in decision-making: People who are historically left out of decision-making positions now actively participate
- Gender equity in leadership: Women and girls, non-binary and/or trans people have leadership roles
- Ecological diversity: A wide variety of species with different niches that have coevolved together are not threatened or endangered

Continual

At scale

Diverse

Flexible

Redundant



CHARACTERISTICS

What characteristics the outcomes exhibit

Explore characteristics of resilience – DIVERSITY examples



Explore characteristics of resilience – FLEXIBLE

Does anything about the sustained outcome reflect this characteristic?

Examples

- **Coordination**: Entities that are responsible for specific climate disturbance management are now sharing resources and information
- **Partnership**: Active cooperation facilitating complex decision-making around common goals in relation to climate disturbances

Continual

At scale

Diverse

Flexible

Redundant

Example Questions

- e.g. What kinds of flexibility and adaptability are illustrated at this project site? How were
 these capacities demonstrated?
- E.g. If one path/ strategy/ approach did not work was another tried? Why, or what triggered the change? By whom?



Coral reefs are an example of a dynamic system

What characteristics the outcomes exhibit

CHARACTERISTICS



CHARACTERISTICS

What characteristics the outcomes exhibit

Explore characteristics of resilience – FLEXIBILITY example

EXAMPLE: Country/project

Continual

At scale

Diverse

Flexible

Redundant

Samoa: "25+ districts with coastal infrastructure management (CIM) Plans reviewed and updated with climate change risks fully integrated, through balanced involvement of men, women, and youth population." (FE)

Example questions to consider

How are decisionmaking processes or actions regularly better informed as a result of the CIMS? For whom?

> Are there new systems in place for reinforcing the gains in managing climate-integrated coastal infrastructure?

Explore characteristics of resilience – <u>REDUNDANT</u>

Does anything about the sustained outcome reflect this characteristic?

Examples

- **Back-up systems**: Two evacuation routes through different terrain in case one is closed off or damaged
- Parallel or duplication of effort: An observer manually measures rainwater levels in addition to the hydro met station gauge

Technical Evaluation Reference Group ADAPTATION FUND

Continual

At scale

Diverse

Flexible

Redundant

Example Questions

- e.g. Are there duplicate systems or back-up systems involved in responding to a specific climate disturbance at this project site?
- If one path, approach, or strategy fails, what are the other options available?



CHARACTERISTICS

What characteristics the outcomes exhibit



CHARACTERISTICS

What characteristics the outcomes exhibit

Explore characteristics of resilience – <u>REDUNDANCY example</u>

Example questions to consider

What specific functions does each of the natural resource assets provide in the context of climate disturbances?

Do the functions overlap or repeat? To what extent? What is the relationship between duplication of effort (e.g. multiple defenses in one place) and specific climate disturbances?

EXAMPLE: Country/project

Mauritania: "Natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change; e.g. Tree plantings, water and soil conservation, defenses, and village plantations." (FE)



Redundant



CHARACTERISTICS

What characteristics the outcomes exhibit

RRT characteristics – Samoa Example – summary points

Resistance-Resilience-	Findings from desk review – projected	Findings from fieldwork – verified characteristics
Transformation characteristics	characteristics	
Continual	Some evidence of coordination/maintenance partnerships for the hard infrastructure.	The Salei'a rock wall generated some natural feedback loops between neighboring communities by physically connecting them with a communal space
(Providing or developing communication,		and requiring cooperation for maintenance.
and/or coordination to sustain results)		
At Scale	Some reclaimed land noted in the TE from the Salei'a rock wall – used for communal gardening. The space has been used for growing	The benefits of the Salei'a rock wall have the potential to maintain or change (human and natural system) functions by generating newly utilized space and
(Providing the temporal or spatial scale needed	bananas, cocoas, tamarinds, pandanus, and nitrogen-fixing gatae;	produce communal benefits in response to climate disturbances.
for natural and/or human systems to maintain or change their functions and/or structures in	completion in 2016.	
the face of climate disturbances)		
Diversity	TE indicates that all four infrastructure sites involved some collaboration amongst a variety of villagers, contractors, and	Interviews and consultations confirmed the degree of diversity of persons collaborating to maintain the infrastructure sites.
(Reflecting a wide and deep variety of actors	national government in construction of the structures and subsequent maintenance.	In terms of biodiversity, the Manase wave breaker anecdotally showed evidence
and inputs working toward common goals)		of providing protection for fish life, turtles, shellfish; and evidence of beach and
		beaches erode/move, with unknown impact on habitat in the long run.
Flexibility	The hard infrastructure of the rock wall and wave breakers both serve to reduce the dynamism of natural systems.	The Manase Wave breakers have reduced dynamism of natural sand movement along the beach. Beach replenishment and shoreline stabilization is limited to 2
(Demonstrating flexibility – around an		tourist operators south and southeast of the assets since completion, while the
equilibrium – in approach and strategy towards		reverse - rapid shoreline erosion - is occurring on shorelines to the southwest of
reaching common objectives)		the assets.
Redundancy	Salimu/Musumusu road and rockwall replaced an older road and rock defense, and connected Uafato and to Falefa, and serves as a	Salimu/Musumusu road and rockwall was still functional as a secondary route but it floods/collects rain.
(Creating a duplicate or back-up system)	back up to other routes	

Reviewing resilience



<u>Resilience Checklist</u>

- Disturbances What <u>climate</u> shocks and stressors (disturbances) does the sustained outcome address? How have they changed since project closing?
- □ Systems & Resistance Resilience Transformation (RRT) What are the human and natural systems in which the sustained outcome sits? Where on the RRT typology does the sustained outcome –it's adaptation strategy sit overall? To what extent did impacts influence/affect targeted systems (or their structures and functions)?
- Adaptation What are the assets and capacities being used for? How are they improving climate information use/access/quality? How are they reducing (known) climate vulnerabilities through reduced exposure, reduced sensitivity, or increased adaptive capacity?
- Characteristics What RRT characteristics does the sustained outcome exhibit in the face of climate disturbances (redundancy, diversity, continuation/feedback loops, scale, flexibility, etc.)? Are these characteristics locally valued, and why or why not?

Stretch and drink break



Questions?

Contents

- Ex post evaluation process and sampling
- Methods options deep dive *
- Real world ex post trouble-shooting

*The methods slides (SEIE, story surveys/causal mapping, QCA) in this section are tailored to ex post evaluation(s) (in this case, 2 Argentina ex posts)

outcomes (even from various actors) lead to impact

Ex post evaluation process: tracing sustainability and resilience



Ex post evaluation process: tracing sustainability and resilience





Process for ex-post project evaluation & learning



Source: Valuing Voices Sustained and Emerging Impacts Evaluation

Decision Point: Qualitative vs Quantitative Methods

The strongest ex post evaluations on sustainability are built on mixed-methods, but they require certain conditions



	Qualitative Methods (what, why)	Quantitative Methods (how much, how many)
Conceptual	 Concerned with understanding human behavior from the informant's perspective Assumes dynamic and negotiated reality 	 Concerned with discovering facts about social phenomena Assumes a fixed and measurable reality
Methodological	 Data are collected through participant observation and interviews Data are analyzed by themes from descriptions by informants Data are reported in the language of the informant 	 Data are collected through measuring things Data are analyzed thought numerical comparisons and statistical inferences Data are reported through statistical analysis



NOTE: Adaptation Fund project data may not have been measured at the outcome level and sample sizes may be too small for quantitative methods

Methods available for the ex post evaluation fieldwork

There is an array of possible methods to collect data for ex post evaluation. Methods used depends on the project context, the outcome chosen, and project's previous data availability and quality.



Methods for ex post fieldwork: learning within and across tools

Example: Seawall & Wave Breaker Infrastructure in Samoa	What is assessed during the fieldwork with the tools?		
DATA COLLECTION TOOLS	Sustainability of outcome Climate resilience of outcome		
Desk information	Outcome data, Maintenance budgets	Vulnerability, initial characteristics of resilience (verified in the field)	
Historical calendar of shocks	Shocks before and after the project – how it affected the outcome		
Maps	Who benefits (or loses out) from this infrastructure; where gains/losses are focused	Scale and nature of the systems affected by the new infrastructure	
Activities mapping	Gender-related outcomes, sectoral overlap of activities supporting outcome	Impact of climate disturbances (storm surges, flooding) before/ after project	
Rankings	Ascertain what led to most/least sustained	Least/ most affected by climate disturbances	
Transect walk	Triangulation + check visible sustained impact	Comparison before/ after in most vulnerable areas	
Interviews: • Focus Group Discussions • Key Informant Interviews	Understand breadth of sustainability; determine individual use; causes for impacts; distribution of benefits; and/or lack or emergence of new sustainability (unforeseen)	Understand impact of shocks and stresses; vulnerability to climate change; change contributed by the project	

IT IS NECESSARY TO MAP OUT THE OBJECTIVE OF EACH OF YOUR TOOLS BEFORE GOING TO THE FIELD 68

Bias and triangulation of findings with mixed methods

Triangulation of findings to manage bias

Manage bias

Triangulation

- **Gender Bias:** More emphasis is put on the point of view of either men or women; the other perspective is underrepresented. *Purposively selecting women is important re: gender policy.*
- **Spatial Bias:** One area is favored in collecting information and the views of people who live in or frequent that area may be given more weight. This may take place if some places are more accessible (areas near good roads, near the center of the village versus the periphery); *include remote areas*.
- Wealth Bias: Often the views of people who are wealthier or who hold positions of authority are given greater weight over the course of a study. The poor are frequently underrepresented unless specific actions are taken to include them. *Make study design to fit poor and marginalized peoples'* schedules to maximize access.
- **Education Bias:** The views of those with more formal education are often solicited and considered more carefully than those with less education. This often coincides with a language bias since educated people may be better able to communicate with researchers. *Make sure local language translation is accessible (if relevant).*
- **Expectation Bias:** The village's expectations of what the outside organization may bring them often causes villagers to favor certain types of information in their discussions. Similarly, the researchers' expectations of what they will find in the community acts as a filter for the information that can limit learning. *Ensure expectations at village level are focused on past learning, no promise of future aid.*

Proxies for evaluating infrastructure sustainability

Example for when direct evaluation of structures are not possible: Samoa

For evaluation of assets:



evaluate maintenance and impact

- Operations and maintenance (control and repairs)
- Maintenance budget (amounts & availability or disbursement) or prevention of damage from shocks
- 'Climate proofing definition & measures' for roads
- Staff training on maintenance
- Long-term monitoring of quality

 e.g. Monitoring coastal sedimentation/ flood
 protection/ escape routes
 e.g. Monitoring of IWS water supply and quality
- Impact on livelihoods e.g. tourism, farming, access to social services
- Looked for rockwalls, seawalls, bridge engineering records- not found at UNDP or GoS (NZ consult?)
- Looked for road maintenance records none, disconnected from project
- Anecdotal qual data of community rebuilding

For evaluation of capacity to withstand climate shocks:

evaluate restoration capacity or prevention

If shock:

- Budget allocation for repairs and maintenance
- · Extent of damage after shock
- Evidence of relocation
- Recovery to previous conditions

If no shock:

- Budget for prevention
- · Materials used e.g. sustained quality of wave breakers
- Planning for end-of-life of material
- Looked for budgets for repairs/ maintenance none at GoS except community replanting, cleaning
- Found evidence of some road flooding on site (photo documentation from transect walk)
- Anecdotal stories from those living closest to the infrastructure- purposive respondent selection

Ex-post sustainability methods selection

Ex-post sustainability methods options:

- A. Sustained and Emerging Impacts Evaluations (Mixed methods)
- **B.** Contribution Analysis (Qualitative)
- C. Most Significant Change (Qualitative)
- D. Outcome Harvesting (Qualitative)
- E. Qualitative Comparative Analysis (QCA) and Story Surveys (Mixed methods based on algorithms)
- F. Propensity Score Matching or SEIE Surveys (Quantitative)





Data collection process & methods – Specific set for Argentina

Selected Methods given limited evaluation time, fieldwork and budget

The main considerations for ex post methods are:

- **Data quality**, e.g. at output or outcome/impact levels (see decision tree in prior slide)
- Location and roles of the main respondents (government and local)
- **Time** available for the evaluation overall, especially fieldwork, and team composition
- **Budget** for the evaluation, which could limit the analysis to only qualitative versus mixed-method with quantitative



Fieldwork: Examining a Samoan rockwall, 2021

Given that the evaluation team (for the current Argentina ex posts) could complement short fieldwork time (~ 1 day per site) with online surveys, telephone interviews and remote sensing, the remote evaluation and fieldwork methods recommended are:

- Sustained and Emerging Impacts Evaluations (SEIE) –qualitative tools only
- Contribution Analysis
- Causal Mapping via Story Surveys
- Qualitative Comparative Analysis (QCA)

Sustained and Emerging Impacts Evaluations (SEIE)

Sustained and Emerging Impacts Evaluation



Refers to an evaluation that focuses on outcomes and impacts for some time after the end of an intervention (which might be a project, policy, or group of projects or programmes) or after the end of participants' involvement in an intervention. It traces what emerged from local efforts to sustain results.

It uses mixed methods to examine the extent to which intended impacts have been sustained, as well as any emerging impacts that have emerged over time (positive and negative).



Key words:

Mixed methods

Intended outcomes/ impacts

Emerging impacts

Qualitative phase of SEIE - interviews (FGD/ KII)



- Focus Group
 Discussions (FGD)
- Key Informant Interviews (KIIs)

•

- Starts with national stakeholders, drilling down to regional, then local
- Typically using RRA participatory tools with communities and smaller subsets by characteristic or participation in project
- Relies on partner for site selection, self-selection by participants
- Triangulates findings with local partner interviews



- Confirm Theory of Sustainability (ToS) and sustainability of final output /outcome & impact measures
- Shape fieldwork

- Can be used to confirm findings
- Debriefs to triangulate and share learning (community, regional, national level)



 Can be used for OH (outcome harvesting) in control sites
Contribution Analysis

Contribution analysis



Assesses causal questions and infers causality in real-life programme evaluations. It offers a stepby-step approach to help managers, researchers, and policymakers arrive at conclusions about the contribution their programme has made (or is making) to outcomes. It reduces uncertainty about the contribution of the intervention to observed results through increased understanding of why the observed results have occurred (or not) and the roles of the intervention, and other internal & external factors.



Key words:

Causality

Step-by-step approach

Internal & external factors

Steps of Contribution Analysis



Source: Authors' elaboration from Mayne (2008) and Betterevaluation.org

Causal Mapping via Story Surveys



A causal story comes from a qualitative, causal field survey of individuals' mental models of "how things work". Answers prompt prompt them to make connections and give reasons.

Respondents' individual responses are retained (through open-ended answers) and can be analyzed real-time. Can be combined with online surveys (remote).



Key words:

30

Personal stories Most significant trends Minimum # of informants:

Using Story Surveys for Causal Mapping

Identify and visualise causal connections in speech and writing

Causal Map is a new online research tool, a way to code, analyse and visualise fragments of information about what causes what. Use it to make sense of what interviewees tell you in social science research. Use it to visualise stakeholders' experiences of how a programme or intervention is working and create collective empirical 'theories of change'.





Source: https://www.causalmap.app/



Qualitative Comparative Analysis (QCA)



Qualitative Comparative Analysis (QCA) is a means of analyzing the causal contribution of different conditions (e.g. aspects of an intervention and the wider context) to an outcome of interest and how programs contribute to outcomes.

QCA starts with the documentation of the different configurations of conditions associated with each case of an observed outcome. These are then subject to a minimization procedure that identifies the simplest set of conditions that can account for all the observed outcomes, as well as their absence.



Key words:

Evidence of change

Working backwards

Contribution



Challenges and contingency planning – major topics

- 1. Questionable data or issues with sampling (Insufficiencies and bias)
- **2. Adding context and isolating contribution** (context via triangulation from many sources, to make plausible contribution)
- **3. Missing respondents or data or is incomparable** (key informants are missing or data needs to be re-created retrospectively)
- 4. Data issues specific to adaptation and resilience (changes over time)
- **5. Subjectivity and uncertainties specific to adaptation and resilience** (climate risk uncertainties)
- 6. Safe evaluation (method options during Covid-19)

SEE DETAILED HANDOUTS





Thank you!

What's next?

- Finalize Inception Report
- Finalize Fieldwork Preparation
 - Conduct Fieldwork
- **Draft Ex Post Evaluation Report**
- Final Ex Post Evaluation Report
 and Evaluation Summary
 - Presentation & Dissemination



Survey

Before you go....

Please take the following quick survey:

What was clear and/or interesting to you? What was unclear or difficult to understand? What else would you like to tell us about this material?

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