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Evaluation of the Development Impacts of Climate Finance

Daniel Kaufman
Team Lead
Principal, Industrial Economics (IEc)

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Key Learning Questions

1. What are the **potential development impacts** of CIF investments?
2. What impacts are being **achieved**? Are there unintended impacts?
3. What are the **drivers and constraints** to achieving impacts?
4. How can impacts be **strengthened and assessed**?

DI = Development Impact

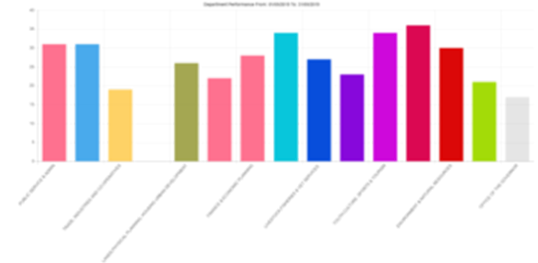
Mixed Methods Approach - 3 Phases of Analysis



Secondary
Information Review



Case Studies



Modeling Tools

Case Studies

				DI CASE STUDY COVERAGE									
COUNTRY	CIF PROGRAM	MDB PARTNER	INVESTMENT IN	Social		Economic		Environmental		Market Dev't		CC - Gender	CC - Capacity
Bangladesh	SREP	IBRD	Rooftop solar for factories										
Bangladesh	PPCR	IBRD	Coastal embankment improvements										
Brazil	FIP	IBRD	Low-carbon/sustainable agriculture										
Brazil	FIP	IADB	Macaúba value chain development										
India	CTF	ADB, IBRD	Utility-scale and rooftop solar and transmission										
Indonesia	CTF	ADB, IBRD	Upstream and downstream support for geothermal										
Indonesia	FIP	ADB, IBRD	Sustainable forest management										
Kenya	SREP/CTF	IBRD	Mini-grid electrification in rural areas										
Morocco	CTF	AFDB, IBRD	Utility-scale concentrated solar power plant										
Nepal	SREP	IBRD	Expansion of off-grid biogas										
Niger	PPCR	IBRD	Climate resilience interventions										
Thailand	CTF	ADB	Utility-scale wind power generation										
Türkiye	CTF	IBRD	Small-scale renewables and energy efficiency										

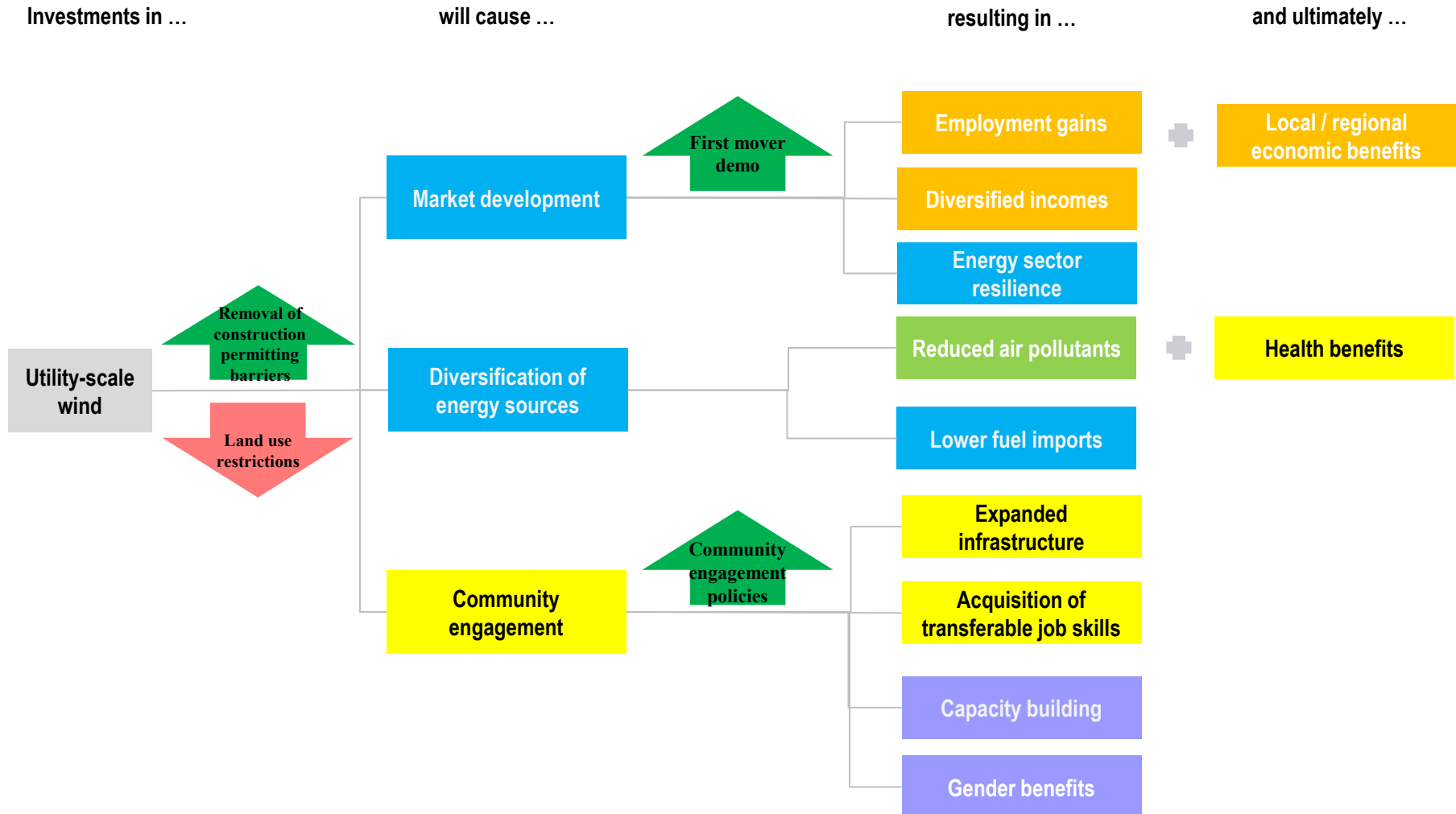
Selected Key Insights

- A systematic approach to **classifying and mapping DIs** can help better understand, plan for, and achieve DIs.
- **Designing for DIs** through a “back-casting” approach can enhance and amplify DI results.
- **Certain DIs are catalytic “Super DIs”** that influence the achievement of other DIs, requiring even closer attention in design, implementation, and MEL.

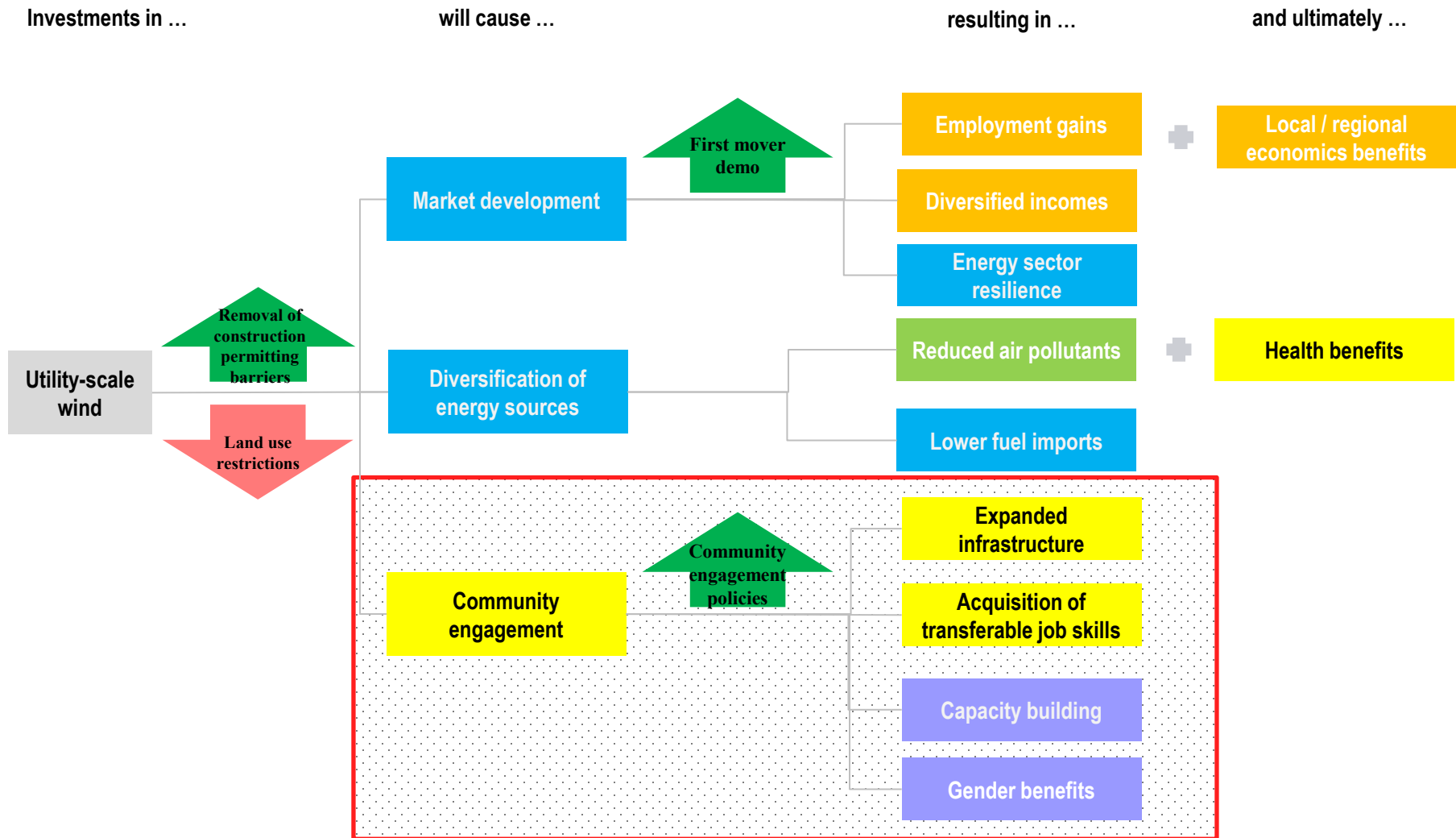
A systematic approach to classifying and mapping DIs can help better understand, plan for, and achieve DIs.

SOCIAL		ECONOMIC		MARKET DEVELOPMENT		
1. Livelihoods, wealth, quality of life	Increased or diversified income	4. Employment opportunities	Increase in direct employment (permanent or temporary)	9. Competitiveness & industrial development	Increased SMEs in market	
	Wealth generation		Increase in indirect employment (perm/temp)		Improved integration/connectivity of systems	
	Recognition of tenure rights		Increase in induced employment (perm / temp)		Supply chain development	
	Increased access to markets		Increased earnings from employment (all types)		Maturation of market structures	
2. Health and Safety	Acquisition of transferable job skills	5. Economic value add (GDP)	Increased economic outputs	10. Energy sector security & resilience	Increased technology adoption	
	Improved working conditions				Expanded access to capital	
	Increased ability to cope with shocks	ENVIRONMENTAL			Reduced operating costs (e.g. energy)	
	Reduced losses from extreme climate events	6. Natural resources	Reduced air pollutants Improved water quality		Increased affordability of low-carbon	
3. Essential services	Increased capacity of local institutions	7. Ecosystem and biodiversity	Improved legal/regulatory framework Improved forest management planning Enhanced forest stocks Increase in sustainable land use	11. Inclusiveness & Justice	Increased/diversified product offerings	
	Community engagement/collaborative implementation				Reduced trade imbalance	
	Increased food security				More projects/products meet international standards	
	Reduced illegal activity				Improved legal /regulatory framework, capacity, governance	
	Avoided negative health impacts from fossil fuels	8. Soils and crop productivity	CROSS-CUTTING DIMENSIONS		Increased market entrants	
	Increased access to electricity (households/businesses)				Increased local energy generation	
	Increased electricity reliability/decreased outages (households/businesses)	Increased productivity of agriculture Improved soil health Reduced use of inputs or natural resources			Reduced transmission/distribution line losses	
	Reduced costs of essential services (households/businesses)	Inclusion and empowerment	Gender inclusion, impacts on women and girls Vulnerable populations and local stakeholders		Diversification of energy sources	
	Increased access to public transportation				Increased sector integration	
Increased access to or improved reliability of water	Capacity	Built capacity (within specific stakeholders)		Increased financial stability		
Increased access to healthcare/medicine				Reduced fuel imports		
Increased access to infrastructure				Increased regulatory / governance capacity		
Increased access to education				Improved planning for shocks and stresses		

A systematic approach to classifying and mapping DIs can help better understand, plan for, and achieve DIs.



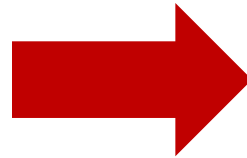
Designing for DIs through a “back-casting” approach can enhance and amplify DI results.



“Super DIs” influence the achievement of other DIs, requiring even closer attention in design, implementation, and MEL.

Super DIs

- Social/gender inclusion
- Capacity building
- Local workforce development
- Market development



Other DIs “Unlocked” by Super DIs

- Job creation
- Increased earnings
- Improved livelihoods
- Education, health, environmental benefits

“Super DIs” are catalytic and influence the achievement of other DIs, necessitating even more careful attention.

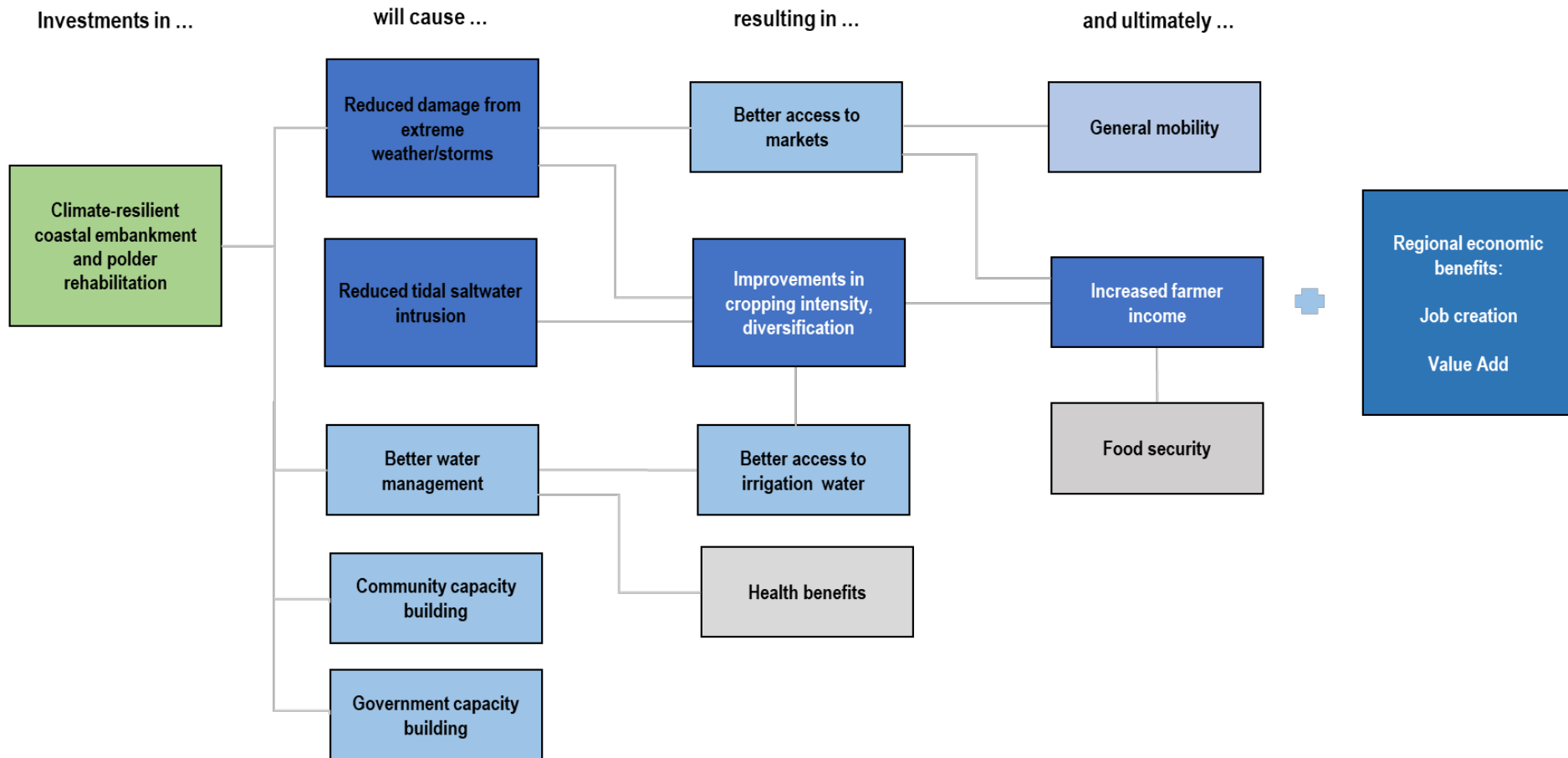
Brazil



India

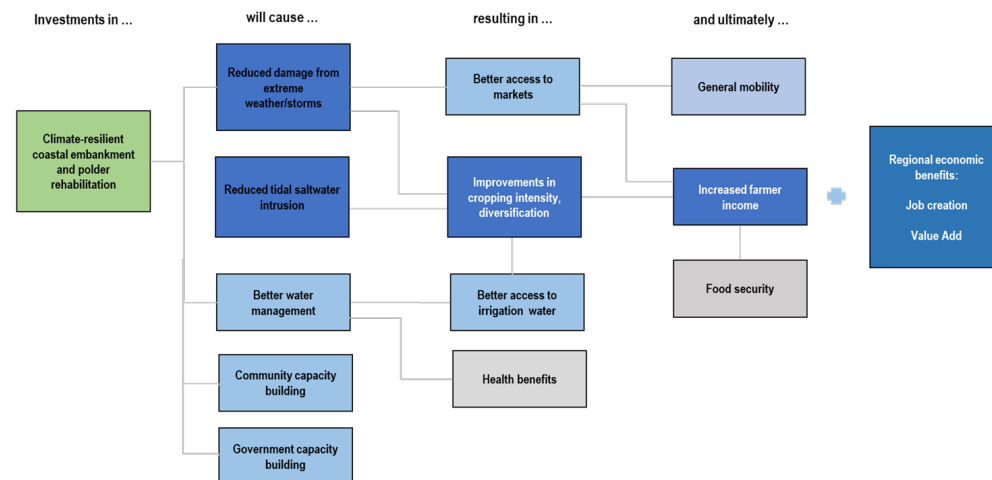


Case Study Example: Climate-resilient Infrastructure in Bangladesh



CIF Case Study Example: Bangladesh Climate-resilient Infrastructure - Methodology

- Refine the DI pathways
- Study select DIs and pathways
- Qualitative: Baseline survey report, post-implementation focus groups
- Modeling:
 - Crop revenues
 - Economic impacts



CIF Case Study Example: Bangladesh Climate-resilient Infrastructure - DI Results

Modeled DI Results:

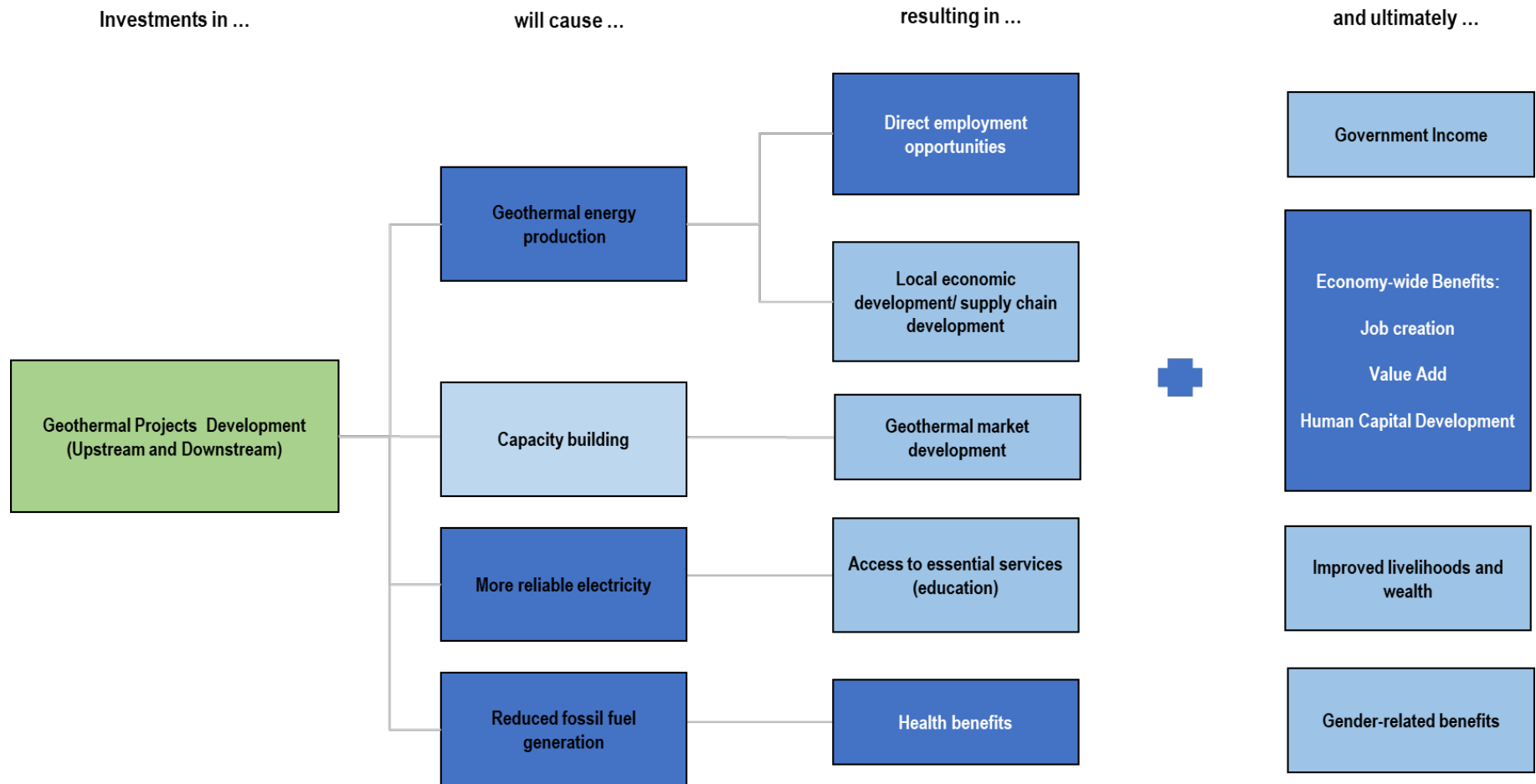
- **Farmland Protection:** Storm surge and tidal flooding have declined.
- **Cropping Intensity:** Increasing by ~12% annually in the Rabi season.
- **Agricultural Revenues:** \$56 million increase in annual revenues by 2032.
- **Economic Impacts:** \$50 million value added annually and 25,000 jobs supported by 2032.

Other Exciting DI Results:

- General mobility
- Food security
- Capacity building



CIF Case Study Example: Upstream and Downstream Support for Geothermal in Indonesia



CIF Case Study Example: Upstream and Downstream Support for Geothermal in Indonesia - DI Results

CGE Modeling Results:

- **Economy-wide impacts:** \$107 million per year
- **Jobs:** 29,000
- **Education and human capital:** \$27 billion
- **GHG emissions reductions:** 1.3 million tCO₂e
- **Health benefits:** \$2 billion

Other DIs:

- Geothermal market development
- Capacity building
- Improved regulatory/policy environment



Assessment and testing of modeling approaches for climate finance DIs

Air quality and resulting health benefits

- Energy-related emissions and related health impacts
 - Tool: LEAP-IBC
 - Case study: Thailand large-scale wind

Increased yields/climate resilience in agriculture

- Revenue benefits of agriculture resilience investments
 - Tool: AquaCrop
 - Case study: Bangladesh climate-resilient infrastructure
- Links between pastureland restoration, pollinator abundance, and agricultural productivity
 - Tool: InVEST
 - Case study: Brazil sustainable agriculture

Changes in economic output from energy investments

- Estimate the sizable impacts on GDP from energy investments
 - Tool: CGE model
 - Case study: Indonesia geothermal

Recommendations

	If climate finance stakeholders wish to:	They should:	Relevant for	Relevant at stage
Maximize DIs by including them in project design and planning	Support design of interventions that maximize DIs	Create standardized impact pathways by sector that identify priority DIs and metrics	Investors Programs	Strategy, Design
	Engage a range of stakeholders, including host country governments and external funders	Start from a common DI foundation, grounded in evidence, to identify drivers and constraints	Programs Projects	Design
	Prioritize and support a focus on Super DIs	Budget wisely to ensure that Super DIs receive adequate support	Investors Programs	Strategy, Design
	Strengthen DI results at the local community level	Build meaningful community engagement strategies into project design, implementation, and M&E	Projects	Design, Implementation, Monitoring, Evaluation
		Ensure intentional site selection that considers DI tradeoffs	Projects	Design
		Provide capacity building to communities	Projects	Design, Implementation
	Increase women's and other vulnerable stakeholders' participation and share of corresponding DI results	Deploy inclusive, gender-responsive project design, baselines, and monitoring plans	Projects	Design, Implementation,
		Assess potential risks and take steps to minimize negative impacts on women or vulnerable groups	Projects	Design, Monitoring
Maximize DIs by improving assessment and measurement of DIs	Improve capacity to report secondary DIs of energy investments, such as air quality and health impacts	Track and report actual clean energy production and reduced use of conventional energy sources in RE projects	Programs Projects	Design, Monitoring, Evaluation
	Strengthen the business case for projects that provide ecosystem benefits and follow-on economic impacts	Ensure tracking of relevant field data to support modeling of biodiversity and follow-on economic impacts	Programs Projects	Design, Monitoring, Evaluation
	Gain deeper insights into DI results that cannot be measured	Deploy more sophisticated tools such as modeling, especially for large projects that have significant potential to generate DIs	Programs Projects	Design, Monitoring, Evaluation

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Questions?

Daniel Kaufman
dkaufman@indecon.com
617-354-0074 ext. 184

Backup Slides

Links between DIs and the SDGs

DIs	1. No Poverty	2. Zero Hunger	3. Good Health and Well-Being	4. Quality Education	5. Gender Equality	6. Clean Water and Sanitation	7. Affordable and Clean Energy	8. Decent Work and Economic Growth	9. Industry, Innovation and Infrastructure	10. Reduced Inequalities	11. Sustainable Cities and Communities	12. Responsible Consumption and Production	13. Climate Action	14. Life Below Water	15. Life on Land	16. Peace, Justice and Strong Institutions	17. Strengthen Global Partnerships	Total
SOCIAL																		
Health and Safety																		1
Access to Essential Services																		7
Expansion of Electricity to New Households and Businesses																		2
Increased Electricity Reliability/ Decreased Outages																		1
Energy Cost Savings																		1
Increased Food Security																		2
Reduced Losses from Extreme Climate Events																		4
Community Engagement/Social Inclusion																		2
Capacity Building of Local Institutions																		11
Improved Working Conditions																		1
ECONOMIC																		
Economic Value Added (GDP)																		5
Earnings (Construction and Permanent)																		5
Employment (of any type)																		5
ENVIRONMENTAL																		
Soil and Crop Productivity																		5
Reduced Air Pollutants																		5
Ecosystem and Biodiversity																		7
Sustainable Land Use																		6
MARKET																		
Competitiveness and Industrial Development																		5
Energy Sector Security and Resilience																		1
CROSS-CUTTING																		
Gender Benefits																		3
Total	7	6	5	1	1	3	5	7	6	6	6	5	5	2	6	2	6	