



Social Management of Climate Risks in Low Income Countries

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Based on paper:

"Climate Change, Human Vulnerability, and Social Risk Management"

by

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Contributions of this paper

- Unifying conceptual framework on risks/adaptation/vulnerability for design of adaptation
- Apply framework to risks related to climate change
- Discuss social policy options at different levels
- Suggestions for future work

Motivation for Social Policy Perspective

- Social justice
 - Unequal distribution of benefits and costs from emissions
 - “Bad” adaptation strategies by households affect society
 - Stern Review: “greatest and widest-ranging market failure”

- Gaps in the literature
 - Mostly global models of natural and ecological systems
 - Lots of uncertainty about predicted risks and impacts
 - National, regional, sectoral models => more uncertain
 - Assume high vulnerability for poor households, but unclear use of terms vulnerability, exposure, adaptation

- Need for unifying conceptual framework to design social policy to reduce human vulnerability from climate change

Tentative Conclusions

- Climate change could increase human vulnerability to poverty, hunger, disease, mortality, displacement, and violent conflict in many countries unless adaptation is improved
- Climate change brings:
 - direct risks (changes in climate variables)
 - indirect risks (pests and diseases; degradation of natural resources; food price and employment risks; displacement; conflicts, negative spirals)
- interventions often focus on direct risks and direct impacts with insufficient attention to indirect risks and to social dynamics and their impacts on households.
- This paper proposes and applies a conceptual framework to
 - examine the links between risks, adaptation, and vulnerability
 - help design interventions that can: *increase the capacity of society to manage climate risks with a view to reduce the vulnerability of households and maintain or increase the opportunities for development.*

CC Implications for Poverty and Vulnerability

- Lower mean returns to assets and livelihoods
- Higher variability in returns to assets and livelihoods
- Damages to assets and loss of livelihood options
- More difficult to rebuild assets after shocks
- Increased insecurity and concerns about the future

The above could increase:

- chronic poverty and transient poverty
- vulnerability to transient and chronic poverty
- assets allocated to low-risk low-return livelihoods
- cycle of poverty and vulnerability across generations

Depending on what steps are taken to improve risk management.
Need to help poor and vulnerable make better adaptation decisions.

Social Risk Management (SRM)

“How society manages risks”

- Ex-ante and ex-post risk management
- Formal, informal, public, private, civil society
- Different levels of risk management
(household, community, national, international)
- All households face climate risks, but not all are vulnerable

Our definitions:

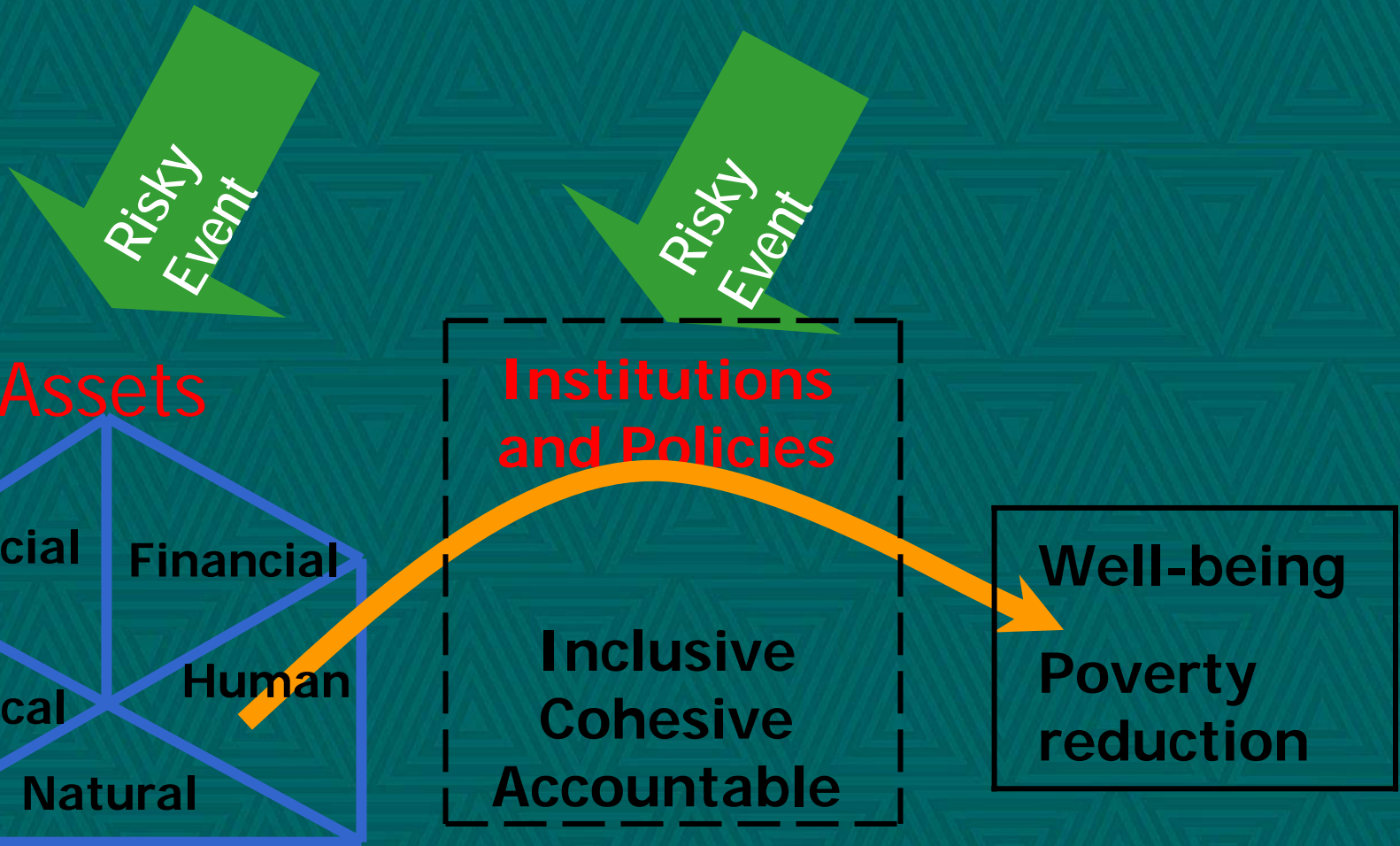
- **Vulnerability:** An individual or household is vulnerable to risk(s) associated with climate change if these risk(s) will result in a loss of well-being that pushes the individual or household below a benchmark or threshold level of well-being.
- **Vulnerability** is a function of the risks, exposure and sensitivity to risks and adaptive capacity.

International Panel for Climate Change (IPCC) definition of vulnerability and adaptation

According to IPCC (2001):

- **Vulnerability** is a function of the character of climate risks to which a system is exposed, its sensitivity, and its adaptive capacity.
- **Adaptation** is a response to actual or expected climate risks and impacts, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.

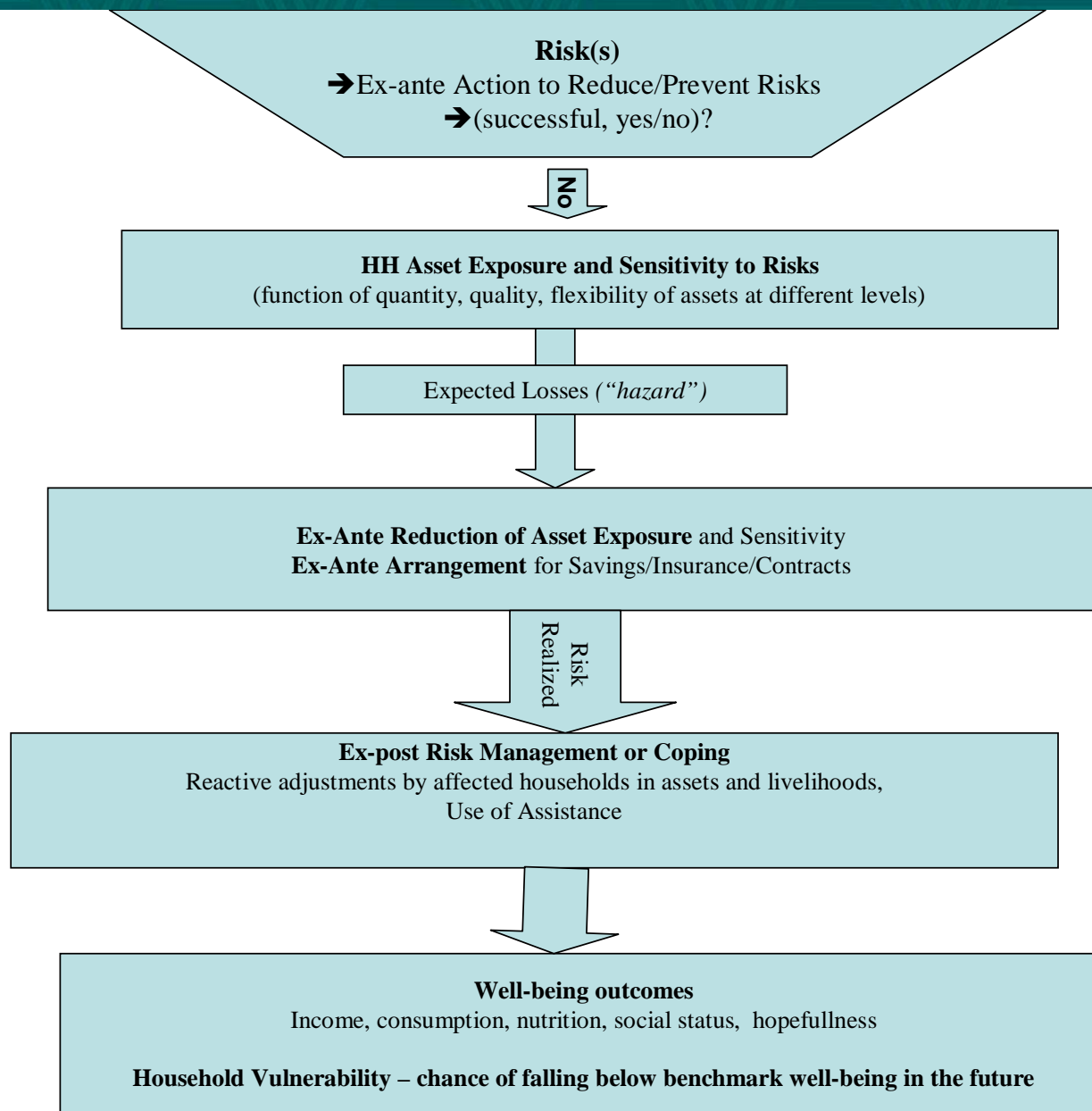
SRM and asset-based approach



Climate change related risks and impacts

- Agriculture/food/water/health
- Conflict/displacement
- High uncertainty and insecurity
- Direct and indirect risks and impacts
- Change frequency, magnitude, spread, timing/duration of rainfall
- Covariate risks increasing
- Irreversible impacts
- Challenge to existing formal/informal, public/private risk management practices

SRM risk-vulnerability cycle



Risk management strategies

- Ex-Ante Climate Risk Reduction (e.g., lower GHG emissions)
 - ➔ Usually referred to as “mitigation strategies” in climate change literature

CLIMATE CHANGE ADAPTATION STRATEGIES:

- Ex-Ante Reduction of Exposure and Sensitivity to Climate Risks (e.g., climate-proofing, disaster preparedness, health/nutrition, water/sanitation, asset and livelihood diversification, zoning and building codes)
- Ex-Ante “Savings/Insurance” (e.g., informal and formal arrangements to provide compensation for expected losses)
 - ➔ In SRM referred to as “risk mitigation”

Ex-ante adaptation strategies have costs based on expected losses, and benefits do not necessarily cover actual losses

- Ex-Post Coping (e.g., after the risk is manifested, “ad-hoc” adjustments)
 - Coping by households can be funded by ex-ante actions at other levels

Ex-post adaptation strategies have costs based on actual losses



Social Risk Management Adaptation Matrix

	Household	Community	National	International
Ex-ante: reduction of exposure	<ul style="list-style-type: none"> Diversification of assets and livelihoods New technology Protect assets Permanent migration 	<ul style="list-style-type: none"> Sea dikes, drainage, irrigation Protect assets Weather station 	<ul style="list-style-type: none"> Climate proof technologies and infrastructure Research and extension Climate forecasts Macro and sectoral policies Migration policies 	<ul style="list-style-type: none"> Well-functioning international markets Migration policies Research Climate forecasts Trade policies
Ex-ante: mitigation/ compensation	<ul style="list-style-type: none"> Insurance Savings Planned migration Social capital 	<ul style="list-style-type: none"> Storage Micro-finance Mutual insurance Social networks 	<ul style="list-style-type: none"> Develop finance and insurance markets 	<ul style="list-style-type: none"> Re-insurance Disaster finance Cat bonds
Ex-post: coping	<ul style="list-style-type: none"> Sell assets Transfers Ad hoc migrate Lower consumption 	<ul style="list-style-type: none"> Consume community assets Sell community assets 	<ul style="list-style-type: none"> Safety nets Social funds Public works 	<ul style="list-style-type: none"> Disaster assistance Food aid Assistance for social protection

Climate risk management: At what level?

- Household and community adaptation is necessary but external support will be increasingly needed
- National adaptation – many “no-regrets” options but limited financial/institutional capacity
 - E.g. access to drought resistant crop technology, labor saving technology, better health services
 - Minimum standards
- International support needed and called for:
 - Global public goods – research, information
 - Finance for adaptation
 - Support beyond finance: migration, disaster response, conflict management
 - Global social protection – citizen/rights based?

Climate risk management and social policy

- Ensure focus on poor and vulnerable in adaptation strategies
- Need for integrated approach to risk management spanning sectoral approaches, disaster management, and social protection
- Risk-focused social programs:
 - Safety nets triggered by climate events (e.g., weather-index)
 - Innovative insurance products and funding arrangements as part of social strategies for poor and vulnerable
 - Special needs of women, youth, elderly, infirm, disabled
 - Conditional and unconditional transfers, self-targeted programs
 - Guaranteed minimum basic needs (health, nutrition, education)
 - Better pre- and post-disaster safety nets
 - Migration policy (domestic and international)
 - Pre and post-conflict management

Research agenda for social policy

- For cross-disciplinary research, need some consensus on basic terms and relationships between risk, vulnerability and adaptation
- Monitor household and community responses to climate risks and climate changes, and indirect risks/impacts
 - Is climate change risk management more of the same or is there a “breaking point”
 - combine social monitoring with climate monitoring
 - Assess poverty and vulnerable impacts with attention to gender/age/disability differences
 - apply conceptual framework to climate vulnerability assessments
 - Examine alternative policy interventions at different levels, with priorities and sequencing for different risks and target groups
 - develop new methods to assess and evaluate adaptation interventions
 - Identify appropriate institutional arrangements, coordination, financing, and sharing the burden of adaptation
 - identify best practices for finance and governance of adaptation

Summing up

- Climate change is certain, but with uncertain risks/impacts
- Social justice aspects require global perspective
- All households face climate risks; not all vulnerable
- Human vulnerability to climate change is a function of:
 - direct and indirect risks
 - exposure and sensitivity of assets
 - adaptive capacity (shaped by policies and institutions).
- Need multidisciplinary, multisectoral approach to adaptation
- Ex-ante adaptation can strengthen assets/livelihoods and is “no-regrets” for growth and poverty reduction
- Mainstream adaptation into development agenda using integrated risk management approach
- Institutions, good governance are key to adaptation.
- This is good development but goes beyond “business as usual”
- Global dimensions of climate change require global approaches

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