Building Adaptive Capacity in Less Developed Regions

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Farmers building a dam as part of the government emergency work front program
Farmers supplement their diets with cactus plants.
Adaptive capacity

The ability of a system to adjust to climate change (including climate variability and extremes), to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

The set of resources, and the ability to employ those resources, that are prerequisites to adaptation (Nelson, Adger and Brown 2007)
<table>
<thead>
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<th>Determinant</th>
<th>Encompasses:</th>
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<tbody>
<tr>
<td>Human capital</td>
<td>Knowledge (scientific, “local”, technical, political), education levels, health, individual risk perception, labor</td>
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<tr>
<td>Information &amp; Technology</td>
<td>Communication networks, freedom of expression, technology transfer and data exchange, innovation capacity, early warning systems, technological relevance</td>
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<td>Material resources and infrastructure</td>
<td>Transport, water infrastructure, buildings, sanitation, energy supply and management, environmental quality</td>
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<td>Organization and social capital</td>
<td>State-civil society relations, local coping networks, social mobilization, density of institutional relationships</td>
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<tr>
<td>Political capital</td>
<td>Modes of governance, leadership legitimacy, participation, decentralization, decision and management capacity, sovereignty</td>
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<tr>
<td>Wealth &amp; financial capital</td>
<td>Income and wealth distribution, economic marginalization, accessibility and availability of financial instruments (insurance, credit), fiscal incentives for risk management</td>
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<tr>
<td>Institutions and entitlements</td>
<td>Informal and formal rules for resource conservation, risk management, regional planning, participation, information dissemination, technological innovation, property rights and risk sharing mechanisms</td>
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The Critical Relationship

• In less developing regions there is a direct relationship between building adaptive capacity and development

• ...or in other words, many of the causes of vulnerability are connected to development deficits...
Development

About solving perceived social problems

• Poverty  ➔  Economic growth (GDP)

• Inequality  ➔  Human development (HDI)

• Environmental Degradation  ➔  Sustainable development (SD)
A new paradigm?

Climate impacts → risk management

Adaptive Development
Why do we need it?

• Protecting resources, ensuring redistribution, and promoting growth in the wake of climate changes may well overwhelm the capacity of many governments, but especially those of less developed countries, to manage risk and continue to develop economically and socially.
Adaptive development is needed because policies must take into account risks rather than just poverty, equity, scarcity, or degradation.
Adaptive development

• Theoretically provides a robust basis upon which to elaborate strategies aimed to improve the life chances of the poor and the long term sustainability of ecosystems.

• From a policy point of view, there is a need to understand the dynamics of adaptive action, that is, how the practice of implementing risk management interplays with existing/traditional development policy negatively and positively.
Adaptive Capacity

• Generic: interventions to address structural deficit (income, education, health, safety, political access, etc.)

• Specific: risk management to address specific climate-related stressors (drought response, disaster relief, climate information, infrastructure, etc.)
Ideally, adaptive development interventions that build overall adaptive capacity would involve tacking the two sides of the problem, preferably in a synergistic way, so as to create virtuous cycles in which resilience is built by decreasing structural inequality/deficits and increasing risk management response.
Ability to benefit from Specific AC may be contingent to minimum generic AC

Overreliance on cash transfers may crowd out other solutions, result in rigidity (lock in) and complacency

Higher AC

Lower AC
NE Brazil
Politicians exchange placement in these programs (e.g. work fronts, carros pipa, etc.) for votes.

Because these programs address only the symptoms and not the causes of vulnerability, they fail to build long term resilience.

Drought affects vulnerable rural dwellers who then depend on state sponsored risk management programs to survive.

Politicians, dependent on clientelism to survive politically, have little incentive to build AC and poor dwellers remain vulnerable.

Vicious cycle
Virtuous Cycle

- increased ability to take advantage of risk management programs
- increased adaptive capacity
- Political reform: erosion of entrenched clientelism
- empowerment of local communities and decision-makers
- participatory, inclusionary and democratic risk management