

Different ways in decreasing vulnerability to increased climate variability and extremes

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Background of Project

Collaboration with Vietnam Academy of Science and Technology (VAST)

on:

Impacts of climate change in Mid-Central Viet Nam

Funded by Danida

Started May 2009 for three years

Further information:

Background for research

Increasing climate vulnerability and extremes predicted

The culprit of all evils?

Different approaches to adaptation:

Enhance ecological resilience through infrastructure investments, i.e.:
dykes, dams, roads, etc.

Enhance social resilience through poverty alleviation, economic and social
development

Sustainable adaptation – **MASD**:

Mitigation, **A**daptation, **S**ustainable **D**evelopment

Hypotheses

Increased income diversification: rich households less vulnerable to effects of CC in terms of health and safety – but they feel more vulnerable to CC than poorer households

Poor segment of the population is more vulnerable in terms of health and safety BUT they perceive poverty and insufficient access to land as greater obstacles to better livelihoods than climate change drivers

Hypotheses cont.

Access to non-farm incomes in general enhances the social resilience of households

Government officials generally consider it better to invest in physical structures to mitigate effects of CC while especially the poor and mid-level households prefer enhanced socio-economic capabilities to adapt to actual effects of CC

Economic growth and social differentiation - Mid-Central Vietnam

	Average monthly income for poorest quintile 1000 VND	Average monthly income for richest quintile 1000 VND	Difference
1992-93	33.3	139.8	4.19
1996	80.13	454.68	5.67
1999	91.5	577.3	6.31
2008	274.0	1911.0	6.97
2010	371.1	2683.0	7.20

Results of household survey:

83.3% of rich households found their livelihoods had improved substantially during last 20 years, while only 23% of poor households felt substantial improvements

31% of poor households found their livelihoods had decreased substantially, while no rich said so

The perceived improvement in livelihoods were bigger in the midland and upland than in the coastal areas

Results of household survey, cont:

61% of rich households live in concrete houses with more floors while no poor households live in such houses. 85% of poor households live in mud- and poorly constructed brick houses
68% of poor households found access to land very insufficient, while only 12% of the rich households found it insufficient

Findings

The rich have invested in better housing and ecological vulnerable acacia plantations and shrimp ponds -> safer in terms of health and security and more vulnerable in terms of (high) income generation

The poorer households, especially in the highlands, have become more dependent on natural resources but consider lacking access to land and employment a greater obstacle to livelihood than CC

Findings, cont.

Access to non-farm employment in lowland and midland contributes to 20% of incomes. A growing trend

All government officers interviewed prioritized government investments in infrastructure to reduce ecological vulnerability

Poor and middle income households preferred income generation (land and employment) for themselves to mitigate effects of CC as they actually happen

Conclusions

Climate extremes in Mid-Central Vietnam already greatly challenge ecological and social resilience

Increased climate variability and extremes will further exacerbate effects of human induced environmental changes, i.e. deforestation, water reservoirs, etc.

Rapid economic growth and socio-economic differentiation differentiates social resiliencies to increased climate variability and extremes

Recommendations for sustainable adaptation

Risk: Focus on 'no-regret' investments in safer houses and harbours for fishing boats, roads, etc.

Capacity to cope: Land use changes, i.e. reducing paddy seasons to two, change to aquaculture with salt water intrusion, more resilient species, increasing non-farm incomes, etc.

Targeting vulnerability: Mitigating causes (GHG emissions), deforestation, construction and management of water reservoirs for hydro-power

Thank you for your attention

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Tredje niveau

Fjerde niveau

Femte niveau

