

Chapter 3

Frameworks

ABSTRACT

This chapter presents the authors' theoretical and methodological frameworks for assessing climate change adaptation. These were framed on the basis of behavioral science and learning theory. A neo-behaviorist lens has been employed in explaining adaptation following the neo-positivist tradition where inquiry is guided by a theoretical framework and implemented with mixed methods of mutually reinforcing qualitative and quantitative strands. The adaptation theme situated within these frameworks is food security. The examples of adaptation practices and technologies all pertain to food and agriculture. The context of adaptation is the agrarian community or the farm family.

INTRODUCTION

Basic Assumptions

Our theoretical and methodological frameworks take off from the following assumptions:

- Climate change is caused by global warming. Global warming leads to the rise of sea levels, climate extremes such as powerful tropical storms and droughts, as well as increased variability and uncertainty in weather patterns.

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- The hazards caused by climate change directly experienced in the tropics are storms, floods and landslides, droughts and wildfires. These vary according to the landscape, i.e., upland, lowland or coastal. The largest vulnerable group in these landscapes is the farm family. Upland farming families are at high risk from landslides during the wet season and forest fires during the dry season. Lowland farming families are at risk from floods during the rainy season and drought during the summer months. Coastal fishing families are prone to storm surge and rising sea levels (Comiso et al., 2014).
- The farm family primarily relates to climate change through their field of exposure to it, which involves: their experiences in changing weather patterns; their appreciation of bio signals that deviates from the norm; and the damage to their lives, property and livelihood. One of the biggest impacts of climate change to the agricultural household is food insecurity.
- In this age, climate change is anthropogenic or triggered/exacerbated by man. Although irreversible, it may be mitigated to a limited degree by controlling carbon emissions that lead to global warming. Other than mitigation, practical responses to climate change are adaptation and coping.
- Climate change adaptation is a social learning process. The stimulus to social learning is exposure to climate change. The resulting response has three dimensions: knowledge, attitudes and practice (KAP). Significant changes on KAP may be observed over time given direct interventions that stimulate climate change adaptation. At any given time, these interventions may be recalibrated or fine-tuned depending on the KAP changes observed.

These assumptions serve as a take-off point for our constructs on climate change adaptation.

Neo-Positivist and Neo-Behaviorist Lens

Employing a neo-positivist/neo-behaviorist lens, we propose the following constructs:

1. Climate change resilience of a community or family is a function of: climate change responsiveness (mitigation, adaptation and coping); availability of resources (natural, livelihood, economic and programmatic

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