

Mixed Methods Research in Climate and Health

Lessons from a Study in Semi-arid India

Nitish Dogra, MD, MPH

Fulbright-Nehru Environmental Leadership Program Fellow (2013-14)

Introduction

- ▣ Vulnerability is a function of the following *exposure, sensitivity and adaptive capacity*
- ▣ Climate change not uniform: 6 climate zones
- ▣ Vulnerable populations: tribal, rural, urban slums
- ▣ Sensitive sub-groups: women, children, elderly
- ▣ Adaptation challenges: health, water, sanitation

Background

- ▣ Guidance document on V&A
- ▣ Workplan Presentation: 2010 PAHO/WHO Global Workshop in Costa Rica
- ▣ WHO SEARO supported and guided project
- ▣ First of it's kind exercise in South-East Asia

Objectives

To assess the baseline vulnerability for climate-sensitive diseases at the local level in India

To construct a pilot tool for assessment of health vulnerability to climate change at the sub-national level in India (SEPARATE STUDY)



Scope

- ▣ Diarrhoeal diseases
- ▣ Vector-borne diseases
- ▣ Heat stress



Site Selection



TWO ADJACENT DISTRICTS NEAR GURGAON
(MEWAT AND REWARI IN NORTH INDIA)

Same climate zone (semi-arid)

Sensitivity differs radically (women, children, poor)

Barriers to adaptation are also markedly at variance

Hence best place to study how climate change impacts health

Methods: Quantitative

- ▣ Time-series analysis
- ▣ Household survey
- ▣ GIS

Methods:Qualitative

- ▣Key informant interviews
- ▣Focus group discussions (FGDs)
- ▣Exit interviews
- ▣Questionnaires for physicians knowledge
- ▣Health facility inventory
- ▣Prioritization exercise for adaptation options

Results: Quantitative

▣ *Time-series analysis*

MEWAT: 1° rise in temp = 3.2% rise in diarrhoea

REWARI: 1° rise in temp = 4.3% rise in diarrhoea

▣ *Household survey*

Community based study with contrasting findings

Results:Qualitative

- ▣ *Key informant interviews*
- ▣ *Focus group discussions (FGDs)*

- Both the above constitute additional evidence bringing out health access issues.

- Provide a clue to the apparently contradictory findings of the time-series analysis.

Discussion

- ▣ Prospective time-series studies required.
- ▣ Detailed household surveys may not be feasible.
- ▣ GIS methods need to be evolved.
- ▣ Qualitative methods apart from FGD and KII.
- ▣ Mixed methods with community studies essential.

Thank-You

