

Water security and vulnerability

Perspectives from a periurban context
Vishal Narain

Overview of talk

- What is periurban ?
- Why are periurban issues going to be important ?
- What are the dimensions of periurban water (in) security ?
- Who are the most vulnerable ?
- What should we do about this ?

Defining periurban

- No consensus definition
- As a place
 - Villages around cities
- As a process
 - Process of transition from rural to urban
- As a concept
 - An analytic construct to study rural-urban relationships and flows of goods and services

Features of periurban

- Mixed and changing land use
 - Agricultural lands, mining, farmhouses of urban elite, conservation and recreation centers
- Natural resources under stress: land acquisition for urban expansion, receive urban wastes
- Social heterogeneity and flux
- Erosion of social capital
 - Migration, acquisition of CPRs

Why do periurban areas need attention?

- Urbanization a fact of life in the developing world
- Periurban areas will grow in importance; will shape the nature of urbanization processes
- Receive scant attention because of fragmentation between rural development and urban planning

Dimensions of water insecurity

- Water insecurity shaped by insecurity of land tenure
 - Water sources go as lands are acquired for urban expansion
 - Tubewells not only irrigate, but also quench local thirst
- Residents lose both land and water to quench urban thirst
 - Lands acquired for water treatment plants
 - Lands acquired for canals to carry water to city
- Building of expressways diverts routes to water sources

Dimensions of periurban water insecurity

- Wastewater use
 - Urban wastewater widely used to irrigate
 - Cheap source of water and nutrients
 - Often the only source when tubewells are gone
 - Long-term health effects for consumers and producers

Who are the most vulnerable in periurban contexts

- Water security is the issue, and not just water scarcity
- The most vulnerable
 - Those who have most of their land at one place
 - Those whose lands are at a low lying area
 - Those whose households are at an elevation

Who are the most vulnerable ?

- Those whose lands are strategically located e.g. along main roads
- Those who have no alternative assets in the city
- Those whose relatives and friends have sold off their lands
- Tenants vs landlords
 - “Passing on” vulnerabilities
 - *Kann* is a common form of land tenure
 - Growing in practice vis a vis *sajedaari* (sharecropping)

Implications for discourses on climate change

- Periurban residents face a ‘double exposure’
 - Urbanization and climate change
 - Periurban water security can be understood at the intersection of climate change and urbanization
- Vulnerability is about the intersection of multiple stressors
- Social capital considered important in facilitating adaptation to the impacts of climate change but is constantly eroded in periurban settings

So what do we do ?

- Base urban expansion on studies of urban carrying capacity to avoid spillover effects into the rural hinterland
- Recognize the futile distinction between 'rural' and 'urban' water supply
 - Develop a better understanding of the flows of water between urban and rural areas
- Create greater awareness of periurban issues
- Support action research to foster greater periurban water security