

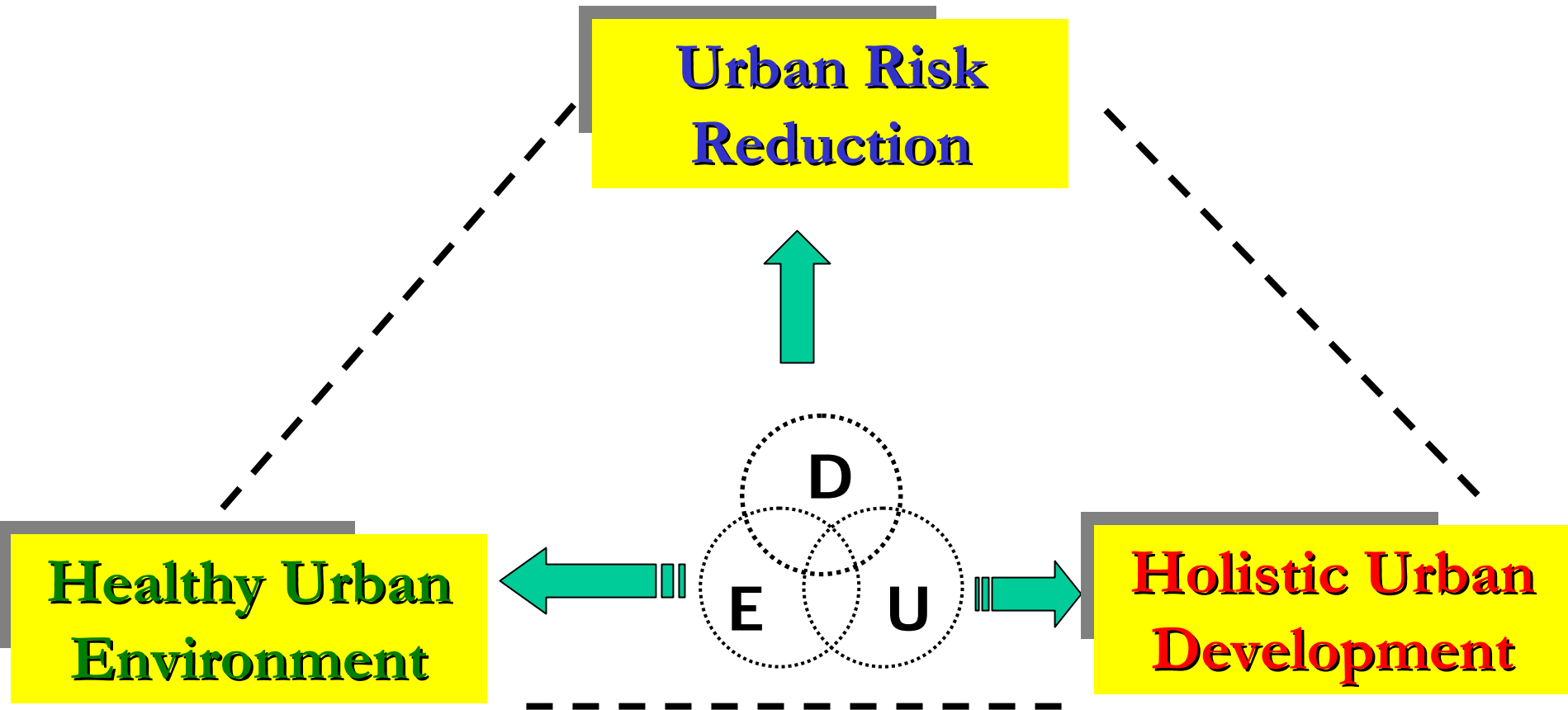
**Interlinking Disaster and  
environmental management :**  
**exploration of concerted approaches  
in literature**

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Doctoral Scholar



# URBAN COMMUNITY ASPIRATIONS

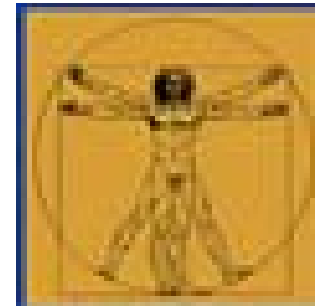


# Hypothesis



- Disaster and Environment Management practices are **inseparable** in development context.
- Community is a **key** to manage urban environment and reduce urban risk
- (a) Enhancing Disaster Resilience  
(b) Making Environmentally Responsive  
above community led efforts can only be sustainable if **mainstreamed** with overall urban development.

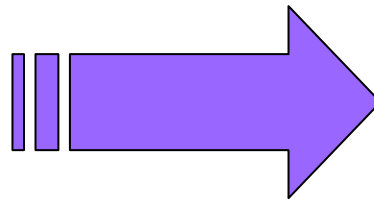
# Why **CONCERTED** approach



Control Oriented  
**COMPARTMENTALIZED**  
Urban Planning

Half-hearted, ad- hoc  
**REACTIVE** Urban  
Environment  
Management

Externally introduced,  
Community based  
**SEGMENTAL**  
Disaster Management



Community centered  
**HOLISTIC**  
Urban Development

**Disaster Resilient  
Eco-Communities**







**Kyoto University** *Graduate School of Global Environmental Studies*





**Kyoto University** *Graduate School of Global Environmental Studies*









# From concept to practice: categories in the literature for environment management

Designers	Practitioners	Visionaries	Activists
The costs of sprawl	Sustainable urban development	Sustainable communities	Green cities
Sustainability by design	Sustainable cities	Community self reliance	Eco-cities
	Local sustainability initiatives (local agenda 21)		Eco-communities

Roseland, 2003



# DIMENSIONS OF THE ECO-CITY

Sustainable Development

Healthy Communities

Community Economic  
Development

Sustainable Urban  
Development

Appropriate Technology

## Eco-Cities

Sustainable Communities,  
Sustainable Cities

Social Ecology

Bioregionalism

Native World Views

Sustainable Development

The 'Eco-cities' theme does not stand alone, but situated in a complex array of relevant variations.

Mark Roseland in 'The Eco-city approach to Sustainable Development in Urban Areas'

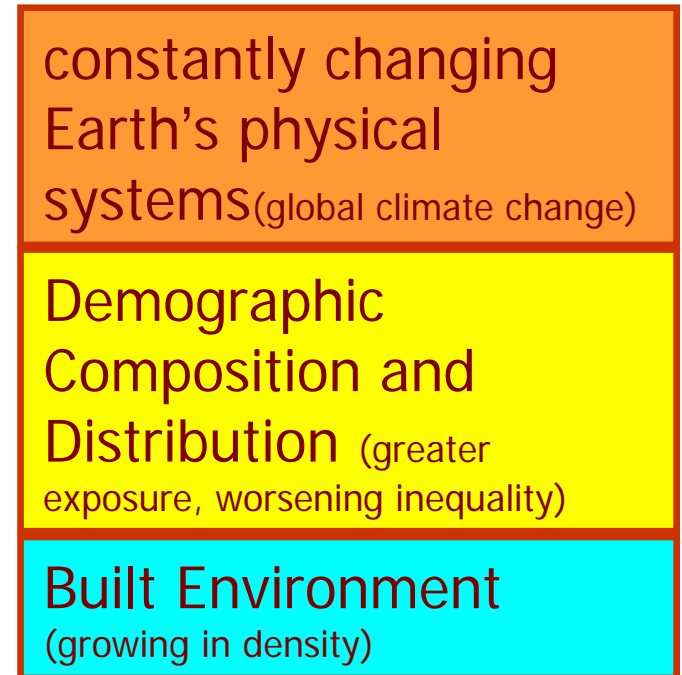


# The roots of the Disaster Problem

**Disaster losses are results of interactions among 3 major systems**



**Three main influences are at work**



**'Disasters by Design' by Dennis S. Mileti**



# The Progression of vulnerability

## Root causes

## Dynamic Pressures

## Unsafe Conditions

## Disaster

## Hazards

### Limited access to

- Power
- structures
- resources

### Ideologies

- political systems
- economic systems

### Lack of

- local institutions
- training
- appropriate skills
- local investments
- press freedom
- ethical standards in public life

### Macro-forces

- rapid population change
- rapid urbanisation
- arms expenditure
- debt repayment schedule
- deforestation
- decline in soil productivity

### Physical environment

- dangerous locations
- unprotected buildings and infrastructure

### Local Economy

- livelihoods at risk
- low income levels

### Social relations

- special groups at risk
- lack of local institutions

### Public actions and institutions

- lack of disaster preparedness
- prevalence of endemic diseases

$$R=H \times V$$

### Earthquake

### High winds (cyclone/hurricane/typhoon)

### Flooding

### Volcanic eruption

### Landslide

### Drought

### Virus and pest

B. Wisner et al., At Risk: Natural Hazards, People's Vulnerability and Disasters, 2004



# Disaster Resilient Eco-Community Approach

Essential steps:

1. Build local networks, capability and **consensus**
2. Establish a **holistic** government framework
3. Conduct a nationwide **environment**, hazard and risk assessment
4. Build **national** databases
5. Provide **comprehensive** education and training
6. Measure progress
7. **Share** knowledge internationally



# Thank you

I welcome your suggestions / comments at : [akhilesh@global.mbox.media.kyoto-u.ac.jp](mailto:akhilesh@global.mbox.media.kyoto-u.ac.jp)

