

# Community diagnosis as a method for spatial risk reduction; A case study of Nepal

A preliminary study



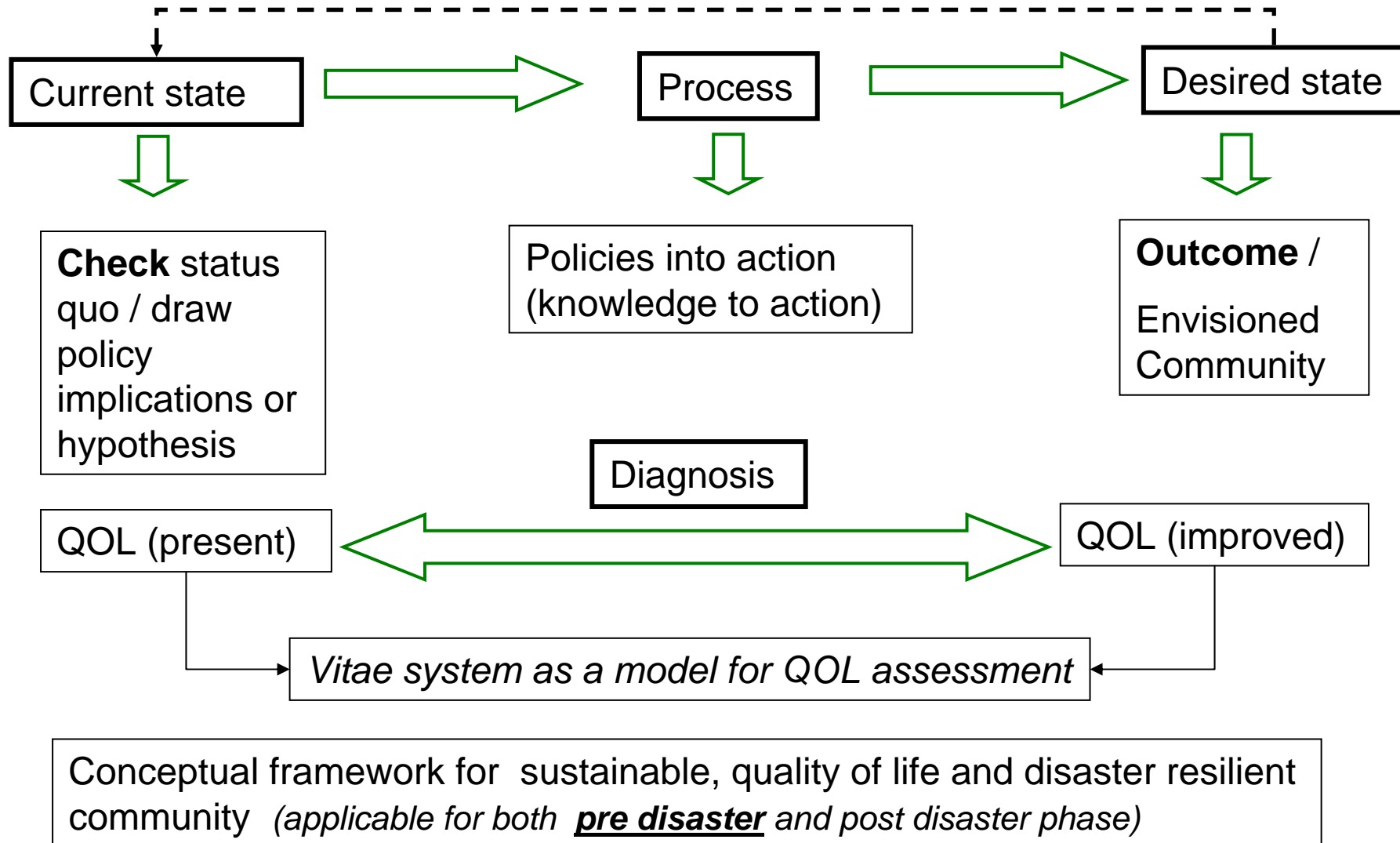
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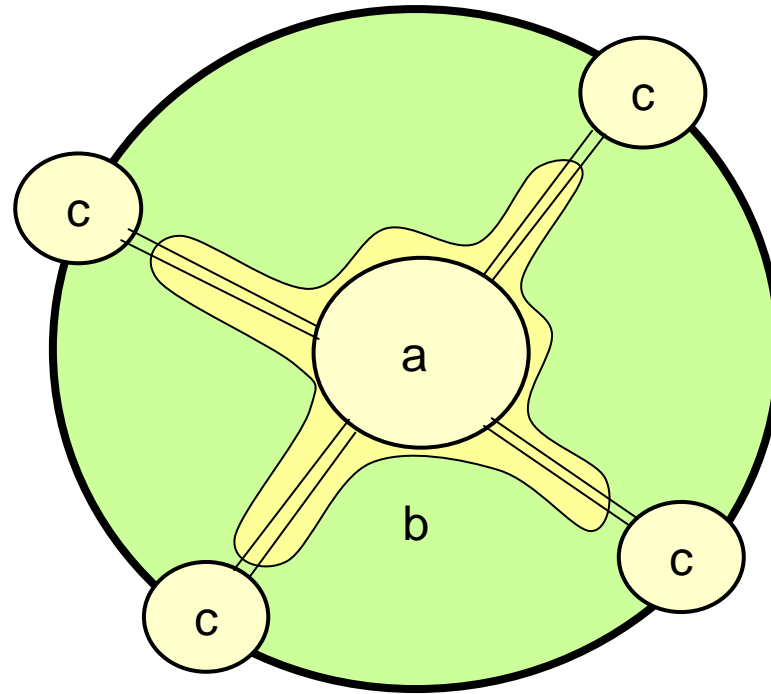
# Presentation Outline

- Introduction
- Research Question
- Literature review
- Objectives
- Methodology

# Introduction : Urban Diagnosis



# Urban form (Kathmandu Valley)



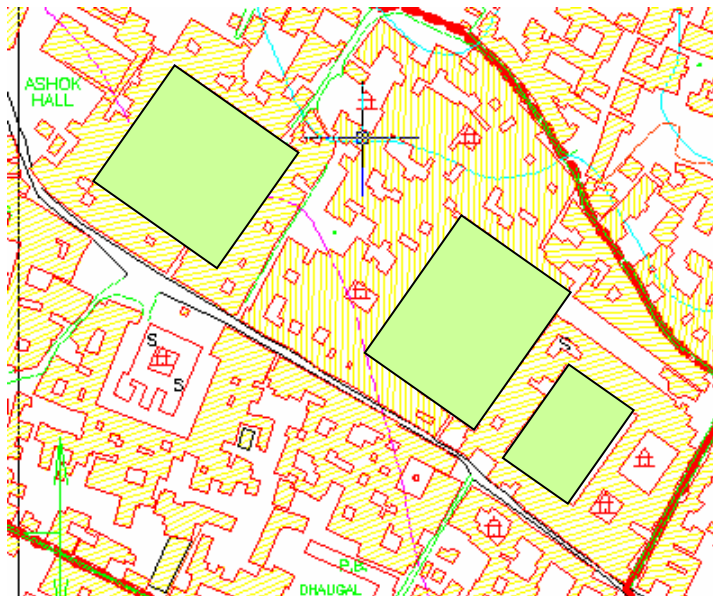
Conceptual Urban form  
Kathmandu Valley, Nepal

a = city core area

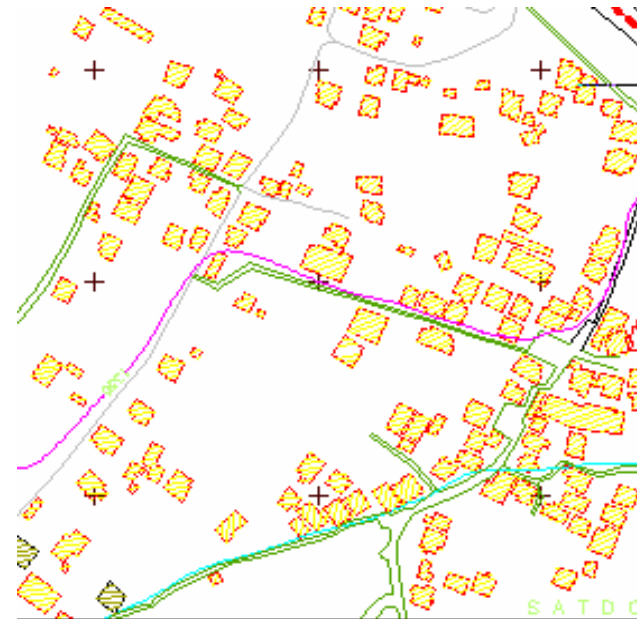
b = suburban area

c = traditional satellite towns

# Neighborhood spaces

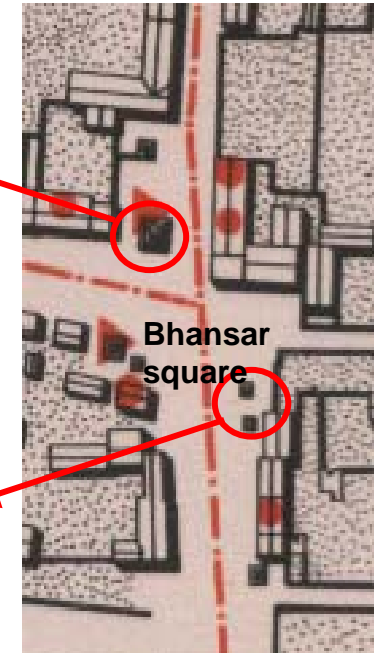
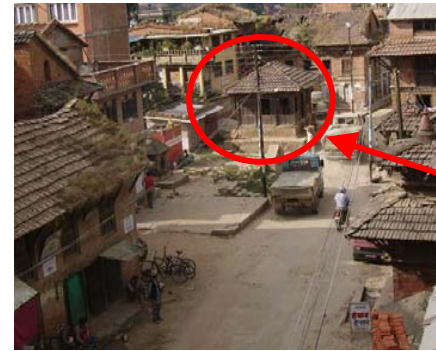
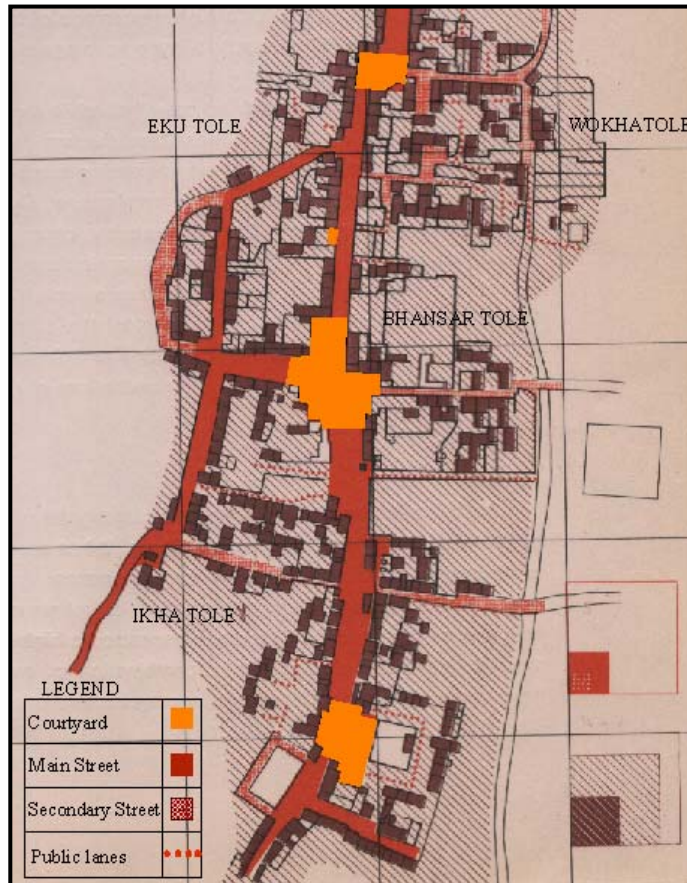


Core area



Peripheral area

S.N.	Spatial character core area	Spatial character peripheral area
1	Compact settlement	Sprawl
2	Organized layout of open spaces (public, private)	Unorganized spaces ( private yards as open spaces)
3	Hierarchical street pattern (grid iron )	Organic layout of street
4	Low rise buildings – uniform skyline	High rise buildings – unpleasant skyline
5	Interspersed symbolic features along street	Newly developed areas , lacks symbolic features



**Layout of typical core settlement**

Attributes	Core area	Peripheral area
Space quality	Organized open and built spaces / uniform built form	Built form not uniform / lacks open public spaces
Sense of place	Human-environment interaction, symbolic value (religious space)	Modern space use , lacks religious symbolism
Sense of community	Public gathering spaces, festivals (festive routes), mixed land use	Heterogeneous community, predominantly residential land use

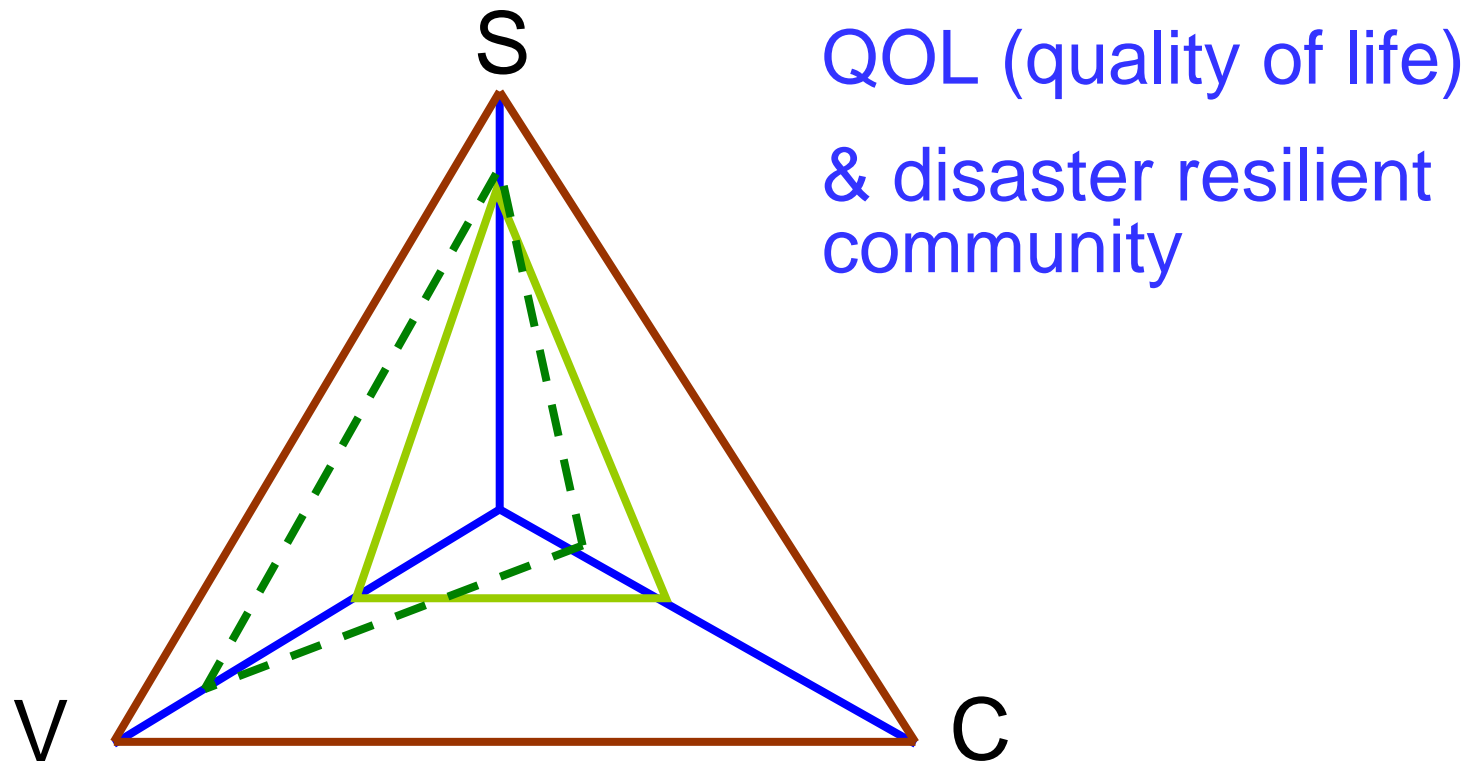
# Research questions

- How do people living in different neighborhood spaces perceive their safety and security situation?
- In what way do the neighborhood characteristics relate to resident's capacity to cope with disaster risk?

# Literature review

## Spatial planning in vitae system perspective

- vitae system perspective centered on viewpoint that any community has three vital or generic components; survival (to become alive), vitality (to live lively) and communication (living together), ( Okada & Mishra, 2005)





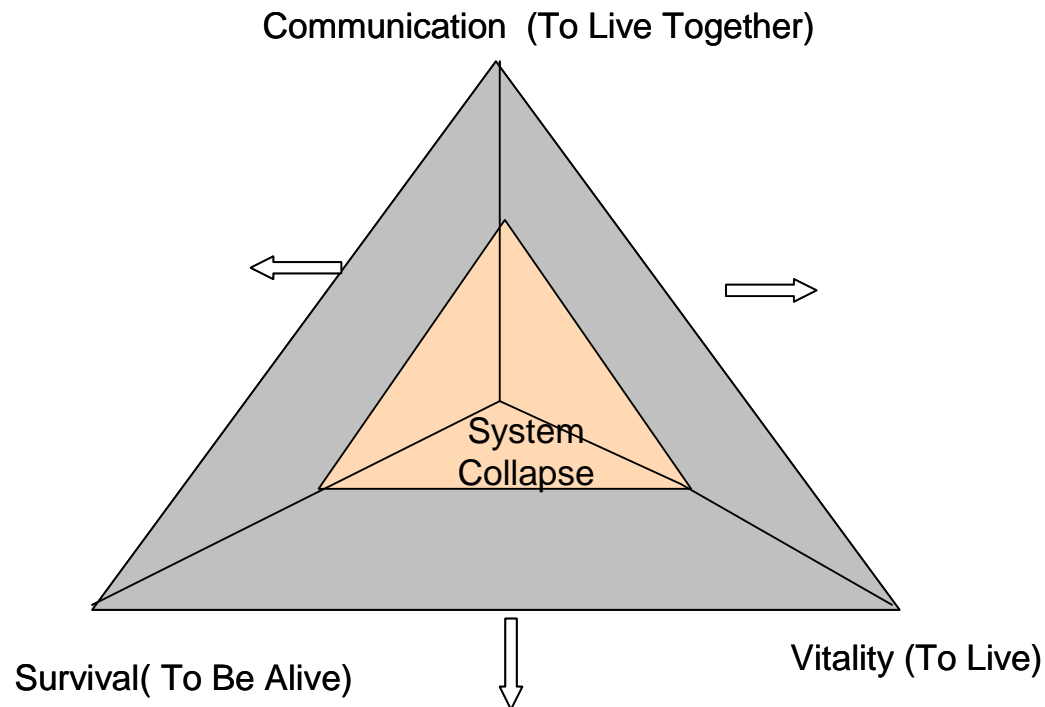
- a disaster resilient community addresses these three components in its development activities in a coordinated manner
- excessive inadequacy of any of these components results in collapse of the system
- survivality though one of the important component, the coordination of other two and a balance is necessary for building a resilient system and achieve desired development

# Urban vulnerability to disaster & vitae system perspective

- Cities in developing countries are highly vulnerable
- Unsustainable urbanization and unplanned built environment with very inadequate sensitivity to disaster risk has exacerbated vulnerability of large cities →
- No cities or infrastructure are completely resistant to catastrophic disasters
- Planning for a society resilient towards disaster risk is a task to reduce vulnerability at all levels in development process

- After immediately hit by a disaster a society first focuses on survival and fulfill the immediate needs then gradually lay foundation for achieving resiliency towards vulnerability
- At this stage, the three components of development process S – V – C are at equilibrium and a steady or sustainable stage of the process is attained

**SCHEMA OF VITAE SYSTEM**



Assumption – collapse starts at half of equilibrium point

- To achieve resiliency to disaster risk it is imperative to achieve conditions that bring stability or steady state to the development process
- How we define parameters of steady state?
  - During disaster situation success in **survival** depends on level of **communication** and capability of community to take collective action
  - Reduction of vulnerability to disaster is tied up with the enhancement of **quality of life** with increased access to all support systems for living that enhances economic strength and resiliency

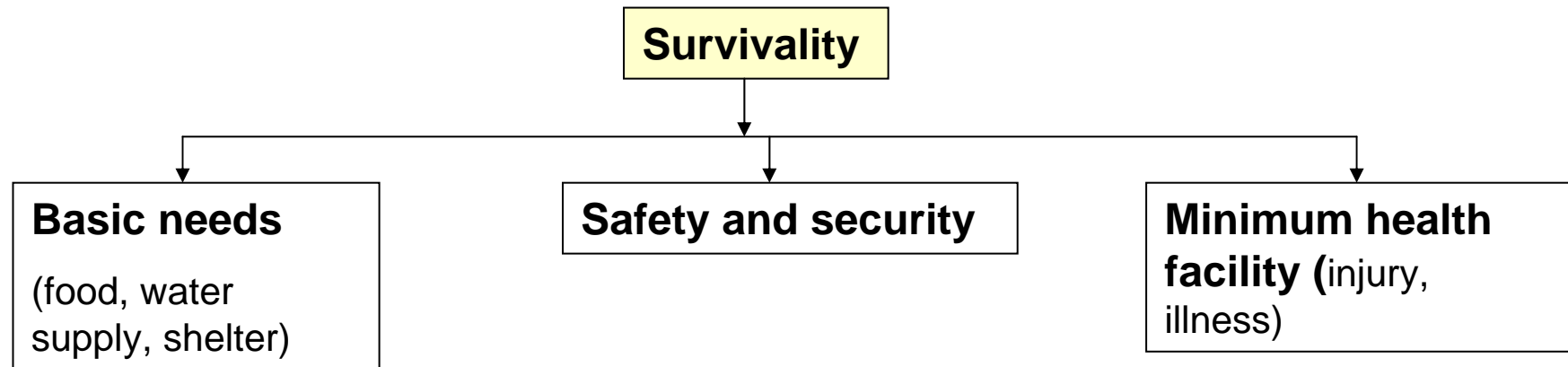
# Integrated approach for creating disaster resilient community

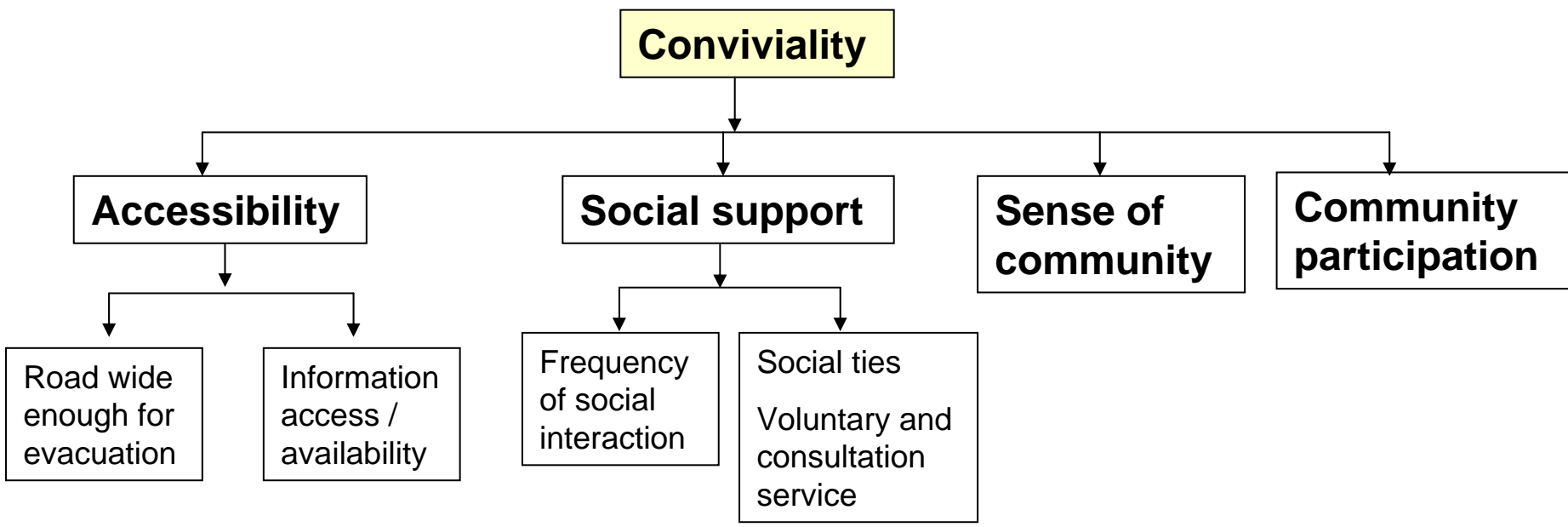
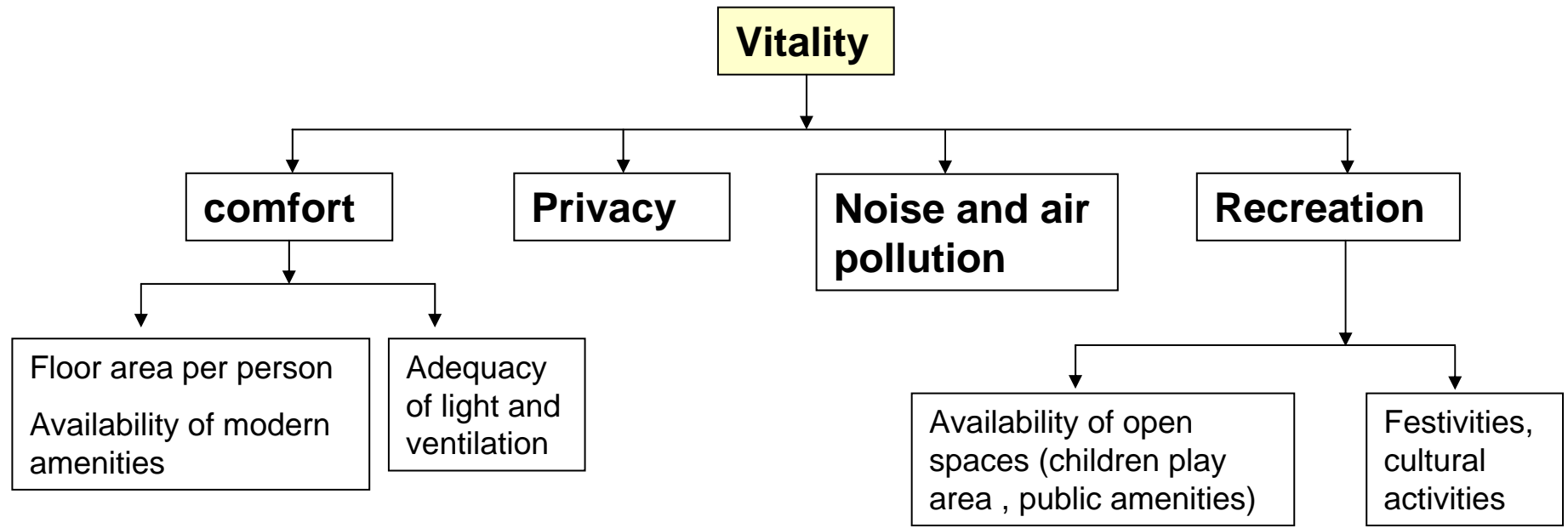
- Vitae system models anything as a living body - the three cardinal functions are coordinated and integrated to achieve balance development
- Integration process in built environment can be explained as;
  - improvement and maintenance of **survivality** by renovating buildings and strengthening for safety and security
  - social and economic **revitalization** by reviving public spaces, upgrading and up keeping built environment
  - up keeping and maintaining public spaces, festivities and cultural activities; building regular **communication** among people within the same ward or its neighboring areas

# Study Objectives

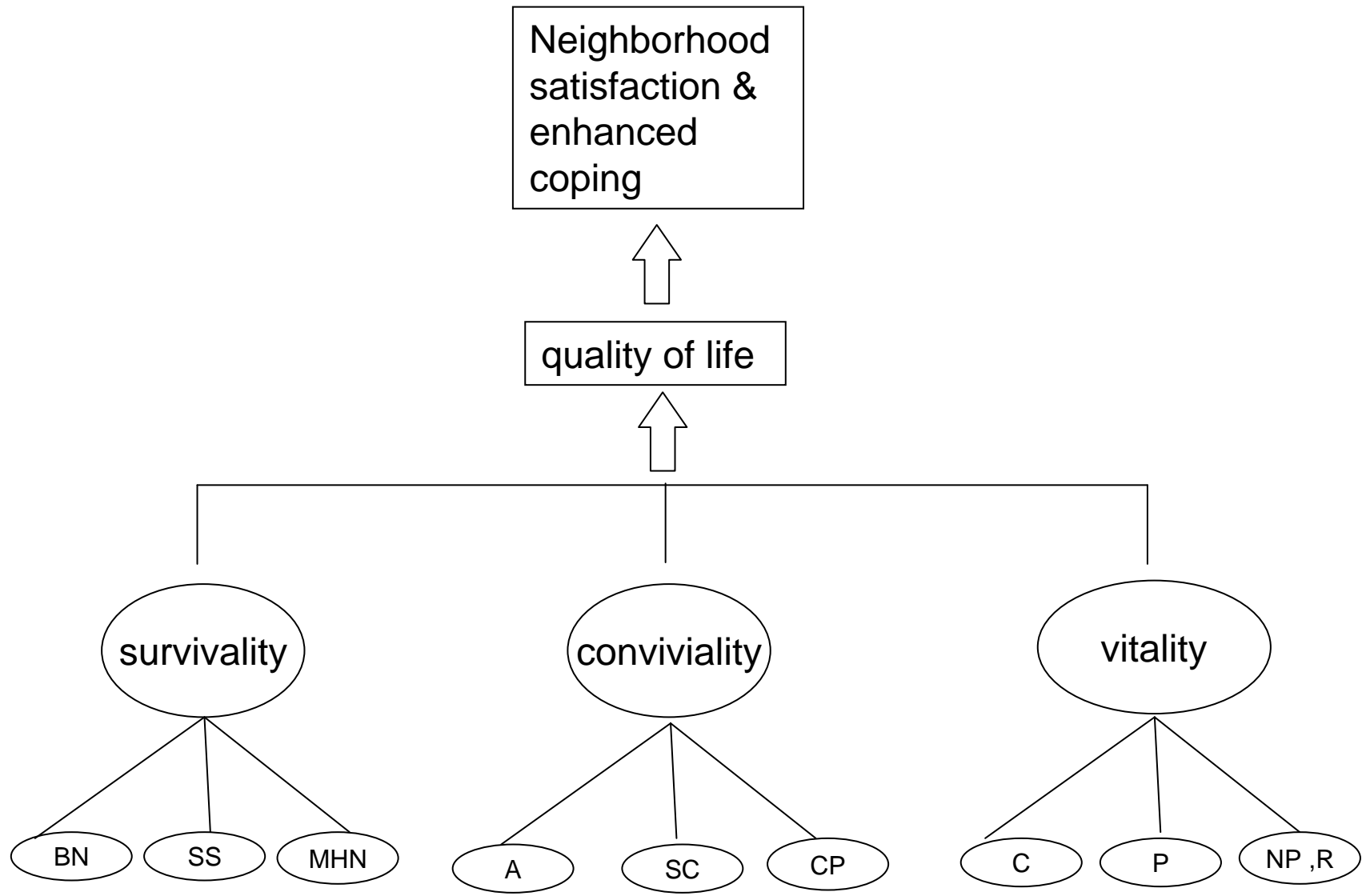
- Assess safety situation in neighborhood
  - Conduct survey on the usage of neighborhood spaces and understand the usage in terms of residents feeling of safety and security
  - Assess the satisfaction of people regarding their quality of life in neighborhoods
- From the investigation draw substantial suggestion on safety and security issue of people and overall community development

# QOL indicators based on Vitae System considered for the study









# Future work

- Field survey to assess neighborhood satisfaction and quality of life of residents
- Develop an understanding about safety and security situation of neighborhood in the study area based on parameters (criteria of SVC) and derive policy measures to upgrade the QOL.

**THANK YOU**