

Urban Climate Change Resilience

ACCCRN Experiences : Gorakhpur City



3rd High Level Seminar on Environmentally
Sustainable Cities
Siem Reap, Cambodia

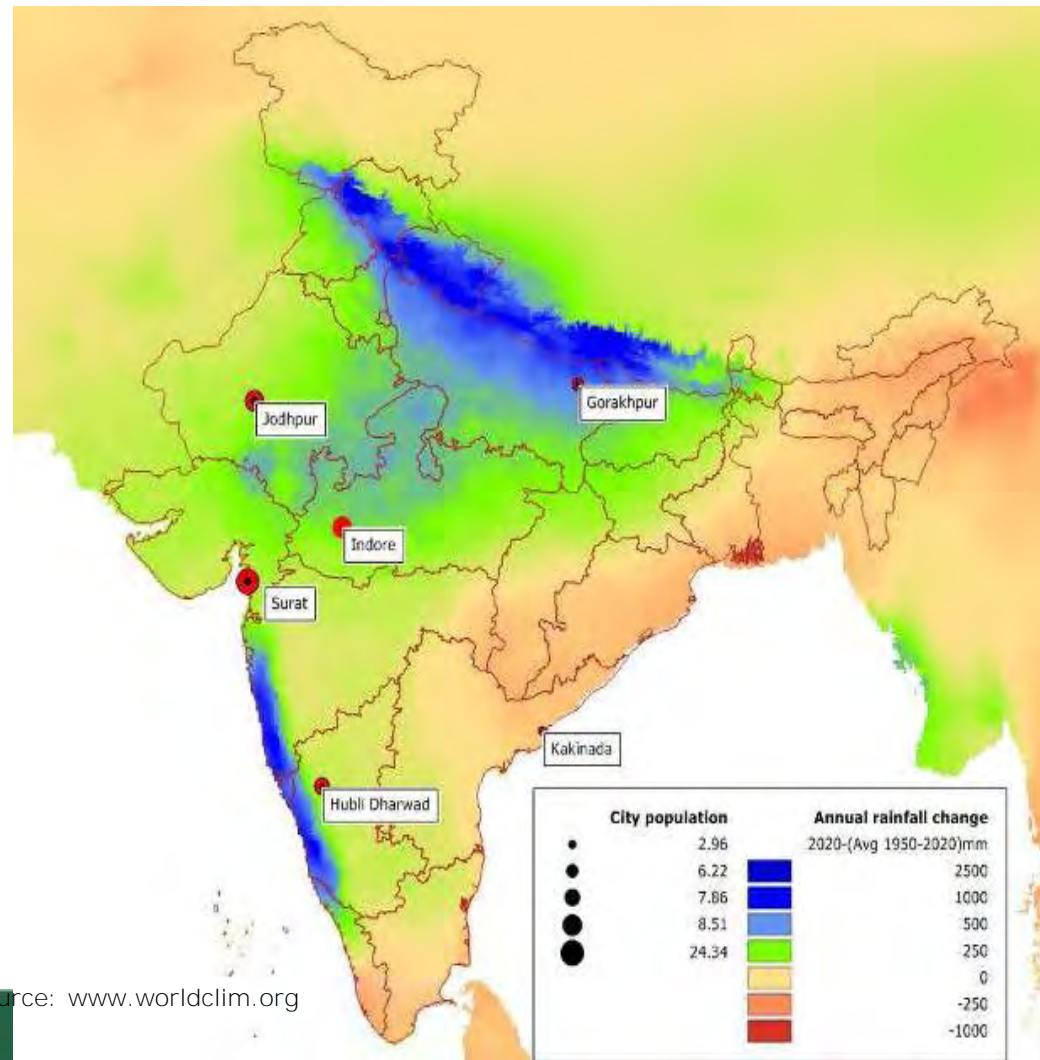


Dr. Shiraz Wajih
Gorakhpur Environmental Action Group

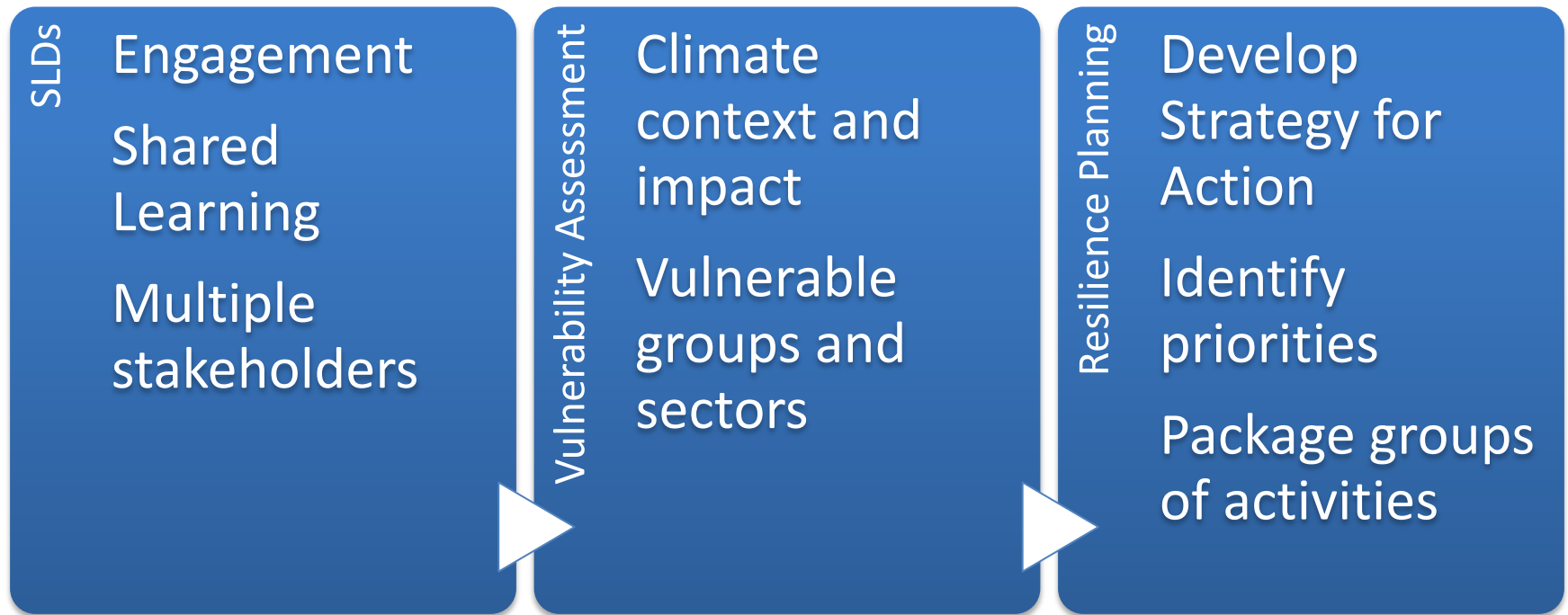
Phase-II cities

Surat, Indore and Gorakhpur

- 23 criteria, 6 categories
- Risk exposure, awareness
- Political will, stability
- City governance
- Capacity
- Stakeholders in decisions
- Champions

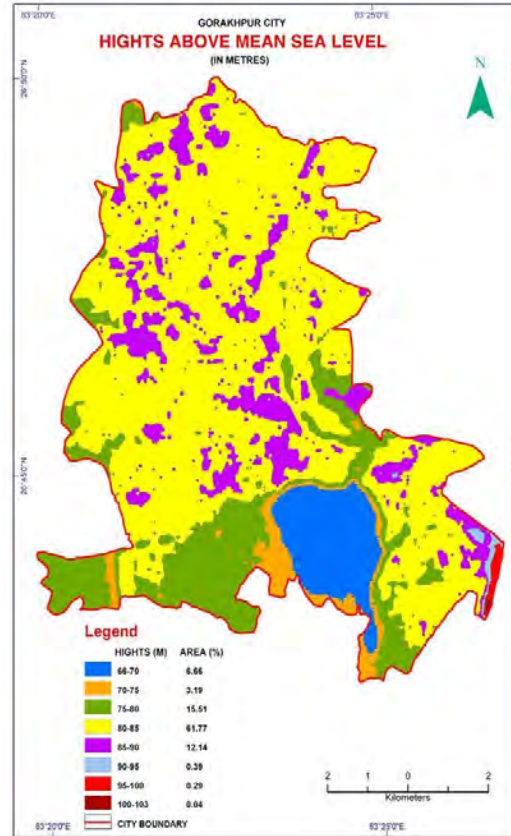
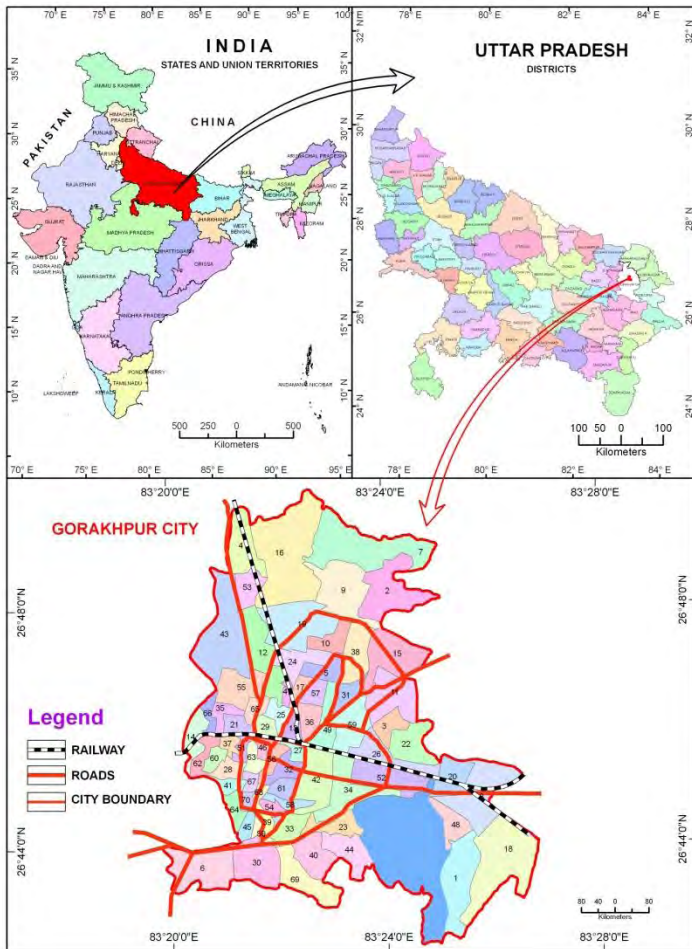


Resilience Planning in Context



Gorakhpur

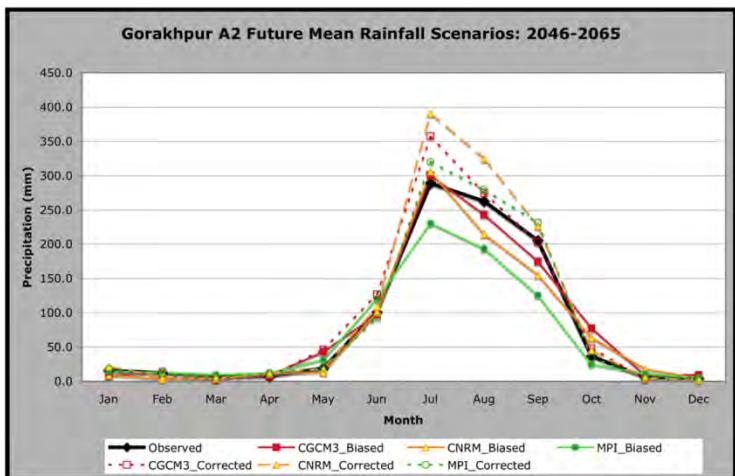
LOCATION MAP OF STUDY AREA



Climatic Scenario and their changing pattern

Evidences for Climate Change

Future Rainfall Scenario



Temperature

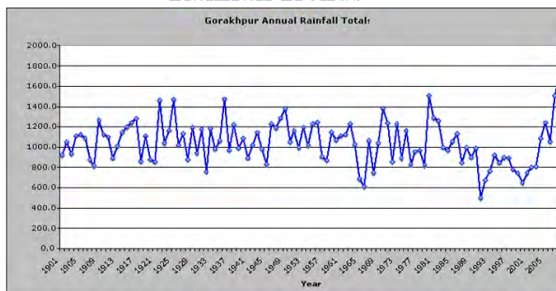
Avg. temperature 25.68°C
 Avg max 31.95°C
 Avg mini 19.57°C

Avg max temp increased to 33.51%
 Avg mini temp decreased to 15.98%

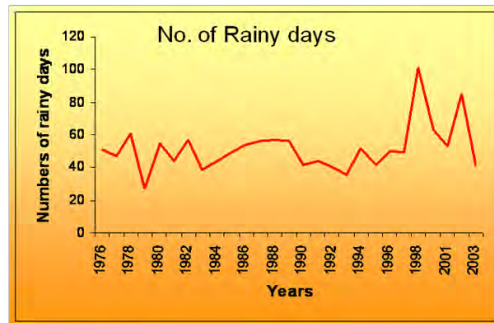
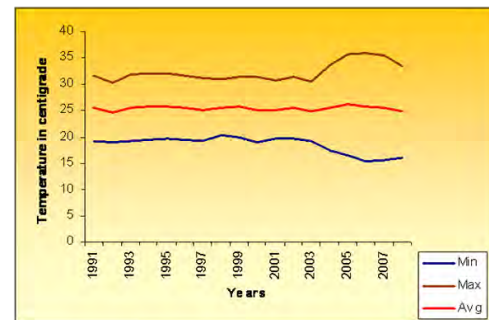
Rainfall

Avg. Rainfall 119.2 cm

Rainfall Trends

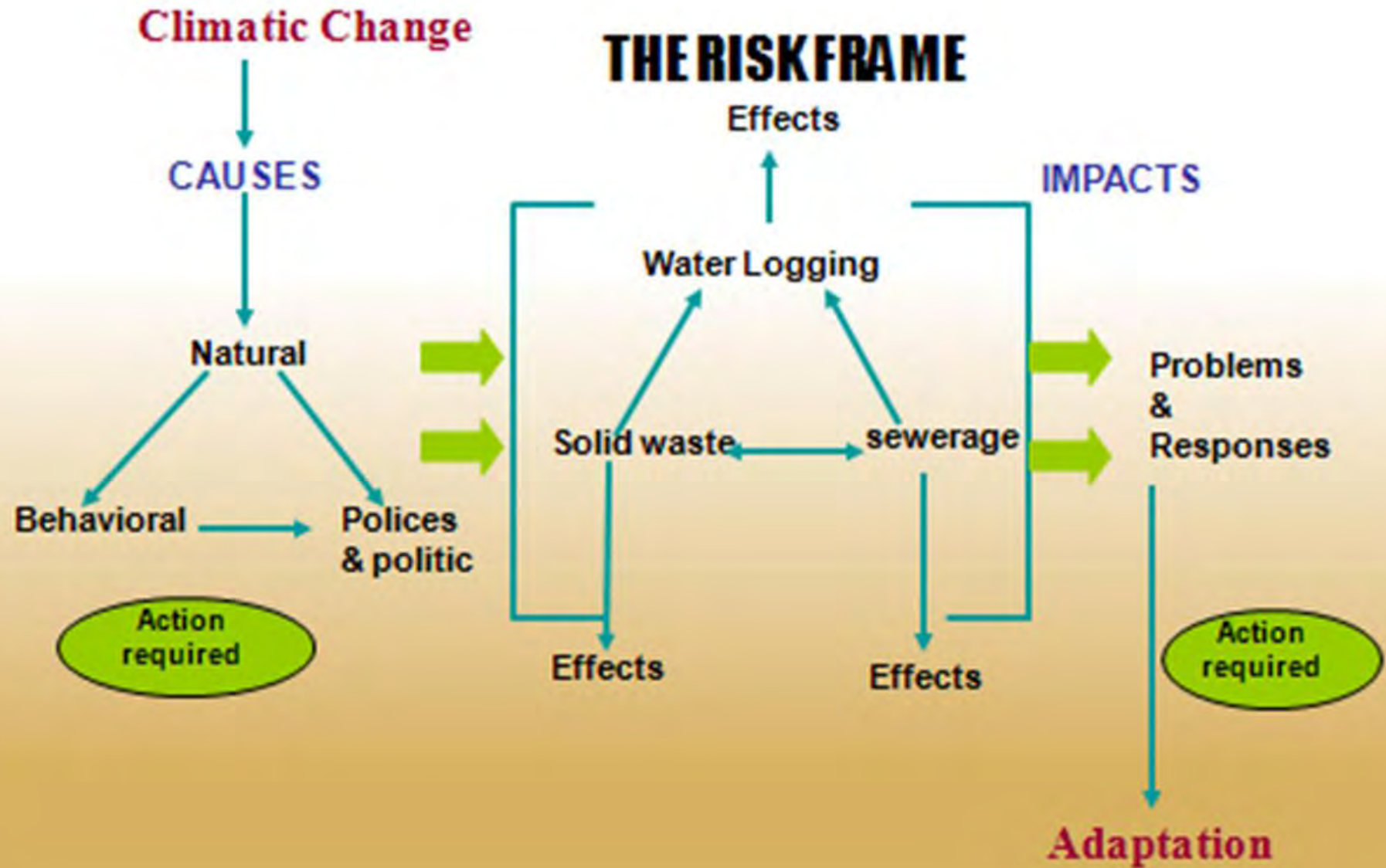


Gorakhpur city
 Temporal Variation in Temperature (in centigrade)



2003 is the dividing period in the climate of Gorakhpur city





Urban Resilience Framework



What?

- Urban *systems* comprise elements and linkages: ecosystems, infrastructure, knowledge
- Key characteristics: flexibility and diversity, modularity and redundancy, safe failure

Who?

- Focus on *agents* (individuals, organizations, groups): their behavior, socio-economic position, authority, marginalization, etc
- Key capacities: Responsiveness and (re-) organization, resourcefulness and planning, capacity to learn.



Urban Resilience Framework



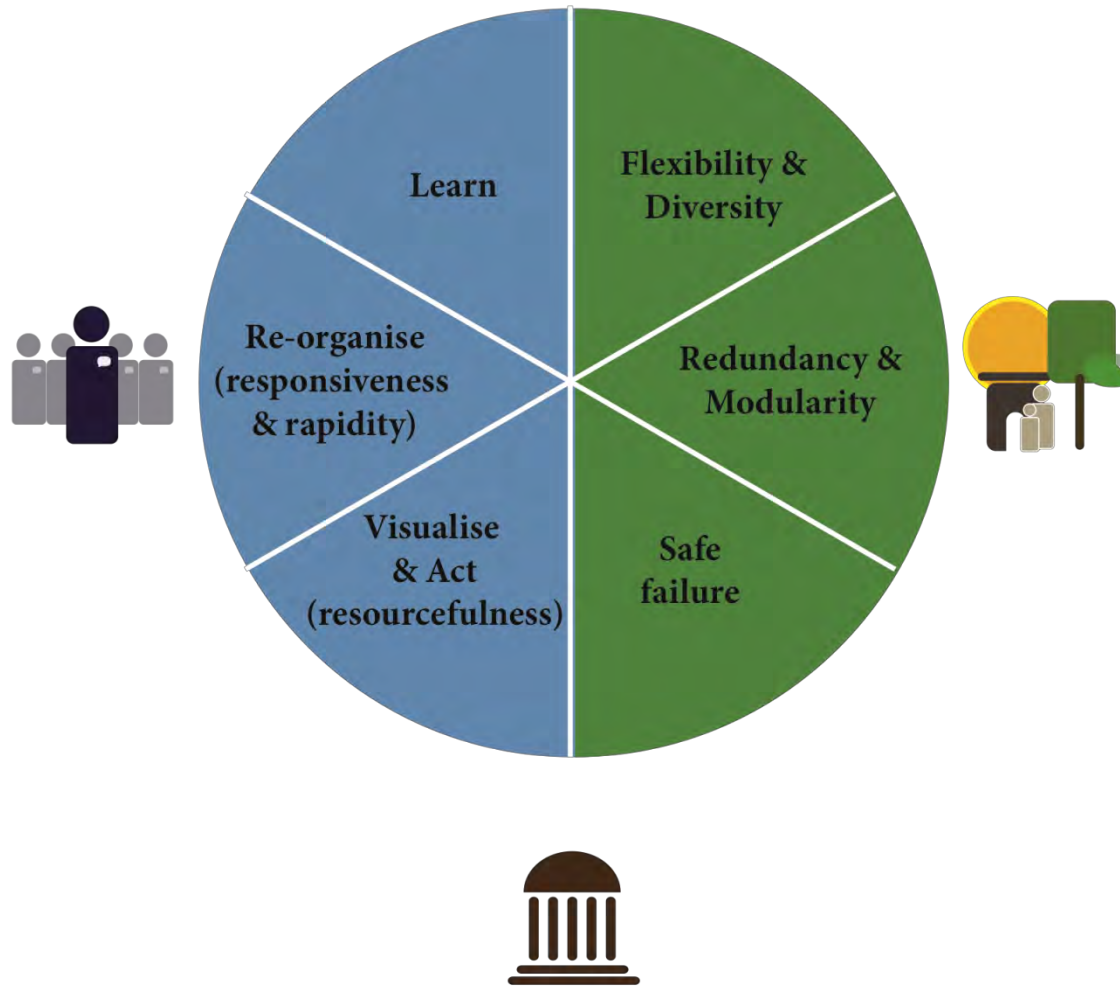
How?

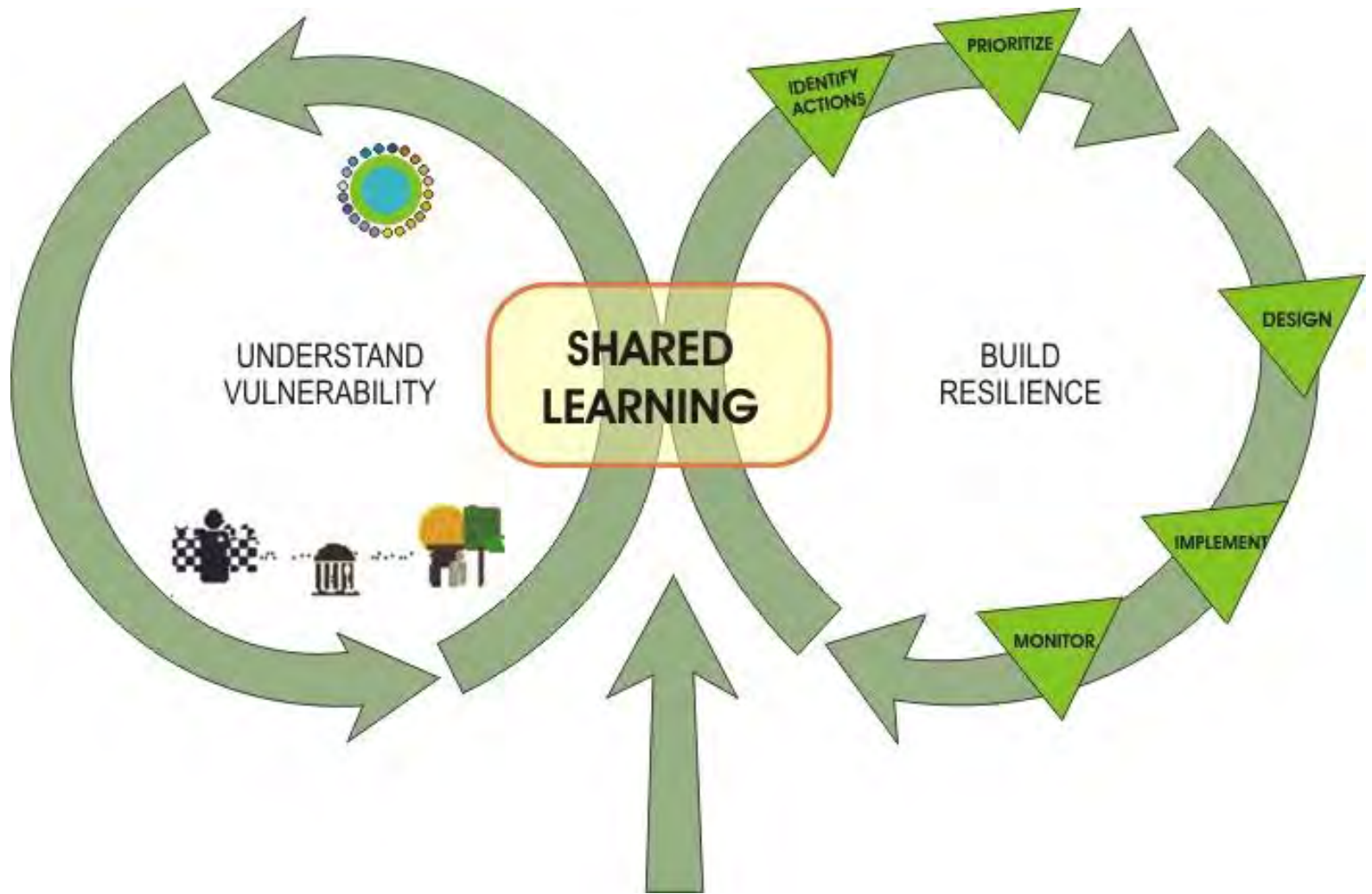
- *Institutions*: the rules or practices that guide how agents interact with each other and with systems
- Key factors: access (rights / entitlements); decision-making; information



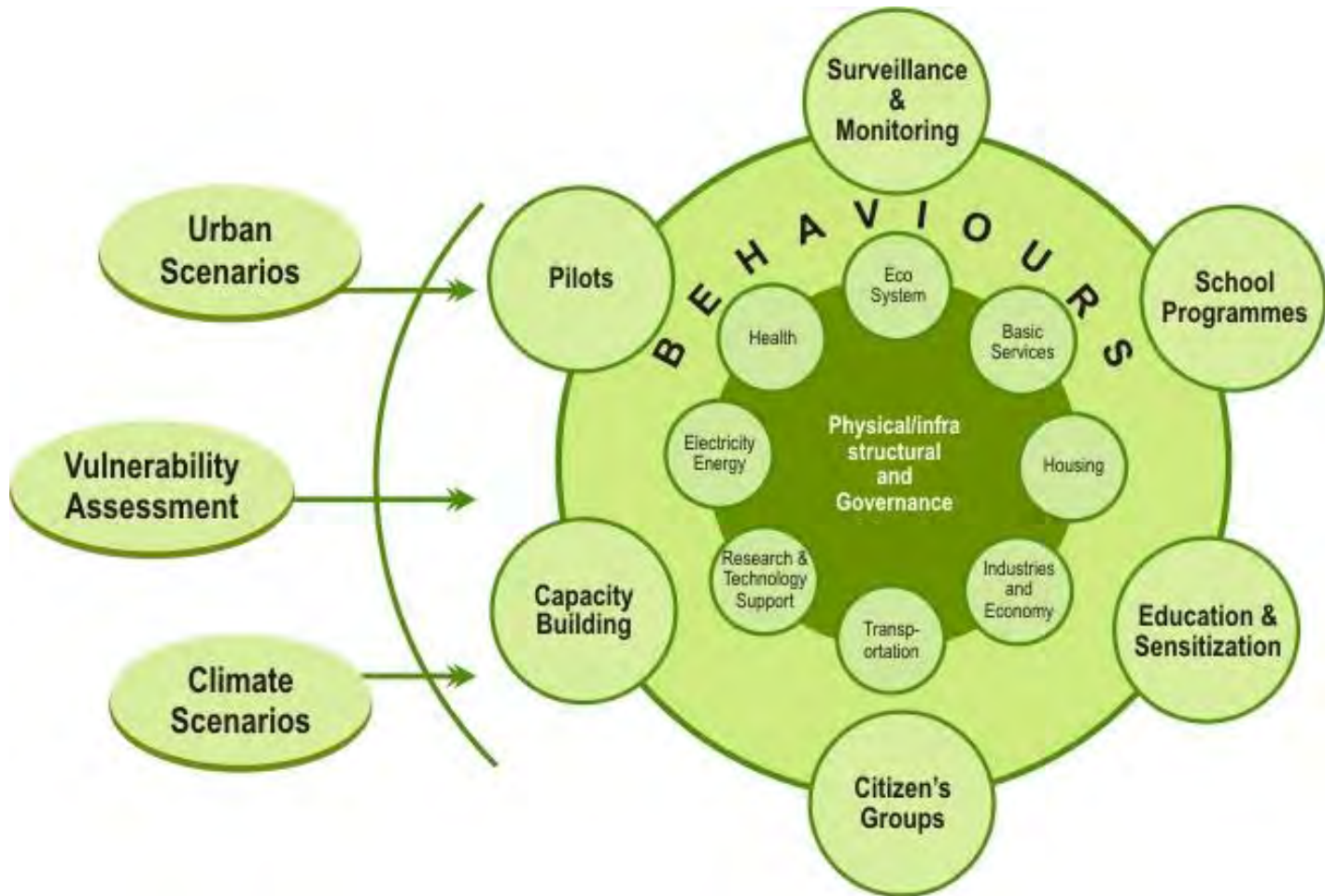
Fragile systems / low capacity agents / weak institutions + **exposure** = VULNERABILITY

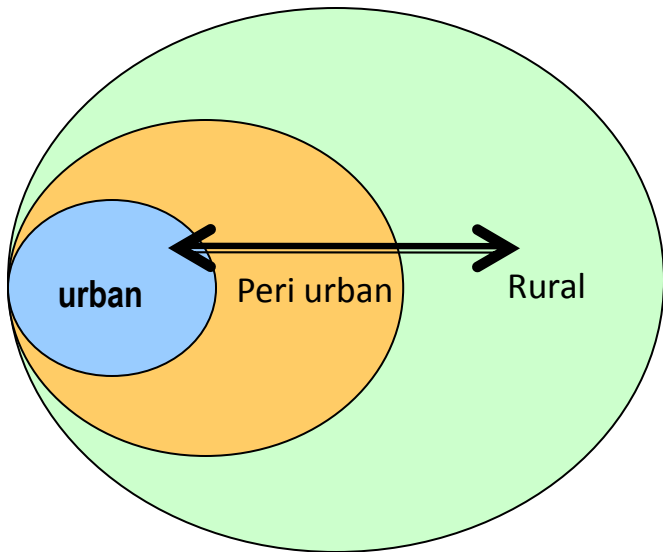






Approaches of City Resilience Strategy





Resilience Measures

- Basic infrastructure
- Social Institutions
- Economic base
- Natural environment

Thanks !

