



#breathe
BAGUIO

INTELLIGENT CITIES AND RESILIENCY

BENJAMIN B. MAGALONG
Public Servant





CITY VISION

BAGUIO 2043:

A Livable, Inclusive and Creative City

NATIONAL VISION:

Matatag, Maginhawa at Panatag na Buhay

AMBISYON 2040

BAGUIO 2043: A LIVABLE, INCLUSIVE AND CREATIVE CITY

WHERE WE WANT TO BE

SOCIAL SECTOR VISION:

A harmonious and thriving city with responsive, accessible, and equitable social services.

ENVIRONMENTAL SECTOR VISION:

A city with a sustainable and regenerative environment for generations to cherish, expand and preserve.

ECONOMIC SECTOR VISION:

A robust, vibrant, and innovative city with an economy that prioritizes growth, social equity, and conservation.

INFRASTRUCTURE SECTOR VISION:

A flourishing city that builds adaptive and interconnected infrastructure for lasting benefits.

6 SECTORS OF URBAN DEVELOPMENT

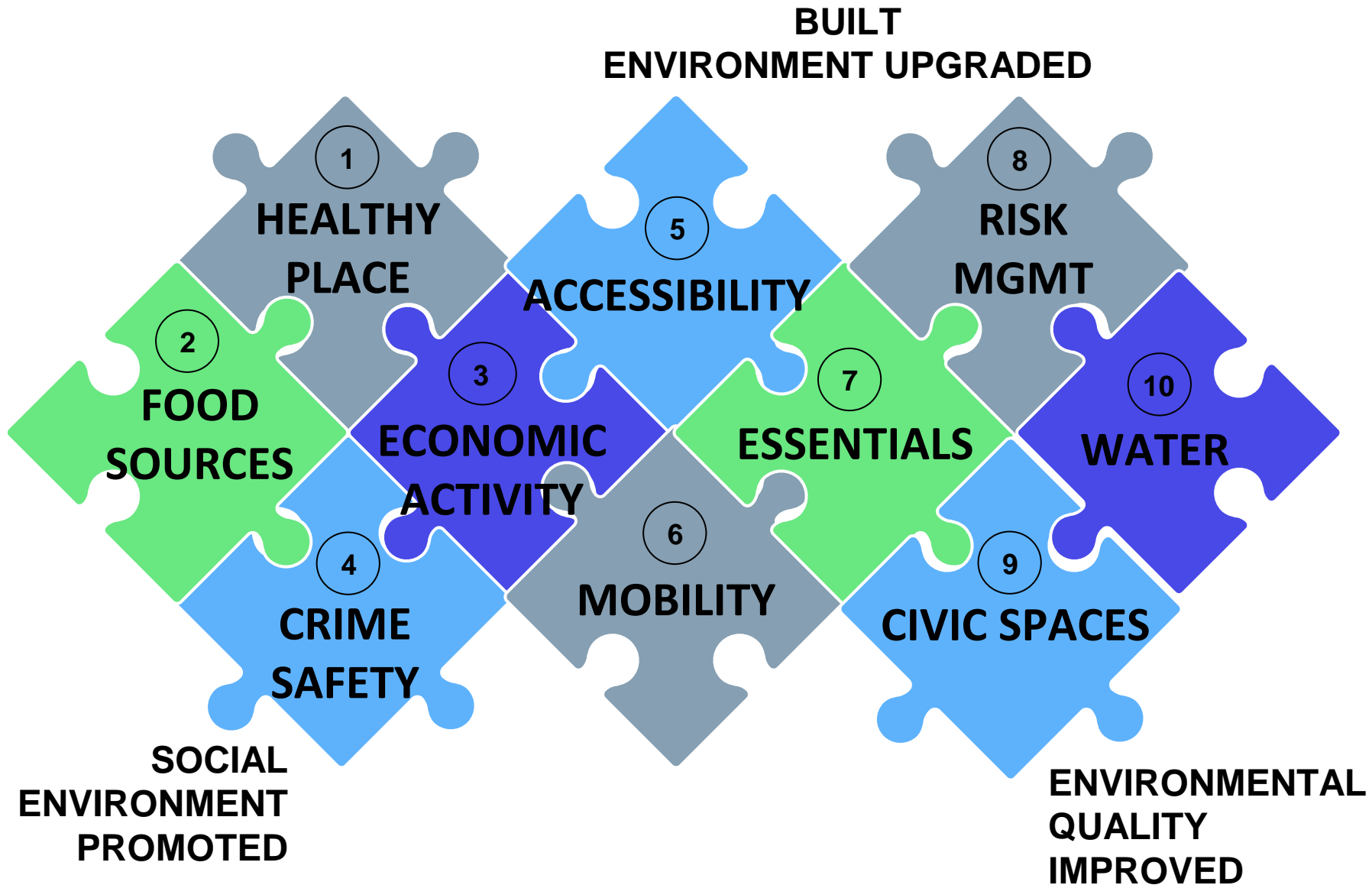
DRR-CCA VISION: A city that fosters inclusivity and resiliency through innovation, collaboration, and knowledge-based approaches.

INSTITUTIONAL VISION: A dynamic, progressive, and livable city, driven by principles of good governance.

CARRYING CAPACITY CHALLENGES

WHERE WE ARE RIGHT NOW

DIMENSIONS OF LIVABILITY



DIMENSIONS OF INCLUSIVITY

OVERCOMING THE FOUR FORMS OF URBAN POVERTY:



DIMENSIONS OF CREATIVITY

01

Urban Rejuvenation, Urban Planning and Placemaking

1. Livability;
2. Cultural facilities, libraries, performance spaces;
3. Recreational facilities;
4. Aesthetics and architecture of the place;
5. Quality of open spaces;
6. Spatial diversity, mixed land use and zoning;
7. Urban buzz, experiences along city streets; and
8. Climate adaptation and resilience.

02

Economic Development and Institutional Support

1. Vision and leadership;
2. Investments;
3. Artistic Freedom;
4. Entrepreneurship, reputation of design-led products;
5. Local Economic Development Strategy, monitoring and evaluation;
6. Policies and enabling strategies;
7. Cultural employment;
8. Creative and knowledge industries, scale and scope;
9. Cultural and creative organizations; and
10. Creative outputs, intellectual property/patents.

03

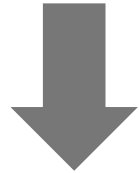
Cultural and Social Authenticity

1. Cultural mapping, preservation, conservation, adaptive reuse;
2. Distinctiveness, Cultural Tourism and attractions;
3. Cultural activities, participation;
4. Talent development, cultural learning, arts and creative education/schools, informal learning;
5. Cultural assets, human capital, the creative sector;
6. Technology and innovation, R&D, Festivals, concerts, outdoor activities, dining experience, nightlife;
7. Diversity, openness, sense of belonging;
8. Involvement and empowerment; and
9. Connectedness and networking

LIVABILITY

INCLUSIVITY

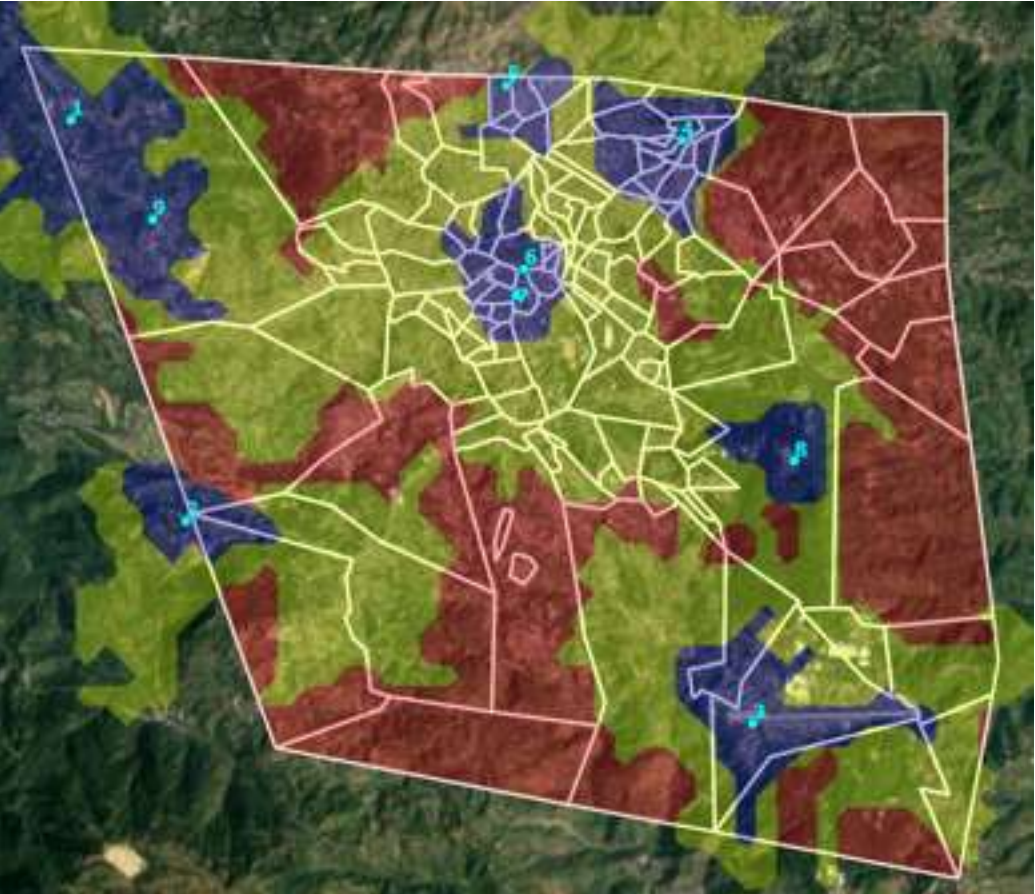
CREATIVITY



RESILIENCY

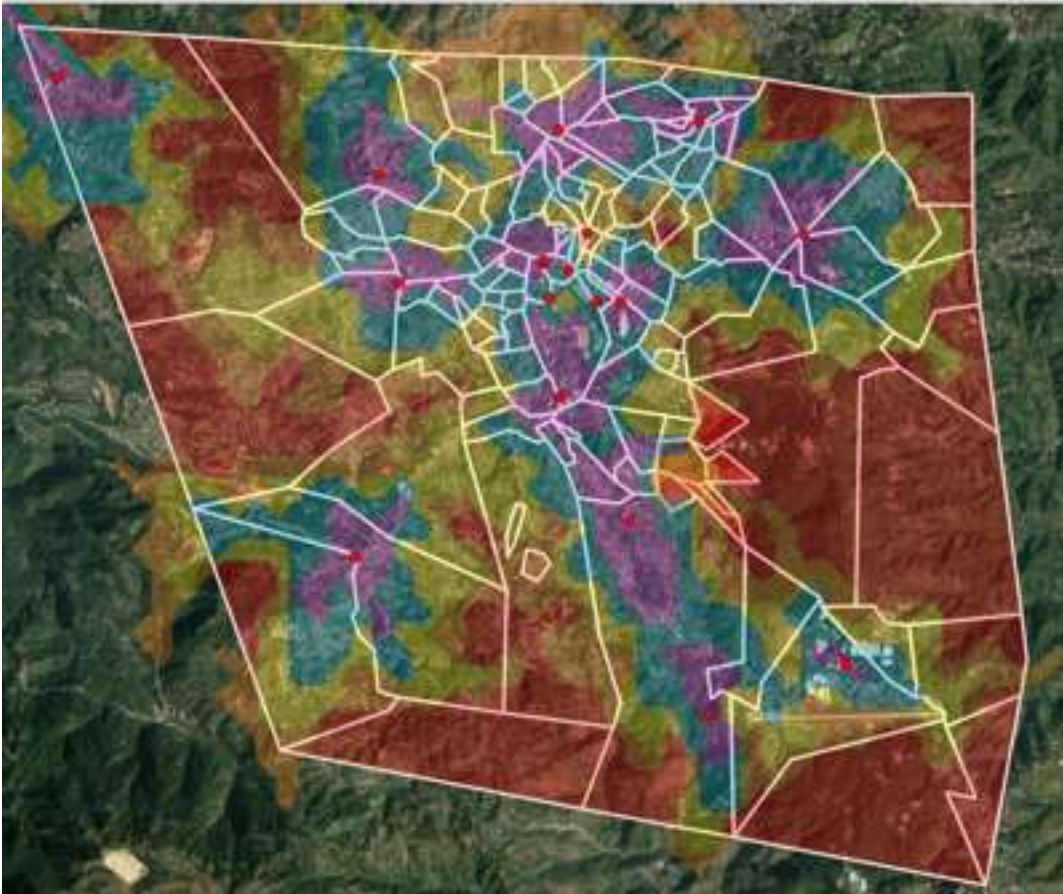
NETWORK ANALYSIS AND CRITICAL INFRASTRUCTURE PLANNING

FIRE RESPONSE TIME



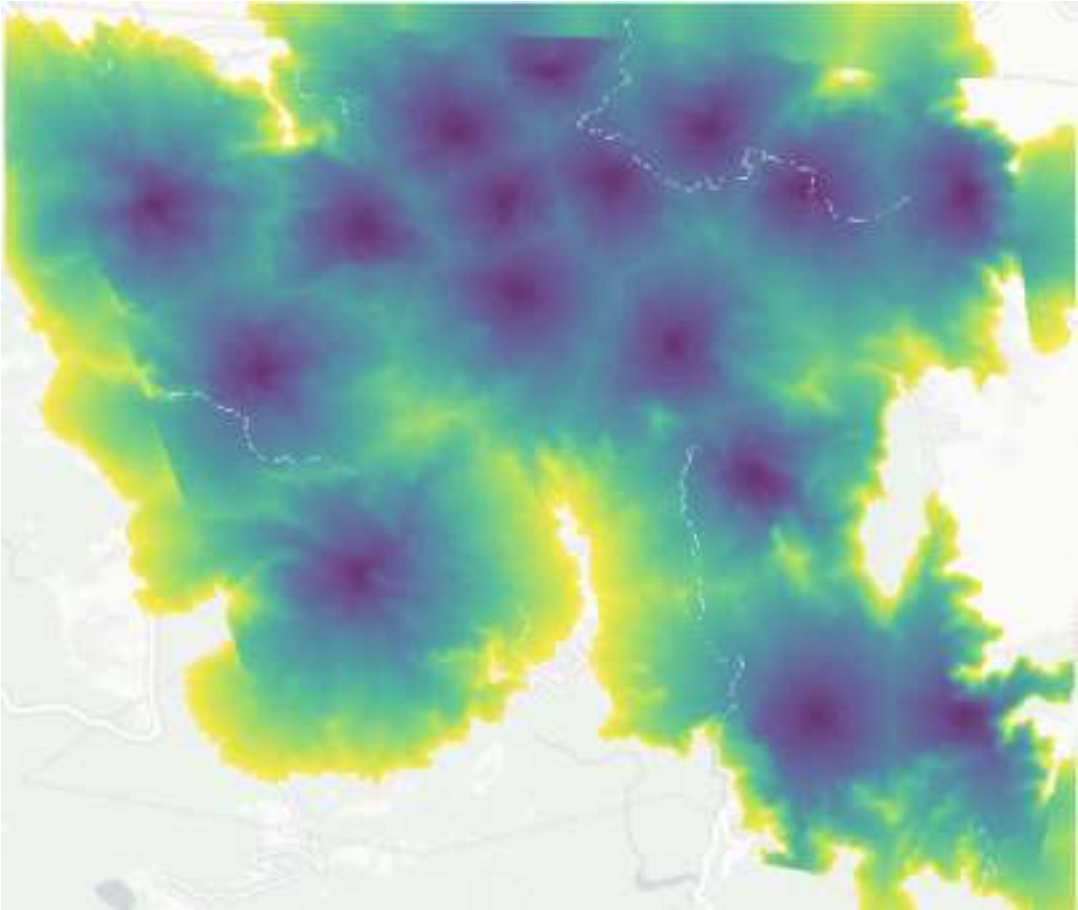
■ - 3 minutes ■ - 7 minutes more ■ - 7 minutes or more

POLICE RESPONSE TIME

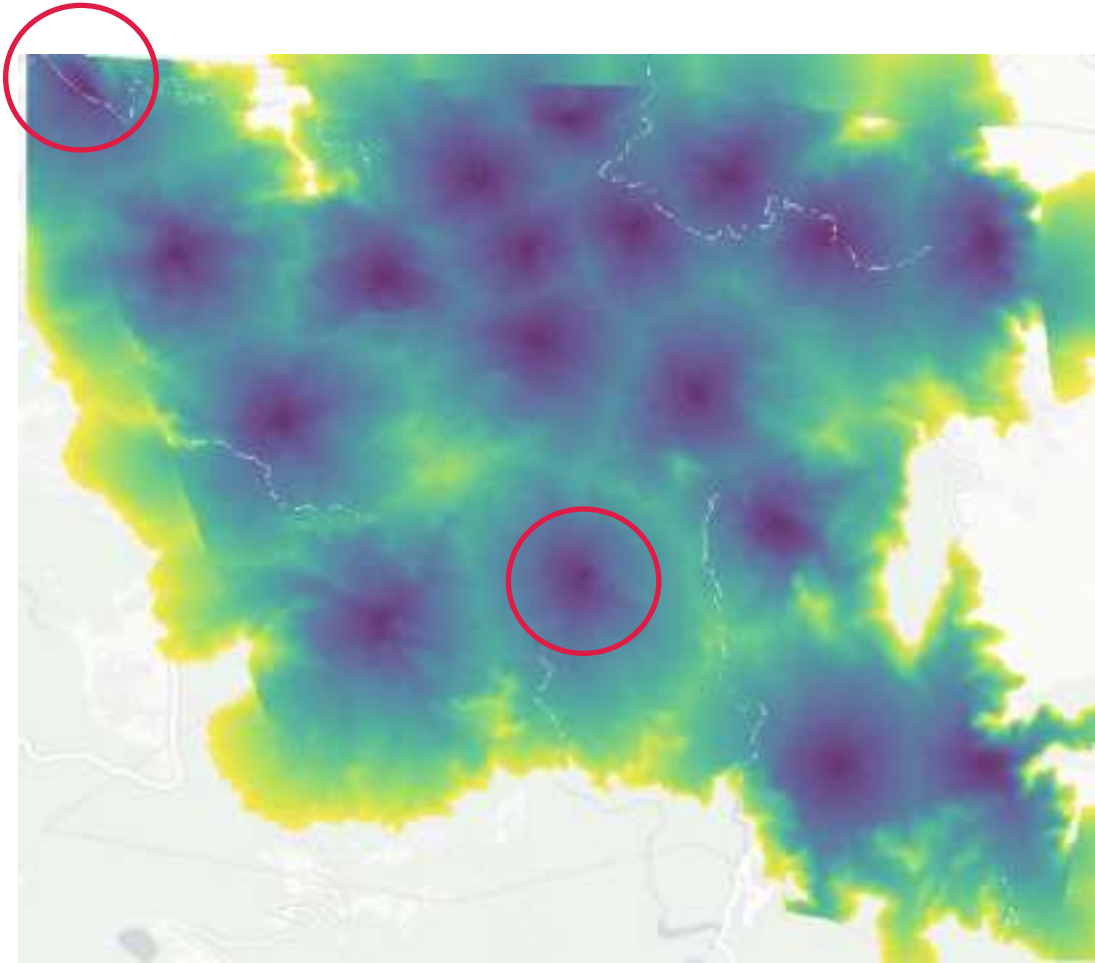


■ - 2 minutes ■ - 3 minutes ■ - 4 minutes ■ - 5 minutes ■ - > 6 minutes

ACCESSIBILITY OF HEALTH FACILITIES

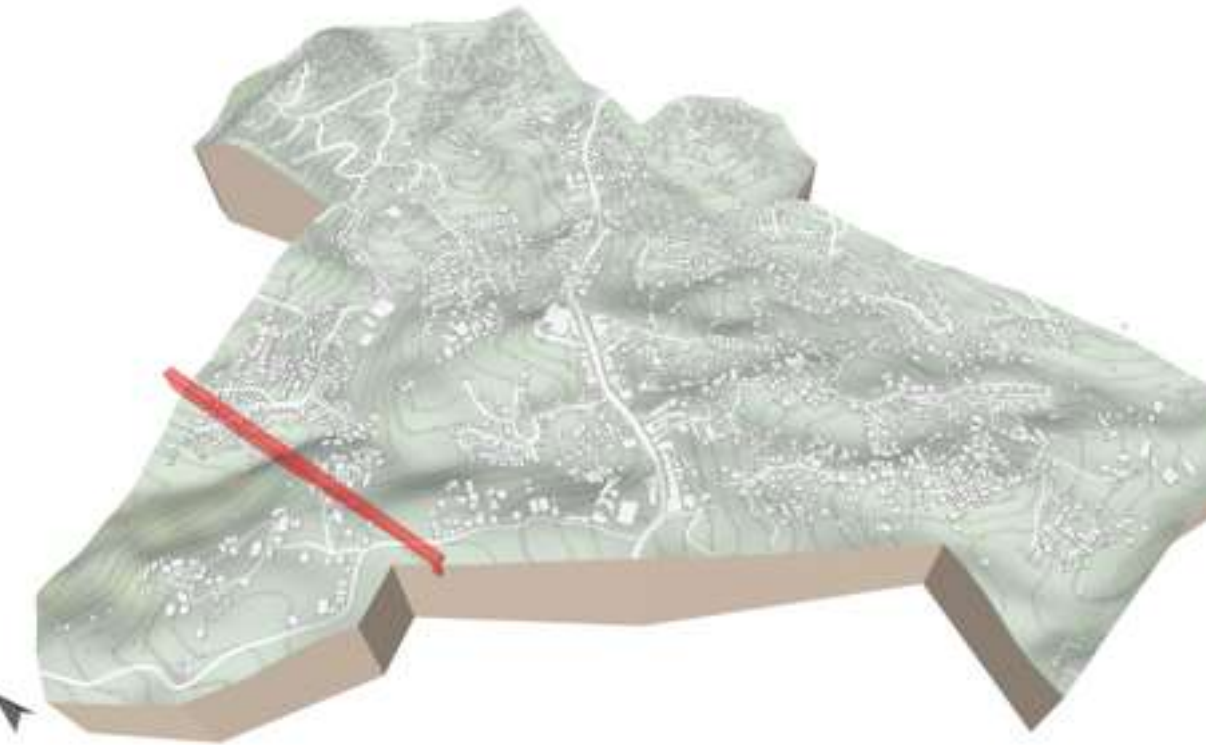


Current coverage



With two additional sites

HAZARDS AND RISK MANAGEMENT



BARANGAY BAKAKENG CENTRAL



34 STRUCTURES ON FAULT



BARANGAY BAKAKENG CENTRAL



142 STRUCTURES ON SINKHOLES

SEISMIC RISK PROFILING



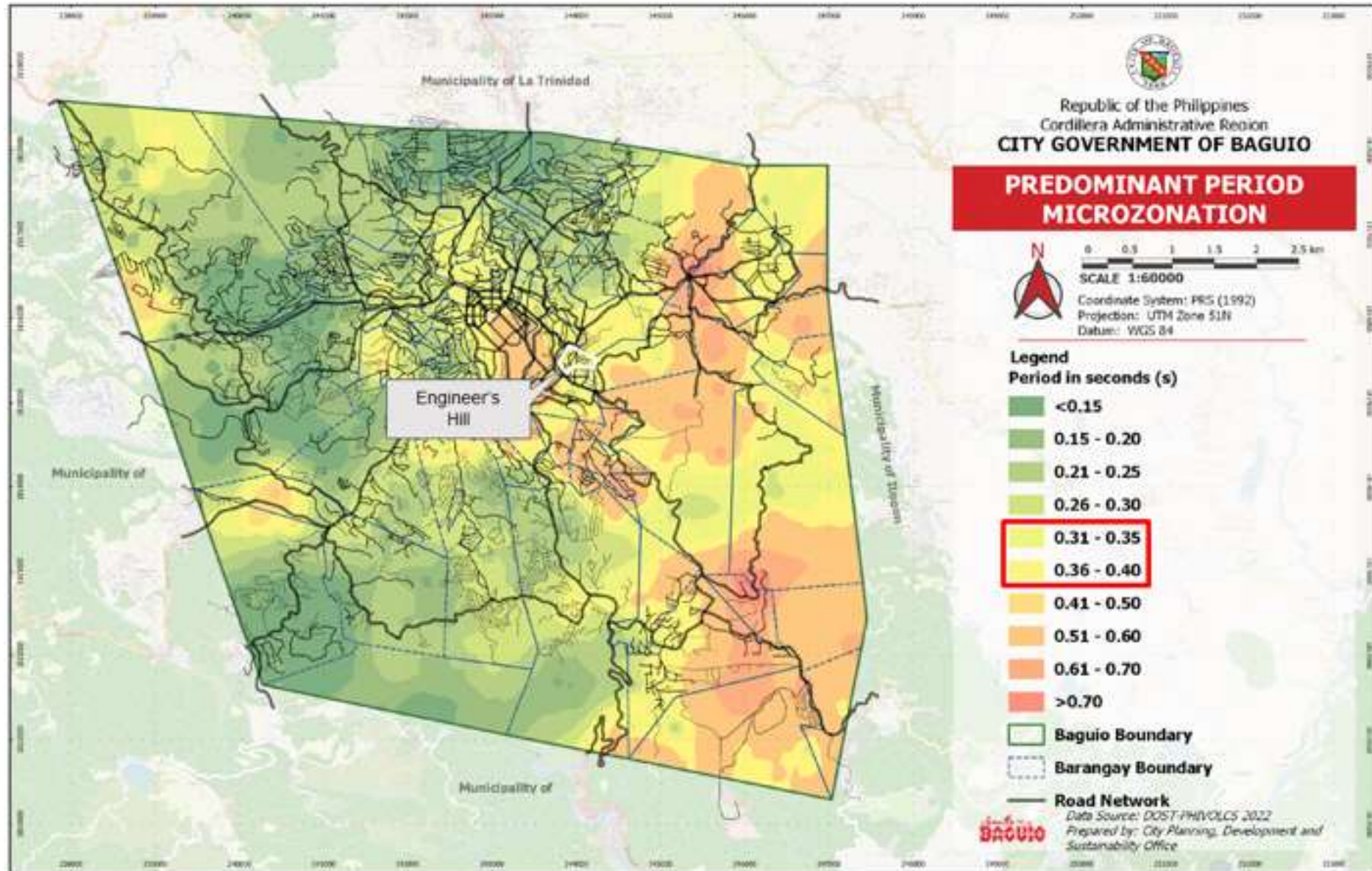
Number of Floors

- 1
- 2
- 3
- 4
- 5
- 6

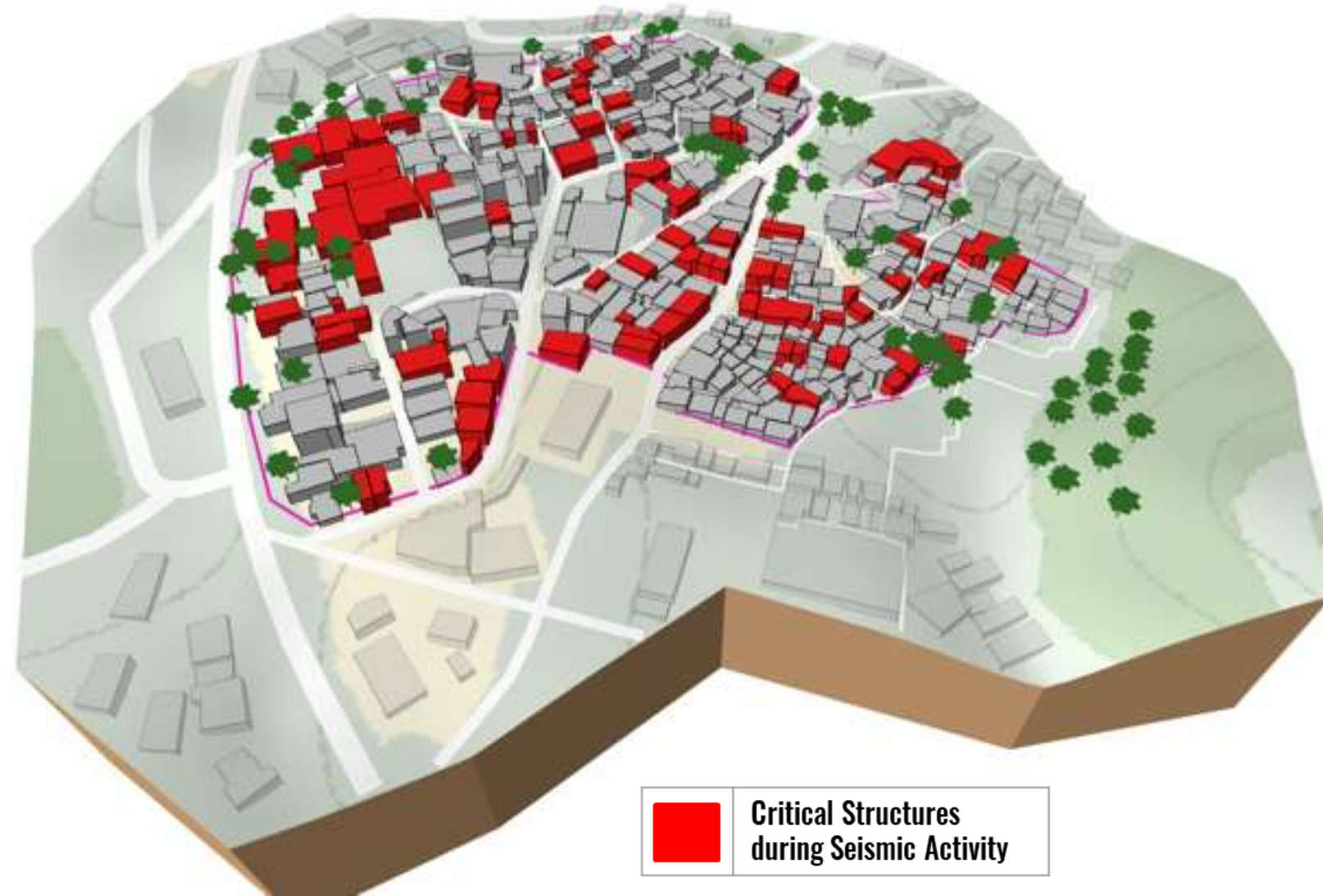
Storey Number	Number of Buildings
1	57
2	200
3	83
4	18
5	5
6	3
	366



SEISMIC RISK PROFILING



SEISMIC RISK PROFILING



BARANGAY ENGINEER'S HILL

30%

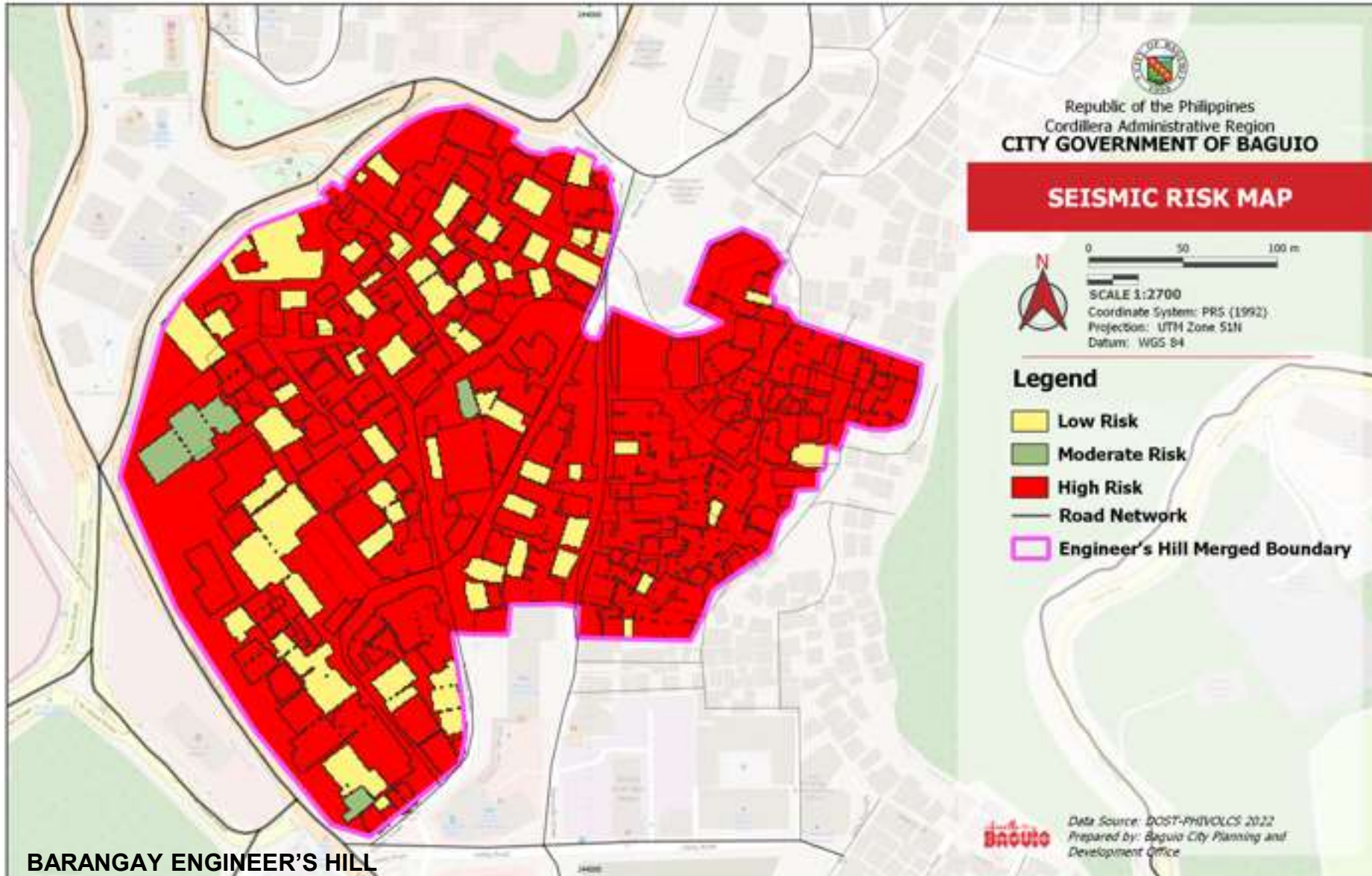
of the building period coincides with the ground period

Critical Structures during Seismic Activity

111/366

Legend	Period in Seconds
	< 0.15
	0.15 – 0.20
	0.21 – 0.25
	0.26 – 0.30
	0.31 – 0.35
	0.36 – 0.40
	0.41 – 0.50
	0.51 – 0.60
	0.61 – 0.70
	> 0.70

SEISMIC RISK PROFILING



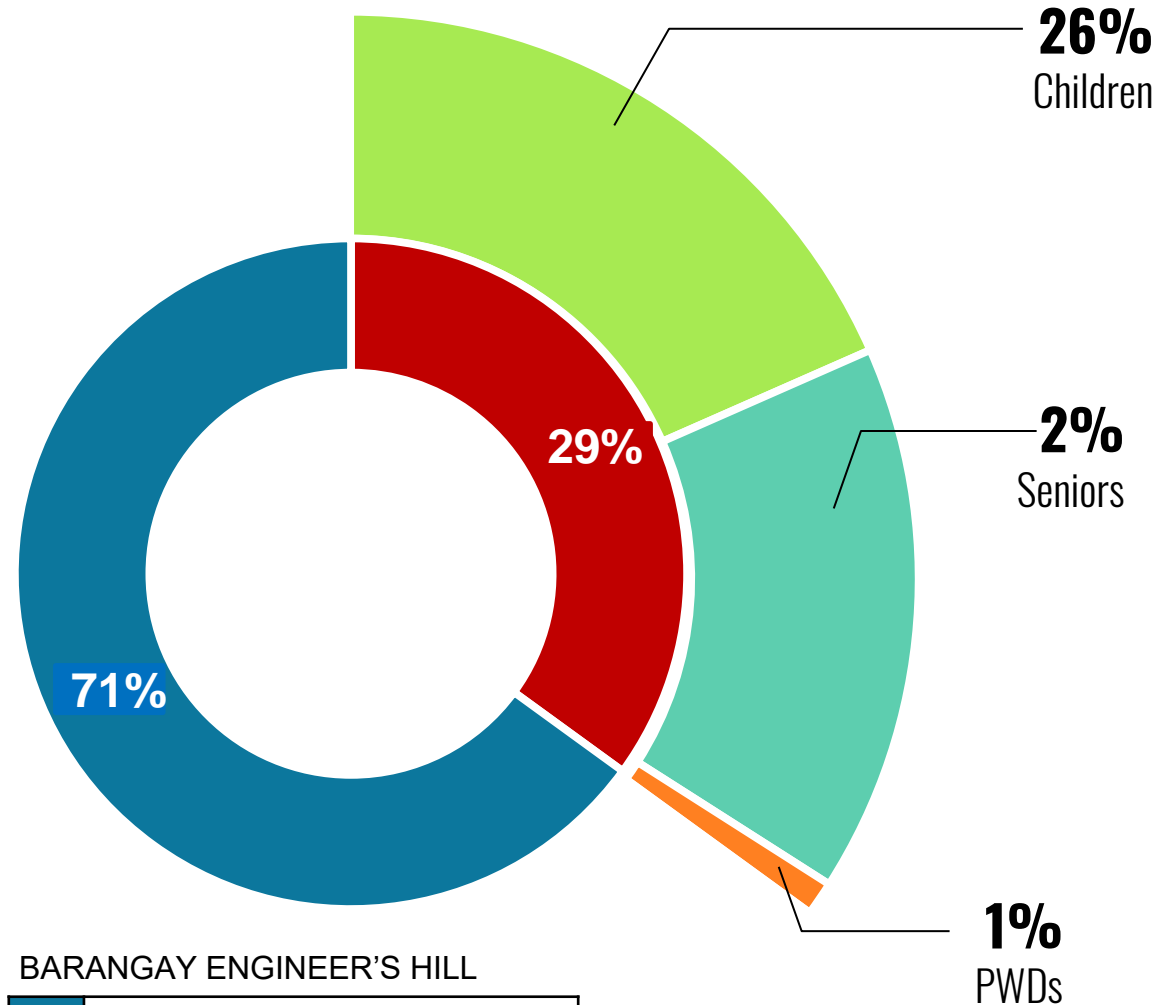
HAZARD

1. Topography/Slope
2. Soil Type
3. Peak Ground Acceleration (PGA)

VULNERABILITY + EXPOSURE

4. Building Number of Stories
5. Building Age
6. Building Typology
7. Structural Condition
8. Function
9. Utilization (degree of use)
10. Physical Density
11. Street Network
12. Open Space Accessibility

VULNERABILITY MAPPING



BARANGAY ENGINEER'S HILL

Rest of Barangay Population
Vulnerable Population

Composition of Vulnerable Population	
Children aged 0-14 years old	
Senior Citizens	
Persons with Disabilities (PWDs)	
Displaced Households	
Households living below the poverty line	

MINERVA Goals

Complement Baguio City's urban and ecological renewal efforts through Data Science, Artificial Intelligence, Complex Systems.

- 🎯 To model how the coupling of crowdedness/mobility and economic activities impact the quality of life.
- 🎯 To create a *smart city* index for Baguio City with the following *sub-indices*:



Air Quality



Water Quality



Urban Mobility



Tourism

TOWARDS A SAFE AND SOUND CITY

BAGUIO YOUTH INNOVATION HUB



ROBOTICS CHALLENGE



AI AND VIRTUAL REALITY TRAININGS



OPERATIONALIZING THE CITY VISION

Livable

Inclusive

Creative

1. **Community Engagement**
2. **Actionable Goals**
3. **Resources and Commitment**
4. **Adaptability**



INTELLIGENT CITIES ARE LIVABLE CITIES

