

MAPPING OF THE PROCESSES AND EVOLUTION OF POPULAR URBANIZATIONS: SOCIO-ENVIRONMENTAL RIGHTS AND ENVIRONMENTAL HEALTH IN THE SETTLEMENTS OF THE ASUNCIÓN METROPOLITAN AREA, PARAGUAY

Sagüí Gómez, Nestor;
Canese de Estigarribia, Marta Isabel;
Estigarribia, Silvia Elisa.

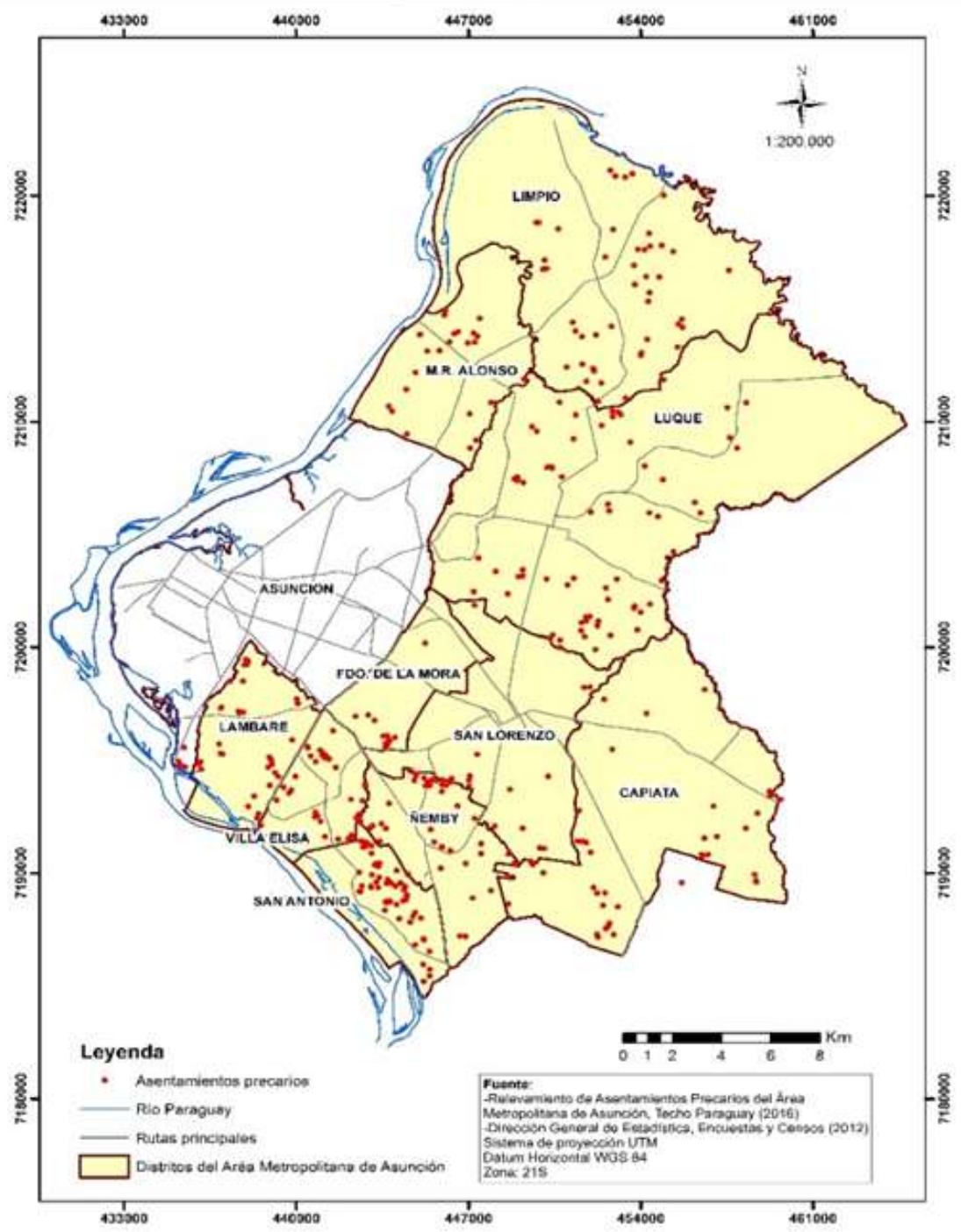
Introduction

- This research explores the processes of shaping popular urbanizations, with emphasis on socio-environmental rights linked to environmental health.
- The popular urbanization approach refers to the process that occurs without the intervention of the real estate market, its agents or the government.
- In this research, the concentration of the population in the popular urbanizations was identified based on geographic and demographic data.

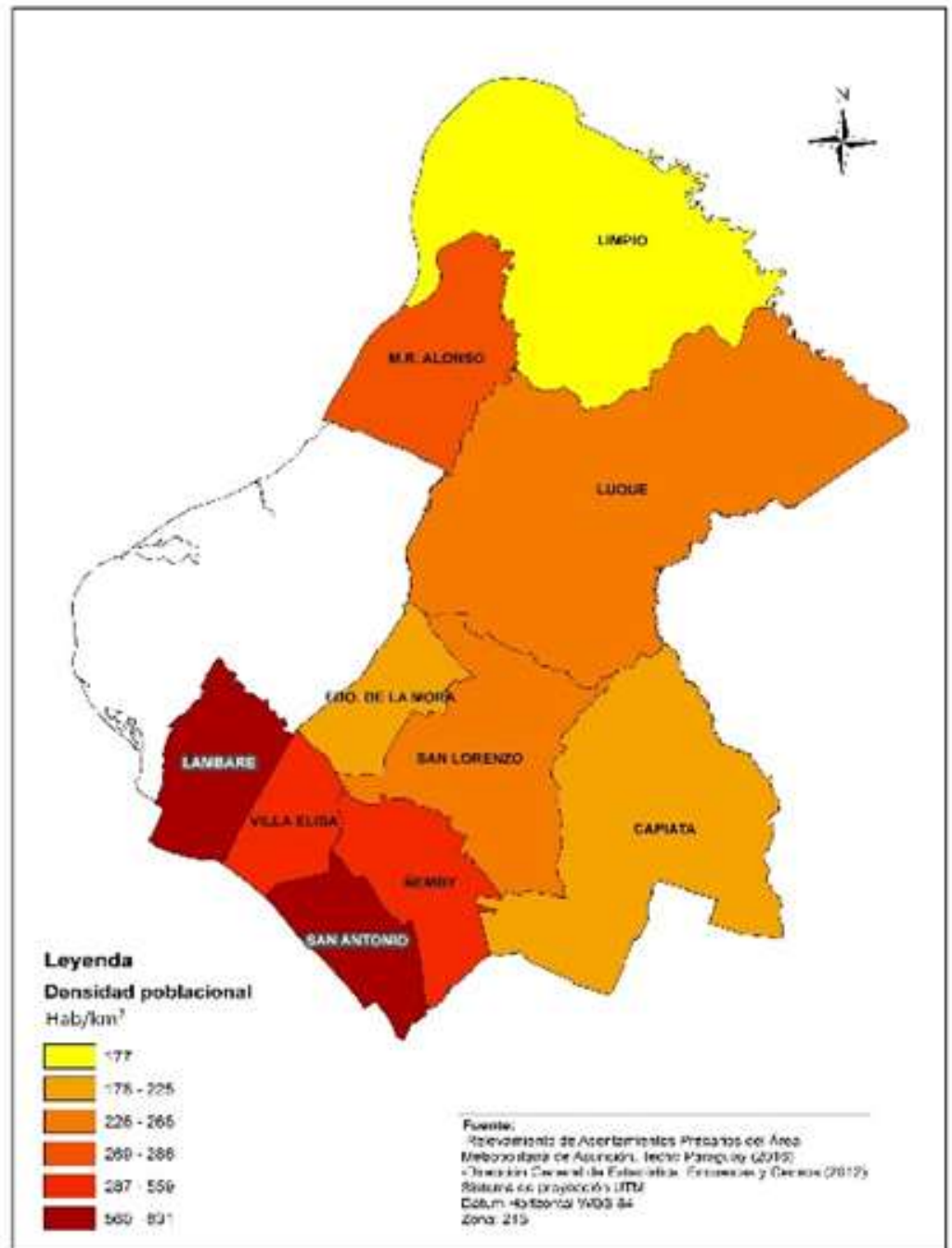
Metodology

- The basic environmental sanitation and the availability of green infrastructure were explored, as aspects related to environmental health and the quality of life in popular urbanizations.
- Data processing was performed with Geographic Information Systems (GIS).
- The perception of the inhabitants was also identified, through observations and in-depth interviews to 30 leaders of organizations in the popular neighborhoods.

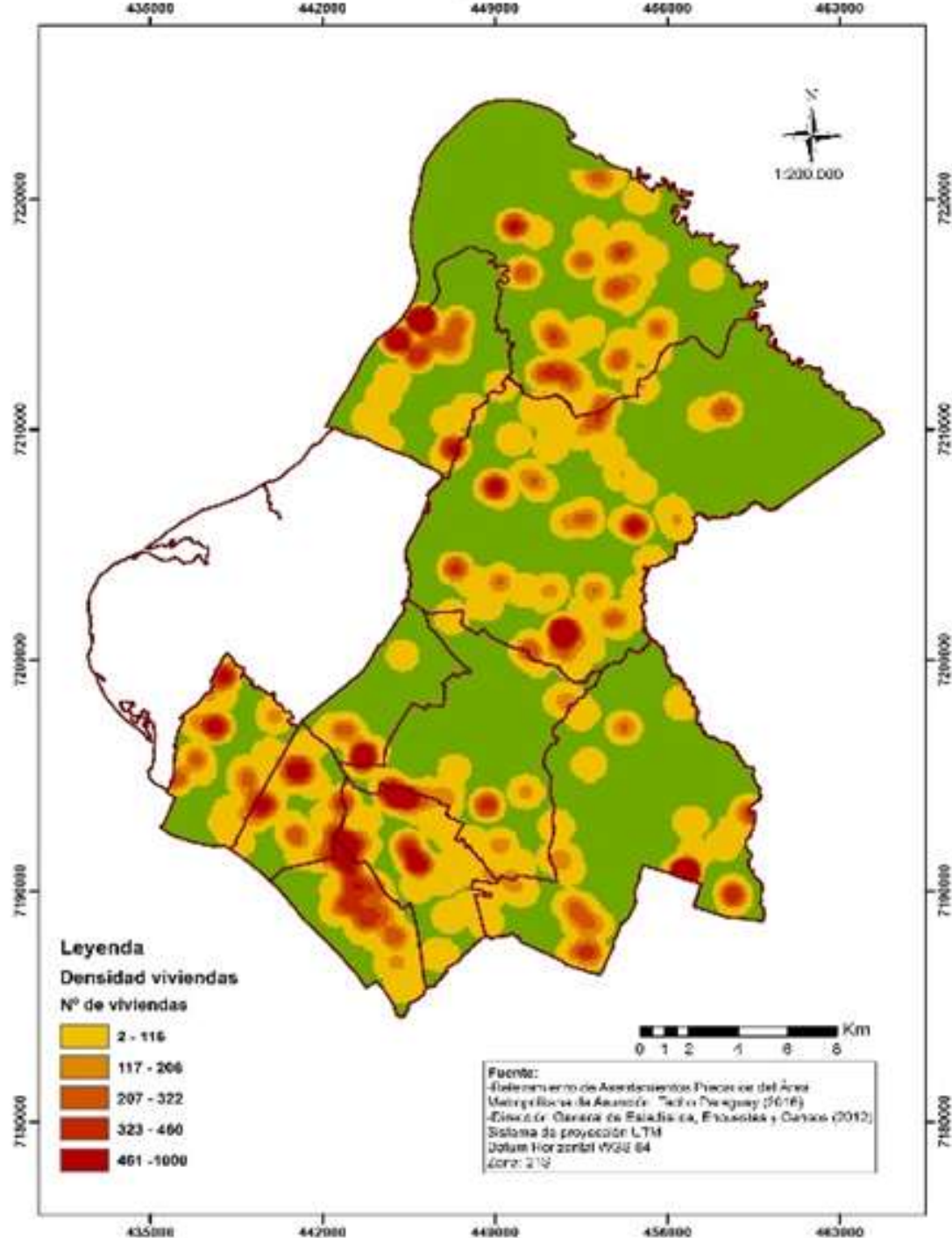
Spatial distribution of popular settlements in the AMA



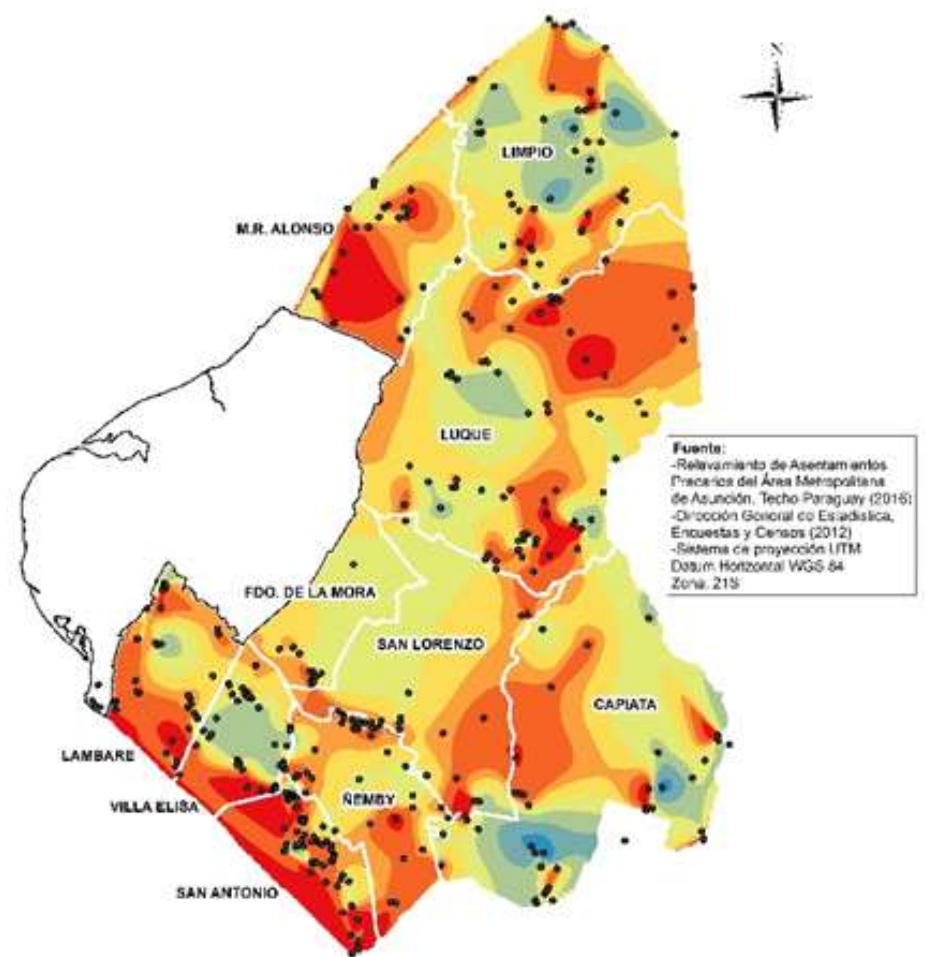
Density of popular settlements in the AMA



Density of homes in popular urbanizations of the AMA



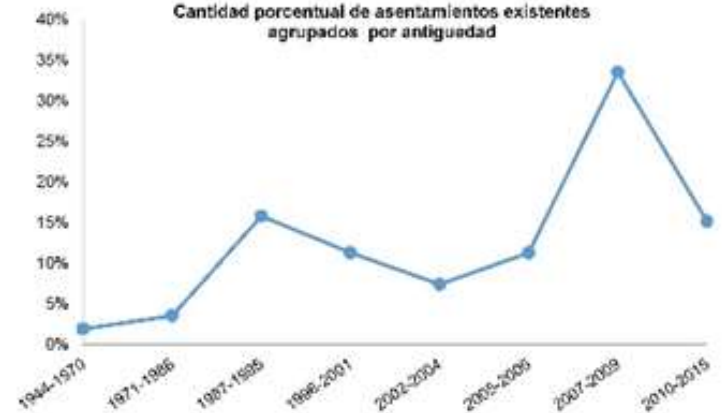
Multitemporal analysis of occupation in popular urbanizations of the AMA



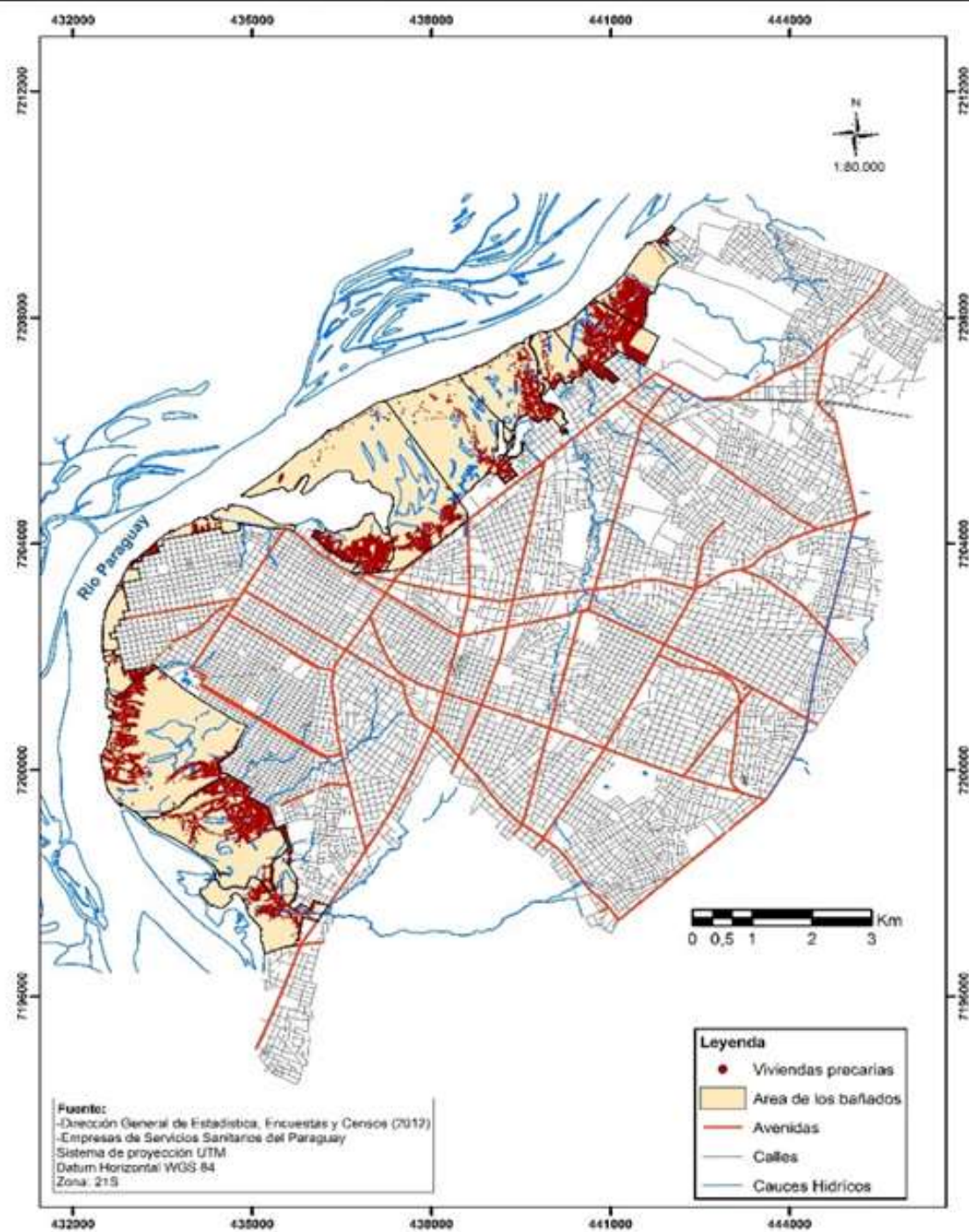
Leyenda

- Asentamientos precarios
- Distrito
- Antigüedad asentamientos
- Asentamientos/año
- 1944 - 1970
- 1971 - 1986
- 1987 - 1995
- 1996 - 2001
- 2002 - 2004
- 2005 - 2006
- 2007 - 2009
- 2010 - 2015

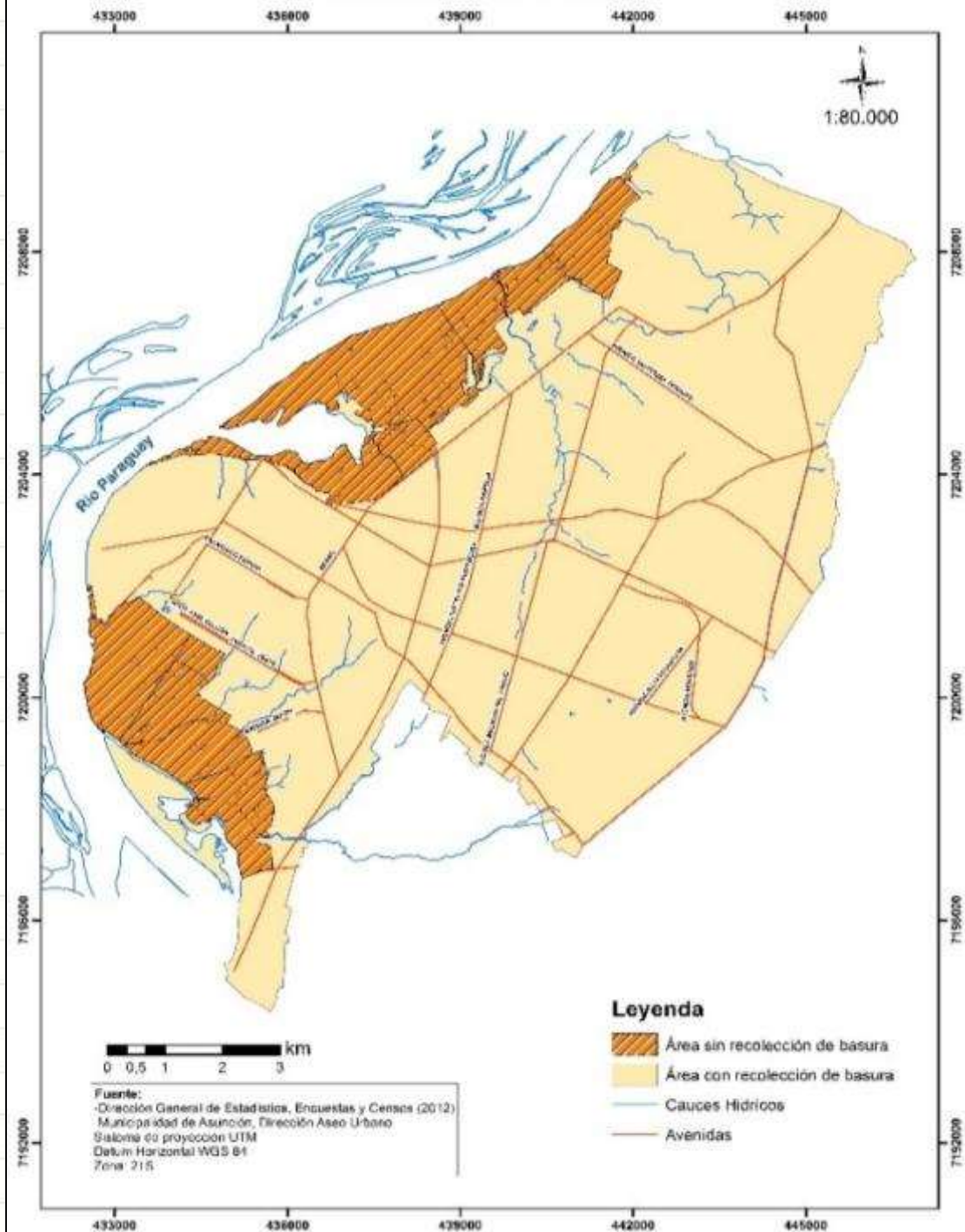
Cantidad porcentual de asentamientos existentes agrupados por antigüedad



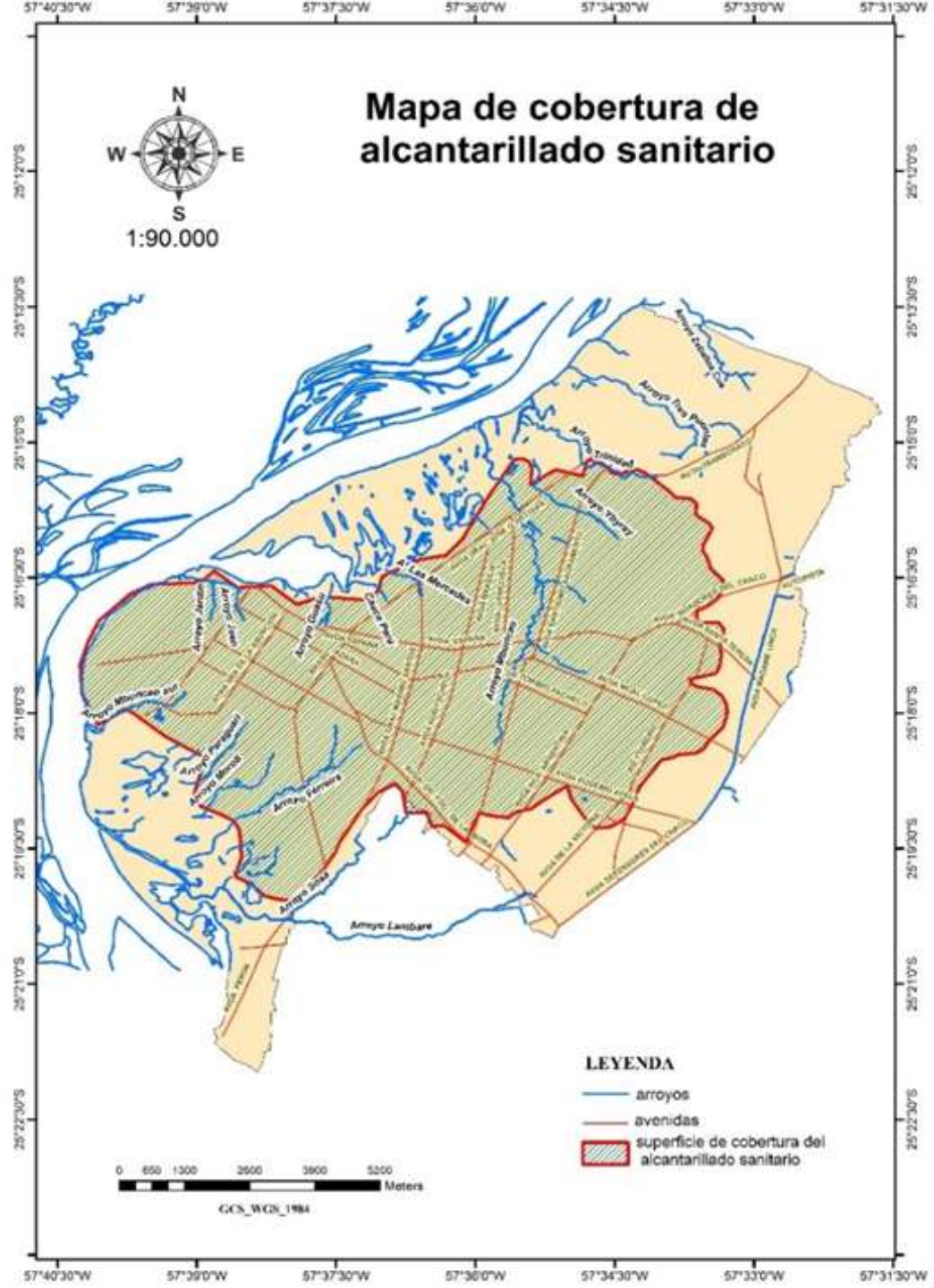
Spatial distribution of popular settlements in Capital District



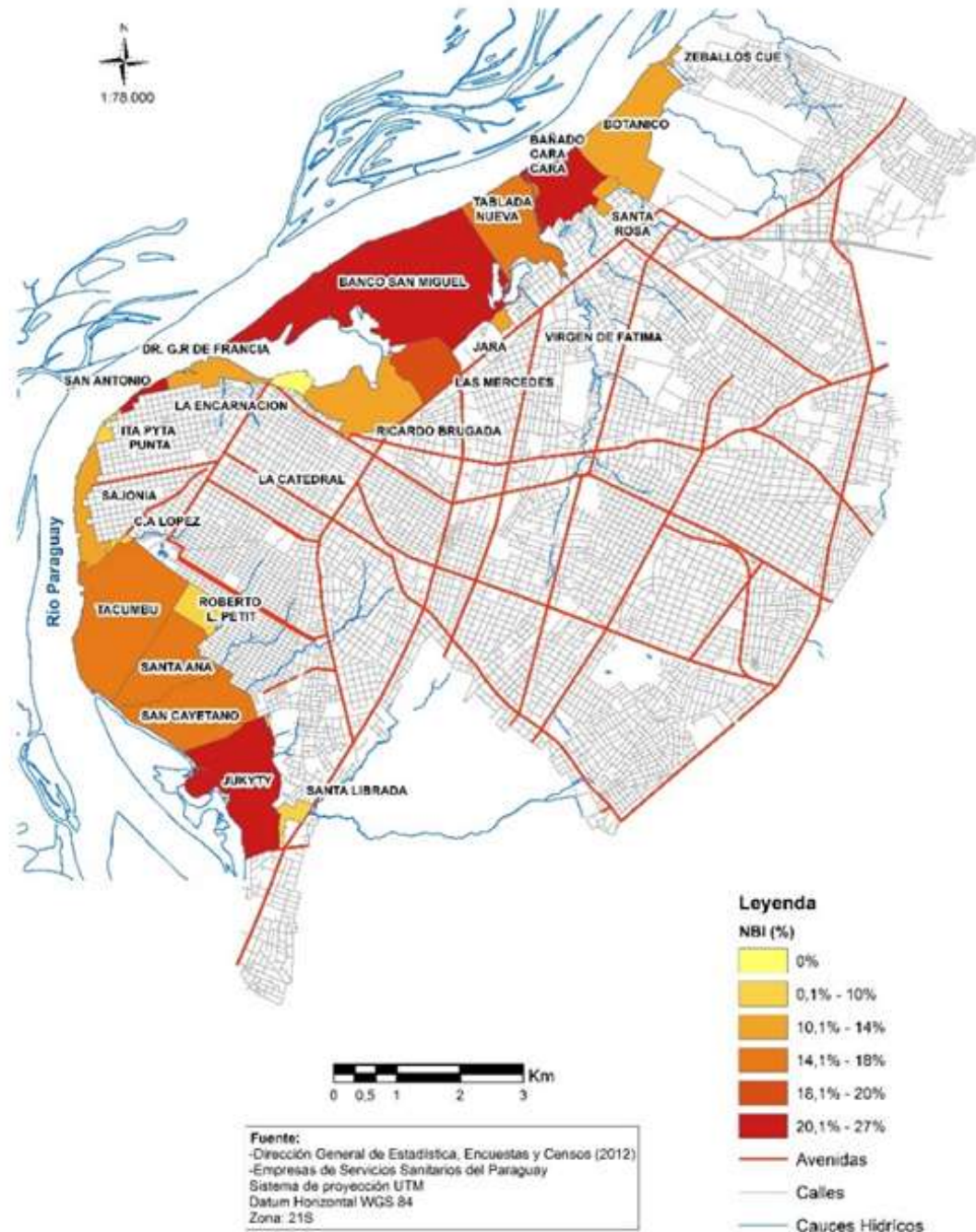
Urban solid waste service coverage in Capital District



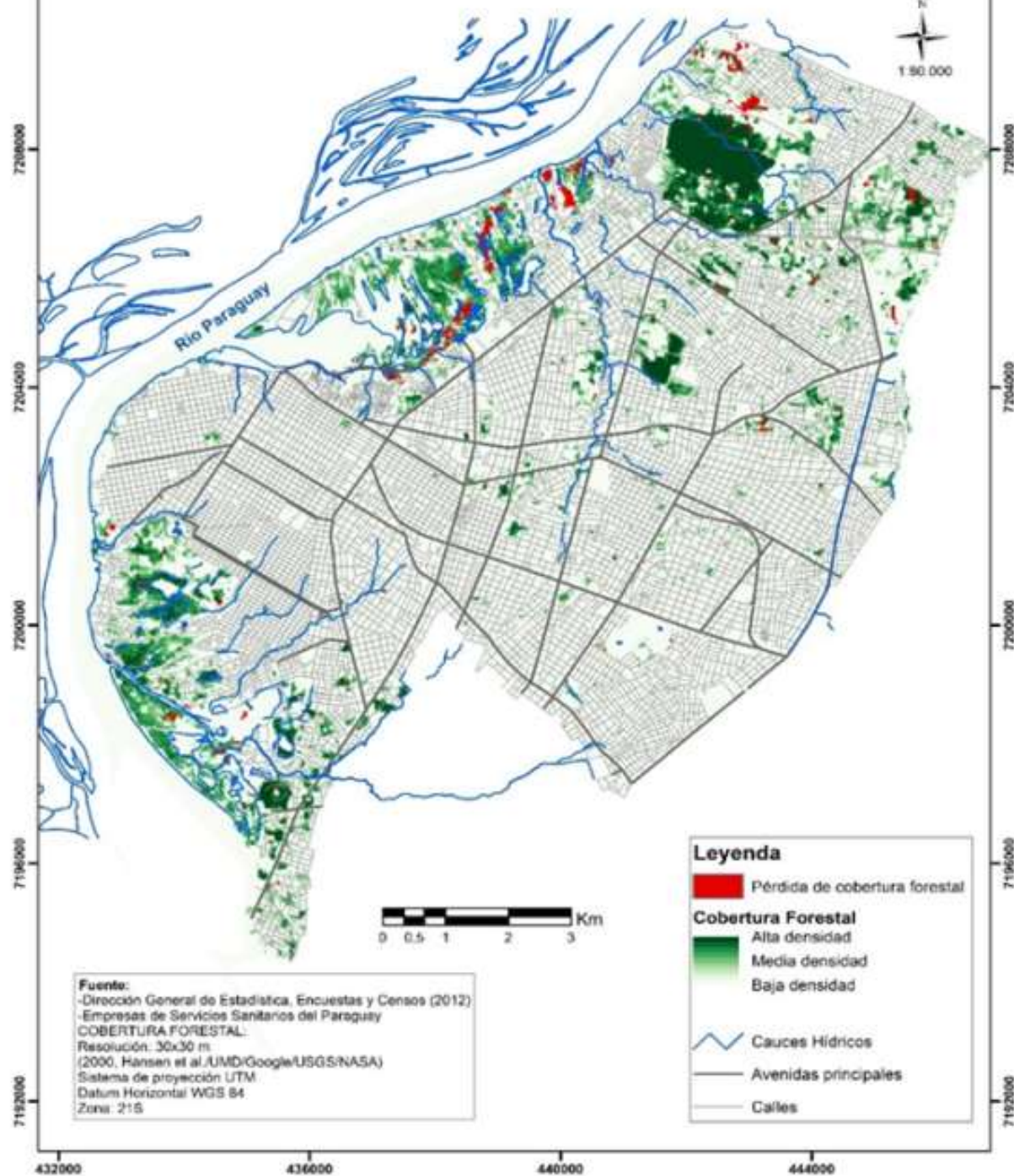
Sanitary sewer service coverage- Capital District



Percentage distribution of the population with UBN - Unsatisfied Basic Needs - Capital District



Green coverage in Capital District



Socio-environmental problems

✓ Flood

✓ Ravines and landslides

✓ Lack of drains

✓ Roads in disrepair

✓ Lack of public spaces

- “The main problem is the flood. We have education services, health services, transportation, security services ”(E2).
- "The urbanization extends to the banks of the river, where sometimes there are landslides when it rains a lot" (E7).
- "The roads are in poor condition and the terrain is very rugged, there are floods with heavy rains, despite being paved the main avenue" (E6).
- “We have no space for cultural or sports activities” (E8).

Actions in defense of socio-environmental rights


- **Requests in public institutions**
 - **Cooperation**
 - **Self help**
 - **Mobilizations**
- “Before the neighborhood had no water, electricity or medical assistance. Now, we also have our cooperative, training center and we build houses with modules ”(E12).
 - “Our organization (Mutual Help Center) addresses the needs that public services do not cover ”(E13).
 - “Our organization requests services from the institutions, and accompanies this management with mobilizations” (E14).

Perception of urban changes

- Civic Center the Port of Asunción (Currently under construction).
 - "It is said that the community below will be affected by the construction of the buildings that will be built in the Port area" (E4).
- Expansion of the waterway (Currently under construction)
 - "We think that the waterway will help us to live better. A landfill was made, and 500 monoblock houses are being built. Those homes will no longer be flooded"(E13).
- Coastal Defense (Cobañados Project).
 - "Coastal defense can bring many benefits, respecting our way of life"(E15)

Conclusions

- The urbanization process in the Asunción Metropolitan Area has increased in recent decades, with major increases since 2005.
- Popular urbanizations in Asuncion are concentrated at the Paraguay river coast.
- Popular urbanizations are mainly concentrated in the peripheries of the metropolitan area, with greater density in 4 districts.

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- There are a strong segregation in terms of sanitary sewer coverage, solid waste collection coverage and households with unsatisfied basic needs.
 - The interviewed leaders perceive the precariousness of basic environmental sanitation services.
 - That is aggravated by the risk of expulsion from their territories due to the lack of legal recognition of their land rights.
 - That fact is limiting to prioritize investment in sanitation infrastructure.

Final recommendations

- The environmental rights of communities living in popular urbanizations and citizens of other neighborhoods should be prioritized in public policies.
- A differentiated registration system for housing in popular urbanizations is needed.
- Appropriate technologies should be investigated to improve the environmental conditions of the coastal zone.









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mcanese@gmail.com
childsago@gmail.com
silviaestig@gmail.com



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