

ENHANCING RESILIENCE CAPACITIES FOR MEGA CITY WATER GOVERNANCE FACING CLIMATE CHANGE

The case of Lima, Perú

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LiWa Project + Chance2Sustain

BMBF + UE 7th Research Framework



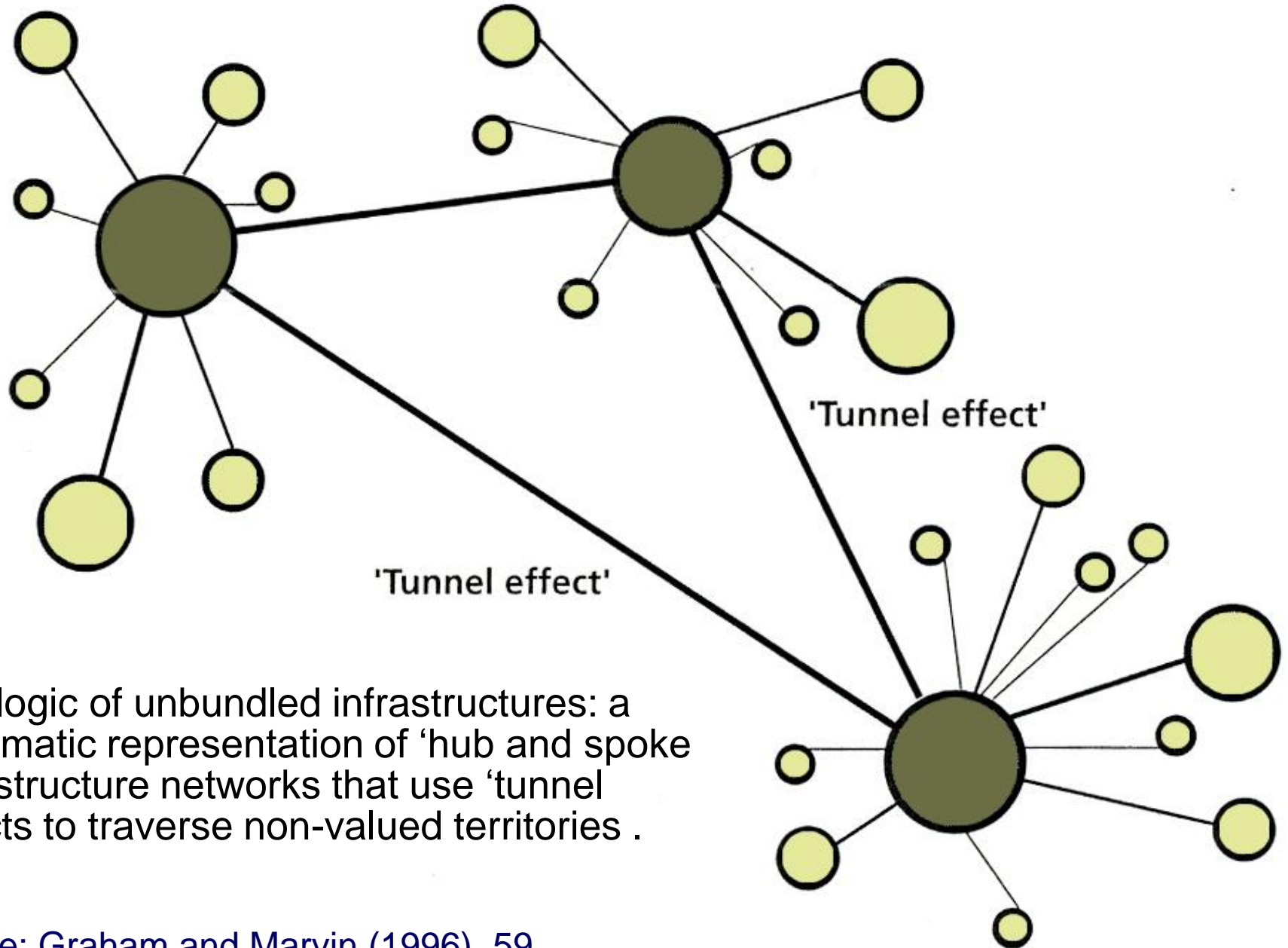


1. THE GLOBAL CONTEXT WORLD URBAN TENDENCIES AND CHALLENGES

The current story



SPACE TIME DIFFERENTIATION AND TUNNEL EFFECTS

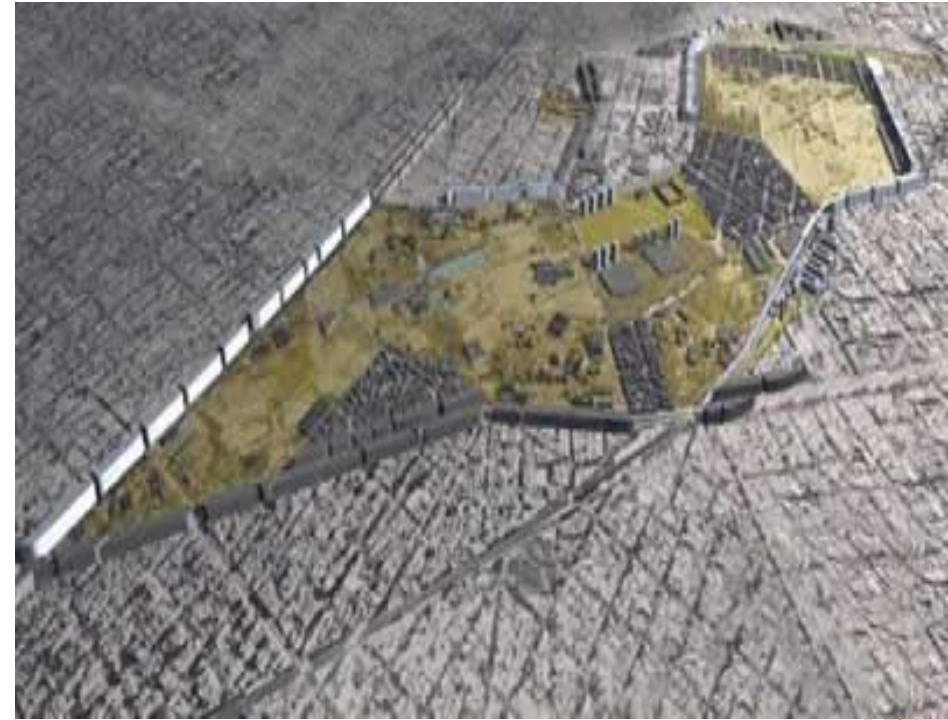


The logic of unbundled infrastructures: a schematic representation of 'hub and spoke infrastructure networks that use 'tunnel effects to traverse non-valued territories .

The shift from Master Planning to Strategic Planning (fragmentation..)



From 'urban-scale planning' strategies'



to 'project-based





There is a profound unfairness globally between the people who cause climate change and those most at risk from its effects. So cities with very low average greenhouse gas emissions per capita still need to add climate change adaptation to their public works programs and land use plans....

***Environment and Urbanization
Brief – 15, IIED, UK***



2. THE PROBLEM

THE CHALLENGES OF LIMA AS A MEGA-CITY

Lima, concentration of:

45 %GNP

56 %Industrial GP

60 %nat. Services

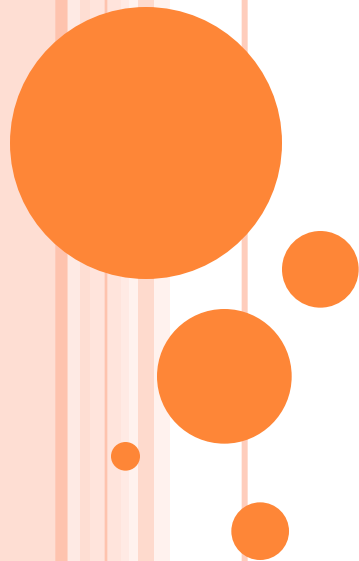
84 %tax collection

70 %export

companies

52 %urban poor

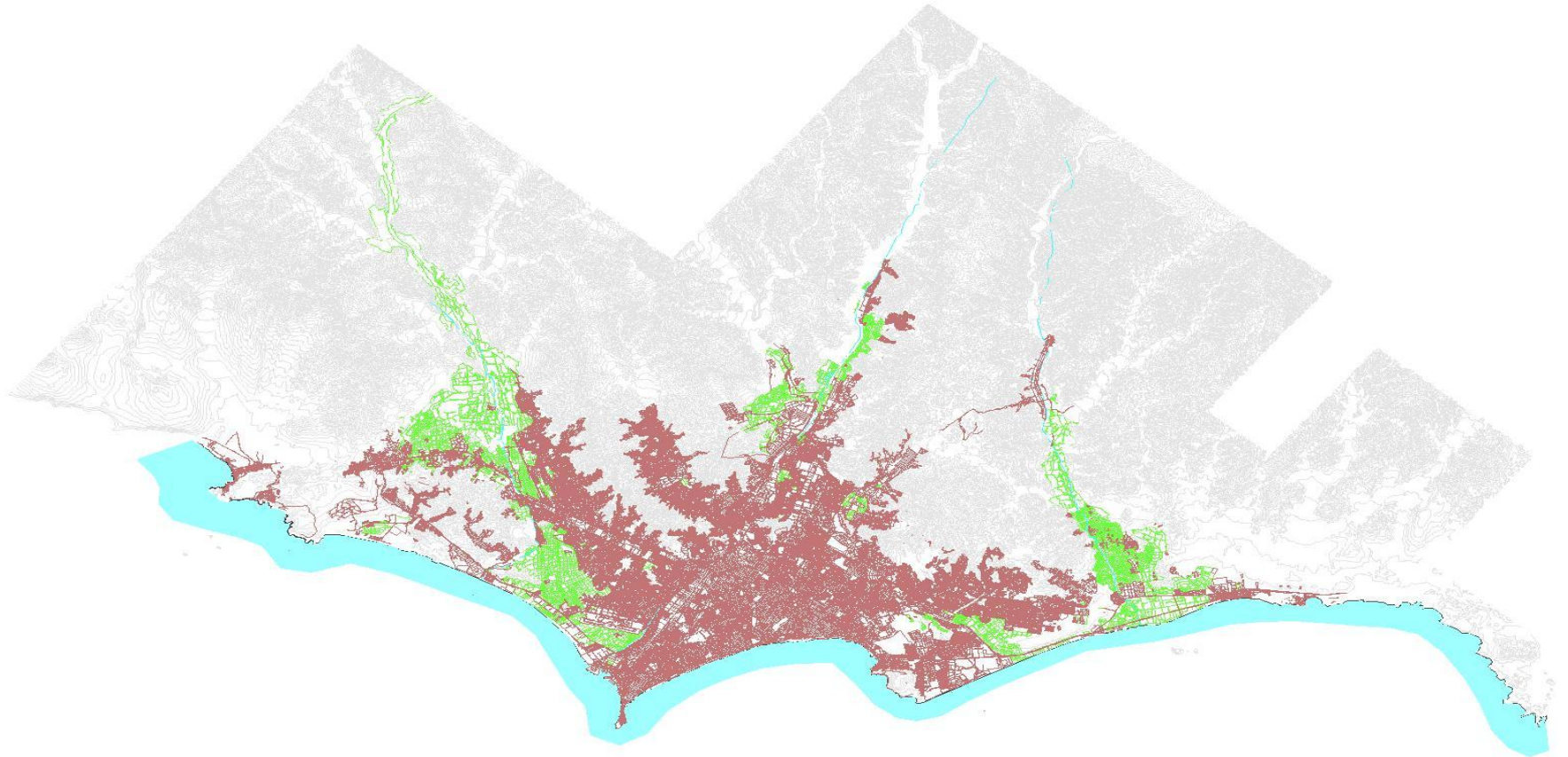
Source, Roberto Arroyo



Lima 1950



Lima 2000



INEI estimated that Metropolitan Lima has reached in 2008, 8'975,315 habitantes and in 2015 will have 10'397,354.

Source: Roberto Arroyo

The four river basins of Lima and Callao: Chillón, Rímac, Lurín and Mantaro



The Mantaro river basin has displayed a downward trend in rainfall over the last 40 years.

LIMA AND CALLAO OVERDIVIDED

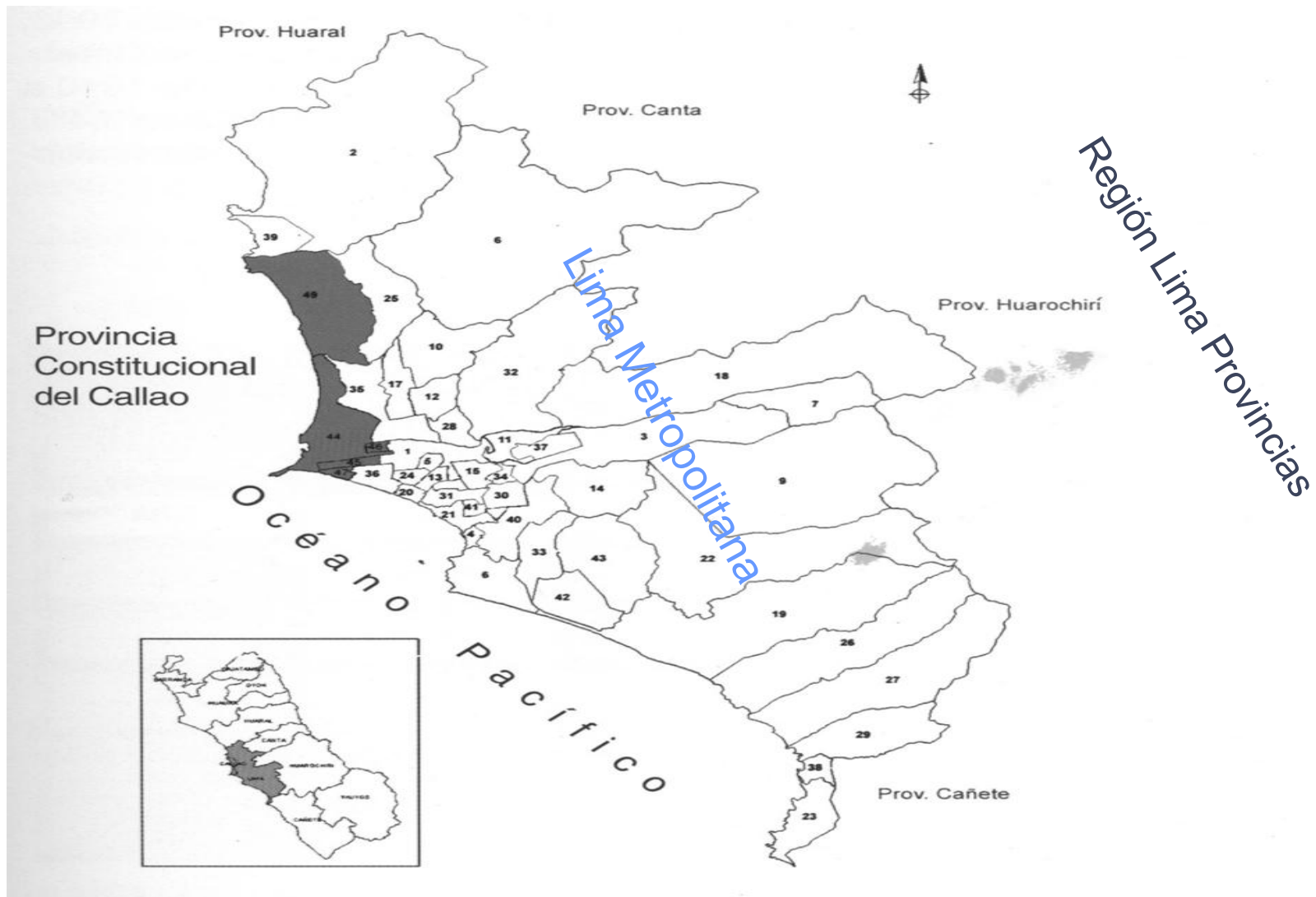
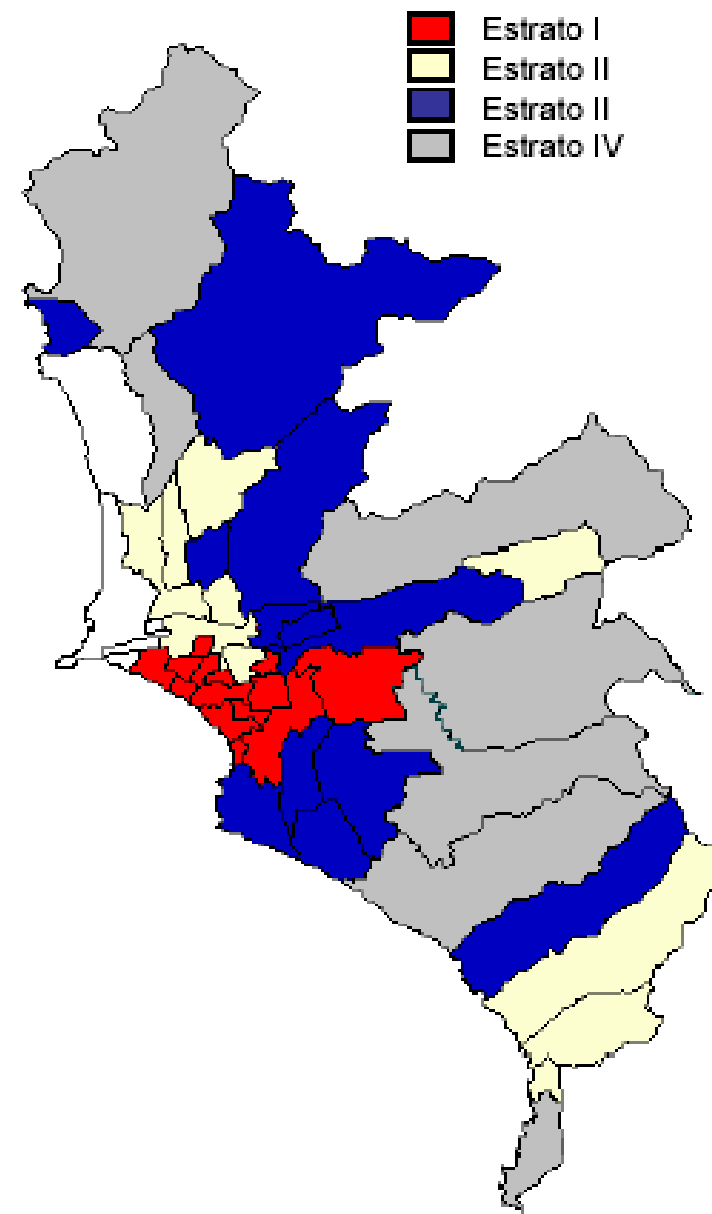
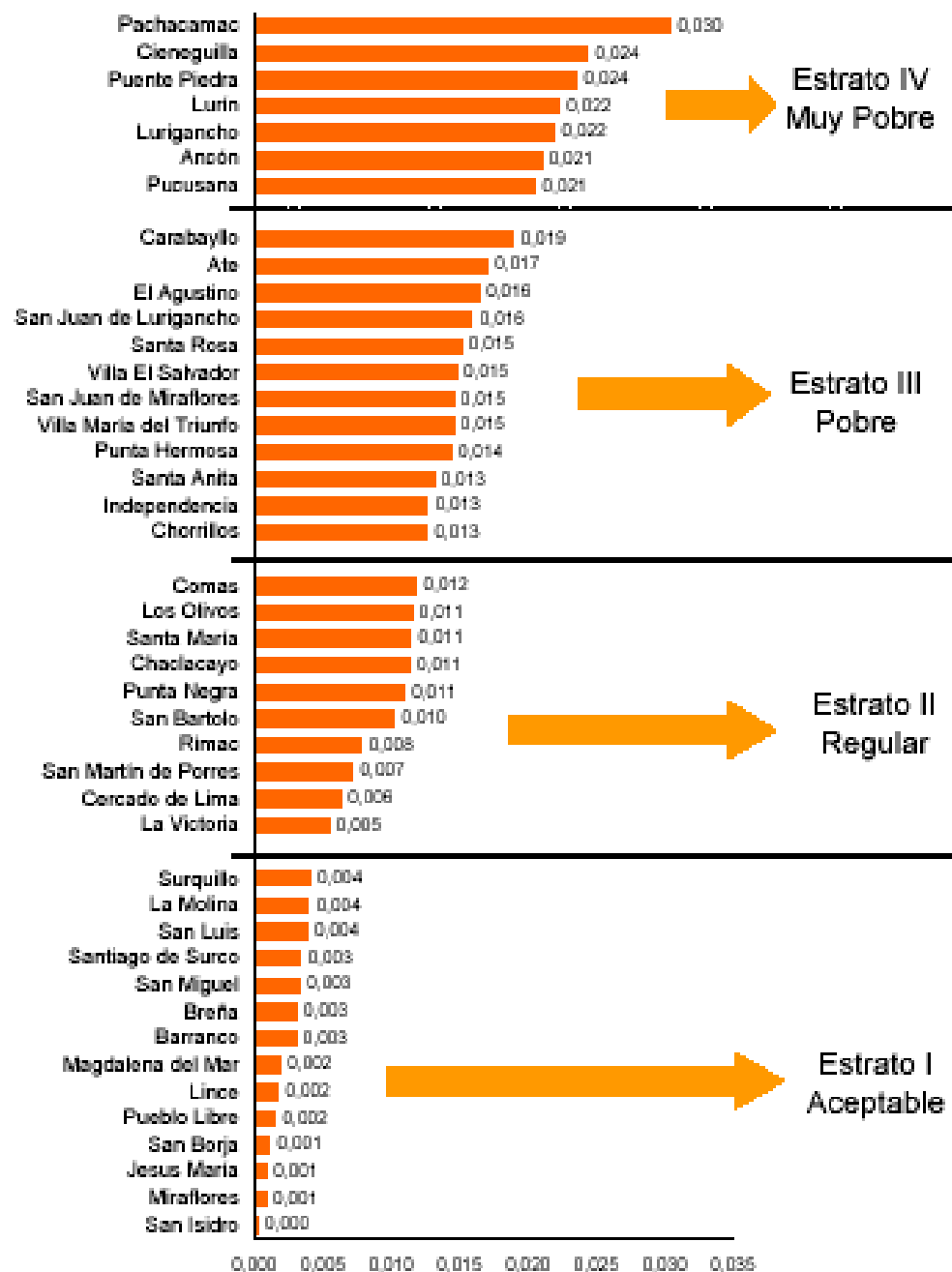


Gráfico 04: Índice de Severidad de Pobreza en Lima Metropolitana por Distritos



BACKGROUND



The problems and challenges of the future go beyond traditional approaches to planning and governance.

The relationship between the city and its environment (rural and environmental) is not recognised in urban and territorial plans (weak, no management tools for its implementation) .

Urban Plans are limited to zoning and do not define the character of the landscape, environmental impact or risk mitigation, and environmental assessment (and if they do, it is cosmetic).

Plans rarely include a strategy to control residential occupation on the periphery of the city (mainly agricultural), or protect sensitive areas.

Land Use Plans with these characteristics make it difficult for local environmental management and sustainable urban development.





CAUSES

Deactivation of the planning system (of land and territory) and information (low transparency): **two decades lost!**

Absence and / or weakness of technical bodies for territorial planning at national, regional, local and city levels; a focus on "megaprojects" rather than a comprehensive and unified vision

A focus on the logic of "free market":

- deregulation (presented as simplification)

- weak local and regional institutions (**densities are increased for free!**)

- inadequate urban environmental management tools

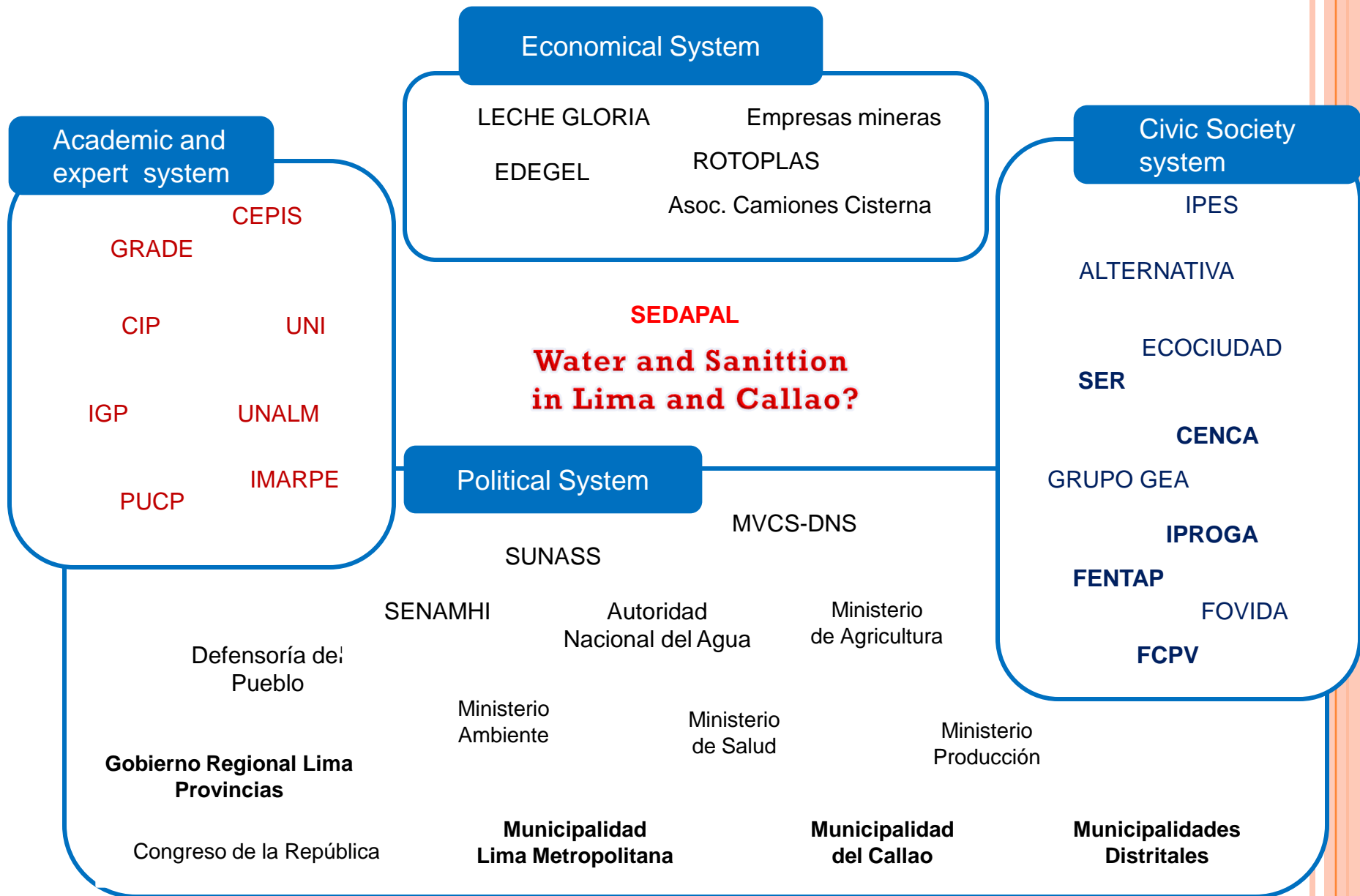
- increasing problems of **corruption,**

Lack of coordination between municipal, regional and municipal sectors, and service companies in defining land use and implementing infrastructure (and conflicts over who decides what and where!)

Interference of the judiciary in controlling urban development



INSTITUTIONAL FRAMEWORK IN LIMA – (ZIRN)



New kinds of Risks and responsible organizations in Perú (Chart model, Renn, O.)

	Water (environment health)	Housing (Social)	Urban and Water Infrastructure	Risk Issues	Environmental Issues (climate change)
International organizations	PNUD, BID, CAN (finances and developing policies)	PNUD, BID (finances and developing policies)	PNUD, BID (finances and developing policies)	PNUD, CAN Developing policies	UNEP, other UN Agencies
National government	MVCS and EPSs (SEDAPAL), MINAM, MINSA. (National policies, laws and finances investments)	MVCS (National policies, laws and finances investments)	MTC, MINSA Policies, laws coordination implementation, and finances investments	INDECI Policies, security org.	PCM, MINAM Disaster prevention and management
Regional government GORE	GOREs Direcciones Sectoriales- (finances investments and it executes projects)	GOREs - Direcciones Sectoriales- (co-finances investments)	GOREs (co-finances investments) Coordination, Monitoring (Dirección Regional Sectorial)	INDECI-GORE (Secretaria de Def. Civil) Coordination	GORE Gerencia Regional de RRNN y Gestion Ambiental
Local governments (Provinciales distritales)	Waste water treatment and safe water control finances investments and	Supervise housing standards, Zoning, licences, local norms	Local infrastructure, grant programs from nat. Gov. licences, dictates	INDECI-Secretarys, Comittes, Risk Planning	Adaptation policy integration Secretarys, Comitees.



3. THE CONCEPT

**RESILIENT CITIES ON THE PATH
TO SUSTAINABLE
DEVELOPMENT**

Territory, City Governance and Sustainability

The city quality environment

TODOS HACEMOS LA CIUDAD
PRESERVARLA Y MEJORARLA ES NUESTRA TAREA !

TODOS CREAMOS una visión de ciudad para la vida
 • Una Visión de Futuro de lo que todos queremos para nuestra ciudad y para nosotros. Una Ciudad para el trabajo y el descanso. Donde se expresen las necesidades y anhelos de hombres, mujeres, niños, jóvenes y adultos.

TODOS QUEREMOS una ciudad limpia, verde y segura:
 • Una Ciudad donde se retienen y utilizan las energías renovables, ahorrando los altos costos energéticos convencionales.
 • Una Ciudad donde se cuenta con servicios y se reciclan los residuos sólidos y líquidos, reutilizándose en el envendimiento urbano.
 • Una Ciudad segura capaz de prevenir los riesgos en armonía con su entorno.

TODOS CONCERTAMOS nuestra Agenda 21
 • Donde se plasman Ejes Estratégicos que implementan nuestra Visión de Futuro a través de planes concertados. Poniendo especial preocupación en la Sostenibilidad, para que nuestros hijos hereden una ciudad mejor en lo Ambiental, en lo Económico y en lo Político Social.

TODOS MERECEMOS oportunidades de empleo y desarrollo:
 • Una Ciudad con oportunidades para nuestro desarrollo personal y familiar, con alternativas de trabajo que nos permitan llevar adelante una vida digna y sin privaciones, sobre la base de una economía diversificada y sostenible.

LEYENDA:
 1. Atrapa nieblas (agua).
 2. Panel solar.
 3. Desagües separados.
 4. Mar y ríos limpios, para no desperdiciar.
 5. Riego biológico.
 6. Reciclaje de basura.
 7. Diferenciación ecológica.
 8. Recolección de basura alternativa.
 9. Recolección de agua de lluvia.
 10. Riego por goteo para electricidad.
 11. Ciudades construidas en laderas.
 12. Vías libres de construcciones.
 13. Casucha del agua.
 14. Desagües tratados.
 15. Compostera.
 16. Agua bombeada con energía eólica.
 17. Ríos limpios.
 18. Equilibrio ecológico.
 19. Transporte sostenible.

TODOS HAREMOS de la ciudad nuestro hogar:
 • Si como familia nos preocupamos por nuestra casa, al mismo nos ocuparemos de nuestra Ciudad, que es la extensión del hogar de todos.

TODOS NOS CAPACITAMOS para lograr una ciudad líder:
 • Una Ciudad donde se practiquen los lazos de solidaridad y equidad, que vayan definiendo nuestra identidad.
 • Donde tengamos la oportunidad de capacitarnos y alcanzar el liderazgo.

TODOS PARTICIPAMOS de los cambios necesarios en nuestro Gobierno Local
 • Una Ciudad donde el Gobierno Local se transforme en una herramienta eficaz para el desarrollo participativo.
 • Donde se practique la Democracia y se aplique el presupuesto participativo.

TODOS ELEGIMOS y fiscalizamos a nuestras Autoridades:
 • Una Ciudad donde nuestras autoridades sean elegidas libremente y actúen como líderes con transparencia, haciéndonos partícipes de las decisiones importantes, tomadas descentralizadamente.
 • Donde se practique la Democracia y se aplique de los actos del gobierno local.

TODOS REQUERIMOS de un presupuesto participativo:
 • Como un medio para afirmar la concertación y democracia locales.
 • Como un camino de desarrollo de nosotros como ciudadanos con derechos y deberes.
 • Como un instrumento para hacer más eficaz y transparente la gestión de desarrollo, utilizando mejor los recursos.
 • Como una vía para acceder a la información y a la toma de decisiones.
 • Como un espacio para definir las prioridades locales y actividades que contribuyan al desarrollo sostenible.

USAID
 PROYECTO DE DESARROLLO URBANO SOSTENIBLE
 VIAL VAUGHAN 2000 COLLEGE
 INSTITUTO VECINARIO
 CARRERA 100 No. 10-100
 BOGOTÁ, COLOMBIA

The nature inside and around of the city

The city as part of a wider ecosystem

New actors are needed to manage the city and its territory

MegaCity Water Risk Governance facing Climate Change in Lima?



1. Which is the scope and/or research object?

Territory Scale and/or level?...Region – basins (3 or 4?) – Metropolitan, interdistrictal and/or per Regional, Provincial and/or District government level?

Risk Governance? Water Public Management? MegaCity Governance?....

2. Which is the feasible and effective term: short or long?..... Or both?

3. How to integrate the territory, water and climate change issues into a MegaCity (wide) policy?

4. How (and with whom!) to develop and integrated and equitable MegaCity Policy?

Who decides what into and integrated City and Water Planning and Management strategy facing climate change?

Which resilient capacities should be enhanced to be able to implement it?



Cities Agenda 21: City Regional Planning and Action Plan... .. The same course!

TERRITORIAL MANAGEMENT PLAN,
URBAN AND RURAL DEVELOPMENT

Water Plan

Risk Plan

City
Agenda
21

LOCAL ENVIRONMENTAL MANAGEMENT SYSTEM

Action Plan

Action Plan

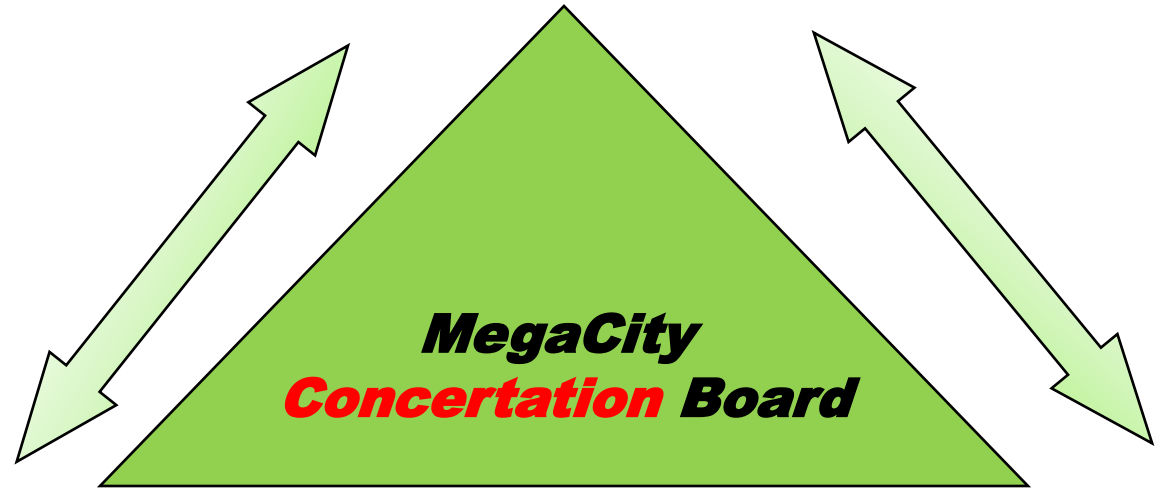
REGIONAL ENVIRONMENTAL MANAGEMENT SYSTEM



MEGACITY WATER GOVERNANCE ?

**MVCS +
SEDAPAL**

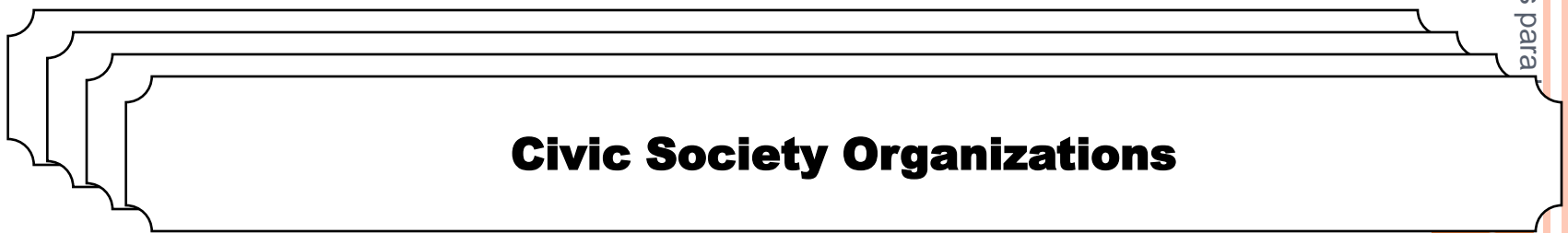
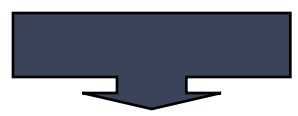
+ Regional + Prov. Municipalities Platform



**NGOs
and private
organizations**



**Universities and
Experts**



Liliana Miranda Sara, Foro Ciudades para
Vida - Ecociudad

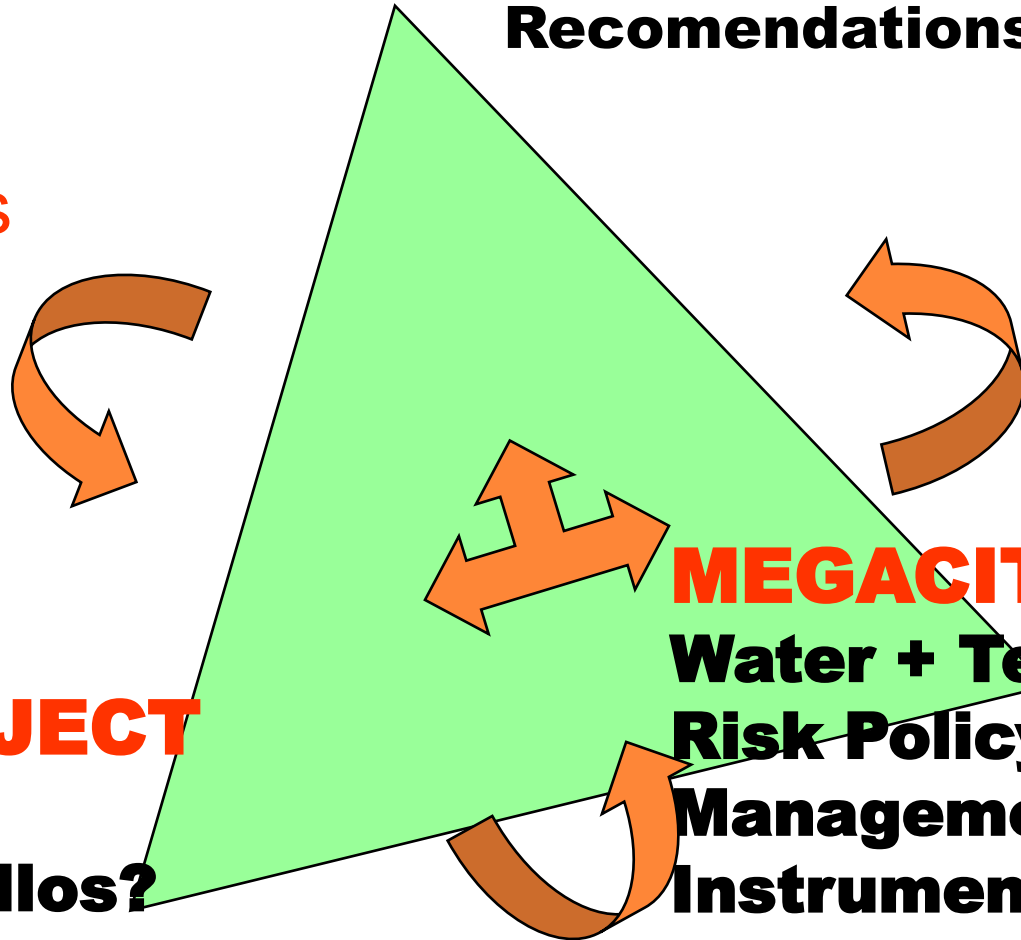
POSSIBLE STRATEGY

NATIONAL LEVEL
Policy and Strategy
Recomendations

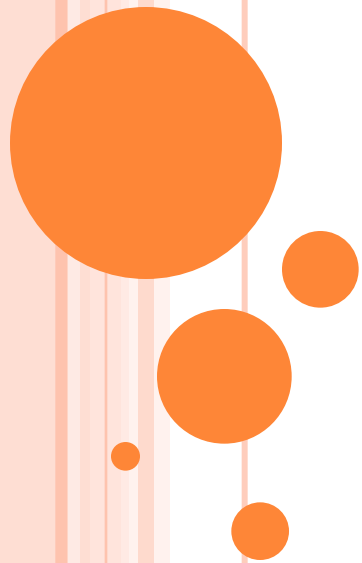
Communication
means: actors
and networks
relationships

PILOT PROJECT
VES, VMT,
SJM....Chorrillos?

MEGACITY:
Water + Territory +
Risk Policy integration
Management Tools,
Instruments
& Program proposals



4. RESEARCH QUESTION AND METHODOLOGY



Central Question

- **How do Lima's key actors and social networks generate changes to reconfigure an equitable and integrated Mega City Water Risk Governance facing climate change threats at 2025?**
- *Sub Question 1*
- Who are the key actors and social networks that can generate universal access to water at multiple territory scales (and/or levels) in Lima facing climate change?
- Which are (or would be) the key characteristics of those key actors and networks resilience capacities to generate an equitable and integrated Water MegaCity Risk Governance of Lima?



Research Methodology

A qualitative analysis as well as a quantitative statistical and geographical analysis of Lima at the MegaCity territory and multiple scale level, as well as a comparative analysis between two (poor and middle) districts.

- It will focus on a participatory and action research approach using a “**social construction**” building up of knowledge.
- Knowledge tends to remain where (and with whom) it has been generated
- The participatory research process will be a capacity building strategy itself



Thanks!

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