ENVIRONMENTAL AND SOCIAL ENERGY JUSTICE

VII Tarragona International Environmental Law Colloquium (TIEC)

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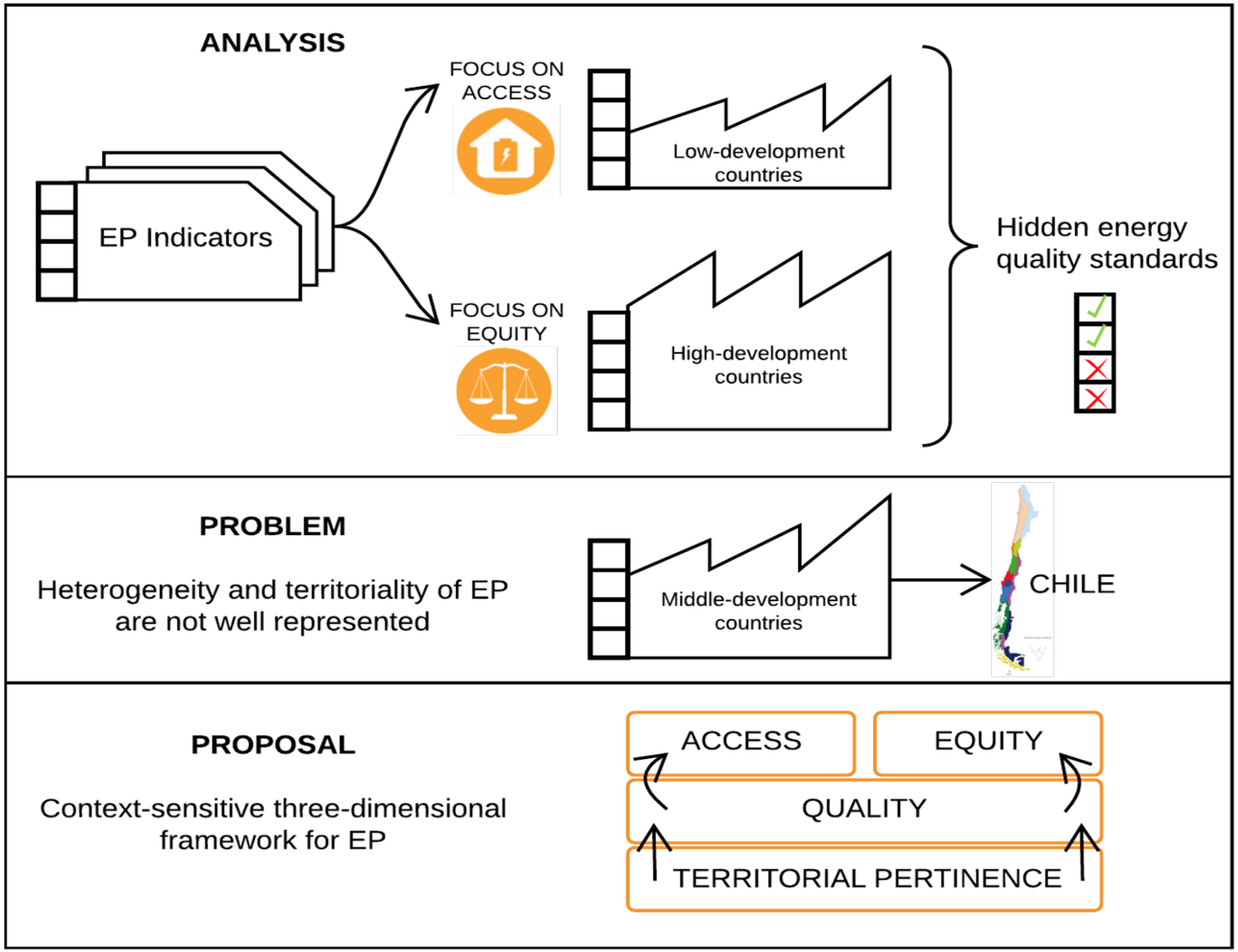
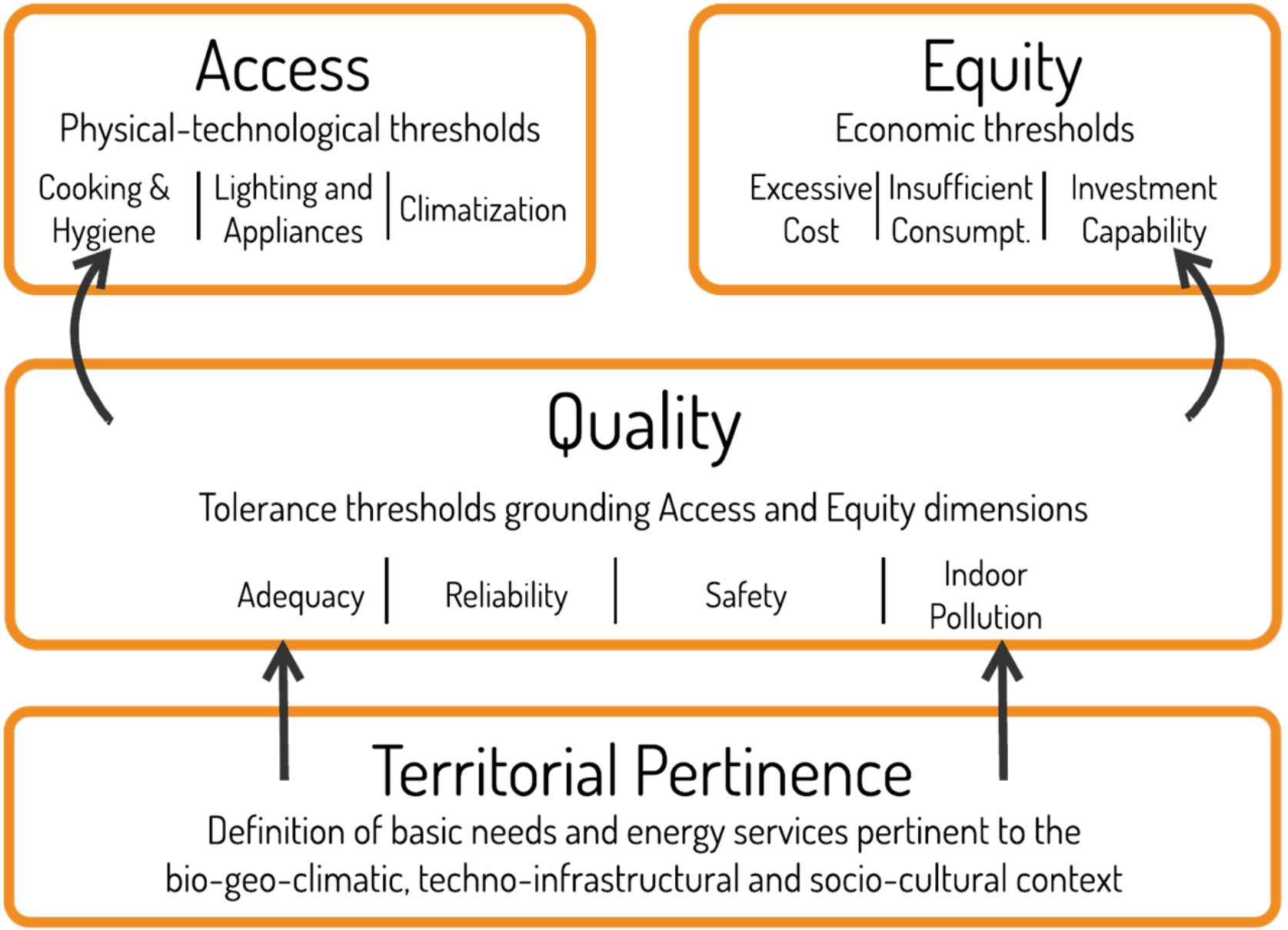
Introduction

- Guaranteeing energy access is key to advance towards Sustainable Development Goals 7.
- Climate change in turn makes this goal more challenging by driving stricter energy policies
- how gaps in energy security distribute across different people and territories
- how climate change and other challenges affect energy justice



Energypoverty in middle income countries

(Urquiza et al., 2019)

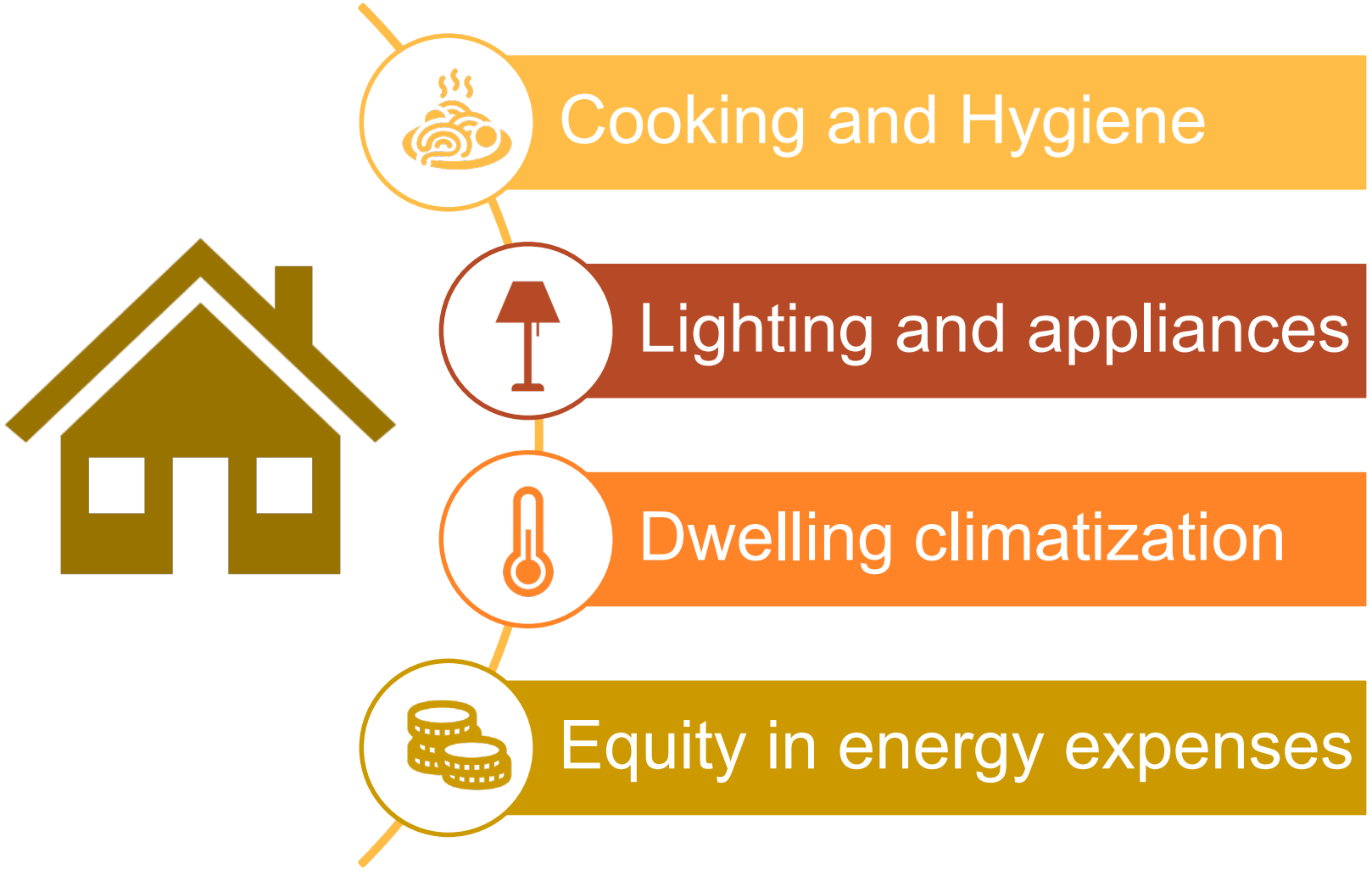


A tridimensional approach to EP

An energy poor household does not have equitable access to high quality energy services (adequate, reliable, non-polluting and safe) to meet its fundamental and basic needs, which allows its human and economic development.

(RedPE, 2019)

Some results from Chile



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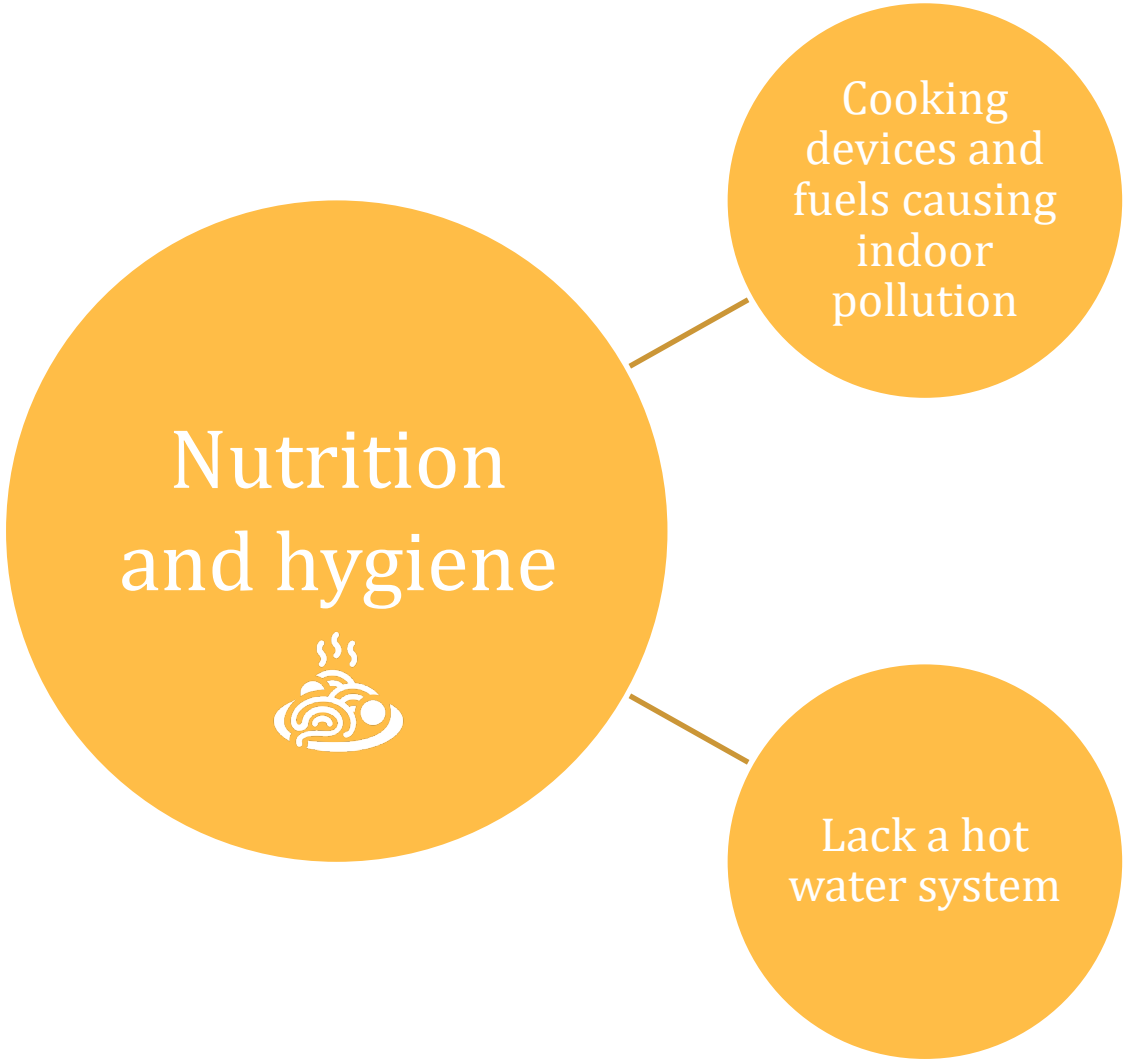
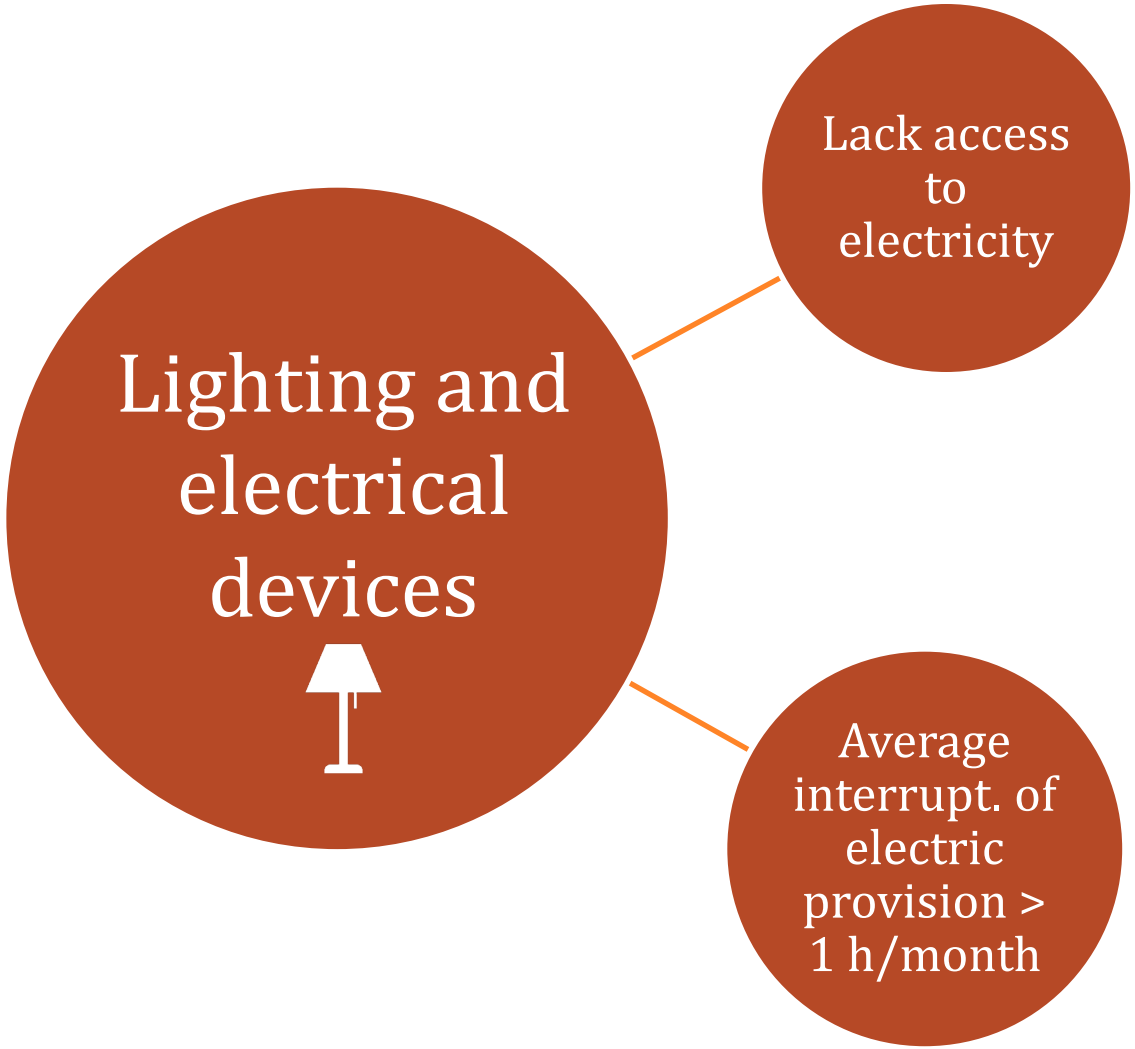


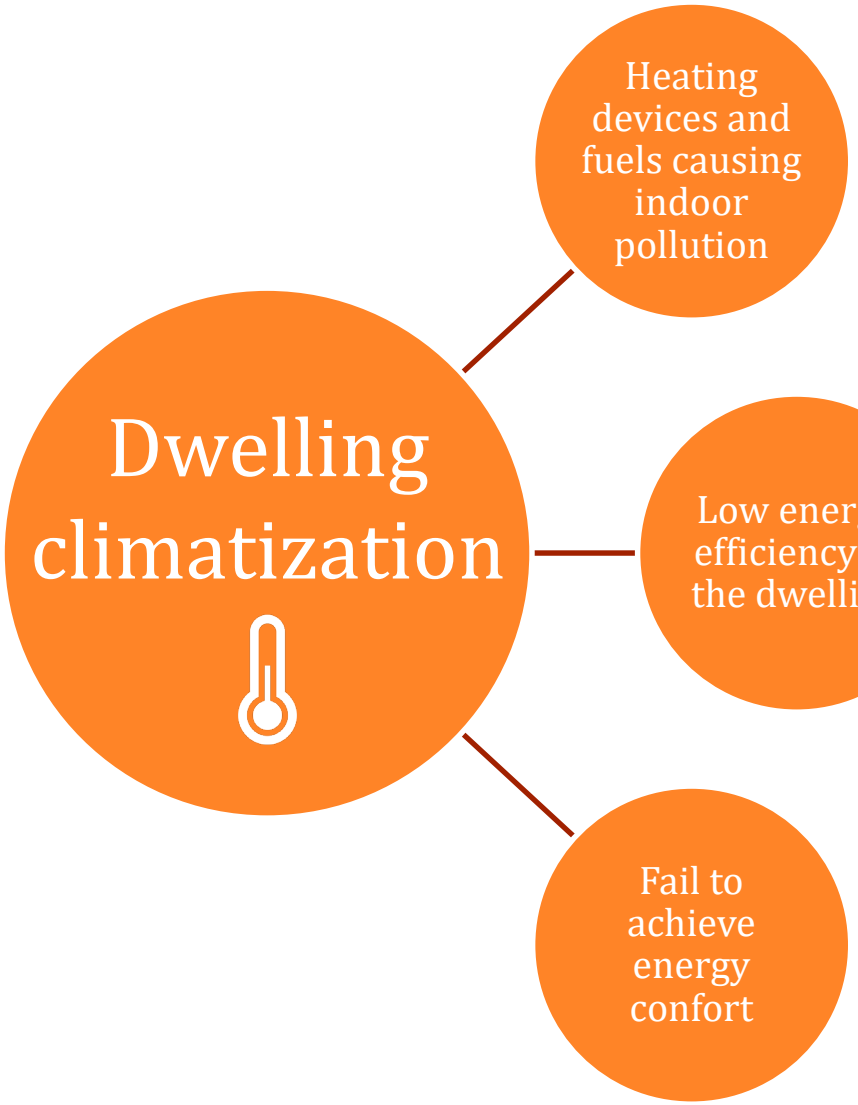
- 3,03% (CDT, 2015)
- 10,20% (591,012 households) (CASEN, 2017)

Some results from Chile



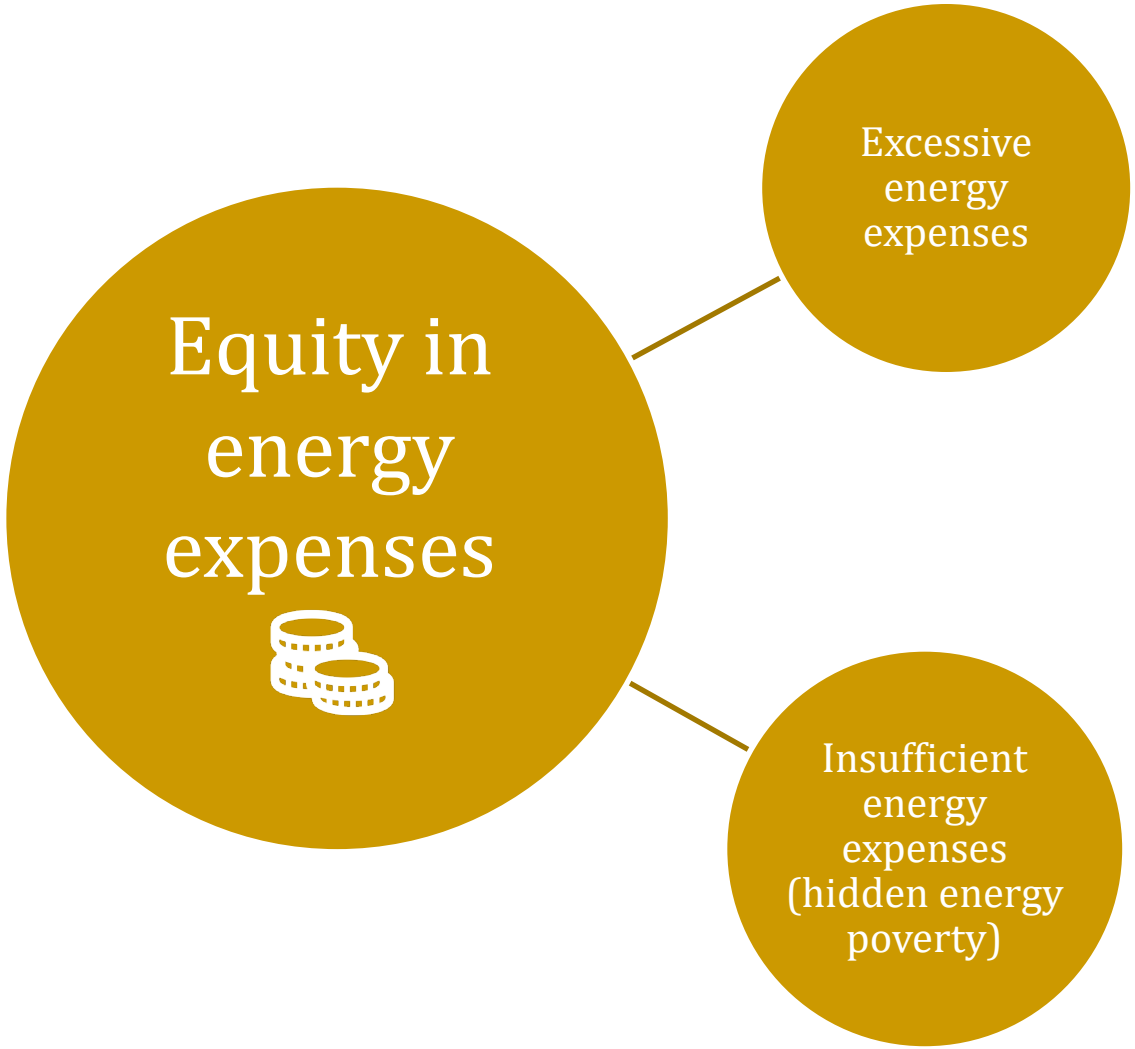
- 0,34% (19,920 households) (CASEN, 2017)
- 18,1% households (CNE, 2018; CASEN, 2017)

Some results from Chile



- 3,98% de households (CDT, 2015)
- 60,47% (INE, 2018; CASEN, 2009)
- 21% de households (ENE, 2016)

Some results from Chile



- 22,66% (766.552 households) (EPF, 2016-2017)
- 16,91% (571,974 households) (EPF, 2016-2017)

A comparative perspective

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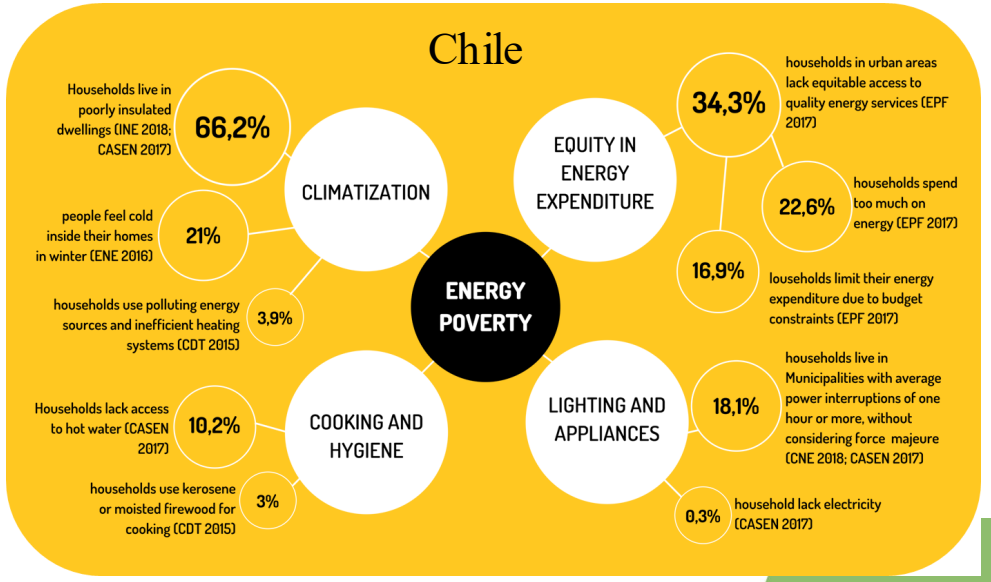

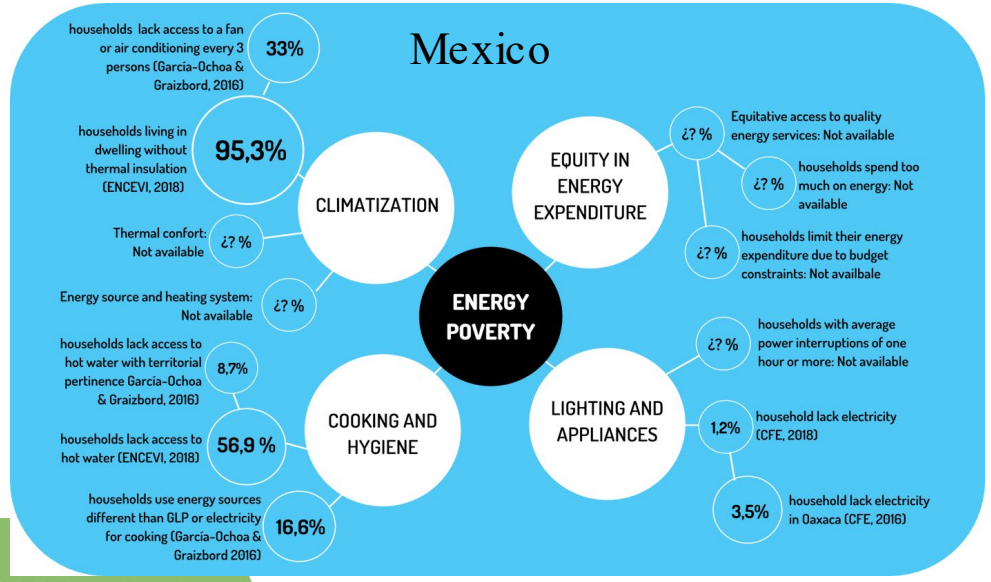

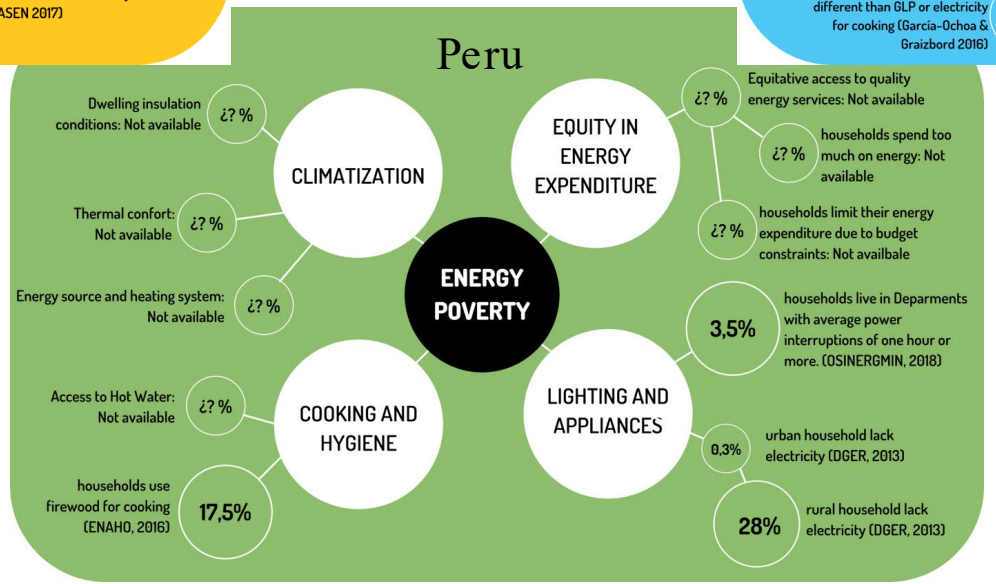

(RedPE, 2019)

Why a territorial perspective?

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- Energy poverty traditionally defined at the household level
- Dependence of equitable access on territorial drivers
- Relevance of energy services consumed outside the house (e.g. transport) and/or related to public and/or private organizations

Goal: advance an analytical framework for 'Territorial Energy Vulnerability' as a complement to energy poverty, focusing on territorial characteristics related to lack of equitable and resilient access to energy services.

A key challenge: territorializing energy poverty

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A contextualized approach

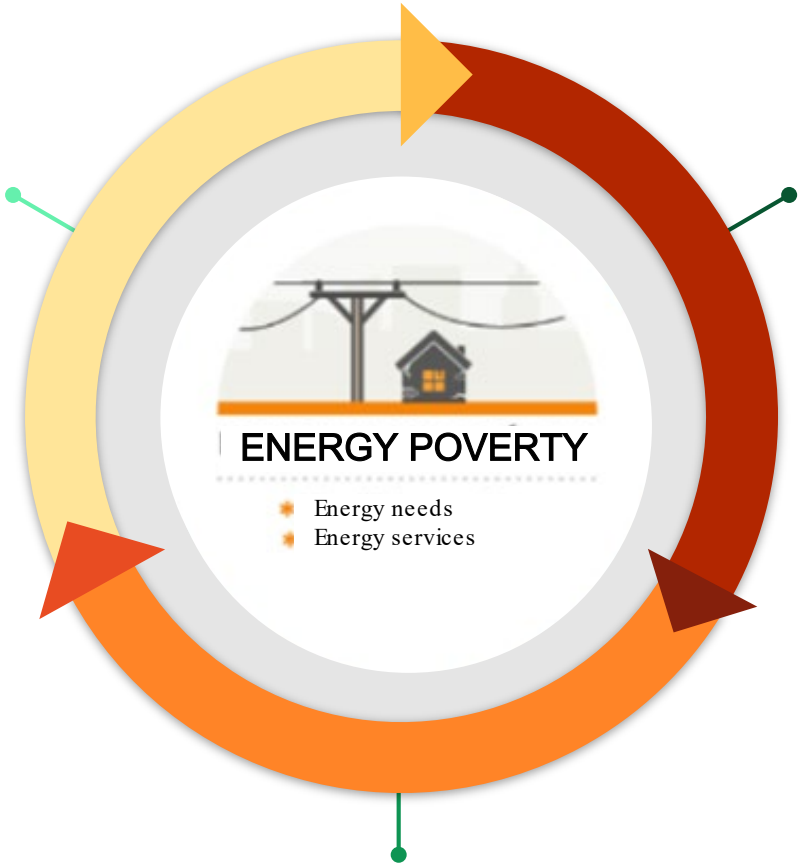
Definitions Indicators Strategies

Integrated assessment

Heterogeneous manifestations

Geography Technologies Cultures

Towards spatial justice

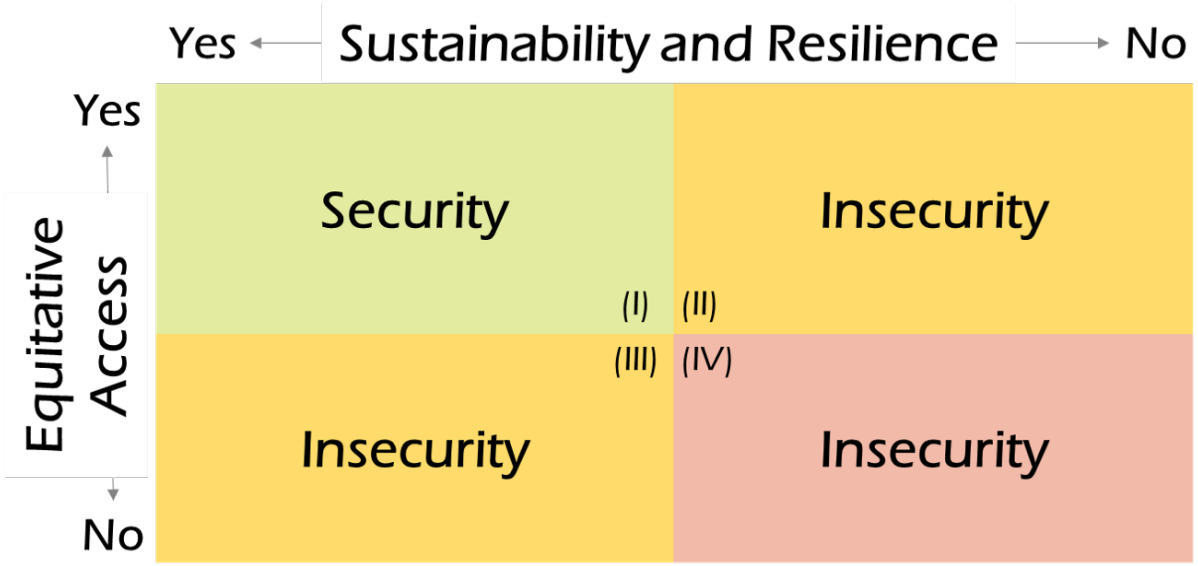


Energy vulnerability
reproduces EP and inequality

Territorial conditions
influence energy needs and services

Spatialization of EP
correlated with other forms of spatial injustice

An integrated framework on energy (in)security

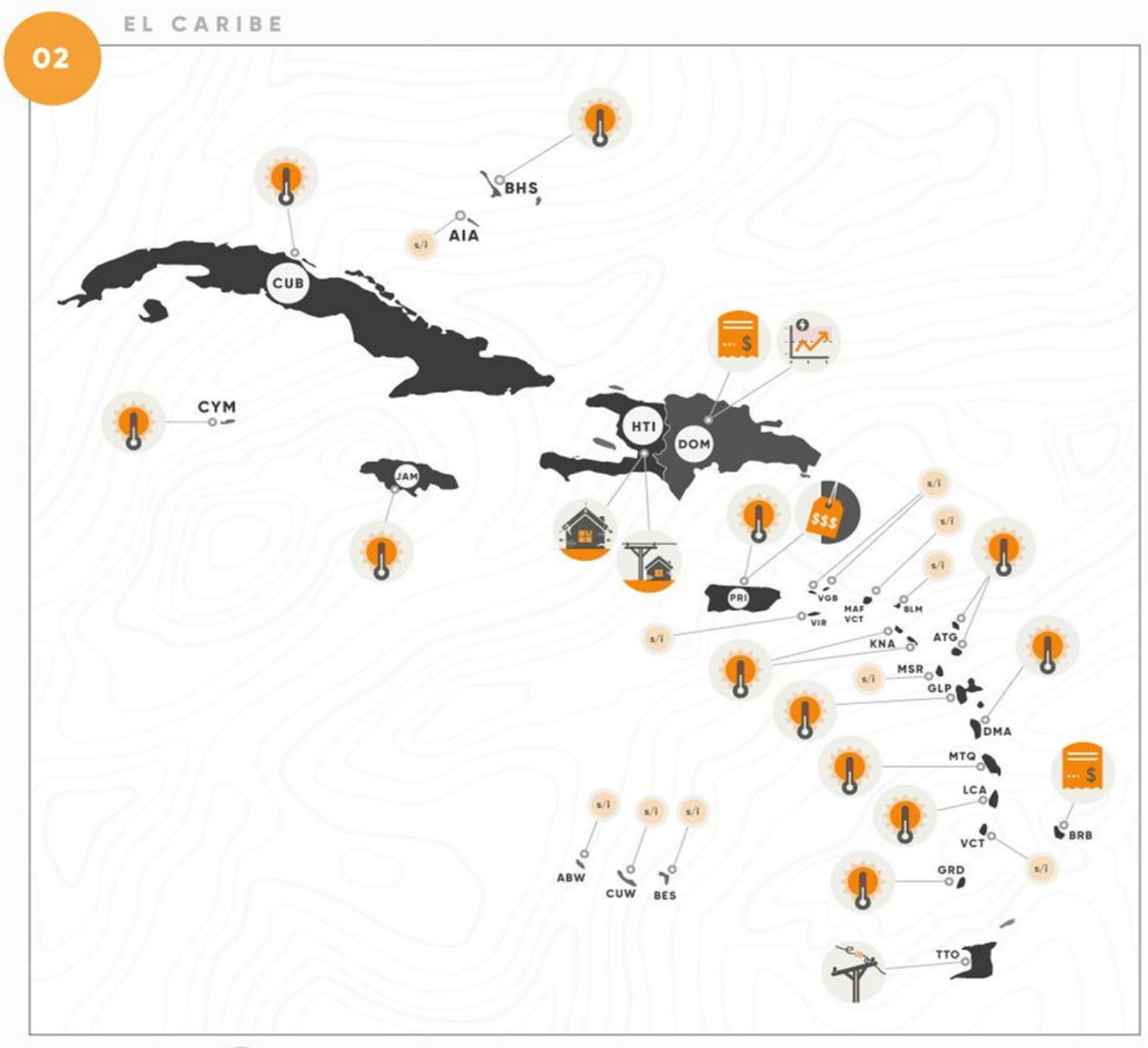


Energy security: capacity to guarantee equitable access – in quality and quantity – to resilient and sustainable energy services, that allows human and economic development of a territory and its population.

Energy Poverty ← **Energy Insecurity** → Territorial Energy Vulnerability

Main challenges to provide energy security and overcome energy poverty in LAC (by country).

(UN-ECLAC | RedPE 1 REDEL, forthcoming)



Main challenges to provide energy security and overcome energy poverty in LAC (by country).

- Electrical blackouts
- Electrical access
- Bad housing conditions
- Excessive energy expenditure
- Extreme heat waves
- Overcrowded dwellings
- High price of appliances
- s/i Missing information

(UN-ECLAC | RedPE 1 REDEL, forthcoming)

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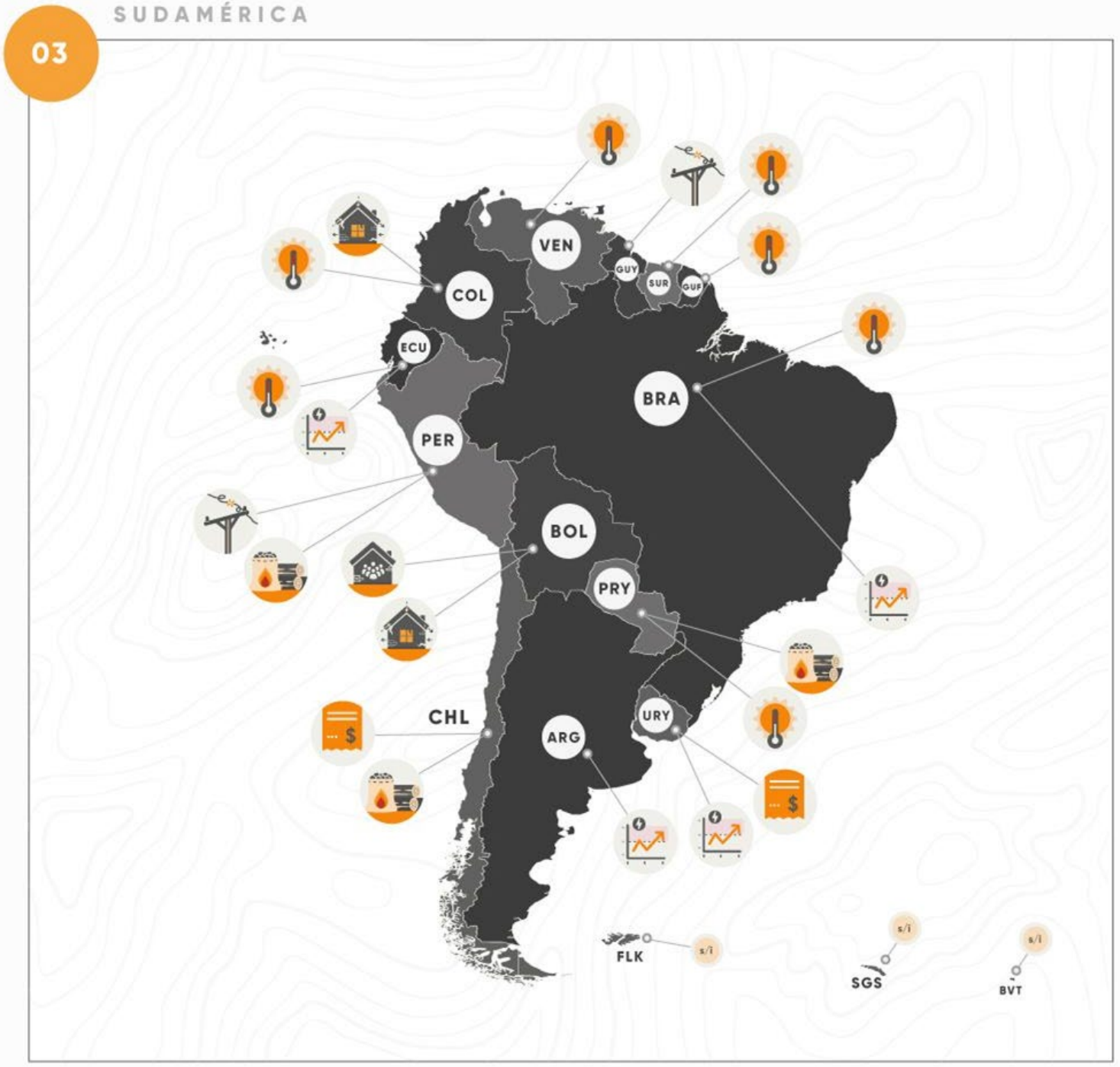

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Territorial Energy Vulnerability

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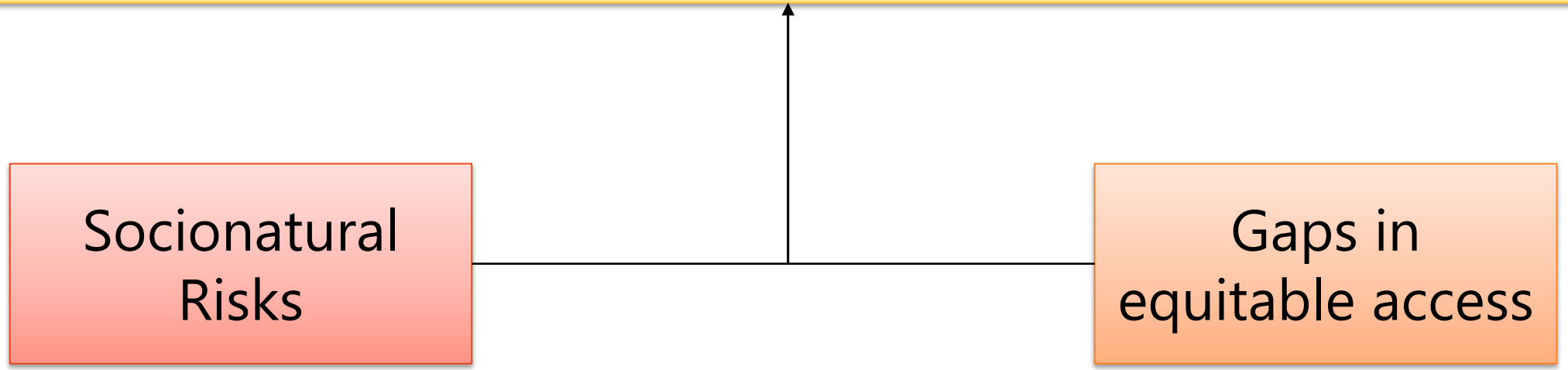
Territorial Energy Vulnerability

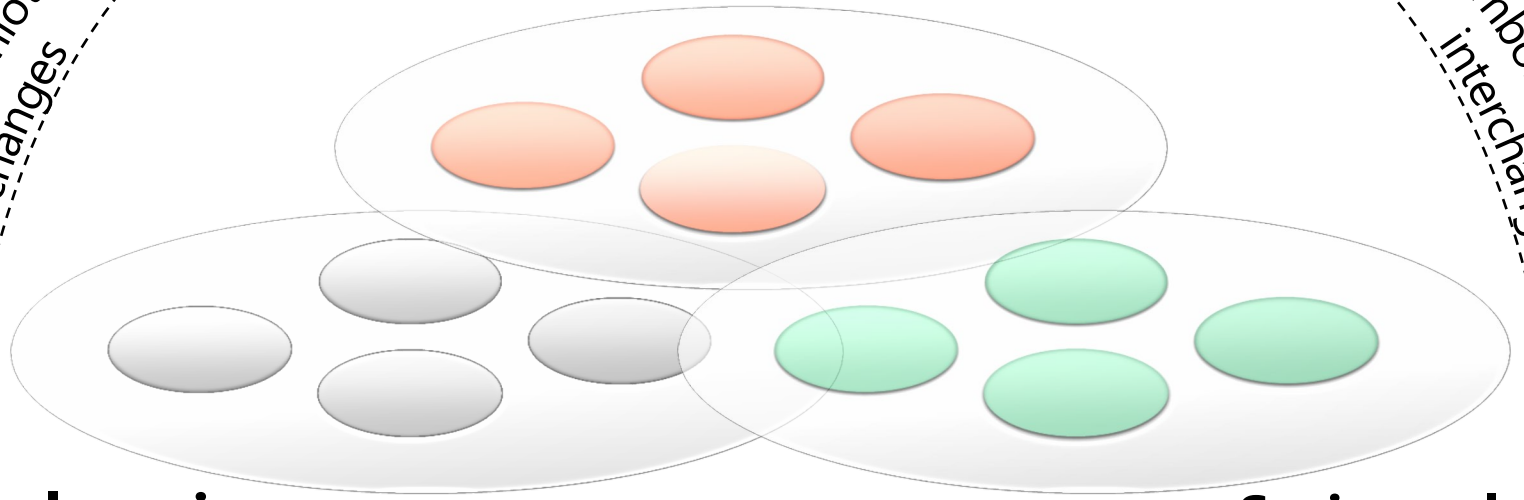
Lack of capacity of a **territory** to ensure **equitable access** to **high quality energy services** in a **sustainable** and **resilient** way over time.



Territorial system

Socio-cultural services
political decision-making, economic interchange, legal accountability, scientific knowledge…

Symbolic & semiotic interchanges



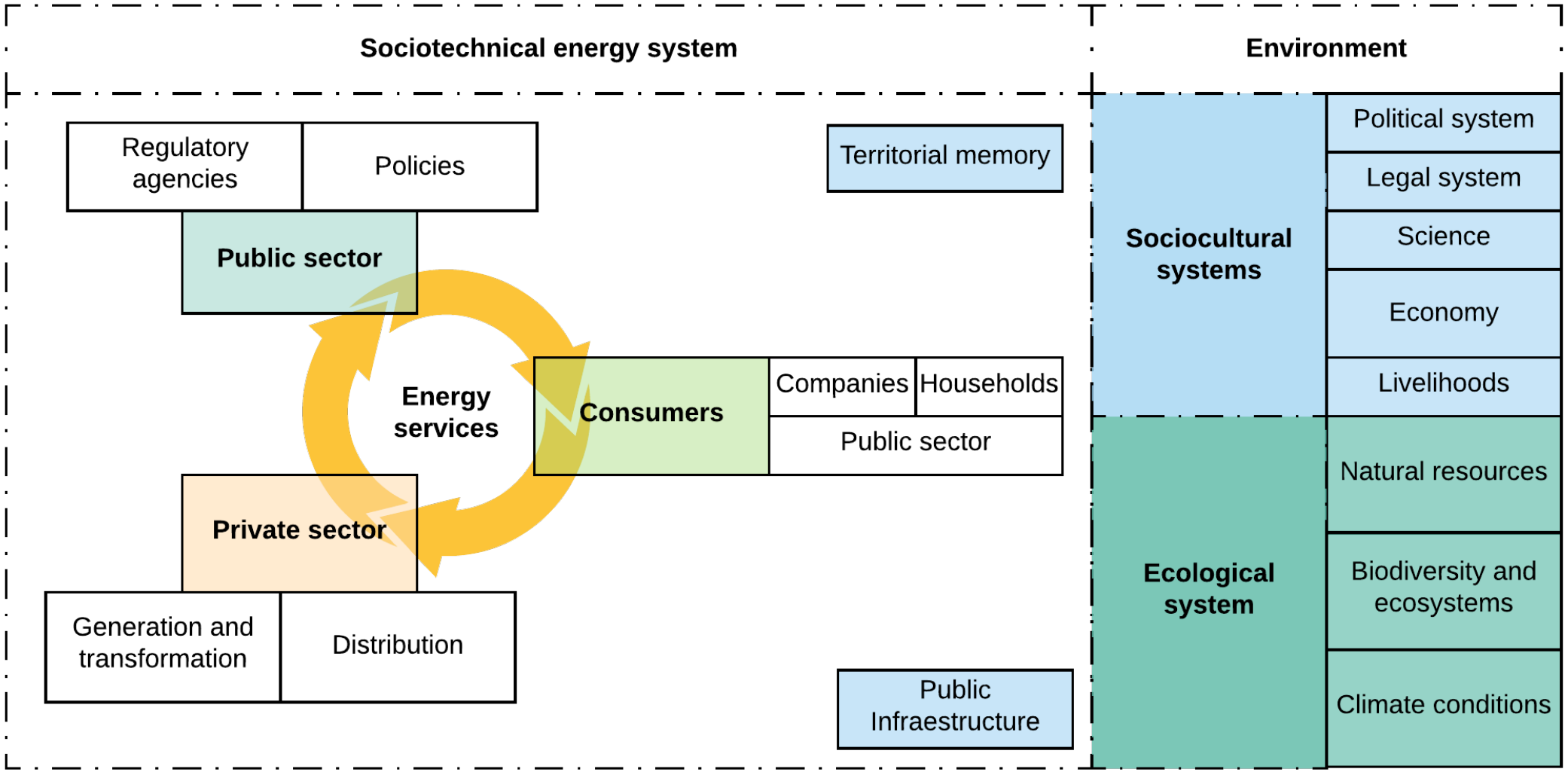
Symbolic & semiotic interchanges

Socio-technical services
water, energy, food, health, education, waste, transport, communication…

Material & energetic interchanges

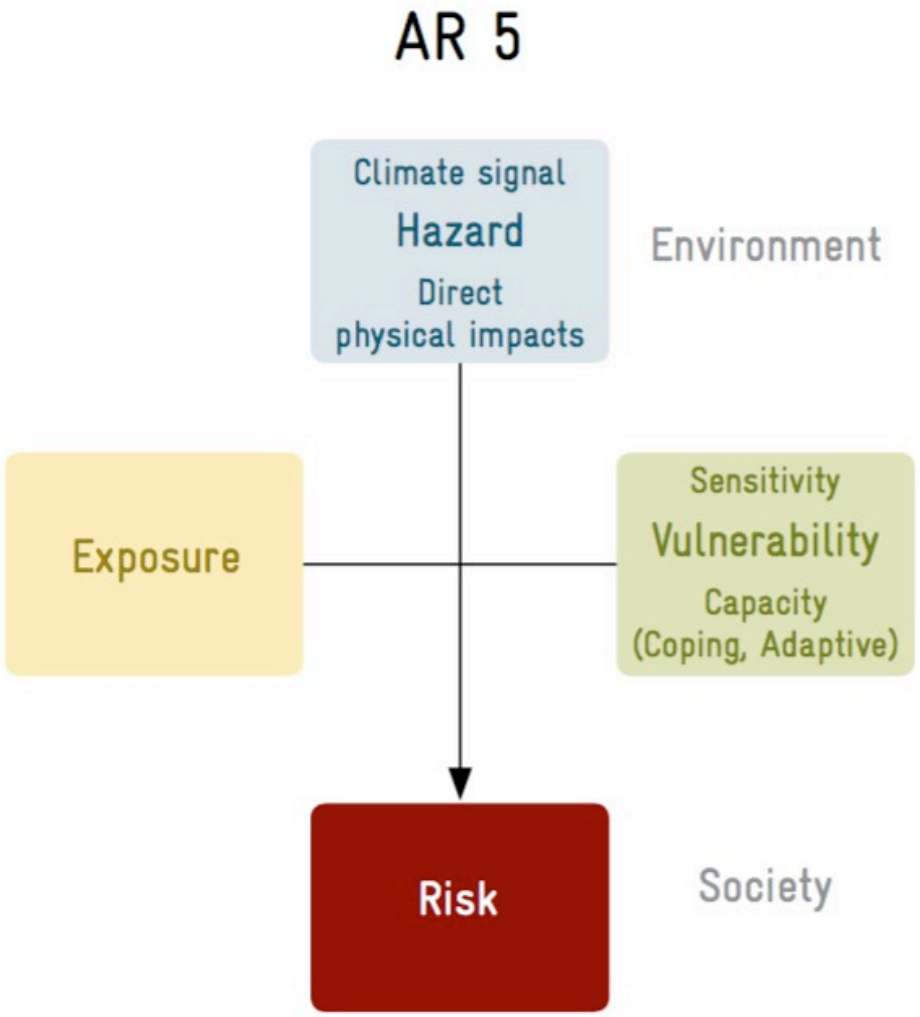
Socio-ecological services
hydrology, water quality, temperature, rain, biodiversity, green infrastructure…

Sociotechnical energy system



Vulnerability framework

IPCC AR5 definition of vulnerability: ‘the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.’



From hazard to risk: territorial energy vulnerability

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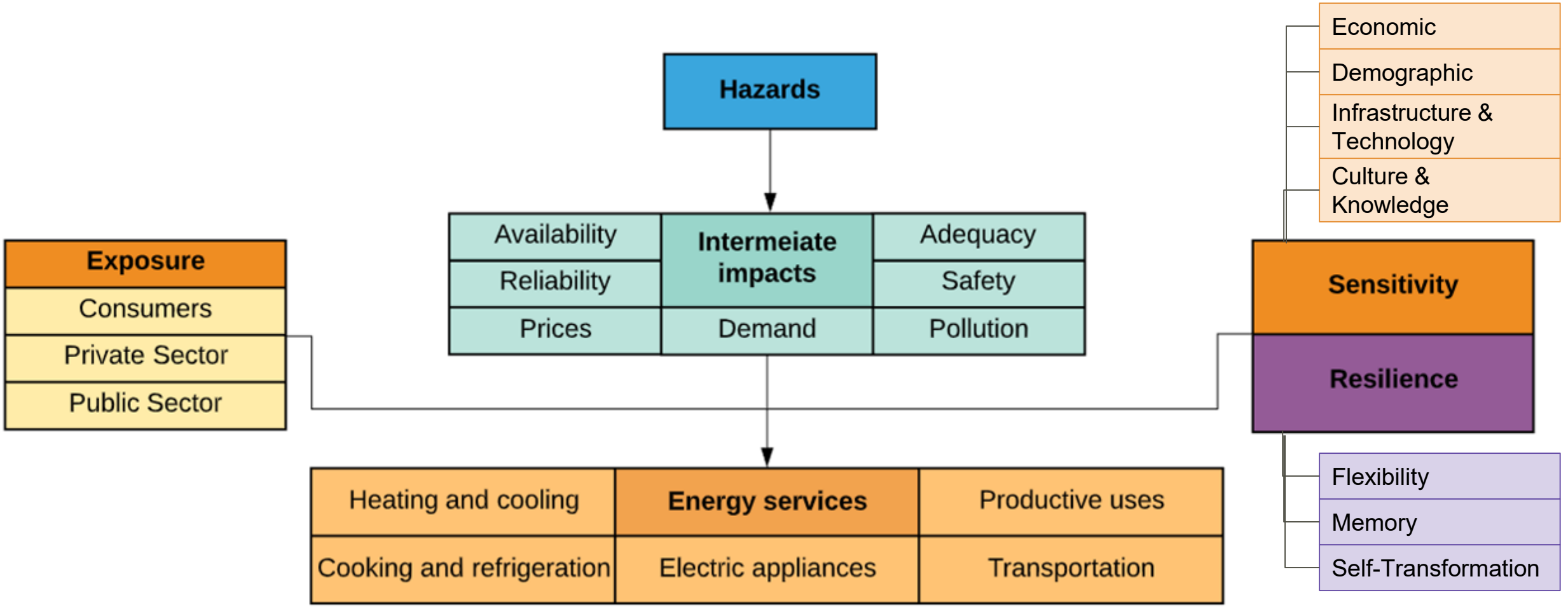

(RedPE, 2020)

Sensitivity of the energy system

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Sensitivity dimensions			
Economic	Demographic	Infraestructure and Technology	Culture and knowledge
High price	Childrens	Low energy efficiency	Corruption
Lack of energy alternatives	Elderly	High CO2 emissions	Institutional distrust
Low income households	Gender inequalities	High aerosol emission	Lack of scientific literature
Small business	Ethnic inequalities	Operation condition thresholds	Lack of open data
...	...	Connectivity infraestructure	...
		...	

Resilience in sociotechnical systems

Resilience in sociotechnical systems				
Expressive	Predictive			
Response capacity	**Flexibility**	**Diversity:** qualitatively diverse components.	**Redundancy:** multiple components with similar functions.	**Connectivity:** diverse and redundant networks that allow communication.
Adaptative capacity	**Memory**	**Records:** generation, maintenance and publication of data about system functions and environment relations.	**Reflexivity:** capacity to process data and create distinctions about its relationship with the environment.	**Learning:** capacity to integrate new information and alternative interpretations from the register and reflexivity.
	Self-transform.	**Coordination:** active interchange of information, resources and collaboration among public, private and civil society	**Anticipation:** capacity to anticipate future scenarios and/or set goals for present action.	**Decision:** capacity of private, public and societal actors to make public decisions about the structure and operation of the system.

JustTransition

Low-carbon energy transitions involve the transition from energy systems based on conventional technologies and dependent on fossil fuels and/or highly polluting to systems powered by renewable and clean sources.

With the last name “just”: contemplates the step towards an environmentally sustainable and socially inclusive economy:

ILO; who cares about the workforce and job creation

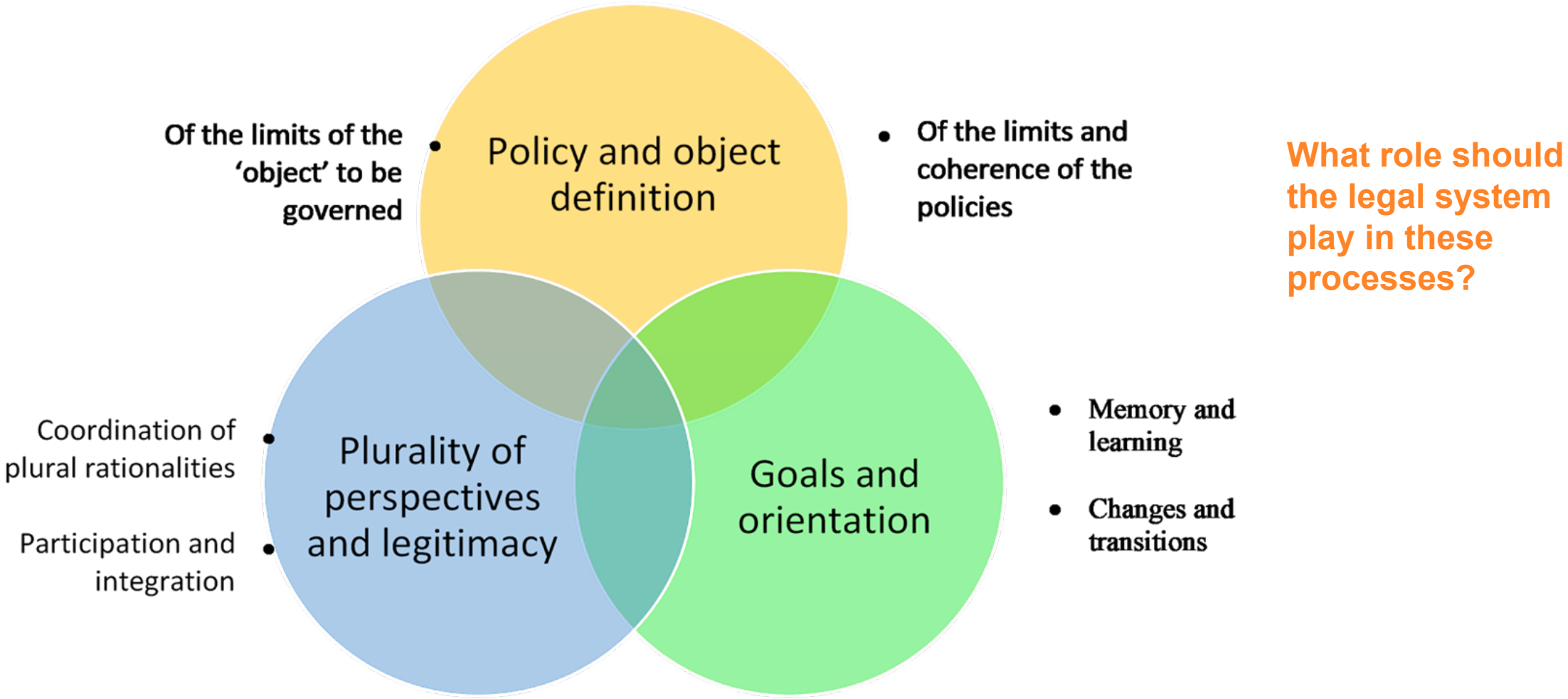
Paris Agreement; labor market, sustainable production and consumption, and a transition with equity criteria.

COP24; development of the sustainable and inclusive public and private sectors; among others

We speak of energy justice when in an energy system the benefits and costs of energy services are distributed fairly, based on impartial and representative decisions

Governance of energy poverty

Challenges and gaps for multi-level coordination in energy governance



What role should the legal system play in these processes?

Final remarks

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- Need to overcome persisting polarization between access and equity
- Need to include an explicitly context-sensitive quality dimensión
- Promising preliminary results for our context-sensitive three-dimensional framework (although data availability is very limited).
- Comprehensive approach for a just transition
  - Refining threshold territorialization
  - Territorial governance to face PE

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