



# Smart grids in the European Union: Possible synergies with Africa



# Matters of common concern

- war
- climate change
- economic crises
  
- they all have far-reaching and devastating effects

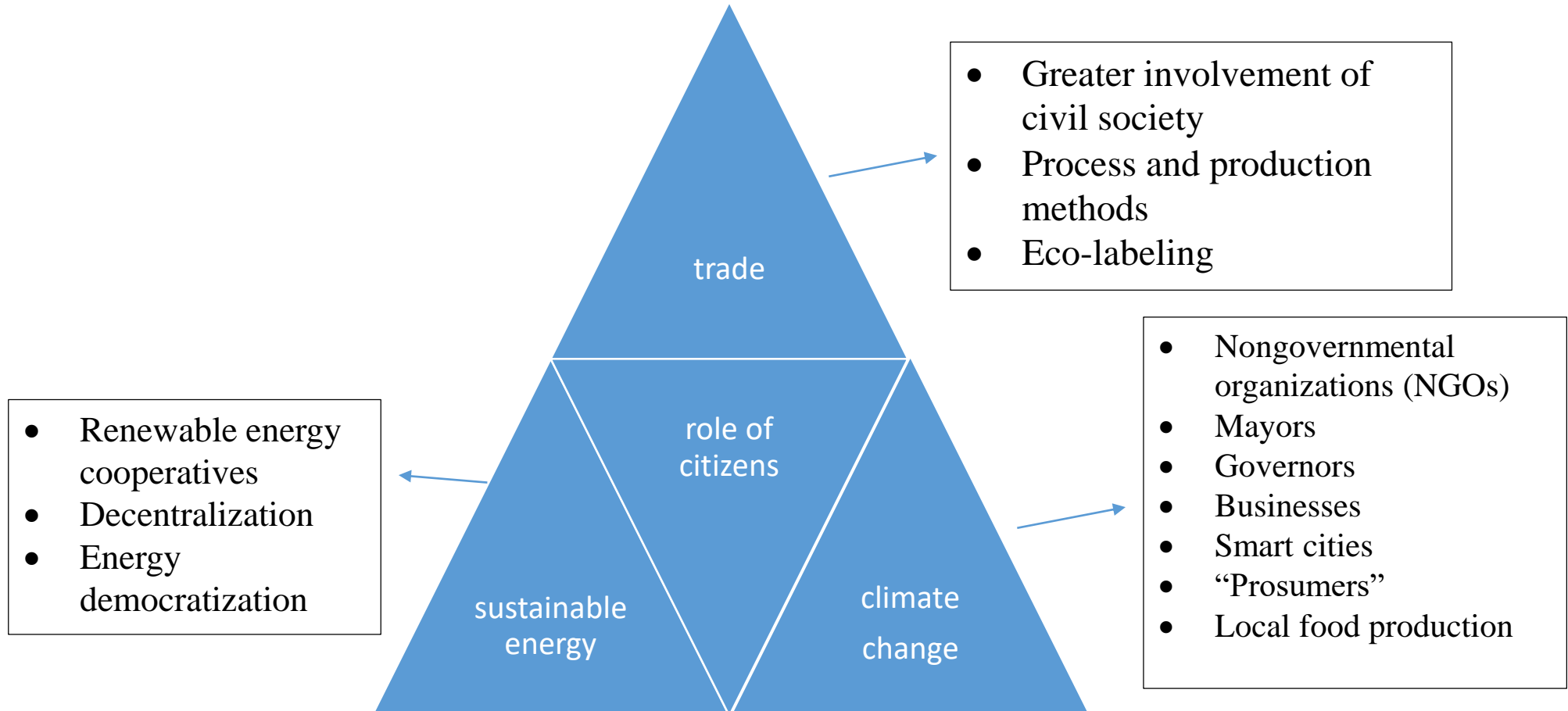
# Shifting the paradigm in IEL governance

- The 20<sup>th</sup> century => top-down approach to the governance of climate change mitigation, energy, and international trade
- The 21<sup>st</sup> century => bottom-up approach
- The shift to this bottom-up approach is one of the mega-trends of the 21<sup>st</sup> century
  - energy governance: energy democratization by decentralizing the governance of energy security and creating new actors (eg., prosumers)
  - CC: with implementation of climate change mitigation plans (Paris Agt)
  - And international trade governance? How can it be governed from the bottom up?

# Citizens' empowerment

Approach	Trade	Climate change	Energy
Top-down (20 <sup>th</sup> century)	Inter-governmental trade agreements	Kyoto Protocol	Inter-governmental energy agreements
Bottom-up (21 <sup>st</sup> century)	<b>Open trading system in different aspects:</b> <ul style="list-style-type: none"><li>✓ Political</li><li>✓ Legal</li><li>✓ Economic</li></ul>	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• Smart cities</li></ul>	<ul style="list-style-type: none"><li>• Prosumers</li><li>• Decentralization</li><li>• Energy democratization</li></ul>

# Role of citizens in the SDGs





## OBJECTIVE

- Analyse the existing legislation and regulatory frameworks implemented in the energy markets at various levels (i.e., local, national, supranational and international)
- Analysis of smart grids and the energy market in the social and ethical context, such as energy security, data privacy and equity



## STRUCTURE OF THE REPORT

1. INTRODUCTION
2. SMART GRID REGULATION
3. SMART GRID DEPLOYMENT AND ITS IMPACT ON ENERGY SECURITY
4. SMART GRID EMERGING BUSINESS MODELS
5. SOCIAL AND ETHICAL ISSUES OF SMART GRIDS
6. COUNTRY CASE STUDIES
7. CONCLUSIONS AND RECOMMENDATIONS



## 1. SMART GRID REGULATION

- Examination of the existing legal frameworks that impact on the project
  - Smart metering
  - Electricity storage and electric vehicles
  - Demand response
  - Data protection and privacy
- Regulatory and policy recommendations





## 2. SMART GRID DEPLOYMENT AND ENERGY SECURITY

- Setting of the geopolitical, climate change and institutional context
- Prosumers' market
- Smart grids and energy security
  - Sustainability prospects
  - Strengthening supply security
  - Affordability and competitiveness
- Policy recommendations



### 3. SOCIAL AND ETHICAL ISSUES OF SMART GRIDS

- Contributing to the EU collaborative economy
- Low-carbon transition pathways and smart grids
  - Circular economy and waste management
- Digital technology, smart grids and the law
  - Security and privacy matters
  - Corporate rights and responsibilities
- Policy recommendations



## Country case studies

- Belgium (Ghent) – ECO, RESC, PARTA
- Italy (Terni) – ASM, ENG, EMOT
- Greece (Kythnos) – HEDNO, EPA, AEA
- Spain (Crevillent) – ETRA, ENER, AMP
  
- Synergies with Africa?



# Thank you!

Any question?



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