



POST-CARBON CITIES OF TOMORROW IN THE GLOBAL CONTEXT

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URBAN GROWTH

- Today approximately 50% of the world population lives in cities
- By 2030, the share will increase to over 75%
- The majority of urban growth will happen in emerging economies (BRICS, BASIC)
- In Europe, 80% of citizens will live in cities by 2030
- Already today, cities are responsible for about 70% of energy-related greenhouse gas emissions globally
- Cities offer potential for efficiencies of scale, but risk of urban sprawl



PRESSURE ON INFRASTRUCTURE

- population growth creates pressure on urban
 - economic system
 - financing of infrastructures
 - financing of public services
 - social system
 - health impacts, air pollution, noise pollution
 - employment
 - social integration, quality of life
 - environment
 - resource consumption, especially energy and land use



FROM FUNCTIONAL TO ECO-CITIES

- 1933: Athens charta on the Functional City (Le Corbusier),
land planning based on functional zones
 - separating uses (live, work, social)
 - focus on high rise residential buildings
 - entails significant transport demand
- The call for an ecological transformation of urban systems is not new, started in the 1970s
 - 1975: Urban Ecology group in Berkeley (Richard Register)



ECO-CITIES

- 1976 biokybernetical perspective (Frederic Vester)
- understanding the city as a system with diverse sub-systems
- gradual transformation of the urban system based on the existing structures over many decades
- high degree of citizen participation
- polycentric planning with high-density urban islands
- aiming for a high degree of self-reliance



ECO-CITIES CORE PRINCIPLES

- social integration and networks
- multi-use spaces
- local self-governance
- reintegrating nature
- preserving air quality and micro climate
- sustainable use of natural resources
 - water
 - energy
 - materials



EVOLUTION OF ECO-CITIES

- 1992 UN Rio conference
 - local participatory processes to implement Agenda21
 - aiming at an integrated solution of social, environmental and economic problems
- since the 2000s increasing dominance of climate change
 - new initiatives appear such as
 - low carbon
 - CO2-free
 - smart



FROM ECO- TO POST-CARBON CITIES

- Covenant of Mayors – almost 5,500 cities of which 3,500 have Sustainable Energy Action Plans
- Local Governments for Sustainability (ICLEI) – network with 1,200 members globally, 200 in Europe
- Energy Cities - European Association of local authorities in energy transition, over 1,000 members in 30 countries
- Transition Town movement – inspired by Rob Hopkins, aiming at cooperative, local economies
- C40Cities climate leadership group
- many national and local platforms



CITIES ON THE GLOBAL STAGE

- UN special envoy for cities and climate change
Michael Bloomberg (January 2014)
- Cities special focus at UN Climate Summit Sept 2014
- Workstream 2 at UNFCCC focusing on opportunities for near-term mitigation
 - bringing together experts and practitioners from civil society and private sector
 - key focus on urban mitigation
 - meeting in Lima 2014 and Paris 2015



POST-CARBON CITIES OF TOMORROW

- European project with a global reach
- Linking local, European and global efforts
- Linking social, environmental and economic issues
- Linking research, city authorities, EU stakeholders and partners in emerging economies
- global marketplace for best practices
 - special focus on Brazil and China
 - already first activities in China and the US



POCACITO OBJECTIVES

- How can we improve the resilience of cities and regions to environmental, social, and economic pressures of today and the future?
- POCACITO develops an evidence-based 2050 roadmap for EU postcarbon cities by using a participatory case study approach.
- Access an inventory of good city practices and engage with the POCACITO project at:
 - <http://pocacito.eu>
 - [@EUCities](#)



POST-CARBON CITIES DEFINITION

- Rupture in the carbon-dependent urban system
- Establishment of new types of low carbon and environmentally, socially and economically sustainable cities
- Emphasis on the transformation process, shifting paradigms
- Responding to the multiple challenges of climate change, ecosystem degradation, social equity and economic pressures
- Adaptive capacity empowers cities to using threat of climate change as an opportunity to reduce vulnerability



POCACITO PARTNERS





POCACITO CASE STUDIES





KEY APPROACH: FORESIGHT

- Systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at enabling present-day decisions and mobilising joint actions” (EFP 2001)
- Foresight activities within POCACITO do not aim to predict the future, but rather to create a platform to *think, debate, and shape it with stakeholders at the city level*
- Scenarios support the learning process by examining the factors and trends that form future developments



KEY APPROACH: SYSTEMS THINKING

- Inherent to most decisions are long-term and short-term trade-offs (Forrester 1991)
- Systems are highly resistant to policy changes
- A system – in the case of POCACITO, the city – is seen as a unit that is made up of several units
- Systems are changing entities, not rigid structures
- Think in processes and not in states
- A system has a certain order (a structure), which is determined by its elements and their relations



POCACITO – WAY FORWARD

- Sep Oct 2014: initial assessment in case study cities
- Oct/Nov 2014: vision and scenario workshops in case study cities (lead: Margaretha Breil, FEEM)
- Feb 2015: sensitivity model workshops in case study cities on quantification of impacts of scenarios
- Jan 2016: Brussels workshop on pre-EU roadmap
- May 2016: Case study cities roadmap workshops
- June 2016: Brussels workshop on final EU roadmap
- Oct 2016: POCACITO conference in Brussels
- Dec 2016: POCACITO funding ends



THANK YOU.

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