

Eco-neighbourhood Planning in Greece

Maria-Christina Georgiadou

PhD Candidate

Centre for Sustainable Development

Department of Engineering

University of Cambridge

The role of Impact Assessment in *Transitioning to the Green Economy*

Outline

- The Concept of Sustainable Communities
- Status Quo of the Greek Building Sector
- Justification for Eco-neighbourhood Planning
- The Eco-neighbourhood Model
- Policy Recommendations for Government Strategy
- Concluding Discussion

Sustainable Communities

- Integrated approach to urban planning incorporating
 - ✓ Green buildings
 - ✓ Eco-friendly public transportation, walking and cycling routes
 - ✓ Waste and water management systems
 - ✓ Risk management
 - ✓ Local employment
 - ✓ Proximity of community facilities
 - ✓ Green and open spaces
 - ✓ Cultural heritage preservation
 - ✓ Biodiversity
- Genuine sustainability refers to community-level schemes. It is more than individual zero- or low-carbon design
- Central planning of resources and systems and economies-of-scale for novel technologies

Department of Communities and Local Government. Draft Planning Policy Statement: Eco-towns Consultation. 2009

The Greek Building Sector

- Bureaucracy, financial and institutional barriers
- Total population of 11 million, an annual growth rate of 1.3% and a household size reduction to 2.6 people
- 4.5 millions homes with an annual demand of 250,000 new-builds
- 2008: Harmonisation with the European Performance Building Directive (EPBD) 2002/91/EC
- *At a community-level*
 - ✓ Lack of a central action plan
 - ✓ Few projects on eco-villages, cities with district heating or bioclimatic design of building blocks
 - ✓ The Solar Village 3: a social housing estate of 435 homes, built in Pefki, a suburb of Athens, in the 1990s

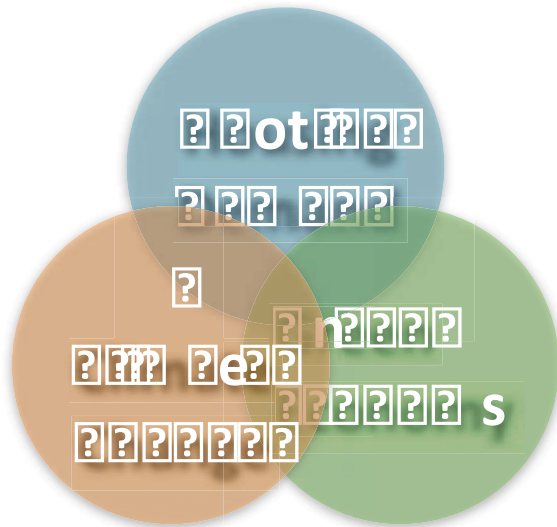
Papadopoulos A. Workshop in 'Energy Efficiency in the Greek Built Environment'. Thessaloniki, Greece. March 2009

Balaras C. Institute for Environmental Research & Sustainable Development. (IERSD) National Observatory of Athens. Personal Communication. Greece, 2009

Greek Real Estate. 2006. Available from: URL: <http://www.capitallink.com/ppress/ppressfile/98206638/81206gr.pdf>

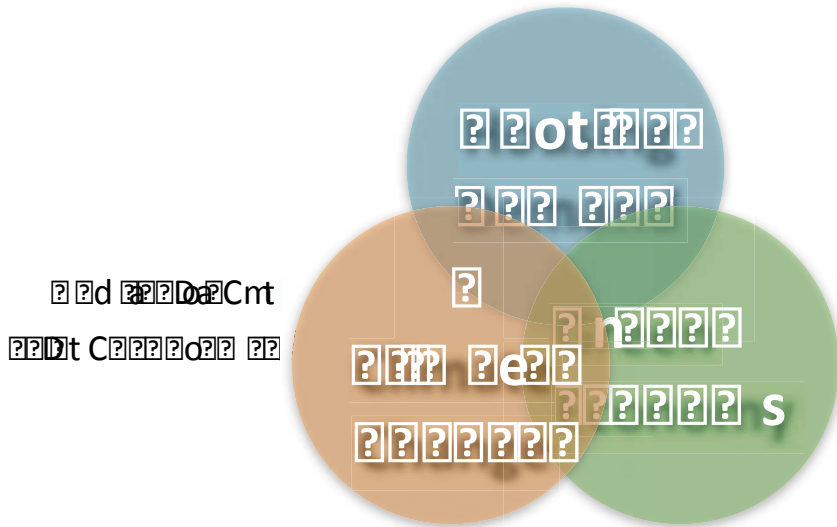
Water Pollution Prevention on the Internet

- The first step in water pollution prevention is to identify the sources of pollution. This can be done by conducting a site audit or by using a pollution prevention checklist.
- The second step is to develop a pollution prevention plan. This plan should identify the sources of pollution, the potential impacts, and the measures to be taken to prevent or reduce pollution.



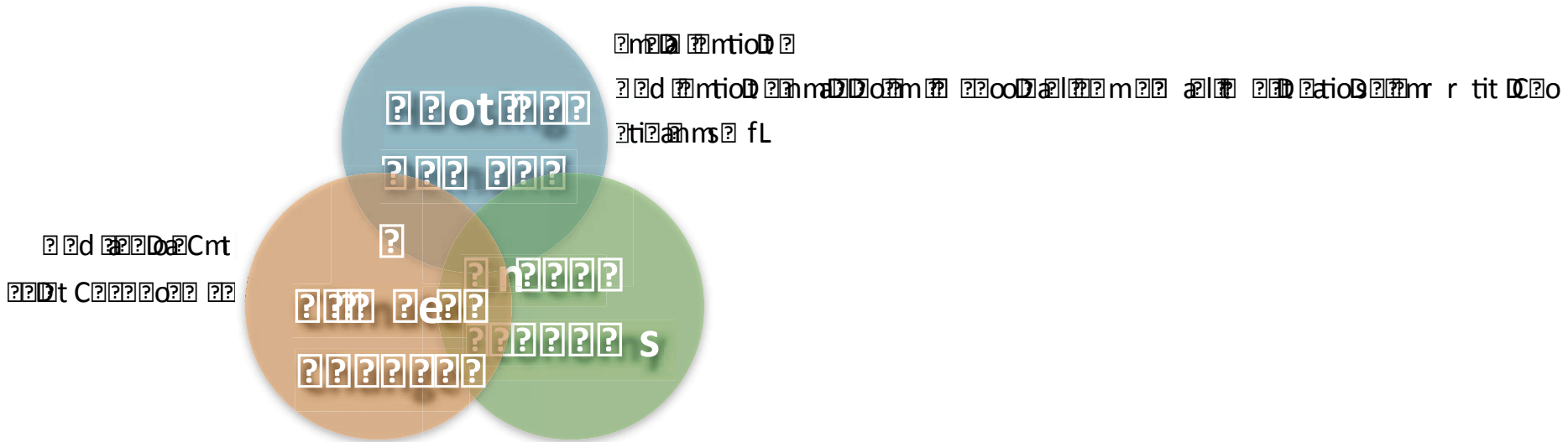
Water Pollution Prevention on Water

- The first step in water pollution prevention is to identify the sources of pollution. This can be done by conducting a site audit or by using a pollution prevention audit (PPA). A PPA is a systematic process of identifying, evaluating, and controlling pollution prevention opportunities.
- The second step is to develop a pollution prevention plan (PPP). This plan should outline the measures to be taken to prevent pollution, such as installing pollution control equipment, implementing good housekeeping practices, and providing training to employees.

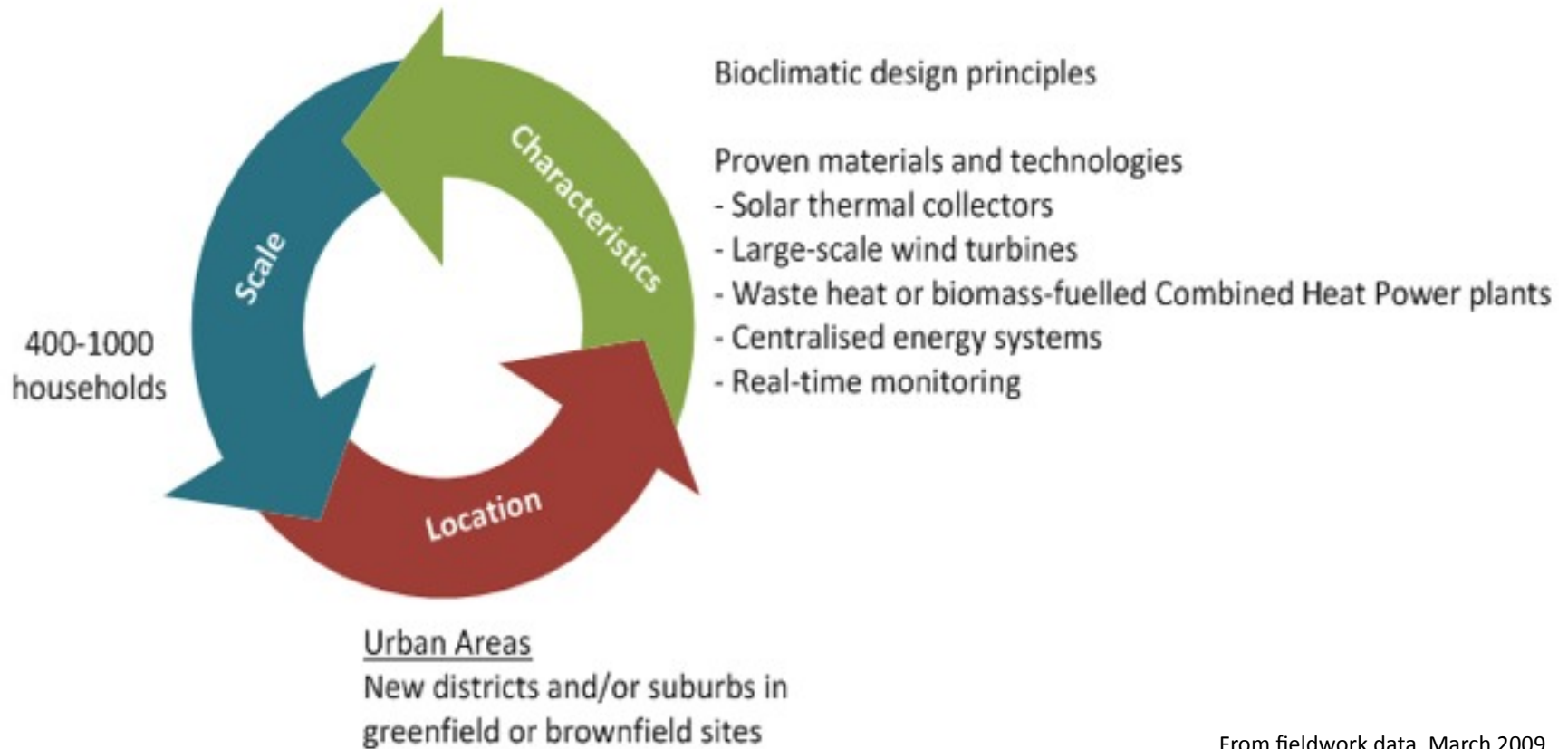


Water for People: A Human Perspective on Water

- The right to water is a human right, not a privilege. It is essential for the realization of other human rights, such as the right to life, health, and a decent standard of living.
- The right to water is a right to sufficient, safe, acceptable, accessible, and physically and culturally acceptable water for personal and domestic uses.

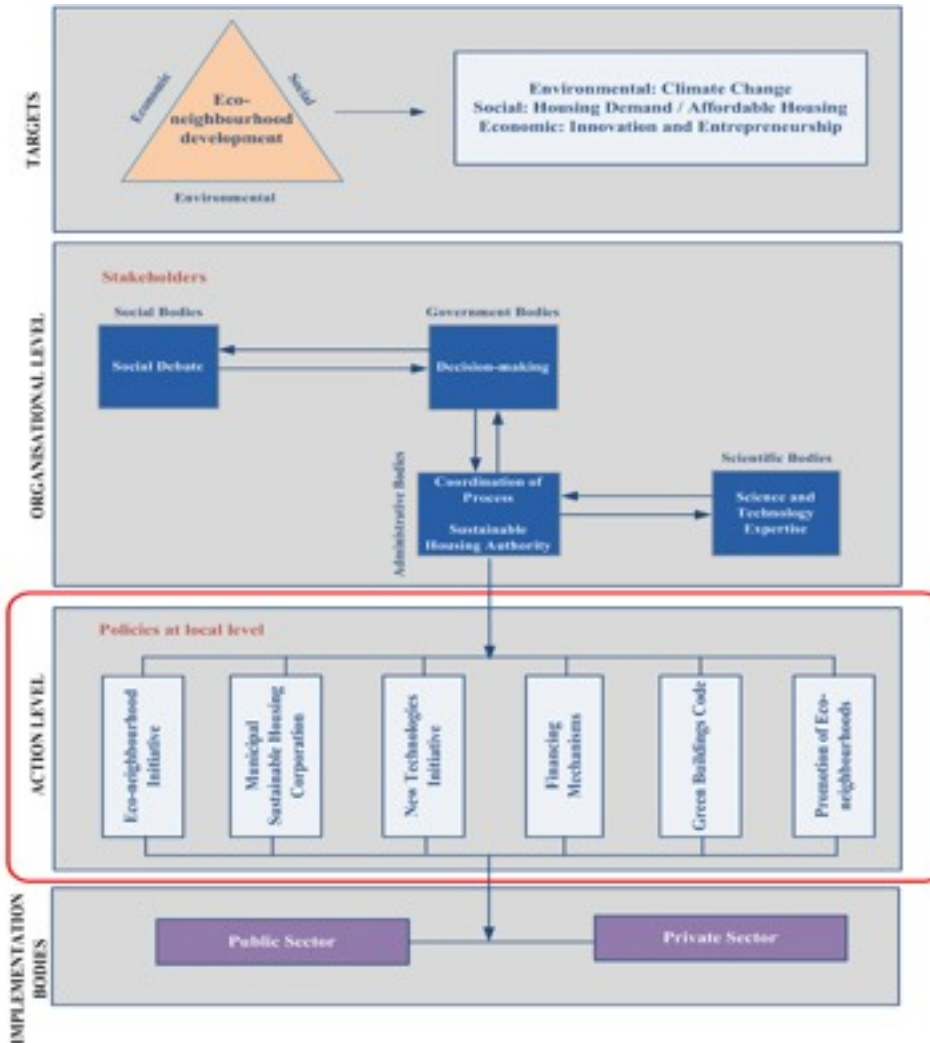


The Eco-neighbourhood Model



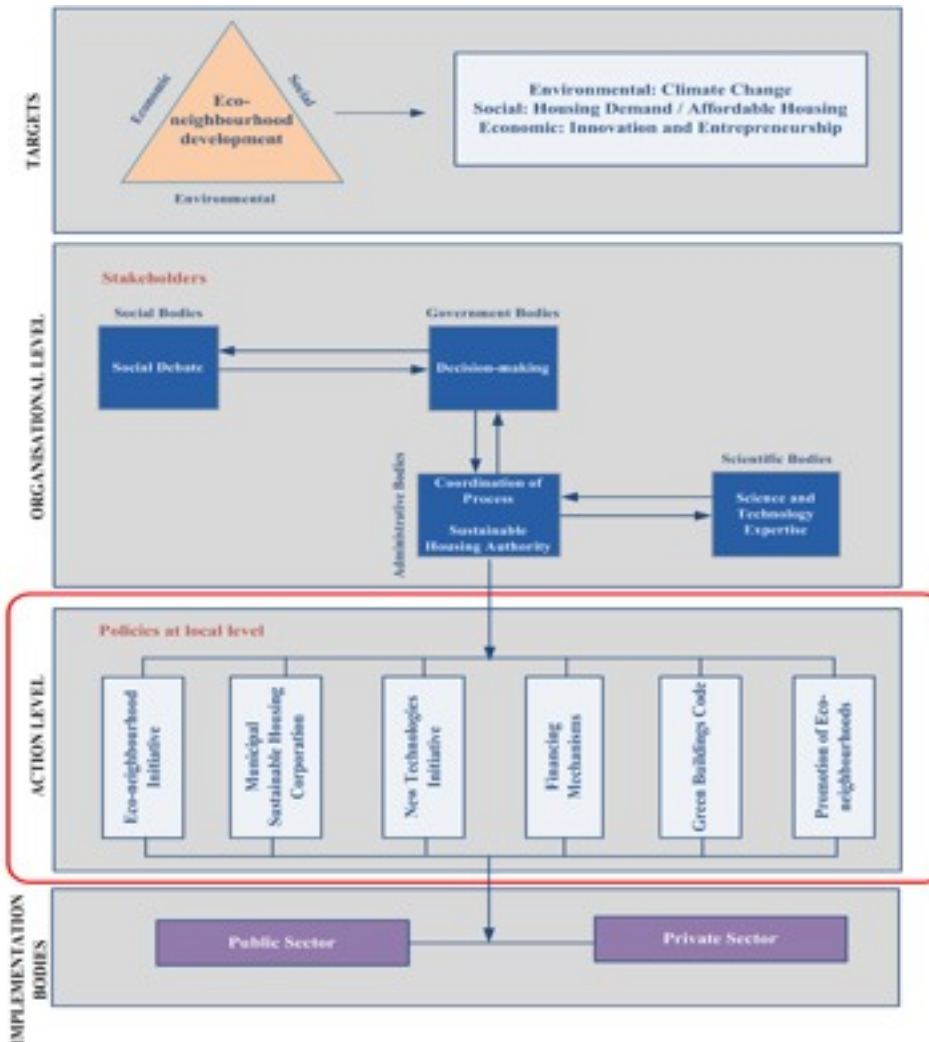
From fieldwork data, March 2009

Policy Recommendations



inning in Greece

Policy Recommendations



Actions at local-level

1. Eco-neighbourhood initiative
 - Planning Policy Statement on the list and characteristics of projects
 - Impact Assessment
2. Establishment of municipal corporations
3. Technological innovation
 - Energy autonomy: fixed percentage of renewable generation
 - Energy management: smart metering coupled with dynamic price regime
4. Financial mechanisms
 - Local Development Funds
 - European Funding Programmes
 - Standard market conditions and incentives
5. Green building code
6. Promotion of the new housing models

Concluding Discussion (1/5)

An eco-innovative project with **multiple benefits**

- Step further than existing individual eco-houses
- Contribute to meet the ongoing housing demand
- Surpass the European building obligations
- Transition to a green economy
 - ✓ Bolster local economies with new market prospects and job creation
 - ✓ Save money through energy efficiency
 - ✓ Scientific character via 'learning-by-doing'

Concluding Discussion (2/5)

However...

Uncertainty due to the project's novelty

- Economic evaluation of policy recommendations
- Knowledge and technology transfer from leading 'best practices' to educate the construction industry
 - ✓ Tools and techniques that include social and economic aspects of the sustainability agenda apart from standard environmental assessment methods
 - ✓ Concept of whole design approach, embodied energy, and specific planning for decommissioning

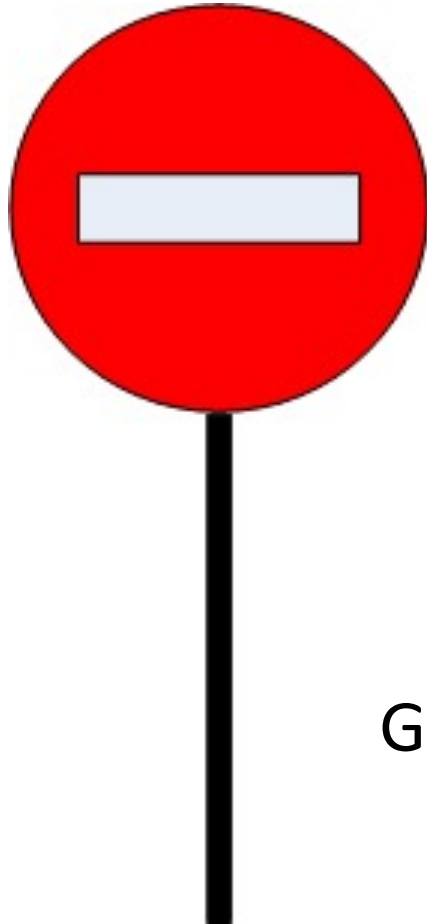
Concluding Discussion (3/5)

Complexity

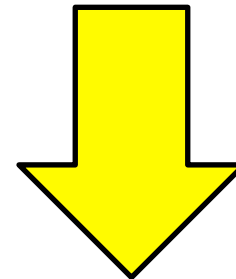
...It is more than 'green' buildings...

- Similar plan for waste and water management systems, transport, amenities, open space etc.
- Effective integration of all thematic areas to achieve the appropriate and effective policy mix for Greece

Concluding Discussion (4/5)



'Unknown unknowns'
Threat of external shocks



Greece is under the worst financial and debt
crisis of all times

Concluding Discussion (5/5)

- Lessons learned from impacts of the external environment
- The current crisis represents an opportunity for a shift away towards long-term strategic thinking
- Eco-neighbourhoods could be a trial model towards sustainable urban communities
- New design response via systems thinking, multidisciplinary research and multi-stakeholder collaboration

Thank you for your attention!

Maria-Christina Georgiadou
mcg36@cam.ac.uk