Exploring aspects of urban sustainability and the use of tools in Europe – using the PETUS cases

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Questions raised in PETUS

- Why are so few tools being used?
- How are tools being used in practice?
- What are the benefits of using tools?
- How can better tools be developed for more interested end-users

From theories on Ecological Modernisation and Governance

- Increasing quantifying and surveying of the environment (“substance flows”)
- integrating sustainability in ”traditional” policy by making it calculable
- New actor relations, new actor roles, new types of collaboration
- More voluntary rules & tools
- ”Story lines” and ”Discourse coalitions” on sustainability

60 PETUS case studies

Sector / Country	Energy	Waste	Water/sewage	Transport	Blue/green	Building and planning	Planned Light	Planned Deep
UK	· Awel Aman Tawe - Community Wind Farm · North Hoyle Offshore Windfarm - north Wales		· Newfyn waste water treament works · Gowerton outfall, waste water treament pipeline in south	· Ebbw Vale Railway Scheme	· Millennium coastal path	· Llandarcy Urban Village · Baglan Energy Park - Port Talbot · New Tredegar Regeneration · Angelina Street, Butetown Regeneration Scheme	10	6
Bel	· Wind-farms equipping Wallonia			· Pedestrian Master Plan for the city of Liege		· ECUB-project, revitalisation, sustainable buildings · Environmental Management Control Panel for the Royal Theatre "de la Monnaie"	4	2
Au	· Municipal Energy Strategy in Graz	· Recycling and waste management regulation in Graz		· Transport management at the regional level	· Open Space Policy in Graz	· URBAN: Social and economic renewal of · Ecocity 2000 – Ökostadt 2000 · Spatial planning - a holistic approach	7	1
Dk	· Middelgrunden offshore windfarm	· Assessment of organic waste management in Denmark · Waste sorting at Inner Nørrebro	· Groundwater co-operation in the Copenhagen Region · Evaluation of green laundry in Folehaven · Harbour bathing in Copenhagen · Water savings in Copenhagen			· SEA in Copenhagen · DOGME 2000 - a municipality network on sustainable development · Green accounts as evaluation tool in Hedebygade · Green buildings at Teglmosegrunden · Green diploma for building operation · Sustainable building in DR-City (Ørestad)	13	2
Fr			• ARP, for water supply networks · Port Des Alpes, storm-water management · Storm water detention basin, Clichy · Lyon confluence Storm water management		· Green space, Renne, qualitative approach	· Lyon Confluence – development zone · Port Des Alpes, development zone	7	3
Fin				· Transport strategy in Helsinki Region · Cost/benefit analysis on traffic projects			2	1
NL	· Zuidas, City district heating and cooling					· Emporium healthy building concept · Integrated environmental guidelines for neighbourhood development (Nijmegen) · Eco-Quantum indicator (Almere) · 2MW project, Schalkwijk, Haarlem · DPL2 indicator (Leeuwarden) · GPR2 indicator (Tilburg) · VROM: Indicators and network policy · Environmental monitoring in Breda	9	1
Bul	· Municipal energy efficiency programme, Municipality of Gabrovo	· Municipal System for Biogas Extraction and Utilization, Municipality of Bourgas	· Construction of municipal waste water collector no 5, Samokov municipality	· Project for a New Bridge over the Danube (Vidin – Calafat)	· Regeneration of Dobrich City Park, Dobrich municipality · Development Plan of Chepelare Ski Center	· Sustainable Development Strategy and Action Plan, Municipality of Velingrad · Regeneration project for a historical quarter in the town center, Bozhovtsi municipality	8	3
Total	7 (3 deep)	4 (0 deep)	11 (4 deep)	6 (2 deep)	5 (2 deep)	27 (8 deep)	60	19

Types of tools

- *Process tools* leading user through different stages of a process, suggesting which sub-tools to be used at different steps etc.
- *Calculation tools* - e.g. LCA-calculation tools, simulation tools and others.
- *Assessment tools* - to weight different aspect of sustainability, e.g. Multi-Criteria-Analysis
- *Monitoring tools*, as indicators, programmes and others.

	Sector-specific	Cross-sector
Project (limited in time and scale)	**Sector-specific projects. Examples:**	**Cross-sector projekts. Examples:**
Policy (continous, all-sector)	**Sector-specific policies. Examples:**	**Cross-sector policies. Examples:**

Project

Project	Tool
Gowerton outfall (UK)	Ecological Toolbox; Salt Marsh Restoration Method; AMP 3 Process Map; m.fl.
Vindmøllerpark i Wallonien (Bel)	EIE-Olienne; Framework for Wind-farms implementation

Buildings

Project	Tool
ECUB-området i Bruxelles (Belg)	T-RNSYS, H.Q.E, B.R.E.E.A.M., Socio-town-planning analysis, P.R.A.S., Raw materials list

Planning

Project	Tool
Llandarcy Urban Village (UK)	BRE Sustainability checklist m.fl.

Policy

Policy	Tool
Open Space Policy i Graz (AU)	Catalogue of measures
Water savings in Copenhagen (DK)	Performance indicators
Transport strategi, Helsinki (FIN)	Impact Assessment, weighted multi-criteria-analyses

Local Urban scale

Policy	Tool
Sustainable Building operation (DK)	Green Diploma
Dogme 2000 (DK)	Indicators, monitoring, certificate

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10 good examples om tools in use

- Llandarcy Urban Village (UK, holistic – neighborhood scale)
- North Hoyle Offshore Wind farm (UK, energy sector)
- Environmental management control Panel (Belgium, holistic – operation of a building)
- Dogme 2000, a municipal network on urban sustainability (DK, holistic – urban scale
- Ecocity 2000 (Austria – holistic, urban scale)
- Helsinki Metropolitan Area Transport System Plan (PLJ 2002) (Finland, transport sector)
- Regeneration of Dobrich Town Park (Bulgaria, green/blue sector)
- Ranking Criteria for Priority Assessment (Bulgaria, energy sector)
- CARE-W-ARP (France, Water sector)
- GPR3 (NL – holistic, urban scale)

BRE Sustainability Checklist for Developments – Llandarcy Urban Village

- Tool peer reviewed by experts in the field
- Provided decision-makers with an overview of the best environmentally friendly alternatives
- Lead to inclusion of environmental elements that were overlooked in the first phase

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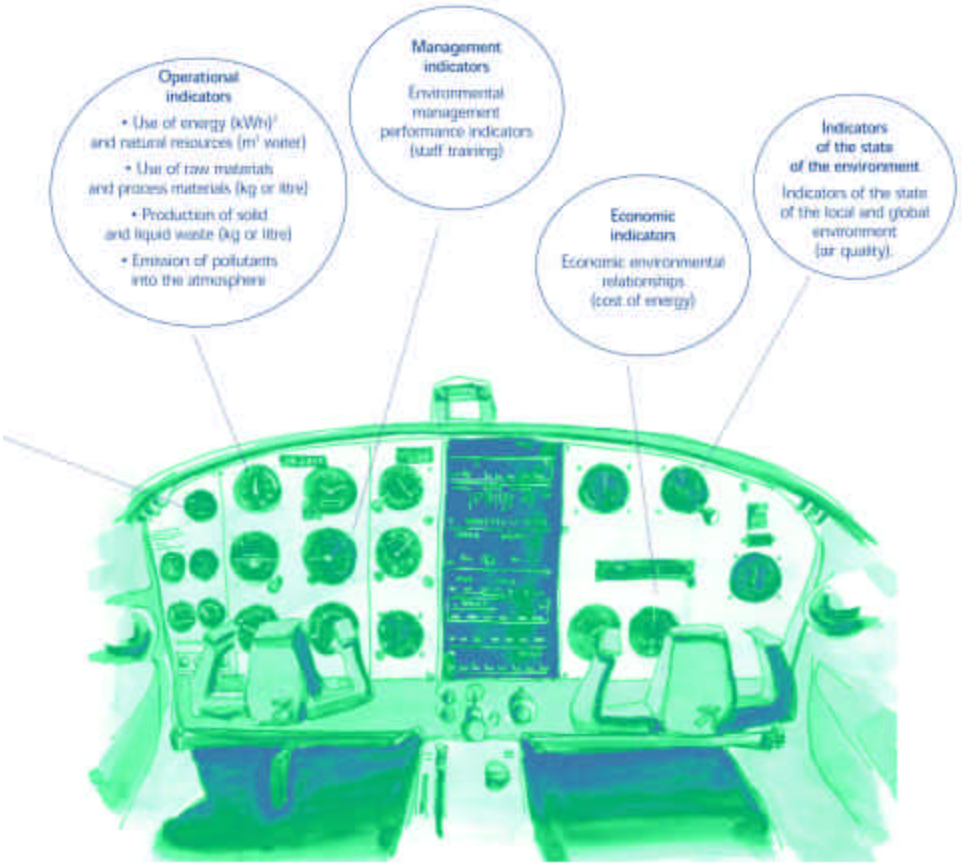
Environmental management control Panel (Belgium)

- Indicators for building operation
- Made as a simple tool for services, SMEs, Micro-businesses, and public sector
- Aims to change the routine, modifying day-to-day behaviour, - not asking radical new development
- Support facilities for companies using the tool



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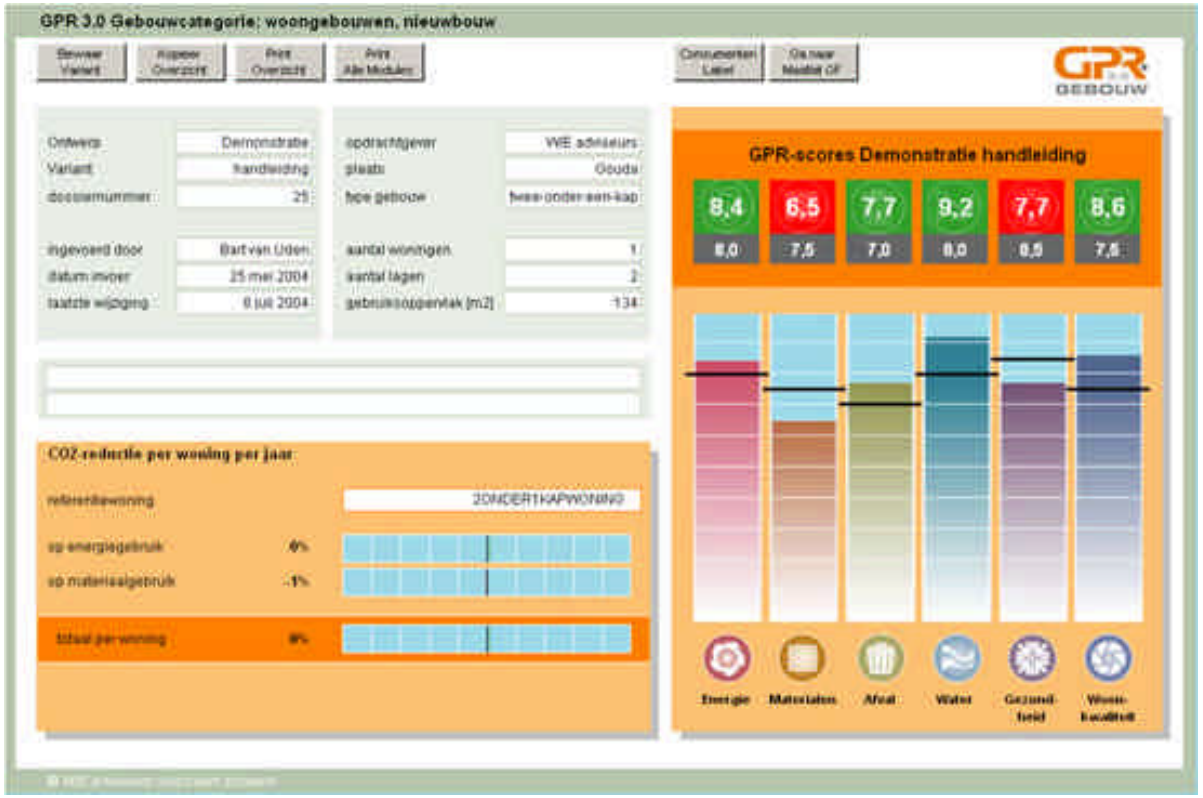
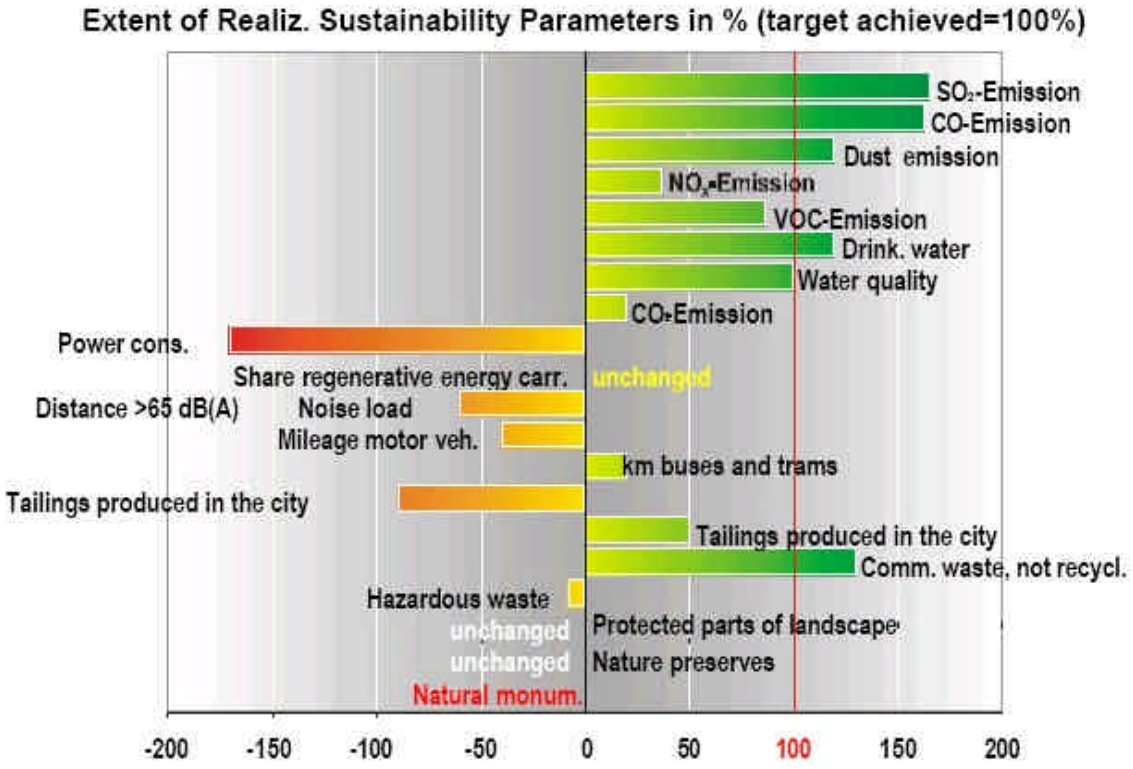
GPR (Gemeentelijke Praktijk Richtlijn / Municipal Guidelines), Tilburg

- Sustainable building assessment tools
- Scores in 6 categories
- Diploma
- Based on LCA, but easy to use
- Applied to 4.200 buildings in Tilburg and 700 houses outside
- Market diffusion
- For new buildings, offices, schools and existing buildings
- Further development in 18 municipalities, with recommendations for legislation

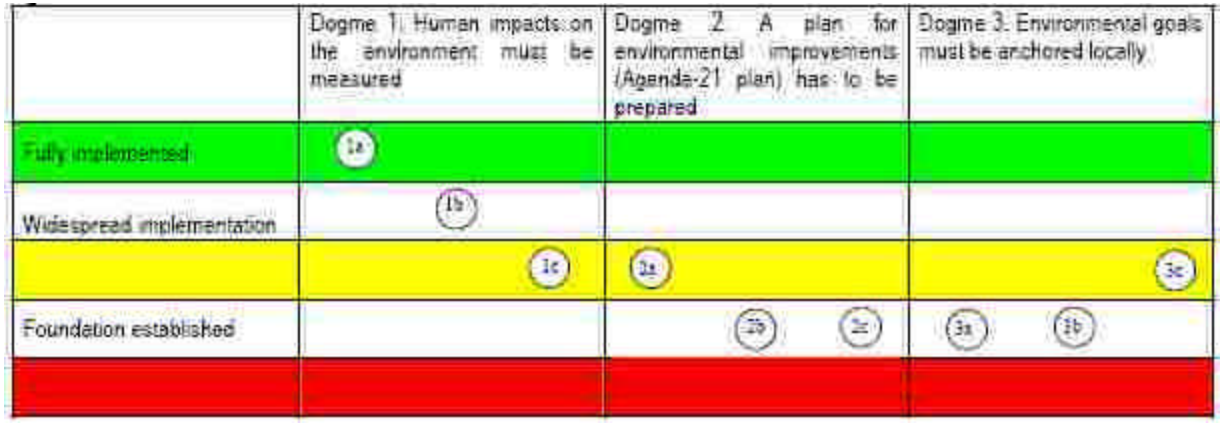


Eco-City 2000 – Evaluation (Graz)

- Catalogue of measures in specific sectors, checklists, indicators and benchmarks
- Evaluations reports every three years
- Involving sub-groups in evaluation
- Results of environmental policy become transparent and quantifiable



Dogme 2000 (Denmark)



Danish network on sustainable urban development, having at the moment five members (the municipalities of Copenhagen, Albertslund, Ballerup, Herning and Fredericia). The network is based on political commitment to the common goals defined, on setting up measurable goals, and on annual audits on the municipality's success. This is formulated in 3 Dogmes:

- All human impacts on the environment must be measured
- A plan for environmental improvements (Agenda-21 plan) has to be prepared
- The Dogme 2000-plan must be embedded locally

If the annual audit reveals that the municipality is not improving its environmental standard, members can be excluded.

What characterises a good tool?

- Credible, transparent and user-friendly
- Give clear message about sustainability performance (for instance scores)
- Use few but accessible data
- Give users a feeling of ownership and commitment; involve stakeholders
- Demonstrate alternatives
- Add visibility (profiling and PR) to other actors, for instance through labelling

Barriers for using tools:

- Data availability
- Knowledge of tools
- Ressources (time & money)
- Expectations of benefit using tools
- Courage to change traditional procedures

Observations from case studies

- Several tools used at the same time
- Tool are adapted to the local context
- Tools just one element of different sustainable initiatives
- Test of tool where tool-developers are strongly involved
- Learning-process

Interpretations

- Evaluations challenges understandings of sustainability: ”green” projects or policies are not always as green as expected
- Evaluations and indicators do not automatically provide change
- Difficult to measure the outcome of a tool
- Tools do not function without a will to sustainable development
- Tools cannot secure innovation; innovative processes might turn into tools, concepts and methods

Conclusions

- Tools can actually make a difference
- Tools are means of communication, more than means for efficiency. Tools can structure a process and make it legal to include in traditional policies
- Tools might becomes a “sign of sustainability” more than a motor for change

Viewpoints

Tools should be

- used as inspiration
- used as a support for own thinking and experience
- developed and ”owned” by users