

RP2005: URBAN MICRO CLIMATES

COOLING CITIES WITH GREEN SPACES: POLICY PERSPECTIVES

Research focus

As cities grapple with impacts of urban heat and heatwaves, exacerbated by climate change (Figure 1), integrating green spaces contributes to cooling cities, as well as many other benefits.

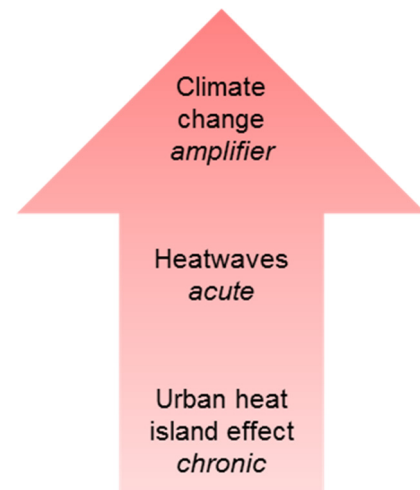


Figure 1: Urban heat relationships

These benefits – *nature-based solutions* – include urban heat mitigation, stormwater management, biodiversity habitat, and contributing to human health and wellbeing (Figures 2, 3 and 7). However, space for greenery is threatened as cities grow in size, density and population. This research analysed how policies contribute to retaining and maximising urban green space.



Figure 2: Green spaces contribute to urban cooling

Research methods

The research focused on green space policies in Melbourne Australia. An analysis framework was developed that integrated elements of policy research and sustainability transitions. The framework directed attention to strategic, tactical, operational and reflexive aspects of policy processes and content. Data was drawn from policies for Melbourne's green spaces from federal, state and local governments, and interviews with policy makers. A study of London's green space policies supplemented the analysis.

Green spaces are essential, multifunctional elements of urban infrastructure for thriving cities.

Outcomes

The research identified key policy mechanisms and policy success factors, and related these to sustainability transitions perspectives. A range of policy mechanisms are necessary because different types of mechanisms operate at different points along the transition trajectory (Figure 4).



Figure 3: Green façade and street trees

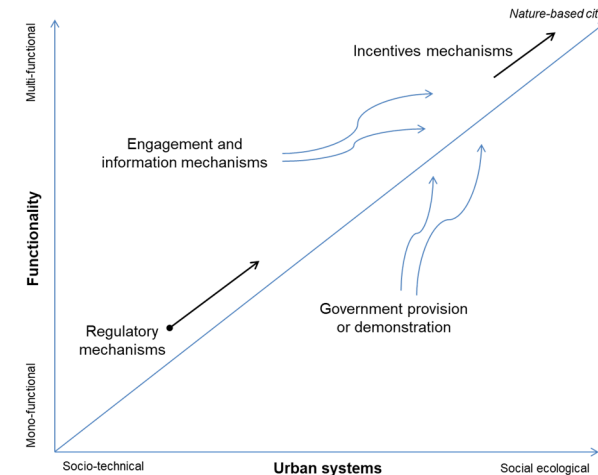


Figure 4: Policy mechanisms that support transitions

Policy success factors associated with strategic, tactical, operational and reflexive dimensions were identified (Figure 5). These included policy champions, community engagement, integration with influential policies and implementation skills and resources.

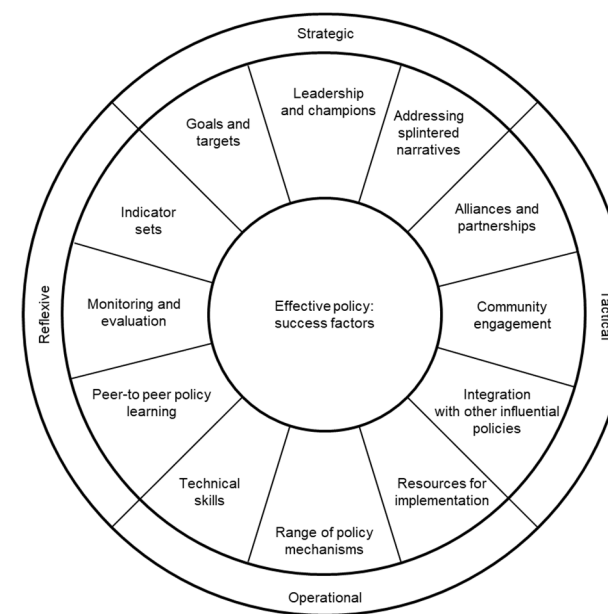


Figure 5: Policy success factors

Conclusions and anticipated impacts

Urban green spaces provide multiple benefits and functions. Multifunctionality is promoted by policy makers and advocates, but creates substantial challenges for monofunctional governance systems. The research highlights the role of shared narratives in transition from monofunctional infrastructure to multifunctional systems in nature-based cities (Figure 6).

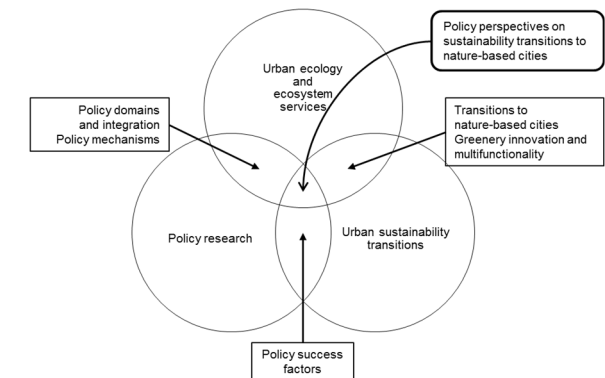


Figure 6: Research conclusions

Further information

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Figure 7: Urban green spaces and social inclusion