

Exploring community-based stewardship of nature-based solutions (NbS) in upgraded informal settlements: the case of Bangkok, Thailand

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Executive Summary

This study explores how residents of the Rungmanee Patthana community in Bangkok, Thailand, manage and sustain nature-based solutions (NbS), particularly community gardens and canal-side green spaces, as part of broader efforts to strengthen climate resilience in upgraded informal settlements. Through interviews with residents and urban professionals, the research examines the social, cultural, and governance factors that enable or hinder long-term stewardship of these community-led initiatives.

The findings show that stewardship is driven less by formal programs and more by strong community relationships, collective action, and local leadership. Residents have transformed vacant spaces into productive gardens that provide food, support community well-being, and create networks of mutual aid, particularly during crises such as the COVID-19 pandemic. Older residents, many of whom migrated from rural areas and possess agricultural knowledge, play a central role in maintaining these spaces and sharing practical skills with others.

The research highlights that people value urban nature for multiple reasons. Community gardens provide tangible benefits such as food, cost savings, and small income opportunities, while also creating social connections, cultural identity, and a sense of belonging. Many residents described green spaces as places that improve mental well-being, strengthen relationships, and preserve memories of earlier ways of life. These social and emotional benefits are as important as the environmental benefits often emphasized in climate resilience programs.

At the same time, the study identifies several challenges that threaten the continuity of community stewardship. Much of the work is carried out by older women and relies on unpaid labor that often goes unrecognized. Younger residents have limited time to participate due to employment and other priorities, creating concerns about long-term sustainability. Residents also face uncertainty over access to land, limited funding, and dependence on short-term external support.

A major finding is the role of fragmented governance in limiting the effectiveness of nature-based solutions. While community gardens have benefited from partnerships with universities, non-governmental organizations, and local institutions, stewardship of canals and waterways has been undermined by poor coordination among government agencies. Residents reported frustration that local knowledge and community-led efforts are often overlooked, particularly when dealing with drainage and water management challenges.

Overall, the study concludes that informal settlement residents are not simply beneficiaries of climate resilience interventions but active environmental stewards with valuable knowledge, skills, and social networks. Strengthening climate resilience in cities like Bangkok will require governance approaches that formally recognize community contributions, support long-term stewardship efforts, address inequities in environmental care work, and foster stronger collaboration between communities and government agencies. Without these changes, the

potential of nature-based solutions to deliver lasting environmental and social benefits may remain unrealized.