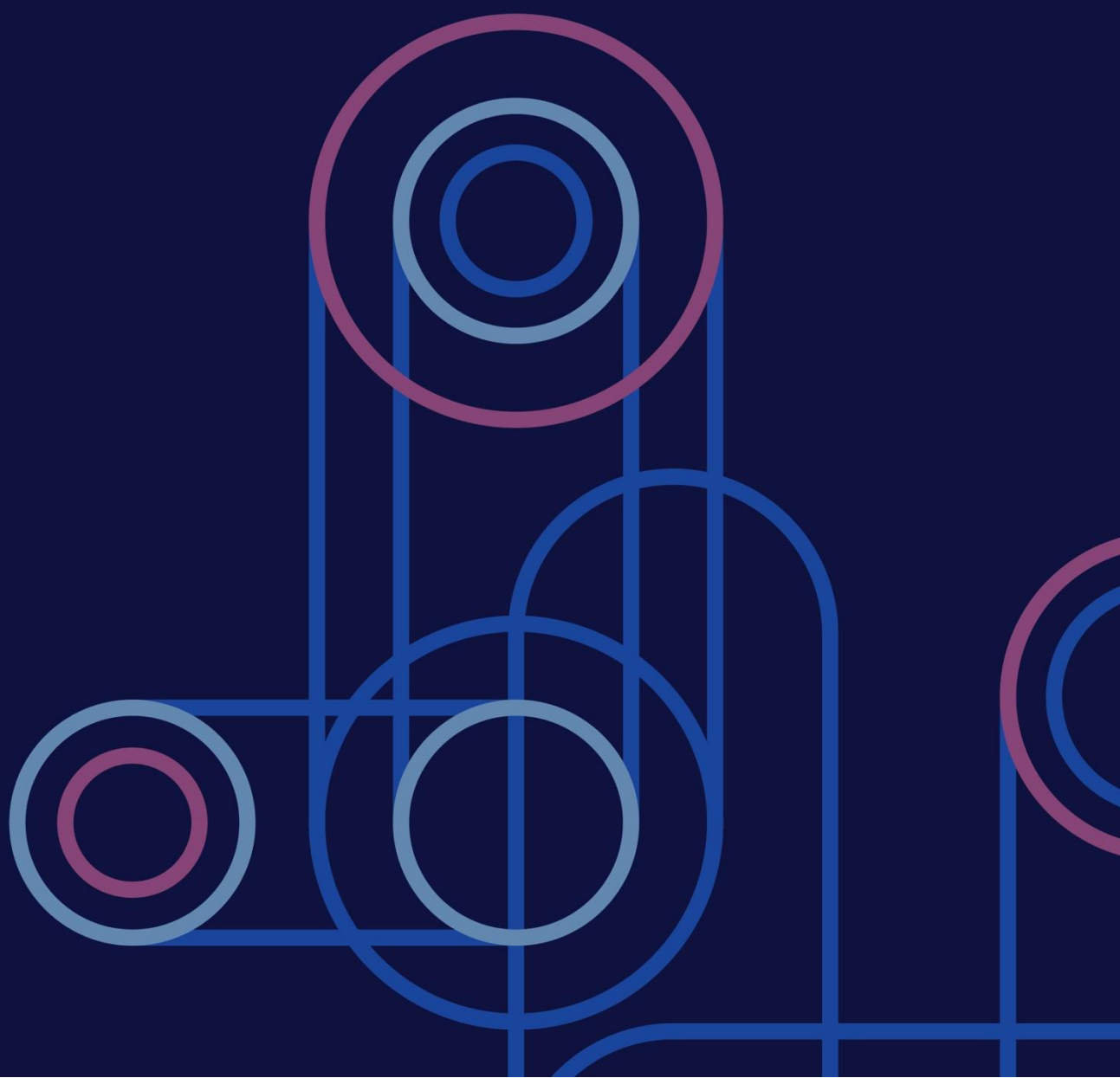


CASE STUDY

Revitalising Informal Settlements and their Environments (RISE)

2025



Basic information	
WHO Region	SEARO, WPRO
City or Country	Makassar, Indonesia and Suva, Fiji
Timeline	2018 – ongoing
Type of intervention	Infrastructure; research
Primary level of implementation	Neighbourhood
Primary sectors involved	Water; sanitation; housing; environment; health
Primary health outcomes or challenges	Gastrointestinal disease; child health; waste management; environmental resilience

Case description

Urban informal settlements are among the most health-challenged environments in the world. In the rapidly urbanizing regions of South Asia and the Western Pacific, populations in such settlements face degraded living conditions, high exposure to environmental contamination and increasing vulnerability to climate impacts. Conventional approaches to informal settlement upgrading – typically involving resettlement or public sanitation measures – have proved costly, socially disruptive and largely ineffective in improving health. The Revitalising Informal Settlements and their Environments (RISE) initiative, led by Monash University in partnership with governments in Indonesia and Fiji, set out to demonstrate a new model: community-led, water-sensitive upgrading that improves both human and environmental health while remaining feasible for scale-up in low- and middle-income countries.

Launched in 2017 and supported by the Australian and New Zealand Departments of Foreign Affairs and Trade, the Fiji Government and the Wellcome Trust, the program operates across 26 settlements in Makassar, Indonesia and Suva, Fiji – representing roughly 1650 households and 9000 residents. RISE’s randomized controlled trial is designed to capture the health and environmental impacts of integrated, neighbourhood-scale upgrades, with phased implementation across selected settlements in both cities. The project’s technical components include co-designed drainage, sanitation and clean-water systems that blend green, grey and digital technologies: nature-based treatment wetlands, internet-connected pressure sewer units, rainwater tanks and flood-mitigation features. Complementary upgrades – such as new or upgraded toilets, improved access ways, and local drainage restoration –



View of the tailored RISE water-sensitive upgrading intervention in an informal community. Makassar, Indonesia: 2024. © RISE.

address multiple exposure pathways and additional climate- and safety-related health risks.

The intervention is bespoke, co-designed with community members, local authorities and service agencies. Community workshops identify priorities, shape layouts and inform operation and maintenance models, ensuring gender- and ability-inclusive facilities. In each city, partnerships link municipal and national bodies with research partners – such as Makassar City’s Public Works Department, the Ministries of Health, Environment, and Planning, and Hasanuddin University in Indonesia; and in Fiji, the Ministries of Housing, Health and Infrastructure, the Water Authority of Fiji, and Fiji National University. The result is a complex, cross-sectoral platform in which local governments provide political mandate and integration with city planning frameworks, while communities and academic partners drive participatory design and evidence generation.

Construction was completed in the first set of Makassar settlements in 2024 and will conclude in Suva in 2025. Thereafter, up to two years of post-intervention monitoring will assess impacts on environmental quality, microbial exposure and child growth outcomes. Early evidence indicates improved drainage and strengthened community organization around sanitation. Data from continuous environmental and biomedical sampling – combined with socio-economic and wellbeing indicators – are generating an unprecedented evidence base for health benefits of integrated, nature-based urban upgrading.

Enabling factors for RISE include strong multilevel partnerships, consistent donor and governmental support, and the scientific credibility provided by the randomized trial study design. Key challenges include navigating land tenure complexities, securing regulatory approval for unconventional wastewater technologies, and ensuring the continuity of political commitment across election cycles. Yet the co-ownership model has built legitimacy, with local communities and city authorities jointly maintaining new systems and advocating replication elsewhere.

Locally grounded innovation, backed by rigorous research and genuine collaboration, can transform health outcomes in the most marginalized urban environments. RISE offers an alternative to displacement-based upgrading and a practical pathway for cities to meet health, equity and climate-resilience objectives simultaneously.

Strategic Highlight

RISE shows how robust partnerships can bridge research, government and community action to deliver urban health improvements. The initiative's governing consortium unites academic expertise, donor resources, private sector know-how and public sector authority with the lived experience of informal settlement residents. Each partner performs a distinct strategic function: universities design and evaluate interventions; governments provide mandate, integration with policy and long-term stewardship; private sector actors implement the new infrastructure; and communities ensure appropriateness, ownership and continuity.

The partnership operates across multiple scales. At the community level, residents and local facilitators co-produce designs, building trust and ensuring the inclusion of women, elders and people with disabilities. At the municipal and national levels, formal agreements embed the upgrades within existing planning and budgeting systems, turning experimental pilots into precursors of policy. International partners sustain funding, technical oversight and global visibility, enabling a cycle of learning that feeds back into policy and practice.

Critically, every partner benefits from RISE activities. At the community level, RISE researchers have been embedded throughout the project, going beyond the

intervention's tangible benefits to provide support, upskilling, jobs and humanitarian relief during COVID. Local academic partners have benefited from research infrastructure improvements, lab training and data-related capacity building. For sectoral authorities, the RISE intervention is an innovative way to overcome physical and bureaucratic constraints related to service provision – public-sector partners are also embedded in the project, gaining experience through the novel approach. For local government leaders, RISE represents a political opportunity to support informal settlement residents, offering dignity, better health and wellbeing; it also represents a hook to bring cross-ministerial representatives together. National-level and multilateral partners see the potential for cost-efficiencies in delivering on development priorities.

The RISE model is integrative, linking health, environment and infrastructure sectors; contextualized, grounded in local governance and community priorities; and complexity-informed, adapting to diverse social, cultural, hydrological and political realities. By embedding capacity-building within implementation, RISE strengthens the institutional systems needed for sustained intersectoral cooperation.

Beyond the immediate gains for residents, RISE creates a policy pathway for national and city governments to mainstream similar approaches. RISE is informing new standards for decentralized sanitation and settlement upgrading, demonstrating how scientific collaboration with communities can deliver practical, scalable solutions for urban health.

Further Information

- [Revitalising Informal Settlements and their Environments \(RISE\)](#)
- [Transforming lives: RISE Annual Activity Report 2024](#)
- [Study design, rationale and methods of the Revitalising Informal Settlements and their Environments \(RISE\) study: a cluster randomised controlled trial to evaluate environmental and human health impacts of a water-sensitive intervention in informal settlements in Indonesia and Fiji](#)
- [Improving human and environmental health in urban informal settlements: the Revitalising Informal Settlements and their Environments \(RISE\) programme](#)
- [Responsible north-south research and innovation: a framework for transdisciplinary research leadership and management](#)
- [RISE – The transformation: a water-sensitive future \(Part 4\) \[video\]](#)