(PROJECT) RISE

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Design &
Architecture
Practice
Research

(PROJECT)

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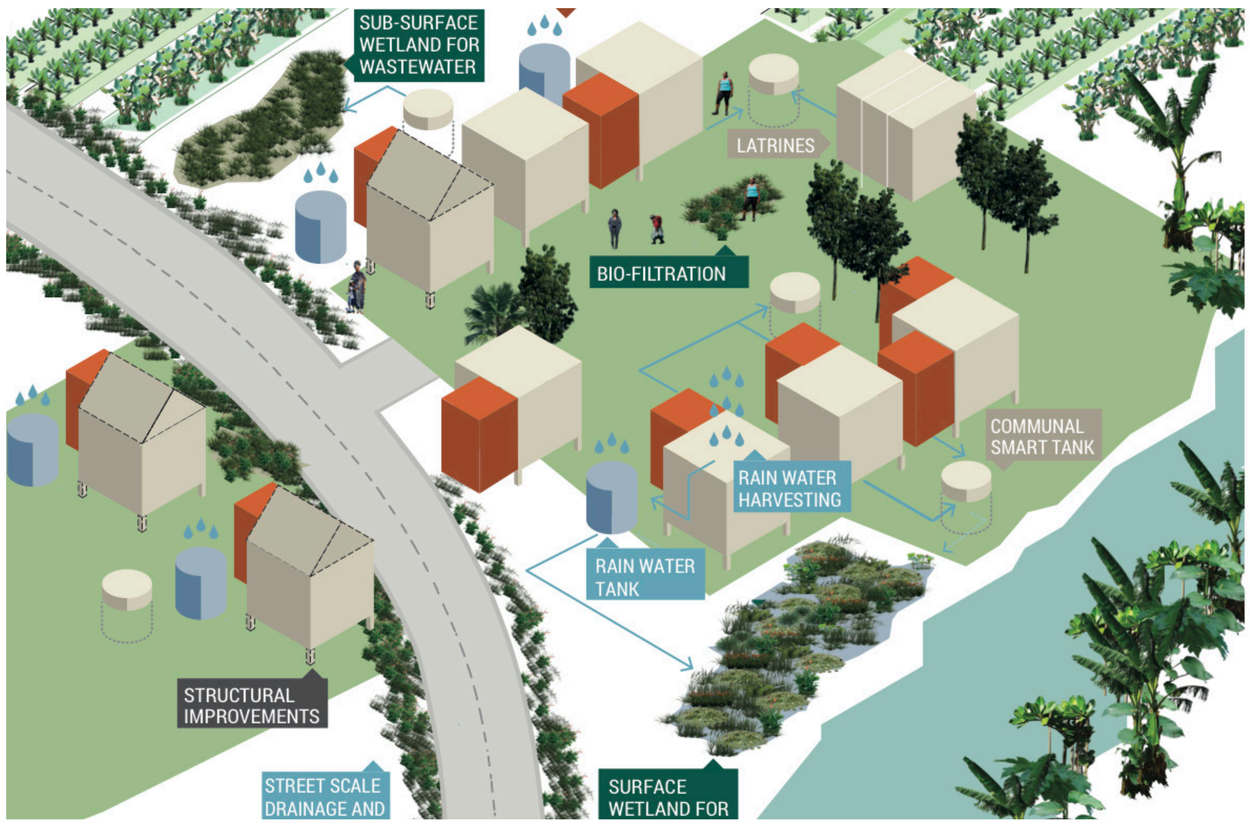
01.



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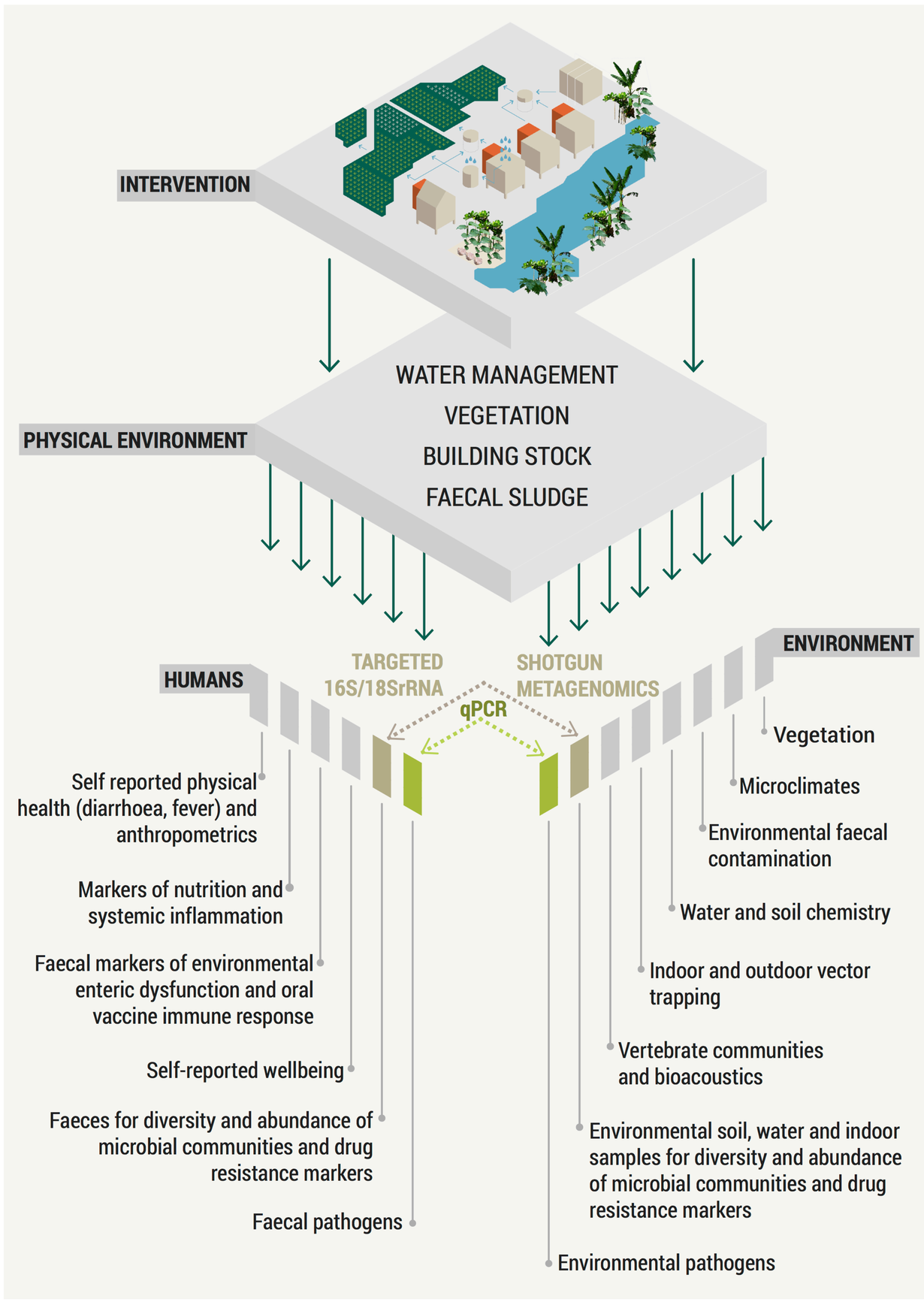

04.

01. Full project as a precinct-scaled intervention
02. Community workshop to identify challenges
03. Community mapping of neighbourhood in Makassar, Indonesia
04. Summary of the project, from intervention to environmental and health analysis

RISE

REVITALISING INFORMAL SETTLEMENTS AND THEIR ENVIRONMENTS:

Urbanisation is a major demographic trend globally. Informal settlements, which account for much of global urban growth, are especially vulnerable to ill-health because of poor environmental and socio-economic conditions. The water cycle is a critical factor exacerbating the linked challenges of poor environmental quality and poor human health. The conventional hydraulic water engineering solution to these challenges has changed little in 150 years and comes at major financial, environmental, and social costs, and is an unlikely option for informal settlements as their rate of growth increases. RISE seeks to provide an alternative approach to the revitalization of urban informal settlements in Fiji and Indonesia.

Supported by the Wellcome Trust's 'Our Planet Our Health' programme, this five year randomised controlled trial will quantify the human health, environmental, economic and social benefits of an alternative, more holistic and modular water-sensitive approach to revitalization processes. With capital funding provided by the Asian Development Bank, the project will supply new infrastructure and housing to 24 informal settlements across Makassar (Indonesia) and Suva (Fiji) as an alternative to conventional approaches. This approach involves providing the urban poor with more sustainable water supply, sanitation, flood protection, environmental stewardship and greater resilience in the face of climate change. This will be achieved through the provision of novel green technologies (such as wastewater wetlands and nature based stormwater biofiltration systems) and green urban design and architecture, from the scale of the house to that of the precinct.

The project will assess environmental and human health conditions in revitalized and control communities in order to provide data on the efficacy of this alternative water-sensitive approach. This will involve testing soil and water environments for microbial diversity, drug-resistant gene markers and pathogens, and concurrent testing of faecal specimens from children under five years old living in the settlements using identical genomic and pathogen testing, as well as specific measures of intestinal inflammation.

Working in partnership with local communities and stakeholders, this interdisciplinary project seeks to provide an evidence-based assessment of the efficacy of the water sensitive approach in revitalising informal settlements poorly served by water infrastructure in the Asia-Pacific. This project aims to deliver the first public health and environmental data on the outcomes of an alternative water management approach, and potentially the basis for new water infrastructure policies and investment strategies for informal settlements. We anticipate that the changed physical environment and improved water-servicing will also lead to enhanced social and economic outcomes, resulting in further benefits to human health and wellbeing. The project seeks to develop a proof of concept for alternative slum revitalisation methods which will be used to inform future investment directions for global lending institutions.

Project team members include engineers, sociologists, architects, economists, public health experts and biologists.

Participating Universities
- Stanford University (USA)
- Emory University (USA)
- University of Melbourne (Australia)

Collaborating Universities
- Hasanuddin University (Indonesia)
- Fiji National University (Fiji)
- The University of the South Pacific (Fiji)

Project Partners
- South East Water
- Melbourne Water
- World Health Organisation
- Oxfam Indonesia
- Oxfam Pacific
- Australia-Indonesia Centre
- WaterAid Australia
- SDSN Australia Pacific

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