



rise

REVITALISING INFORMAL
SETTLEMENTS AND
THEIR ENVIRONMENTS

Adapting and growing

RISE Annual Activity Report 2020

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The COVID-19 pandemic has forced us to change the way we operate. But our goal of improving water and sanitation services for the poorest and most vulnerable remains more important than ever.

A young resident prepares to participate in co-design workshops to design water and sanitation infrastructure for his community in Suva, Fiji.





Message from the Director

How do we make sense of a year that we never saw coming?

Our year started off on a high. In February we welcomed New Zealand Prime Minister the Rt Hon. Jacinda Ardern to launch the Fiji build component of our program. One week later, Asian Development Bank President Mr Masatsugu Asakawa toured our Indonesia demonstration site in his first official engagement as president. Our teams across the globe were on track to implement an ambitious work plan to progress our program in 2020.

Then, the world as we knew it changed. As international borders closed, so too our research sites closed off to our Australia-, US-, and UK-based researchers. Our communities in Fiji and Indonesia were unable to meet with us to design their infrastructure and continue face-to-face data collection. We were unable to access our laboratories. Suddenly every inch of progress we'd made since 2017 hung in the balance. And the question loomed before us: *where do we go from here?*

This year's Annual Activity Report tells the story of how RISE has responded. We reset our program to reflect the new operating environment, and meet our commitments to our study communities, our research teams, and our mission.

COVID-19 has made us relentless in our mission to bring clean water and sanitation to informal settlements. Because we do not accept that being able to wash one's hands with clean water is a privilege. We do not accept that a working toilet in the home, or a safe path to walk on to lend support to a neighbour, is a luxury — it is a right that should be afforded to everyone.

This year we met the challenges of COVID-19 head-on, adapted, and moved forward with even greater resolve to build a better future where nobody is left behind. While the pandemic is far from over, as this report shows, RISE is now on a strong footing to operate and deliver in a COVID-19 world thanks to decisive actions taken in 2020 to safeguard our endeavour.

Professor Rebekah Brown
RISE Program Director
Senior Vice-Provost and Vice-Provost (Research), Monash University



“RISE’s ability to adapt to the challenges of 2020 without wavering from its ambitious scientific aims is a testament to its responsive management and strong partnerships, especially with local communities. Wellcome particularly commends RISE’s efforts to build outstanding in-country scientific capacity and leadership, so critical for transformative planetary health research”.

Jeremy Farrar, Director, Wellcome Trust

“Monash is incredibly proud of RISE’s progress in 2020 in providing solutions based on rigorous evidence. Its pioneering research is even more important in a COVID-19 world where community health mixed with environmental and economic crises disproportionately affect the poorest and most vulnerable”.



Professor Margaret Gardner AC, President and Vice-Chancellor, Monash University

“The phrase ‘never waste a good crisis’ could have been written for the RISE program. The whole team has pulled together, not only to meet the challenges of 2020, but also to find the opportunities by its strategic adaptation of data collection tools to safeguard the aims of this most important trans-disciplinary study”.



Professor Ted Bianco, Chair, RISE International Scientific Advisory Panel



“The strategic ‘Reset’ process undertaken in 2020 examined in detail the governance, financial, and occupational health and safety risks posed by COVID-19. The Reset resulted in a delivery plan for safe operations in a COVID-19 world that will continue to pay dividends well into 2021”.

Professor John Thwaites, Chair, RISE Governance Panel

Our commitment to deliver on our mission has never been stronger, with the health and safety of our people and communities being our top priority.



February: New Zealand Prime Minister Jacinda Ardern launches RISE's Fiji demonstration site.



March: Asian Development Bank President Masatsugu Asakawa tours RISE's Indonesia demonstration site in his first official engagement as president.

Executive summary

The 2020 Annual Activity Report tells the story of RISE's agile response to the COVID-19 pandemic and how the program has adapted to a changed world.



October: Community training in RISE's new COVID-19 Safety Protocol.



November: completion of community co-design activities with first six intervention communities in Fiji.

This year has challenged us all in many different ways. For RISE, it was a live test of our research and intervention model as a locally led and implemented program. With country border shutdowns grounding our global researchers, we further bolstered our already strong local teams, accelerating their capacity to lead and drive research and co-design on the ground.

We are so proud to see our Fijian and Indonesian colleagues continue to establish themselves as powerful forces in international research and development practice.

We have optimised our sampling and analysis without undermining the scientific integrity of our randomised control trial. Rationalising our data collection program has made space for data analysis and the translation of our findings into impactful publications that can shape debates in informal settlement policy.

Our commitment to deliver on our mission has never been stronger, with the health and safety of our people and communities being our top priority. We will never put progress above the wellbeing of our people and the communities we work with, and with this guiding principle, we have found innovative ways to continue our work in a safe way.

It has taken commitment by our staff, our partners, and our communities to reset and move forward together. We have reimagined a path forward to deliver RISE in a COVID-19 world, doubling down on our locally driven delivery model by supporting our highly capable in-country teams.

And, as this year has demonstrated so clearly, understanding the connections between humans and our environment, and delivering better water and sanitation to those who need it most, has never been so important.

COVID-19 impacts and our response

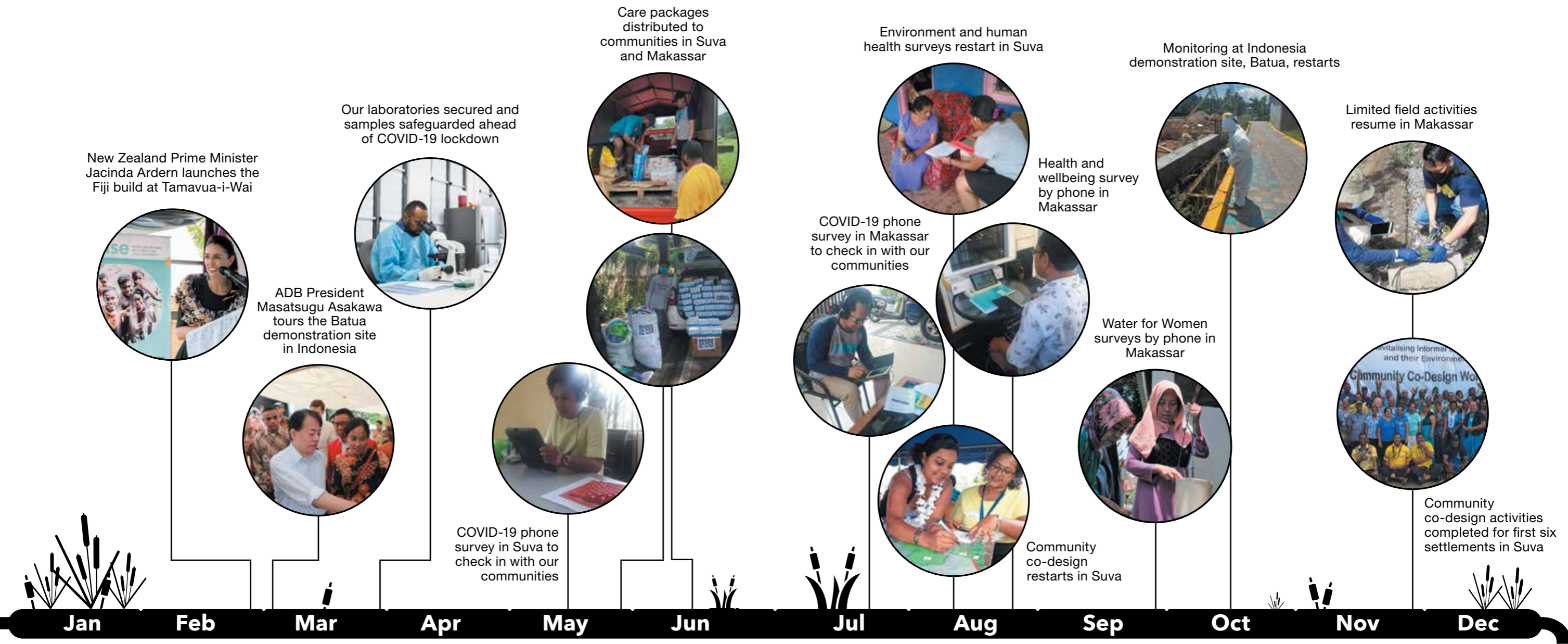
Makassar, Indonesia

Indonesia remains one of the hardest-hit nations by COVID-19 in Asia. There have been significant restrictions in place for most of the year in terms of public gathering, work, and access to city services. Our partner university, Universitas Hasanuddin, remains closed, including our RISE laboratory and office. Our Indonesia team continues to work predominantly from home, and undertakes activities such as limited laboratory work, maintenance operations at the demonstration site, Batua, and limited environmental field activities in our settlements with strict safety protocols.

Suva, Fiji

A strict lockdown was enacted in Fiji at the end of March as the pandemic took hold. Our Fiji team successfully transitioned to a working from home arrangement and all in-community activities were put on hold. With no community transmission since May, the restrictions were eased in June and our Fiji team returned to the office and the field. Our laboratory at Fiji National University reopened in July after several months, and the community co-design activities were resumed in earnest.

Our 2020 journey



RISE Reset initiated

RISE Reset launched

- Working from home: Fiji
- Working from home: Australia, Indonesia, USA, UK
- No international travel

Our 'Reset' for a COVID-19 world

From May to August, RISE undertook a program-wide 'Reset' to safeguard the scientific and technical progress to-date, and set up the program for successful delivery of the research and intervention in the context of COVID-19.

The Reset involved a deep, open, and participatory three-month strategic planning process involving all team members and partners to re-examine operations and retune our priorities.

The key outcomes of the Reset include:

- RISE is transitioning microbiological pathogen analyses to be undertaken in-country at our Fiji and Indonesia laboratories. This is a necessary and pragmatic shift from our original plan to analyse samples in Melbourne and Cambridge, and will involve setting up TAC Array systems and equipment for pathogen and antimicrobial

resistance analysis on human (faeces, blood) and environmental (sediment, water) samples in-country.

- In response to restrictions on field activities due to the pandemic, we have replaced in-person field activities with phone-based surveys and data collection for as long as required. In Fiji, restrictions have now eased and we made a successful transition back to 'light' field activities from August, with full health sampling to resume in 2021.
- Due to restrictions on international travel, we have successfully replaced in-person support and guidance from our international research teams with remote real-time support for in-country data collection.
- We are now tracking COVID-19 and its impacts in our study sites. RISE has leveraged team resources and research infrastructure to analyse the impacts of COVID-19 on informal settlements to inform evidence-based policy.

Pillars of the RISE Reset



Our long-term ambition to transform human, environmental, and ecological health remains unchanged.



Our randomised control trial of community co-designed water-sensitive infrastructure to improve the environment, human health and wellbeing remains central to our work.



Our core research hypotheses and questions remain unchanged.

Our vision

To transform human, environmental, and ecological health in urban informal settlements through water-sensitive revitalisation.

Our six priorities for the Reset

Intervention

Build the intervention in the first 12 sites (six in Fiji, six in Indonesia)

Maintain our cohort, capture essential longitudinal data and track COVID-19 impacts

Harness the demonstration projects to generate new knowledge

Assessment

Codify lessons learned and build the evidence base for scale-up

Identify, through the RCT, the microbiological relationships between humans and the environment

Generate pioneering evidence on social well-being impacts

Enabling platforms

Agile program management

Transdisciplinary data science innovation

Empowered country offices and communities

Impact-driven communications

Delivered by our dynamic and collaborative RISE research community

Our values

Research excellence and impact • Implementation innovation
 Transdisciplinary respect • Partnership and teamwork

Environment, health and wellbeing **research**

Ecology

Analysing the relationship between humans and our natural environment has never been more important. This remains core to RISE.

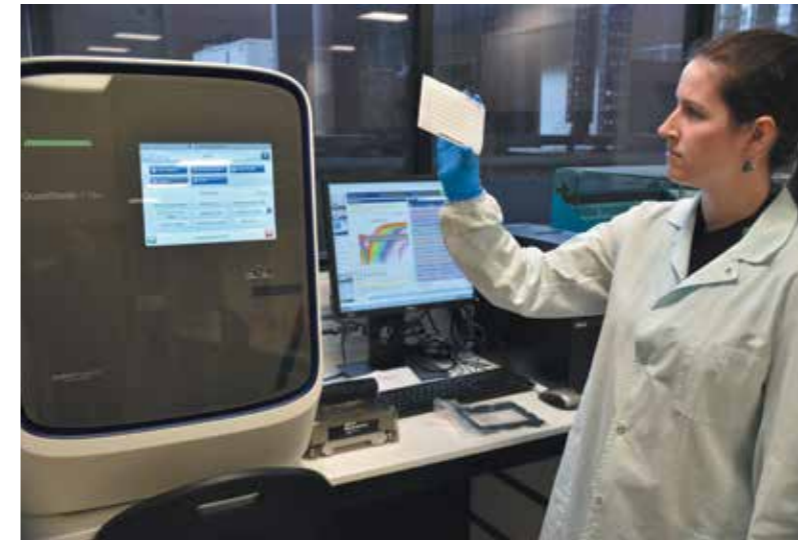
The pandemic has required us to modify the way we deliver our ecological monitoring program. Without the ability to offer in-person training, our Melbourne-based ecologists transitioned online, offering real-time mobile support for our Fiji field team when they resumed field activities in August, allowing them to continue sampling in the field.

In Indonesia, having already completed the ecological baseline prior to the pandemic, ecological monitoring has been put on hold until conditions improve.

The program now has a full year of baseline results for both Indonesia and Fiji, and the findings will be published in 2021.



We have detected large numbers of antimicrobial resistance genes and many different pathogens in Suva's environmental waters and child stools.



In 2020 RISE advanced new scientific approaches for identifying pathogens in both human and environmental samples.

Environment

In 2020, environmental testing and analysis shifted to being conducted in Fiji and Indonesia, instead of samples being shipped internationally for analysis. Optimising this work in-country has not only tangibly benefited the program, but is now paving the way for impact in soil, water, and faecal pathogen research in our partners beyond RISE.

Our microbiologists supported our in-country teams to take their DNA extraction and genomics training from 2019 to the next level: our Indonesia team is now building capacity and a reputation as a reliable Indonesian water sampling and testing lab, and is set to create impact through contributions to national water quality guidelines.

In Fiji, the announcement of a strict lockdown at the end of March forced the team to condense weeks of sample collection into just days, proving new efficiencies that the team has since taken forward in their field work.

Pioneering publications on soil, water, and pathogen analysis are on their way. These studies will shed light on the impacts of water and sanitation infrastructure on informal settlement environments.

Human health

This year our human health research adapted to achieve our annual research goals, and harnessed our resources and research infrastructure to make an impact on COVID-19 in informal settlements.

In Fiji, we have completed close to 700 health and wellbeing surveys. Our Indonesia team also achieved our target of close to 500 phone surveys, building on the strong community trust forged with our teams before the pandemic.

Our in-country laboratories, and the thousands of samples stored there, have been safeguarded amidst country-wide shutdowns, thanks to swiftly updated security protocols to reflect the new operating environment.

Pathogens and genomics

Our advances in pathogen and genomics analysis have been a beacon for the program, defying the odds of closed laboratories and country borders.

Our microbiologists advanced a technique that effectively detects both pathogens and antimicrobial resistance genes (ARGs). We have validated the quantitative polymerase chain reaction (qPCR) technique for environmental samples — with global implications beyond RISE — that could lead to a better understanding of antimicrobial resistance (AMR) in informal settlements.

Despite government shutdowns, RISE secured a Material Transfer Agreement with Indonesia that will see key samples transported to Melbourne for analysis and method calibration, giving us an understanding of pathogens in Indonesian samples to complement Fiji analysis already conducted.

Next year we will train and support our in-country teams to take forward laboratory analysis themselves, increasing efficiencies and accelerating the scientific capacity of our local staff and partner organisations.



860+

households in Fiji and Indonesia shared their experiences of the pandemic in our COVID-19 check-in survey

2,046

health and wellbeing surveys completed in 2020

Wellbeing

Research is needed into how the most vulnerable communities are coping with limited water and sanitation services, and the wider shocks of COVID-19. In 2020 our teams answered that call.

This year forced our social scientists and economists to pivot to phone-based engagement with our communities. They also set RISE up to track the crucial impacts of COVID-19 for people living in informal settlements.

New systems for collecting participant information for phone surveys not only saw teams maintain survey timelines, but have now enhanced our capabilities to combat the problem of research attrition, and ensure we can follow study participants longitudinally, over time.

With survey research questions expanded to track more information about job losses and food security, and with upcoming benchmarking work against national statistics, our teams will be using this work to better understand the needs of informal communities in a COVID-19 world.

Water for Women

Our Water for Women project researchers were on the cusp of travelling to collect data in Indonesia and Fiji on the eve of the pandemic. Not prepared to shut it down before it began, the team reorganised the research questions, redesigned the survey instruments, and pivoted to phone-based data collection in Indonesia.

With the Australian Government's continued support, our teams pushed forward examining gender differences in participation and engagement with RISE activities, as well as household food and water insecurity, and types of assistance received following the pandemic. Our gender specialists intentionally designed surveys to collect both female and male perspectives across every household taking part in RISE, in the most gender-sensitive and inclusive ways possible.

Training in gender, diversity and disability has led our teams to reflect on our own power and privilege that we bring to research, and strengthened local training networks that go beyond science.

We are now seeking to understand whether the social capital communities may have built through RISE's co-design workshops have had an impact on reducing the negative impacts of the pandemic on communities.

Of the 780 Water for Women surveys conducted in Indonesia, 55% of respondents were female.



June: the RISE Fiji team delivers newsletters and care packages of flour and sugar to every participating household to support our communities.

Supporting our communities

Some of our most meaningful impacts were not the ones planned at the start of the year. Leveraging our networks and community trust, we have shared hygiene and safety messages with our communities, and distributed masks and rice packs during the pandemic as a symbol of continued support during the difficult time facing our study participants.



May: the RISE Indonesia team delivers masks and rice packs to our communities.

Indonesia

Batua Demonstration Project

In March, ADB President Mr Masatsugu Asakawa toured RISE's Demonstration Project at Batua in Makassar as part of his first official site visits as ADB president. It was a fantastic opportunity to showcase the RISE approach to informal settlement revitalisation, and highlights the strong interest in our program across our partners at the highest levels.

Although the RISE team had to cease all field activities in April, our build team has kept in constant contact with Batua residents and prepared through the long lockdown for a return to safe monitoring activities at the site.

Batua has now become a 'living lab' for the safe restart of our community work. Staff and small groups of residents have been trained in our COVID-19 Safety Protocol — which outlines the health and safety precautions RISE is taking when returning to the field.

As of November, the team is now back in Batua on a regular basis, maintaining and monitoring the treatment system and collecting the exciting first data that will show the impact of the RISE intervention on the health of Batua residents and the environment.



November: water sampling at Batua with COVID-19 safety protocols.



March: ADB President Masatsugu Asakawa tours the Batua Demonstration Project.



Discussions with government officials in Makassar to finalise arrangements ahead of procurement and construction in 2021.

Revitalisation projects

Makassar tranche 1 intervention settlements

Despite suspending field activities to reduce physical contact for most of the year, our communities can rest assured that the water and sanitation infrastructure they had co-designed with RISE is on its way to construction.

Our Indonesia team successfully completed Detailed Engineering Drawings for the first six communities — a critical milestone to turn design ideas into reality.

We have produced a series of knowledge products capturing the lessons from community co-design of water-sensitive infrastructure in Makassar, and remaining formalities on the ADB grant and approvals to begin construction are underway with a view to commencing construction in the first half of 2021.

Fiji

Tamavua-i-Wai Demonstration Project

In February, the New Zealand Prime Minister Rt Hon. Jacinda Ardern officially launched construction works at the Tamavua-i-Wai demonstration site in Suva. It was a remarkable start to the year and a testament to the promise of the RISE approach to revitalising urban informal settlements.

Residents without a toilet and shower facilities were prioritised when construction began in earnest.

Youths from the Tamavua-i-Wai community are directly involved in the construction activities, with a rotating team of 12 paid volunteers from the community assisting with construction of toilets and shower units. Where possible, youths from the households receiving toilets and shower units are helping with its construction.

Although tools were put aside during the height of the pandemic lockdown in April to June, work soon recommenced, and the toilets and shower units are on track for completion by the end of the year.

The community infrastructure — treatment wetlands, drainage and pathways — will also have commenced by the end of 2020.



Above: Construction of toilet and shower units at Tamavua-i-Wai.

Below: Rainwater tanks installed at Tamavua-i-Wai.



Paid community volunteers for construction are stimulating local pandemic recovery.

Suva tranche 1 intervention settlements

The best laid plans of the Suva build team were put on hold during the height of the pandemic, but as soon as restrictions eased, the team were back in the communities — with plenty of handwashing and temperature checks — co-designing the RISE revitalisation of their neighbourhoods.

Designing infrastructure has been collaborative, energising and rewarding, with design workshops now complete in our first six communities.

The numbers show the scale of the co-design work:

- 1,258 people involved in co-design sessions (including 744 women and girls)
- more than 50 days of co-design intensive workshops
- 10 government partners involved in co-design sessions.

Our Fiji successes are the result of an expanded local team, accelerated capacity building, and our local partners who have seen our momentum and wanted to continue the journey with us.



July: Vunibua residents identify possible free space for the RISE infrastructure as part of community co-design activities.



Co-design workshops see residents discuss, water, sanitation, health, and the environment around them.

Policy and Scaling up

This year, our policy experts focused on generating practical evidence around water security. We expanded our health and wellbeing surveys to capture people's experiences with having enough water to drink, wash their hands, and barriers to accessing these basic necessities.

In understanding resilience, our teams are investigating whether the social resources generated through RISE's unique co-design activities could dampen the negative impacts of shocks on communities. This work is driven through a gender-sensitive lens, and the belief that research should lead to all community members having equal access to the investments in the sector.

Our evidence and policy advice is not designed to sit behind academic walls, but to serve as practical tools for decision-makers to better address chronic water problems, and build policy that supports resilient urban communities.

Emerging results

In 2020 we produced a range of outputs based on our RISE data and experiences. Some of the exciting outputs include:



Water-sensitive informal settlement upgrading: overall principles and approach

The first in our three-part RISE series serves as the entry point for understanding the rationale and concepts for a water-sensitive cities approach.



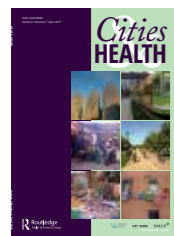
Co-design of water-sensitive settlement upgrading

The second in the series, this publication gives guidance on fostering meaningful participation of settlement residents, as well as government, industry and service providers for upgrading projects.



Water-sensitive upgrading: description of approach and technologies

The final in our series, this publication provides foundational knowledge of the technical requirements for implementing nature-based technologies in urban informal settlements, with an emphasis on Indonesia.



Informal settlements in a COVID-19 world: moving beyond upgrading and envisioning revitalisation

Cities & Health

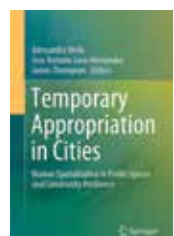
Our commentary proposes a refreshed approach to informal settlements in a post-COVID-19 world underpinned by planetary health, transdisciplinarity, and a people-centred approach.



Mapping informal settlements: a process for action

Ecologies Design: Transforming Architecture, Landscape, and Urbanism

In this book chapter, our architects call for strengthened links between social and cultural frameworks and infrastructure design to create lasting solutions for communities.



(Temporary) Appropriation (of Space), Makassar, and Urban Kampung

Temporary Appropriation in Cities

This book chapter sheds light on the inter-related social dynamics, interactions, legal frameworks, and emerging settlement morphologies that can inform the design and implementation of informal settlement upgrading projects.







Together, we can transform human, environmental and ecological health.

Thank you to the individuals and organisations who are supporting our ambitious program in this COVID-19-affected year like no other. As a global community, we can be part of ground-breaking research to transform human and environmental health across the world.

Join us.

CONTACT US

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