| CASE STUDY CAPACITY BUILDING TO ENGAGE FOREIGN RESEARCH PARTNERS IN A POST-COVID-19 WORLD

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COVID-19 has come with unprecedented challenges. In this changing environment, agricultural research for development (AR4D) is more important than ever to advance sustainable and resilient food systems for healthy diets. Capacity building is a key enabler of sustainability, ensuring research efforts and the effects of those efforts are sustained and integrated into standard practice [1].

The Sustainable Development Goals (Goal 17.9) aim to enhance international support for targeted capacity building in developing countries [2]. Universities play a crucial role in research for development, but the top-down autocratic approach often taken by research institutions can stifle community ownership and adoption of research. A basic philosophical difference in approach between service delivery and capacity building concedes that a service perspective looks towards fixing problems 'for' the community, whereas a capacity building approach looks to support and enhance the existing ability, energy and knowledge 'of' the community [3]. The latter applies a bottom-up participatory approach to research, situating practitioners and citizens as central agents for capacity building in communities [4].

COVID-19 restrictions have transformed our research environments and presented researchers with positive engagement opportunities. Research projects involving multiple partner countries traditionally rely on researchers travelling between geographically dispersed sites with significant administrative hurdles for travel approvals and logistics. Global travel restrictions mean that we can't take part in in-country field work in our current projects in Indonesia and the Pacific, however this has presented new possibilities to try out innovative ways of conducting research. The new normal presents a unique opportunity to test novel approaches to research that foster ownership and empowerment of local staff, whilst we actively support from afar.

Building research and technical capacity has been a longstanding priority for AR4D projects, with COVID-19-related transitions reverberating this need. Although complementary investment in education and training is necessary to establish a team of investigators [5], capacity building must extend beyond mere training. Our strategy used various approaches to build the capacity of our foreign partners beyond that of improved skills and knowledge, such as creating opportunities, actively listening, sharing responsibility and joint decision-making. While some workforce capacity can be built online, it remains essential that trainees have opportunities to undertake practical work alongside experienced laboratory staff. For us, the new normal has opened doors allowing us to engage our foreign partners with trust and shared decision-making, encouraging them to take on greater leadership and management capacity.

Our research projects in Indonesia and the Pacific are at various time-points from project initiation, data collection and field work, to project completion. We've used a range of strategies to maintain project progression and manage fieldwork timelines. Remote execution of capacity building strategies has been trialled from our end to support project partners in their adjusted roles. With an openminded approach to capacity building and stakeholder buy-in, we spent time consulting with our partners to understand the best ways to progress each project. Success in our approaches to capacity



building has come from trust, regular transparent communication, knowledge exchange and engaged decision-making. Investment in long term programs that maintain and nurture existing research relationships is paramount, as opposed to funding standalone projects.

Encouraged by a desire to provide for their communities, the Makassar, Indonesia team offered new approaches to field work that were culturally and contextually appropriate to them. Technology-enabled methods of documentation through audiotaping, photographs and video have ensured data is collected with rigour and consistency (Figures 1 and 2). These digital capture methods allowed us to mutually review processes and engage in group reflections to identify the strengths and limitations of each approach. Modifying the way in which we collect data and conduct field work through these alternate approaches, driven by local researchers, has also uncovered broader insights giving us a deeper understanding of research issues.

We co-designed field work and data collection tools to accommodate local processes. All data collection tools were trialled in-country with a second questionnaire that prompted the researchers to reflect on the practicalities and useability of the tools in their own context. Debriefing sessions then provided an opportunity to discuss strengths and limitations of processes and tools, and agree on necessary changes. Videos and photographs were additionally used as a secondary method to verify written data collection.

Remote capacity building initiatives can be constrained by technical limitations such as digital infrastructure and internet quality. Virtual debriefing sessions worked well with our Indonesian partners. However, unpredictable internet connectivity



meant that online group sessions were not possible with some of our Pacific partners. Where virtual debriefing was not an option, we used group reflections where enumerators came together and used guiding questions to reflect on the data collection process and identify issues that could be fed back to the research team (Figure 3). Guided reflections can be structured in a way that scaffolds the data collection process, building mutual trust and providing opportunities for engaged decision-making. Whilst these offline approaches can work, to better support our foreign research partners from afar, there is a need for AR4D to consider funding infrastructure (in this case digital communication infrastructure, computers, internet access) to the same degree they fund people.

Changing research environments resulting from COVID-19 restrictions offer a welcome shift from researcher driven 'top-down' approaches to participatory processes embracing 'bottom-up' community involvement. We recognise that long-term relationships between research partners are now more crucial than ever before. As researchers, we have an opportunity to engage our foreign partners by trialling remote capacity building strategies. The new normal could advance the way in which we do international development research and has potential to offer a clearer return on investment. Through trust, transparent communication, engaged decision-making and capacity building, we can empower others, transforming the way in which we research moving forward.



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