

SUSTAINABLE DEVELOPMENT GOALS

Jean Monnet Network on Social and Scientific Innovation to Achieve the Sustainable Development Goals



Time is Running Out! Systemic, Disruptive Innovation to Achieve the SDGs

CONFERENCE PRECEDINGS

26-27 June 2024

Online and RMIT City Campus, Melbourne, Australia

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Preface

With less than 6 years to 2030, the ambitions of the United Nations Paris Agreement and the SDG Agenda for Transformation are at grave risk. Time is running out! It is apparent that the taken-for-granted modes of business, policy making, crisis management, governance and knowledge production are deeply inadequate, and new initiatives are necessary if there is to be any chance of achieving the world's climate targets.

If we are to achieve the transformational outcomes needed, we require more effort to accelerate the pace and character of innovation itself: in short, more systemic, structural, radical and disruptive.

The question, then, is what does systemic, disruptive social innovation involve at the everyday level; how does it relate to ordinary, local scale experimentation and adjustment? In the field of climate change adaptation, there is growing awareness of the need for transformational as compared to incremental adaptation. How do the two relate, and does 'everyday adaptation' matter?

This issues are at the heart of this two-day conference, 'Time is Running Out'. This is final major event of a Network project undertaken for researchers from Australia, Europe, Singapore and New Zealand. We are delighted to be joined from other colleagues in Australia and overseas.

If there was any doubt about the urgency, the Sustainable Development Report 2024, just released, highlights these key findings:

1. On average, only 16 percent of the SDG targets are on track to be met globally by 2030, with the remaining 84 percent showing limited progress or a reversal of progress.
2. Sustainable development remains a long-term investment challenge. Reforming the global financial architecture is more urgent than ever.
3. The SDG targets related to food and land systems are particularly off-track. Globally, 600 million people will still suffer from hunger by 2030; obesity is increasing; and greenhouse gas emissions from agriculture, forestry, and other land use account for almost a quarter of total annual global GHG emissions.

The Precedings

The ambition for this Conference is to share the insights developed by our researchers and to highlight the urgency of action required. It is Conference for discussion and exchange: the Precedings provide some background notes and stimulus for thinking and discussion. Our Panellists will draw on these notes in making their introductory remarks.

So please look through them in advance of the Conference and have them available during the discussions. They will presume that you have some familiarity with them. Your questions and contributions will be just as important: This is an opportunity for exchange and active interaction.

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- 3:15-3:30 Afternoon Tea
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- 4:30-5:30 Panel 7: **European Union Policy and building alliances to drive climate adaptation**
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THE FUTURE OF OUR PLANET DEPENDS ON TRANSFORMATION

INTRODUCTION

This Jean Monnet Network Project was conceived in early 2020, when concerns about the challenge of achieving the Sustainable Development Goals, the heart of the United Nations Global Agenda to 2030, *Transforming Our World*, began to crystallise. Four years later, these concerns have been exacerbated by the experience of the global pandemic, growing evidence about the risks of global warming and climate catastrophe, dramatic worsening in global conflict, and ongoing wealth polarisation.

The Jean Monnet Network on Social and Scientific Innovation to Achieve the Sustainable Development Goals has brought together researchers from the United Kingdom, Europe, Singapore, Australia and New Zealand to share the insights from their research activities on how to address these challenges. The key finding from the Network's exchanges is that there is now an intense urgency about the need to share our knowledge about how systemic and disruptive innovation is necessary if there is to be any chance of achieving the fundamental action necessary to contain climate change.

The Network's insights will be shared in a conference on 26-27 June 2024. Details of the event are attached. The conference is supported by this volume of commentaries by conference presenters: each presenter has summarised their key insights and messages to support the brief remarks which they will be making in the relevant panel during the conference. The purpose of this introductory chapter is to provide a richer background to the viewpoints presented in this monograph.

THE PROJECT AGENDA

In the early phases of the project, the Network researchers shared some specific assumptions:

- We are confronting global crises which current systems of national and global governance appear unable or unwilling to address. The dominant modes of economic, political and cultural management must be examined.
- Social and scientific innovation are both essential to charting pathways towards a global future which offers citizens in all nations the quality of life that is presented in the seventeen Sustainable Development Goals (SDGs).
- The European Commission has led a global debate on the importance of innovation for achieving the SDGs. A key element of this debate has focused on elevating the scale of the innovation agenda to recognise the importance of 'missions'.
- Expertise in the European Union's regionally-focused Smart Specialisation policy process could assist in developing Science, Technology and Innovation Roadmaps towards achieving the SDGs as per the Joint Research Centre/United Nations initiative, but also promote a more comprehensive innovation agenda that would encompass social and environmental innovation
- Socio-ecological innovation is central to sustainability transitions.

- New networks such as [Dark Matter](#) can bring together comprehensive initiatives aimed at developing new modes of economy, politics and everyday life, working at both the global and at place-based levels.

EARLY DISCUSSIONS

The initial discussion of the politics of SDG governance was sobering (see Bierman et al). Halfway through the period to 2030, many of the governments that signed up to the UN *Agenda for Transformation* have failed to honour their commitment, not establishing the essential governance frameworks for the scale of action necessary to achieve the targets. At the same time, the limitations of the SDGs themselves have become more apparent. They reflect a very western approach that does not resonate in many areas. Australia itself, is an example of a developed nation with a very fragmented approach. Civil society and universities have led the action with very limited engagement by either the national or state governments.

More constructively, a discussion about ‘Innovation as Social Change’ opened up a framing of innovation which seemed appropriate for engaging the diversity of research insights which Network participants are generating. Drawing on the chapter by Rickards et al (), there is some momentum towards a more inclusive concept of design, and a more democratic idea of innovation as practice for everyone, rather than being the preserve of experts and scientists. Our planetary future depends on ‘context-specific problem-solving’ (see also JRC 2023).

From the previous Network, the ‘Propeller’ model (Johnson et al 2024) has continued to evolve as a lens for understanding how learning in partnership is integral to sustaining the SDGs as a transformative agenda. As such, it is an analytical lens for assessing our own research and for influencing practice. It also prompts a question about how a place-focus affects learning, given the power relations in each place.

Another publication on Smart Specialisation and the SDGs (JRC 2022), helped to unpack some of the theoretical issues which shape the design and implementation of place-based innovation in the context of transition to more sustainable futures. It calls for a broadening of the innovation endeavour to encourage socio-ecological initiatives as well as economic. More than ever, it encouraged ‘quadruple helix’ collaboration, bringing together industry and government with researchers and citizens to create a more democratic process as well as enhancing the technical focus. Another key message is that vision matters: what is the future that we are striving for?

Dark Matter clearly promotes a planetary perspective drawing on transdisciplinary work. While it underscores the importance of ‘unlearning’, there is an emphasis also on experimental learning. When does this become transformational? Can it deliver for the global population?

SOME INTERIM THOUGHTS

Network researchers shared insights from their current research activities to illuminate the connections between the theoretical and empirical. This encompassed work with farmers in Fiji and the Philippines; efforts in NZ to offer greater respect to

Maori knowledge; developing innovation capability in the context of forestry transition work in Victoria; the current global debates on transforming education and adult learning; sustainable building initiatives; and work with education institutions and young people in Sicily.

This led to a set of interim conclusions about prospects for possible interventions:

- We are confronting global crises which current systems of national and global governance appear unable or unwilling to address. The challenge of 1.5 degrees is the sharpest manifestation of this but there are clearly many other aspects of the UN Global Agenda where this is evident also.
- Halfway through the period to 2030, many of the governments that signed up to the *UN Agenda for Transformation* (including Australia) have failed to honour their commitment, not establishing the essential governance frameworks for the scale of action necessary to achieve the targets.
- Business as usual cannot deliver the transformation implied by the SDGs. The dominant modes of economic, political and cultural activity and governance are challenged and must change.
- Hence, developing new models of habitat, production, consumption and governance is critical. Our project's concern with social and scientific innovation is central to charting pathways towards a global future which offers citizens in all nations the quality of life that is presented in the seventeen SDGs.
- From the previous Network, the 'Propeller' model has continued to evolve as a lens for understanding how learning in partnership is integral to sustaining the SDGs as a transformative agenda.

RESOLUTION ON POSSIBLE PATHWAYS

A final research roundtable of the Network colleagues began with updates on their project activities and exploring how their research insights contribute to our grasp of diverse innovation processes, and their implications for action towards the achievement of the SDGs. This proved to be a very rich discussion, with evidence from the global building alliance, global lifelong learning networks, Fiji, the Philippines, Solomon Islands, Nairobi, Australia, Singapore, Catania and then subsequently, Bangladesh, Scotland and India.

Several key themes emerged. These included:

- A) The **richness of the place-studies** in which Network members are involved, and their capacity to illuminate global challenges;
- B) The **significance of collaboration** in the emerging innovative practices. Researchers connect with local farmers, or business, or local authorities, or local citizens – when effective, they are connecting with others, and together they can generate significant momentum;
- C) The **importance of learning**, and in this respect, the 'propeller' model from an earlier project continues to be very powerful in underscoring the interconnected dimensions of relating, measuring and learning;

- D) Notwithstanding the learning from this range of place-based activities, the conversation overall pointed to a series of tensions, not least around the **urgency of 1.5 degrees.**

Since the project began, the global context has changed considerably. As these changes have unfolded, so the Network's conceptual framework has evolved. There are a number of aspects of this journey:

- a) A growing consensus that the ambition of the EU Global Agenda is impressive and valuable. However, its complexity and the scale of ambition make it difficult to engage: silos, fragmentation, ethnocentrism, and internal contradictions all compound this work.
- b) However, the Network accepted that the outcome of the previous Network, framing the Global Agenda of Transformation around four key themes, was a useful way of describing its key message and ambition (in summary):
 - universal public services;
 - livelihoods for all;
 - climate action; and
 - just relationships
- c) Of course, the climate challenge has become a matter of life and death for the planet, as the objective on limiting emissions to 1.5 degrees has become more and more distant. Nevertheless, the consequences of excessive warming are so calamitous that it needs to remain as a key target;
- d) The starkness of difficulty in achieving deliberate and comprehensive climate action globally reflects a range of fundamental dimensions of transformation which require serious attention:
 - Global governance seems to be incapable of solving wicked problems – is this a matter of institutional weakness or of lacking courage?
 - Is there a possibility of developing 'thermostatic' institutions – legitimate, with authority and exploring solutions that have 'plausible causal logics'?
 - The concern for balancing interests amongst different kinds of state and non-state actors influences problem definition, solution identification & political opportunity;
 - There are positive developments, where learning partnerships make visible and advance the learning dimensions around specific challenges, drawing on the quadruple helix, and working for transformation – not least recognising the value of lifelong & lifewide, learning cities.

'INNOVATION' AND 'TRANSFORMATION'

The other significant area of key learning which has occurred so far in this project has related to the central concepts of innovation and transformation. 'Innovation' is a problematic concept in many parts of the world, having evolved over considerable time and still having varied resonance in different contexts. Originally, it was understood as a discourse about firm-level invention, creativity, problem solving and 'creative destruction'. However, since the 1980s, there has been an emerging focus on 'systems of innovation' – national, regional, local – still essentially preoccupied with 'labs', analysing a linear process leading to commercialisation. More specifically, in the last 30 years, research on 'Regional Innovation Systems' has mapped the

dynamic character of interaction amongst quadruple helix actors, and positioned innovation more as a process of collaborative problem-solving.

In the last decade, innovation has become a much more expansive and inclusive concept, recognising the inventiveness of a broad range of stakeholders. When confronted by uncertainty, people can respond with ingenuity, 'situated and beyond ... the strictures of modern modes of thought' (see JRC 2023). In particular, climate-related pressures for industrial transition have driven socio-ecological innovation, leading to new ways of managing social and ecological dimensions of contemporary life.

This adds up to a democratisation of innovation: in the EU's Partnerships for Regional Innovation, the 'square' is 'not only the place where the consequences of climate change and declining biodiversity will be felt most directly but also the place most given to broadening further participation and building a spirit of trust-based and timely partnerships among all relevant actors addressing transformative innovation (JRC 2023, 9). This same tendency is reflected also in 'grassroots' innovation, for example: innovation is no longer the preserve of scientists or engineers, rather, it describes the spaces in which citizens are exploring new ways, other than business as usual, for achieving global transformation.

The democratisation of innovation offers a pointer towards making sense of the how 'transformation' will unfold. It is apparent from successive United Nations COPs that the current strength of existing vested interests will continue to block the shifts in global agreements necessary to meet the global targets. In the absence of an orderly intergovernmental process, change will result either from response to catastrophic events which in themselves destroy 'life as it is known currently' in G20 countries, or people themselves will drive change through individual and community action.

The various cases in our diverse research activities already provide evidence of this occurring, illustrating not only the possibilities for active intervention to promote local action, but also the key role which local and provincial governments can play in regulating and supporting alternative modes of production and consumption. Issues of transport and land use provide specific evidence.

'Transforming' requires us to accelerate these processes. Our projects can support learning for this, in the same way that they also illustrate barriers to meeting the required timelines.

AN EMERGING POSITION FOR THE NETWORK

The Network researchers are convinced that inclusive innovation is central to any debate about the SDGs, as it is clear that 'business as usual' cannot deliver the necessary transitions towards 1.5 degrees, let alone the broader transformation agenda.

The Network's conclusions have been shaped by the tensions which flow from a focus on the urgency of the climate crisis as the central challenge of the UN Global Agenda, on the one hand, and their immersion, on the other, in various kinds of place-based, grounded research activities. Both these perspectives, and the

tensions between them, are integral to all of the research undertaken by the CI's in this Network.

As a major global actor, the European Union continues to be a critical audience for these conclusions. It is at the heart of practical and policy experimentation in so many fields: its massive public investment in research and innovation; its drive to address climate action (and the SDGs); its Green Deal and the related policy debates; its investment capacity; and its institutions as an example of how good global governance might develop.

So, the Network researchers have framed a number of key messages for European Union policy-makers:

- a) **Time is running out, yet it takes time** to build the conditions for place-based socio-ecological innovation that can contribute to addressing global challenges. All of the Network's case studies illustrate the importance of trust and collaboration, yet this cannot be achieved through transactional processes;
- b) **Complex political and moral questions cannot be resolved by technical solutions** alone. Sometimes, decision-makers need to say "this" cannot continue'.
- c) **Problem definition**, and the choice of disciplinary perspectives to help understand a problem, matter. Market-driven mechanisms inevitably prioritise economic outcomes. In this respect, we see increasingly the power of clear distinction amongst problem types (see Cashore) for drawing attention to the ways in which inappropriate problem definition becomes not only unhelpful, but a problem in itself. Applying the distinctions between the commons, optimization, compromise and prioritization (in his typology) to decision-making in the context of both local and to global challenges could be very useful in both shaping appropriate choices about the resources necessary for problem solution, but also determining an appropriate process.
- d) **Coalitions and collaboration** are crucial to outcomes – spanning the local to the global. Forming coalitions is difficult and time consuming but necessary, as different kinds of stakeholders speak different languages, have different priorities and resources. However, they are crucial to the kind of innovation necessary to get past business as usual.
- e) **Capacity-strengthening** – rethinking whose capacities and how to effectively do this recognising the existence of different knowledges and contexts (individual, institutional) for engaging with global challenges. What is it? Why it matters and how you do it? Self-reflexive thinking is a key capacity, as capacity development is not just about what 'we' do for them, but a mutual process of learning.
- f) **Innovation** is no longer as an exceptional act, but as a necessary goal for all of us and everything – a widespread means of generating change in which everyone can be involved, but also as necessary change itself.
- g) **Transformation** as a language for describing the implications of success in achieving the UN Global Agenda is confronting for many people in G20 countries; of course, it offers much to the majority for the world's population! Stories must be developed to describe a world transformed, offering hope and not fear in relation to people's personal circumstances.

- h) **Policy**, itself an opportunity for governance innovation, is the practical work which governments do to implement measures necessary for achieving the SDGs. If we are to transform over the next decade, we need to focus on policy learning that will enable us to accelerate the effective problem definition, formation of coalitions, capacity strengthening necessary for innovation, in the face of time running out... As a matter of urgency, **policy learning** needs to address the imperative delivering 1.5 degrees, maximum, of global warming.

All of these key insights or messages can be summarised in a simple proposition:

- i) If our research demonstrates the importance of living in and with the tension between local and global...
- j) ... how to build urgently the kinds of coalitions/alliances that will commit to systemic transformation...
- k) ... understanding that the uncertainty and 'not knowing' where innovation might lead is an experimental/learning process which needs partnership support.

IN CONCLUSION

With less than 6 years to 2030, the ambitions of the United Nations Paris Agreement and the SDG Agenda for Transformation are at grave risk. Time is running out! It is apparent that the taken-for-granted modes of business, policy making, crisis management, governance and knowledge production are deeply inadequate, and new initiatives are necessary if there is to be any chance of achieving the world's climate targets.

It is now well recognised that both scientific and social innovation are required. Examples exist of their sensible and productive interaction, whether in using open data to encourage more equitable lifelong learning (Lido et al., 2020), or complementing the roll out of more environmentally sustainable technologies with a new conceptualisation of human behaviour and how to influence it (Watson et al., 2020). But if we are to achieve the transformational outcomes needed, we require more effort to innovate innovation itself, pushing social innovation to become more systemic (e.g. (Turner et al., 2017)), structural, radical (Marques et al., 2018) and disruptive (Tyfield, 2018).

The question, then, is what does systemic, disruptive social innovation involve at the everyday level; how does it relate to more ordinary, local scale experimentation and adjustment? In the field of climate change adaptation, there is growing awareness of the need for transformational as compared to incremental adaptation (Käyhkö et al., 2020; Rickards & Howden, 2012). But how do the two relate (Park et al., 2012), and what is the role of 'everyday adaptation' (Castro & Sen, 2022)? Across domains, ordinary adaptability, incremental reform and individual level change appears in some settings as a barrier to transformation, but in other settings as a small but vital demonstration of local agency, creativity and learning.

Recent work in policy science combines insights from policy design, policy mix and policy feedback literatures to suggest that transformative policy change – as a form of 'structural social innovation' (Marques et al., 2018) – can emerge as much from

bottom-up and lateral influences as from top-down imposition of new goals or logics (Sewerin et al., 2022). Such outcomes, though, depend in part of difficult-to-influence or even understand social responses. Social heterogeneity and colliding endogenous changes scramble efforts at distinguishing clear patterns of causal relations.

According to some commentators, the only option is now to navigate emergent change in as resilient a way as possible (see (Chandler, 2014)). Adding to the complexity and risk are the nonlinear Tipping Points in the Earth System that scientists warn we are on the cusp of triggering, potentially leading to major negative Social Tipping Points such as the cascading collapse of institutions and ways of governing. Courageously, others acknowledge the potential for Social Tipping Points but aim to direct them to positive ends by identifying and manipulating their ‘cascading elements’ (Juhola et al., 2022). Major policy change is one such element, reinforcing the theoretical value of international policy agendas such as the SDGs. Yet as the broader Tipping Points concept underlines, the contemporary context is characterised by an increasingly unstable and destabilising Earth system.

An upshot for scholars such as ourselves is that we need to attend not only to familiar forms of structure and agency, but to less familiar nonhuman forms, including the ‘innovations’ of the new Anthropocene Earth itself (Alexandra & Rickards, 2021; Clark & Szerszynski, 2020; McNeill, 2022; Rickards et al., 2023). As the COVID-19 pandemic demonstrated, even microscopic nonhuman elements can drive worldwide social transformation (e.g. (Yeo, 2020)), especially if they infiltrate and tip human bodies, institutions and infrastructure, blurring distinctions between endogenous and exogenous drivers of change.

When it was first developed, the SDG policy agenda was an attempt to capture some of this complexity and drive positive Social Tipping Points of various sorts. But it is now in danger of being superceded and overwhelmed by the very issues it lays out and others it failed to anticipate. Efforts to implement the agenda are widespread across government, industry and not-for-profit organisations at multiple scales. Yet in aggregate the outcomes fall far short of what was envisaged and needed. Hindsight reveals policy makers’ overconfidence in existing institutional, organisational and administrative forms and practices. As transformative as the policy agenda was and is, it is clear now that it requires even more transformative change to enable it. Among other things, new modes of organising, working and monitoring progress are needed.

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Transformative localization to accelerate the 2030 Agenda

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To get the Sustainable Development Goals (SDGs) back on track we need to reshape our approaches to implementation, including localization. Localization done differently involves progressing beyond symbolic piecemeal efforts, prioritizing the SDGs with the greatest gains, and pluralizing interpretations and pathways for actions.

Last year marked the mid-term review of the SDGs, adopted by United Nations (UN) Member States in 2015. Global data paint a dire picture of progress so far: the world is not on track to achieve any of the SDGs by their 2030 deadline¹. However, at the 2023 UN SDG Summit, world leaders vowed to double down on their efforts to save the SDGs and, with that, the future of the planet and human society.

But limited progress thus far means that current courses of action are insufficient, and fundamental and transformative course correction is needed to turn the dial². Here, we provide a critical viewpoint of what the UN recognizes as a key mechanism for achieving the SDGs, that is, localization, referring to the adoption of the global SDGs in national and sub-national geographies, as well as organizational contexts.

SDG localization so far

The UN has emphasized the need for concerted efforts by state and non-state actors at different levels of society, including cities, local communities, businesses and organizations to support SDG implementation³. Localization soon became an umbrella term, with earlier attempts focused on adapting SDG targets and indicators to local circumstances for the purpose of monitoring and reporting⁴. But localization efforts and analysis are expanding to include the many ways in which the SDGs are, or can and should be, influencing sustainable development across diverse organizations, communities and places...

We define SDG localization as the translation of global goals to local circumstances, embedding them in local institutions and governance processes, as well as taking actions for implementing them at the local level. Our holistic delineation of localization includes all scales down from global (for example, national and sub-national) in different geographies (for example, Global North and Global South), sectors and organizational contexts (for example, businesses and universities).

Despite the multitude of efforts, scientific evidence suggests that the effect of current SDG localizations has been mainly discursive rather than transformative⁵⁻⁷. This means that current localizations have changed the ways actors discuss and communicate about sustainable development but fundamental effects on institutions, legislation or resource allocations have been rare. For example, only a few countries

(for example, Benin and Denmark) have gone as far as integrating the SDGs into their budget lines⁸, and while a growing number of cities are conducting VLRs, their impact on urban infrastructure, institutions and budgets has been minimal.

Localization faces many challenges, limiting its transformative effects. For example, localization often happens as an add-on to existing processes and practices, leaving prevailing structure fundamentally unchanged. Follow-up mechanisms to assess impacts are also rare^{5,7}. Limited capacity, along with the broad scope of the SDGs and complex interlinkages between the goals makes localization a daunting task. Furthermore, local actors — who ultimately drive localization — hold a diversity of interpretations of the SDGs and their value, and of appropriate courses of action for translation, embedding and implementation. This makes localization a highly contested endeavour.

Transformative SDG localization

Reflecting on international evidence and our collective experience, we propose the following priority areas to advance localization by 2030, the SDGs deadline.

Progress and transcend existing processes. There has been little scientific validation of the effectiveness of current localization processes. For example, Voluntary National Reviews (VNRs) are recognized as a key localization mechanism. They are prepared nationally and presented to the UN High-Level Political Forum, reporting on progress and sharing so-called success stories. They are widely adopted, with only five countries yet to undertake a VNR⁸. A similar process is growing with cities conducting VLRs, and at the organizational level, many businesses and organizations are reporting their contributions towards the SDGs through periodic sustainability reports.

But the impact of these reporting processes as well as the stories they showcase have not been independently assessed⁹. In most cases, these reports highlight a cherry-picked set of initiatives, without a critical assessment of the areas lagging behind, and with limited insights about how to systematically scale and diffuse successes and lessons to other places or organizations. Follow-up action plans to address the gaps are also rare.

However, there is evidence of transformative ‘potential’ in some of the existing localization activities⁷. For example, VNRs often convene large stakeholder processes that hold great potential in drawing decision-makers’ attention to the SDGs, sharing learnings and coordinating efforts across different sectors and at different levels of government for accelerating SDG implementation...

Prioritize the SDGs with greatest gains. Focusing on the SDGs that were readily aligned with existing policies and strategies made sense during the early years of the agenda, but this approach will not deliver transformative effects and can even contribute to lock-in to unsustainable pathways¹¹. At the same time, given the broad scope of the SDGs, decision-makers need to use their time and resources judiciously and effectively. Prioritization is important due to heterogeneous contexts, priorities, resources and mandates, making some targets more relevant.

Moving forward, prioritization should focus on directing limited resources to where they can accelerate progress with greater gains across the goals. For example, priority could be given to targets that lag the furthest behind, or where quick gains could be made by leveraging additional resources or filling policy gaps. Prioritization could also consider targets where there is potential to mobilize additional resources from higher tiers of government and partners. For example, several provinces in Asian countries are using the SDG: Local and Urban Governance Dashboard to provide evidence on socioeconomic, resource and capability development needed to implement the SDGs.

Most importantly, prioritization should consider areas where feasible, cost-effective solutions exist and use systemic approaches to identify opportunities for beneficial multiplier effects for multiple targets. For example, local policies to promote the uptake of household solar energy or active transport could accelerate progress towards a range of targets including on energy (SDG 7), climate change (SDG 13), urban sustainability (SDG 11) and health (SDG 3). Various assessment tools¹², frameworks¹³ and computational models¹⁴ exist that can be adapted to help with identifying such systemic gains and locally relevant cost-effective pathways.

While research on systemic approaches to the SDGs has flourished, a clear link to localization mechanisms and processes is lacking. Moving forward, it is critical to demonstrate how local actors at various scales can apply and benefit from systems approaches in a way that makes localization more transformative. A practical place to start is systemic prioritization, which identifies transformative entry points and cost-effective solutions with the most promise for accelerating progress on multiple goals.

Pluralize localization to accommodate diversity. The SDG framework is laudable for its achievement to unite all governments globally around a single sustainable development agenda. This has increased legitimacy for advocacy and change agents around the world to advance local sustainable development. Despite this unity, plurality in social values and strategic or political orientations result in SDG localization being a highly contested and political endeavour. For example, research on SDG localization in local governments¹⁵ and at universities¹⁶ has shown that actors hold a diversity of perspectives on the value of the SDGs and how to achieve them.

Where there is evidence of transformative potential^{5,7,17}, substantial agency of local actors has been involved in SDG localization. This is often in the form of plural, place-based and organizational leadership, engaged change agents, and institutional work that orchestrate collective action. Pluralizing localization implies placing this contextual 'localization work' at the centre of the SDG agenda. Instead of framing localization as a necessity to achieve national and international commitments to the SDGs, pluralizing localization involves enabling and empowering diverse localization work by sub-national governments, businesses, civil society, grassroots initiatives and community organizations.

Pluralizing localization will not be an easy endeavour and we have first-hand experience of the challenges involved. For example, in our localization work in the Goulburn-Murray Irrigation District in southern Australia, we worked with a regional

community facing a multitude of agricultural, economic and environmental challenges.

There were also significant trade-offs involved between global and local agendas. For example, a shift to a more plant-based diet, which is globally recognized for its positive impact on many of the SDGs, could have a negative impact on the livelihood of the dairy industry in the region. Trade-offs can both emerge from and intensify the plurality of perspectives, interests and ideas for strategic action. Localization involved labour- and resource-intensive facilitation of participatory processes, establishing evidence-based insights and thick descriptions of what works, why, how, where and why there, and operating within and across multi-level governance settings.

Enabling transformative localization

Facilitating the three priority areas mentioned above needs capacity building at scale for local actors and for global actors supporting localization. Universities and scientists have a key role. This involves employing diverse scientific methods for assessing the transformative impacts of new and ongoing localization efforts and understanding if and how they could trigger systemic impacts beyond their context; identifying tailored pathways that result in accelerated progress across the SDGs in each context; and advancing novel research and facilitation methods that open up — rather than close down — plurality. They also have a role in educating a workforce that can attend to the interdisciplinary and multi-level nature of the SDGs and to the participatory, multi-actor and place-based nature of SDG localization...

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Panel 1: Linking place-based initiatives with global challenges

State of Play reports for [UN One Planet Network's Sustainable Buildings and Construction Programme](#)

Executive summary from the Global State of Play report

Professor Usha Iyer-Raniga

The world is becoming more urbanised, particularly in the Asian and African regions. Building stock is expected to double by 2050 in these regions. Global material use is expected to more than double by 2060. Of the types of materials used, the ones that are used in the building and construction sector will comprise a third of this rise. GHG emissions will also increase as a result of material use. Concrete alone is expected to contribute to 12% of global GHG emissions in 2060. Economic growth in construction and utilities is expected to increase by slightly more than 2.5 times between 2011 and 2060. Based on current trends, the new growth economies of Asia, Africa and America are expected to continue to use more materials now than they ever did before in 2060.

Such trends call for an urgent attention to question current ways of operating the built environment. Current practices are locked-into a linear way of planning, designing, building and operating the built environment and it is exigent to consider alternative approaches where mitigation and adaptation goals may be achieved simultaneously. Circular approaches present a viable alternative to underpin the transition to a decarbonised world while at the same time meeting the goals of Agenda 2030.

The OPN's SBC programme initiated a study to understand the current state of play with circularity in the built environment in the six different UN designated geographic regions of the world. These six regions are Africa; Asia; Europe; Latin America and the Caribbean (LAC); Northern America, and Oceania. The study focused on understanding from 'a birds eye' perspective, where circularity is at in the built environment sector. The authors drafting the regional reports are experts in the built environment and circularity, and part of the network of the OPN's SBC programme. Each of these reports were peer reviewed by other experts from each of the designated regions. Each of these reports are presented in the final publication, with an overarching global report bringing together the findings in these regions and the recommendations arising. It is anticipated that this global report will be considered with, and support governments when reviewing their National Adaptation Plans and National Determined Contributions.

The regional reports show that the different areas are in various states of transition to circular economies with Europe leading, largely due to having been in the process of transitioning to a circular economy for at least a decade. Other regions are still grappling with considering what circularity actually means for their region and proactively drafting supporting policies and programmes with the goal of transitioning to low carbon futures. Tensions with respect to design, operation and deconstruction exist between new developments and existing stock. The focus in Asia, Africa and

the LAC regions has been based on a linear underpinning for supporting the needs of the built environment be it residential, commercial or infrastructure.

This linear thinking is entrenched in the practices of the various professions that make up the built environment. This report presents eight recommendations, commencing with the need to think and act differently now and in the near future. The current lock-in approach needs a concerted shift in thinking from linear to circular, and presents a priority as governments are considering catalysing economic recovery packages in a COVID-19 world. Second, monitoring and reporting is essential to ensure that we stay on track and reach the goal of living and working in a world that enables efficient resource use, has little or no environmental impact and ensures a just society. The SDGs can assist in monitoring and reporting as the foundational principles of circular economy and sustainability are the same. Third, life cycle considerations at the outset of planning and design guarantees that the buildings built to stay are mindful of their operations and also consider the second life of buildings and materials post deconstruction. Related to this recommendation, the fourth focuses on materials as building materials are the essential building block for the built environment. Careful thought regarding alternative materials such as bio-based materials and mining existing materials support materials being given second and third or more lives rather than ending up as waste.

Fifth, as pressures for mitigation in environmental impacts continue, adaptation and resilience are also needed as we move into a more warming world. Incidences of natural disasters are also on the increase. Affordability, use of local technologies and building resilience in the built environment needs to be encouraged. New business models that encourage cross sectoral collaborations such as between IT and the built environment to support building passports or track and trace of materials for reuse or repurpose is the sixth recommendation. Seventh, a serious overhaul of education and skills is required so that the gap between competence and industry needs are bridged and skilled workers are available in the transition to a circular economy. The eighth and final recommendation is about collaboration and financing agreements that ensures engagement across all stakeholders is driven by genuine circular economy underpinnings.

So, where to from here? To avoid a repeat of the same lock in approaches, current challenges need to be overcome. Building knowledge, awareness and understanding for new and existing developments underpinned by a circular thinking approach is urgently needed. Some quick wins to achieve this are changes in legislation and regulation, increased building standards that focus on end of life of buildings, changes in procurement practices and increased stringencies where environmental impacts are now only marginally considered.

The emerging economies need assistance in transitioning to a circular economy. The context within which they operate are very different to that of Europe and other developed regions. Climatically and culturally also these regions are quite different. They often have a long history of indigenous settlements which has eroded over centuries and the quest among the young population is for a 'westernised' life style. A repository of good practices and case studies are urgently needed so lessons

learned may be shared. Enhanced collaboration between stakeholders are also needed to support innovations where flexible design and construction becomes the norm so maintenance and deconstruction is easy.

The transition to circular economy presents an opportunity. Recycling is expected to improve in the future. In a world that has been touched deeply by the coronavirus pandemic, shifts in the ways of working have already occurred. As industry practices are transitioning to a 'new normal' supported by governments, it is timely to also consider the advantages of moving to circular built environments.

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A hydrogen future: Eco-modernism on stolen, climate-changed land?

SDGs 7, 9, 10, 11, 12, 13, 15

Dr Matt Ryan, The Australia Institute

This contribution seeks to link the global challenge of “net zero” to the likely local collisions of socio-ecological relations that will play out if capital and the Australian state commit to green hydrogen. This is a speculative exercise, but a necessary one. Scenarios modelled by the IPCC, consistent with Paris Agreement targets, build in the assumption that carbon emissions can be radically decreased while the global economy continues to grow. Those assumptions have been challenged on theoretical and logical grounds (Hickel & Kallis, 2019). But on what kind of local geographies and political economies do those global scenarios rest?

Australia is currently an energy exporter, providing enormous quantities of gas and coal largely to Asian markets. While there remains a disjuncture between commitments and policy, the rubric of the “renewable energy superpower” is increasingly invoked as an alternative political economy to our current fossil-fuel export regime. This possible future remains underspecified, but most conceptions of it imagine a large role for hydrogen, produced from wind and solar power. Globally, hydrogen is seen as especially important to decarbonise the production of iron and steel.

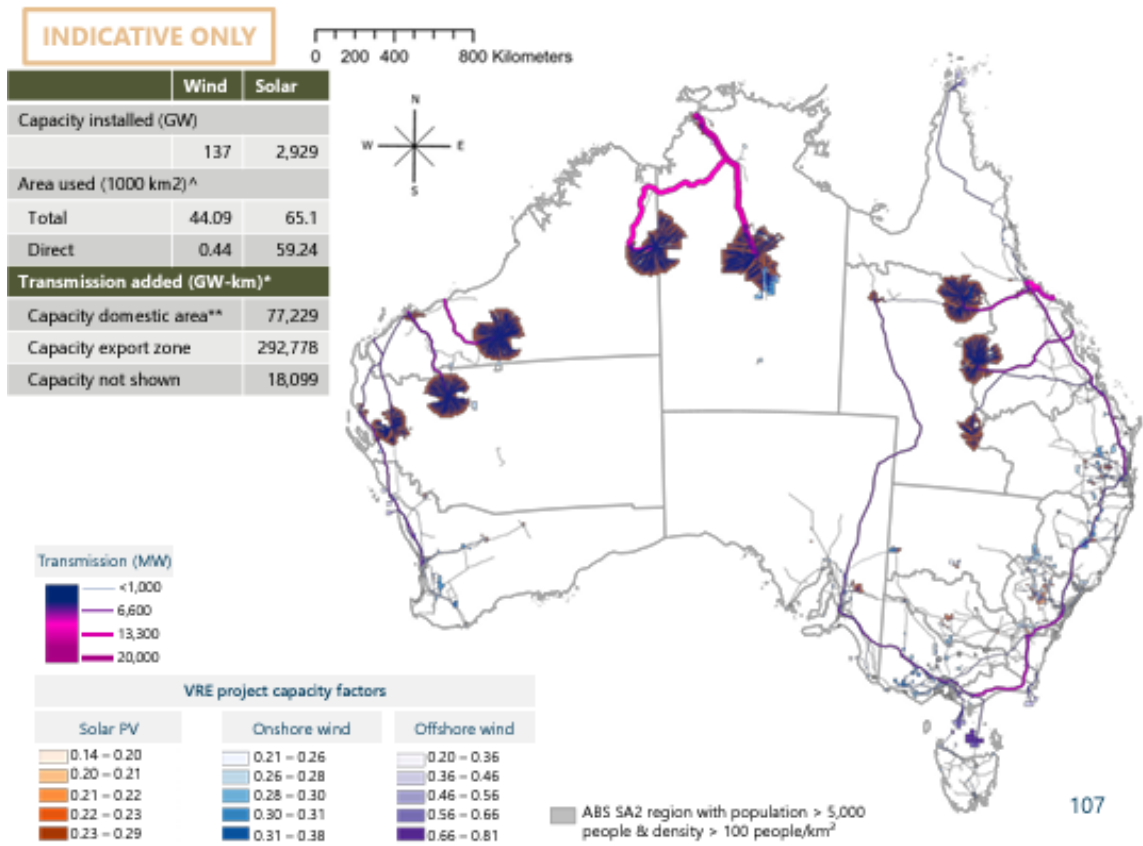
Hydrogen – like land-sector carbon offsets, carbon capture and storage, and direct air capture – is a technology (and a *political economy*) that we are “betting the house on”.

So, will it work? Most conversations around green hydrogen are framed in neoclassical terms, concerned with learning rates and price curves. Broader political-economic questions might follow Malm (2015) or Christophers (2024), and ask: “who will invest in these energy infrastructures”, and “why”? But here we will consider more-localised socio-ecological relations – namely heat, fire, and labour.

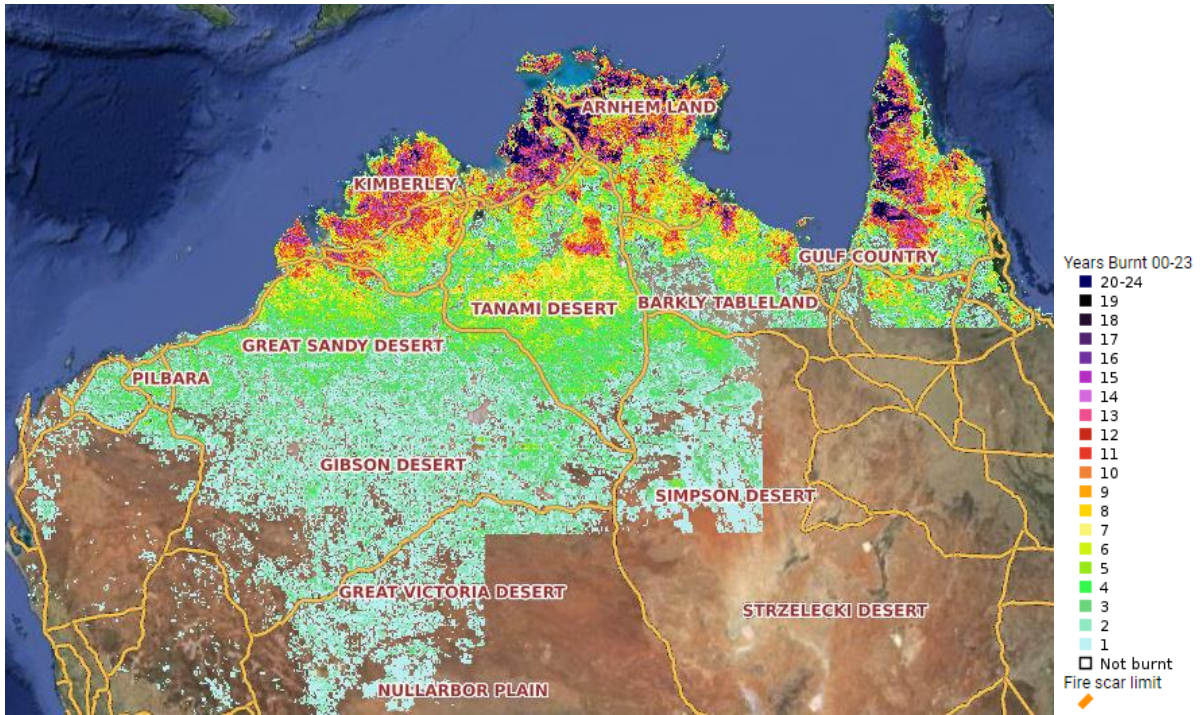
These infrastructures are proposed to be built on stolen, Indigenous land. Likely much of the Australia hydrogen imaginary rests on the old perceptions of Terra Nullius – empty land. This immediately foregrounds questions of sovereignty and of justice. They are also being built *during* climate change, the effects of which are already among us. A landscape already defined by interrupted socio-ecological fire regimes is becoming hotter. Invasive species and the dislocation of people from Country are seeing fires spread further and occur with more regularity. The chemical inefficiencies of hydrogen – and the enormous energy density of those fossil fuels to be displaced – mean these infrastructures must operate on a vast, landscape scale. On the same landscape that is burning.

Those workers who would build these eco-modernist monuments would therefore need to defend these investments from fire. Further, they would need to do so in heat that is expected to be “near unliveable”. Who will do this work? How? Where will they live? And how would their social reproduction unfold?

Climate change ramifies through the SDGs, well beyond the 13th goal. The growing consensus around “net zero” lays out the stakes of the global challenge. Following this challenge, Australia must seemingly reinvent its political economy, landscape, and even socio-ecology. These (and others) are the local socio-ecologies to be worked through, to realise a “renewable energy superpower”. Or perhaps there is another way?

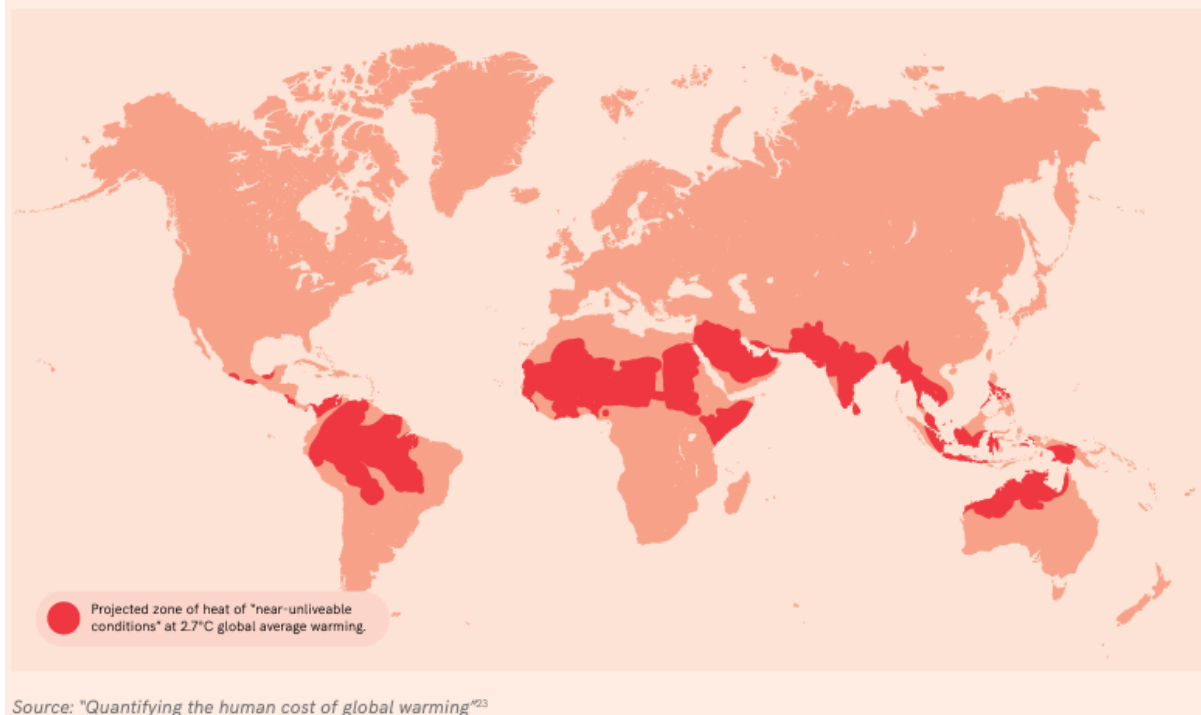


Source: Net Zero Australia (2023) *Final Modelling Results*, p. 107



Source: NAFI (n.d.) *North Australia & Rangelands Fire Information: Fire History, Years burnt 00-23*

Figure 1: Projected zone of heat of "near-unliveable conditions" at 2.7°C global average warming.



Source: "Quantifying the human cost of global warming"²³

Source: Barrie *et al* (2024) *Too Hot to Handle: The scorching reality of Australia's climate-security failure*, Australian Security Leaders Climate Group, p. 15

Linking place-based initiatives with global challenge

Karen Cain, Transition Australia

We require more effort to accelerate the pace and character of innovation itself, more system structural, radical and disruptive innovation

One of the obstacles facing us is the history and design of innovation in the public sector associated with risk management, tinkering at the edges and seeing innovation as nice to have but not essential. This is linked in Australia to an economy historically and currently reliant on the resources sector for its growth and trade. A strong message needs to be put to decision makers and policy designers that without new ways of 'doing business' we will not meet the broader challenge we face.

The catalyst being brought about by Climate Change and the establishment of Sustainability Goals is both a complex issue and existential crises requiring new forms of innovation.

What does this look like at an everyday level - local agency creativity and learning

The change required is ubiquitous in nature, requiring incentives and demonstration of benefit to win the hearts and minds of all actors, including everyday citizens. It also requires quick wins and scale up within timeframes and ambitious goals. At an everyday level it requires arrangements that authorise and enable new leadership activity that encourages local agencies to collaborate, explore and test potential and new ways of working resulting in demonstrated and creative benefit.

Working on the strengths of society, including expertise and skills, encourages collective insight into entrepreneurial discovery, increased opportunity for commitment and investment and real outcomes on what matters to people.

It requires a shift in power from individuals to cooperation, which, is itself disruptive, and can attract pushback from individuals who rely on a singular power base. If this shift in practice can become embedded through demonstrated benefit and tipping point momentum ensues, then it is likely that single organisations are forced to change their behaviour to survive in the new order. Finding those early quick wins at a local level is a good way to start.

Incremental vs radical adaptation

Timing is an important factor associated with the conditions for adopting either approach. Some of it has to do with what people are experiencing and willing to accept re the need for change, some has to do with a demonstration of benefit for the individual or partnership regardless of the issue and some has to do with urgency. Both can occur at the same time and incremental can grow into radical over time with the arrival and momentum of better opportunities and interest. The common feature is working on change through collective effort that is cross sector, developmental and creative, growing knowledge, expertise over time.

Panel 2: Innovation for Systemic Transformation: what kind of intervention?

Making the case for collaboration

Dr Mary Johnson, RMIT University

The agenda of the United Nations Sustainable Development Goals (SDGs) requires transformative action for improving lives and livelihoods, accessing safe nutritious food and clean water, affordable and clean energy; protecting biodiversity and ecosystems; striving for peace, justice, strong institutions and economically thriving societies.

In a world of increasing complexity how can we best shape our future? How do we plan with certainty when dealing with uncertainty? This will take dynamic and reciprocal collaboration that brings together diverse people for dialogue, strategizing, planning and action through engaging with different contexts and different designs.

Forming collaborative, as opposed to transactional, relationships at scale can lead to the social processes required for individual and collective behaviour change. The challenge is to arrange an operating space that enables full civic participation and independent advocacy, and where dominant interests and discourse can be held to account.

Collaboration between three countries

A four-year research project known as Landcare Fiji and funded by the Australian Centre for International Agricultural Research (ACIAR) is focussed on improving Fijian smallholder farmer livelihoods (food and fibre production) and best practice natural resource management. The project is a trilateral collaboration between Fiji, Philippines and Australia that tests and adapts learning from a previous research project developing an agricultural extension model with vulnerable farming communities, Mindanao, Philippines.

The Landcare Fiji project supports teams of farmers, researchers and extension officers working together at three Fiji sites Sigatoka, Labasa and Taveuni Island. The teams work across administrative divisions i.e. local to national government, and with a range of ministries including agriculture, fisheries, forestry, environment, education, iTaukei Affairs (Indigenous) and health. This approach is a significant paradigm shift for those who have been previously working within very structured, siloed workplaces. The scale also helps promulgate the necessary practice and attitude change for transformative action from grassroots to policy making.

At a grass-roots level existing networks are involved with the research project. This supports farmers to take social, environmental and economic action that draws on community spirit, respects cultural norms and provides local solutions to problems that government (s) alone can't provide. The project facilitates intra and inter-community social interaction through activities such as community workshops that map and analyse networks, and identifying ways for strengthening or creating strategic connections. The Philippine experience had demonstrated that strengthened social networks that support community leadership, mobilise local and

regional effort and ensure that priority needs are met can also better inform and build on government and non-government initiatives and investment.

The Study Tour – an impact activity

In December 2023 a delegation of fifteen Fijian delegates and two Australians participated in a Study Tour to the Philippines. This was a reciprocal visit, following a visit to Fiji by Philippine delegates in April 2023.

The Philippines and Fiji are highly compatible for cross country activity as there are mutually intelligible cultural and social values, farming practices, land and water challenges and climate change impacts between the island nations. In addition to gaining an appreciation of the Philippines the study tour presented the opportunity through informal and formal face to face contact to continue to build and strengthen partnerships, cross-country dialogue and knowledge exchange. Meals were shared, karaoke nights held, farm walks taken to see first-hand farm practice, and official visits to research laboratories, university campuses, municipal offices and the Australian High Commission.

Key project partners taking part in the Study Tour included: Australian Centre for International Agriculture Research (ACIAR); Department of Science and Technology – Philippine Council for Agriculture Aquatic and Natural Resources Research and Development (DOST-PCAARRD); Fiji Ministry of Agriculture and Waterways; Tei Tei Taveuni farmer association; RMIT University; Fiji National University; University of the Philippines Los Bano; and University of the Philippines Mindanao.

During formal meetings Fiji and Philippine partners identified and discussed areas of similarity and common interest. General themes emerged including:

- Stages of respective country development
- Challenges and opportunities relating to smallholder farmer livelihoods.
- Food security
- Resilience and adaptation strategies to climate change
- Institutional capacity and administrative processes
- Gender equity and participation
- Life-long learning including access and participation.
 - What can we learn from each other?
- Upholding and respecting culture
- Culture and family.

Positive outcomes continue to be generated from the Study Tour. The Fiji Ministry of Agriculture & Waterways has drafted a Letter of Intent for DOST-PCAARRD and Fiji National University has held further discussions on areas for collaboration with the University of the Philippines Los Baños and University of the Philippines Mindanao. The farmers have been in contact through their respective associations and individually and have been adapting and adopting farm practice they witnessed in the Philippines. This is reported in Panel 6: Global, local, methodical, radical: the Melbourne City Portrait and **other Place-based Innovations**.

Converging Crises and the Emerging Transformative Agendas

Ashleigh Stokes, RMIT University

The first half of the 2020s has signified a critical conjuncture for transformative agendas. The convergence of the COVID-19 pandemic and various manifestation of climate change impacts illustrated the need to radically mobilise our systems and communities. In the face of converging health and climate crises, transformative change has become a key agenda for various states and international institutions. With the aftermath of the pandemic slowly subsiding, the ambitious agenda and progress of the United Nations Sustainable Development Goals (SDGs), which was sidelined by a shift in global priorities towards immediate health and economic crises, has re-emerged. The call for ambitious action resituates the SDGs as important guiding principles for our emerging transformative approaches to our problems that facilitate a shift to sustainable futures. As a result, the renewed ambition for the SDGs within recovery efforts open novel space for inspire substantive social change.

Innovation in Transformative Agendas

At the nexus of the transformative agenda and climate action the concept of transformative adaptation has solidified. As an approach that combines transformative change and adaptation, transformative adaptation scholarship acknowledges that climate change adaptation approaches must seek to create novel and innovative solutions to the risks and vulnerabilities they address if they seek to address their systemic causes. The pursuit of transformative change must engage dynamic approaches that normalise experimentation as an aspect of the policy process.

Yet, in practice this ambition is difficult to capture. In recent applications of the concept to policy in Australia, challenges arise on what kind of interventions are necessary to support and promote innovative thinking beyond the initial commitment to engage 'transformational processes'. In the face of converging crises that outpace action and policy, there appears a fundamental conflict between the problem, the ambition and the interventions.

Policy, Innovative Thinking and Transformative Action

The findings of my PhD titled 'The Potential for Transformation: A Conjunctural Analysis of Australian Climate Change Adaptation Policy' highlight that in order to promote transformative adaptation, more attention is needed on the impact of converging crises as a disruptive force for climate change adaptation planning. Furthermore, building capacity for disruptive and innovative thinking is not only essential for challenging engrained societal, institutional and cultural dynamics but also to promote novel ways to develop and implement climate change adaptation that incorporate substantive societal change.

Panel 3: Learning Partnerships as Social Innovation

A/Professor Jose Roberto 'Robbie' Guevara

The Social and Scientific Innovation to Achieve the Sustainable Development Goals (SSIASDG) Network at the EU Centre of Excellence at RMIT aimed to *examine the role of the EU's Smart Specialisation in linking scientific and social innovation, and how this can help deliver global action to address societal challenges*. While there have been successes in science and technology innovation (STI) in contributing to addressing societal challenges, there has been recognition that in addition to focusing on scientific innovation, equal if not greater attention should be paid to social innovation, in particular the need for partnerships and more bottom-up approaches as social innovation.

Current research and practice acknowledge that the *“partnership and bottom-up approach of smart specialisation that brings together local authorities, academia, business spheres and the civil society, working for the implementation of long-term growth strategies”*¹ will be necessary to achieve the SDGs, which is very much what SDG 17 has argued for - revitalizing the global partnership for sustainable development. Two key dimensions of partnerships have been identified. The first has focused on the need to “mobilize both existing and additional resources— technology development, financial resources, capacity building— and developed countries will need to fulfil their official development assistance commitments.” The second dimension, which is what has been of greater interest to the network has been about how “multi-stakeholder partnerships will be crucial to leverage the inter-linkages between the Sustainable Development Goals.” This dimension recognises that the value of partnership is not just about sharing resources, but it is as much about a recognition that to address the complex nature of the global development problems we are facing it will be necessary to draw in the different contributions of the different stakeholders, but also how this is necessary if we are to recognise the interconnectedness of the different goals. It is this interest in the kind of learning that happens in partnership, or learning partnerships that we are interested in. Our key argument supports the need for partnership in terms of WHAT we can learn from each other, HOW we can more effectively learn with each other but also WHY we must learn together.

While our interest in learning partnerships values the interconnectedness of the SDGs, the entry point of our reflections is on SDGs 17 and SDG 4, access to quality education and lifelong learning opportunities for all. We outline below some of the key papers developed as part of the JM Research Network.

We explored the need to learn in partnership across the different education sectors, given that the post-COVID situation has placed a spotlight on the current skills gap that exists in many countries, and hence an emphasis on the Vocational Education and Training (VET) sector to fill this gap. At the conclusion of a Policy Forum entitlement entitled, Transforming Education and Training in Australia: Challenges and Opportunities February, 2023, together with the participants we released a Policy Statement that called on the Australian government to create the relevant

¹ European Commission (nd) “The Smart Specialisation Platform”. Joint Research Centre Digital Media Hub. [The Smart Specialisation Platform | European Commission \(europa.eu\)](https://ec.europa.eu/euro-iss/iss-hub/en/smart-specialisation-platform)

policies and for partnerships to occur and therefore they must “*take up the challenge of transforming education and training systems to ensure that all individuals, communities, and businesses can participate equally and achieve the outcomes necessary to enjoy a sustainable emerging future.*” However, this desired transformation is based on a commitment to the principle that “*access and equity to lifelong learning are the keys to ensuring that no one is left behind.*” (Policy Forum Statement, February 2023)²

Furthermore, in a Policy Paper entitled “***Tensions between learning for the economic sphere (jobs) and learning for well-being/democracy***” (Klein, Guevara and Wilson 2022)³ that was developed in part based on the Conversation Series conducted by the ASEM LLL HUB (Research Network 4: National Policies on Lifelong Learning), we argued that partnerships across different sectors will often create new ideas but also surface tension between differing worldviews and purposes for education. Therefore, there is a need to engage with these tensions, rather than smoothen them out, which is the essence of learning partnerships we speak of.

To achieve the 2030 Agenda or to even make headway in the achievement of the SDGs, joint action, bringing together the various stakeholders and engaging with different views, is required. ... Partnerships between governments, the private sector, civil society, and other interested parties can cross-pollinate ideas and mobilise resources not available to the individual or individual organisations.

Most of all, though, openness to ideas and the ability and willingness to consider solutions outside the confines of what has always been done or one’s preferred worldview is necessary. Such collaboration and partnerships will require not just being able to acknowledge and recognise tensions but engage with them conceptually and methodologically. Localising contextualising tensions between learning and earning rather than smoothing might just bring about a more effective engagement.

In the article entitled “***Reimagining roads ahead: Harnessing the transformative potential of capacity building as education***” (Emmerton and Guevara 2023)⁴ we argued for the need to reconceptualise capacity-building that is often conducted by NGOs in developing countries as a dialogical process of education and learning that occurs in partnership.

The article poses that a new social contract for education provides a crucial and exciting opportunity to weave difference, dialogue, and justice into the fabric of capacity-building approaches, reframing capacity building not merely as a means to an end but as a vital and valuable form of education in itself, as

² Adult Learning Australia (March 2023) Transforming Education and Training in Australia: Challenges and Opportunities. [Policy-Forum-Statement-080323-.pdf \(ala.asn.au\)](https://www.ala.asn.au/policy-forum-statement-080323-.pdf)

³ Maren Klein, Jose Roberto Guevara, Bruce Wilson, 2023, Learning and/or earning: “Tensions between learning for the economic sphere (jobs) and learning for well-being/democracy.” <https://doi.org/10.25439/rmt.22944734.v1>

⁴ Emmerton, A., & Guevara, J.R. (2023). Reimagining roads ahead: Harnessing the transformative potential of capacity building as education. *PROSPECTS*. <https://doi.org/10.1007/s11125-023-09673-6>

practitioners, educators, policymakers, and organizations work and learn together to shape new shared futures.

In the article **“Universities in Global Transformation: Re-thinking curriculum integration and collaboration to co-create our future”**, **Piazza, Guevara and Castiglione (under review, 2024)** from the University of Catania in Italy and RMIT University in Australia, have taken this opportunity to reflect and share our insights on how we have approached this task of SDG integration in our teaching, with a focus on the challenges of collaboration as an essential approach to transforming education and learning in our universities.

Within the university, we argue that the SDGs provide us with the opportunity to engage in this transformative process which will require that we learn to collaborate more effectively and meaningfully not just with our colleagues across different disciplines but with our students, so we can learn together to co-create our shared future. Cross-disciplinary and student-staff collaboration will require more than the “just add” approach to curriculum integration. It will require the recognition by university leadership for the need to support on-going capacity building of staff, resourcing of teaching and learning that involves engaging in collaborative and cross-disciplinary projects, and a degree of self-reflexivity of the role that universities have played in solving but also in contributing to the problems we all face.

Finally, going back to the start of the Jean Monnet Research Network on Social and Scientific Innovation to Achieve the Sustainable Development Goals (SSIASDG) Piazza and Guevara (2023) used the opportunity to reflect on our own experiences as educators based at universities in Italy and in Australia. Together we published an article entitled, **“Curriculum Innovation in Higher Education in our Interconnected World: Collaborative Learning for a more Equitable and Sustainable Future” (Piazza and Guevara 2023)⁵**.

We argued that any socio-scientific innovation will only succeed if we recognize the significance of incorporating learning not just to promote innovation, but as an integral part of innovation itself.

As we approach the mid-point of the SDGs and prepare for the UN Summit of the Future, the concept and practice of partnerships are being revisited in line with the call of the UN Secretary General for a more inclusive and networked multilateralism because *“multilateral governance, designed in simpler, slower times, is not adequate to today’s complex, interconnected, rapidly changing world.”⁶*

What kind learning and partnership as social and scientific innovation will be required to achieve this emerging multilateral governance, if we are to at least make significant progress towards achieving the Sustainable Development Goals by 2030?

⁵ Piazza R., & Guevara J.R. (2023). Curriculum Innovation in Higher Education in our Interconnected World: Collaborative Learning for a more Equitable and Sustainable Future. *Pedagogia oggi*, 21(2), 26-32. <https://doi.org/10.7346/PO-022023-03>

⁶ United Nations (nd) Summit of the Future. [Summit of the Future website - EN | United Nations](#)

Partnership and Innovation – the case of the Centre for Sustainable, Healthy, and Learning Cities and Neighbourhoods (SHLC)⁷

Professor Michael Osborne, University of Glasgow

Whilst there is no agreed universal definition for equitable partnerships, equitable partnerships are frequently defined as:

Partnerships in which there is mutual participation, mutual trust and respect, mutual benefit and equal value placed on each partners contribution at all stages of the research process. (UK Collaborative on Development Research (UKCDR))⁸

Background – Capacity Strengthening based on Collaboration with Partners

The programme of work within SHLC, a major UK Global Challenges Research Fund (GCRF) project, between 2017 and 2023, was designed with the understanding that research on relationships between urbanisation, health and education in developing countries is fragmented. There had been few systematic, comprehensive and comparative evaluations of the social and physical states of urban neighbourhoods formed under different policy and guarding ideologies. International policy research has mostly been led by foreign experts who tend to provide general guidance based on ideas and policies developed in the western world.

By contrast, we therefore took a different approach and proposed a **partnership of capacity strengthening and research based on collaboration and knowledge co-construction with partners**, and the development of **localised, specific responses** to particular urban issues. It was an approach that sought the mutuality highlighted by UKCDR.

Urbanisation in developing countries has come a long way, and there are now important differentiations between regions and between individual countries and cities. Knowledge, technology and investment transfers between developing countries, especially between China, India and Africa, and between South Africa and other parts of Africa, have had great influences on urbanisation trends in the recipient countries. Such variety in urbanisation provided an ideal laboratory for study. It offers policy makers and planners a 'catalogue of the possible'; it reveals what does and, importantly, what does not work in **uni-directional and uncontextualised transfer**, and highlights the gap between local and global knowledge.

The programme focussed on Africa and Asia. More than half of Africa's urban population is under 25 and despite advances in the *Education for All* agenda many remain marginalised from access to learning opportunities. There was a need for a major reconceptualization of new approaches to African urbanism. Asia features high, middle and low-income economies (as does Africa), as well as a wealth of diverse societies and cultures. It also hosts many developing countries including the two largest ones, China and India, but is also home to the world's largest population of slum dwellers. Asia has a higher urbanisation level than Africa and many cities have

⁷ See <https://www.centreforsustainablecities.ac.uk/>

⁸ See <https://ukcdr.org.uk/our-mission-strategy/>

as experienced fast economic growth and intensive industrialisation. Despite urbanisation addressing the needs of some of the region's very poorest, inequalities and limited access to basic infrastructure, educational and health services remain serious challenges that need to be addressed (UN Habitat 2015).

Within Africa and Asia, we recognised the diversities of the countries in relation to economic development, regional characteristics, cultural and historical background, level of industrialisation and urbanisation. We therefore adopted a comparative approach. We divided countries into two broad categories: fast growing and emerging economics and the others. From the first group, we included South Africa, India and China. In these countries, urbanisation, industrialisation and economic growth have continued apace in the last twenty years; parts of these countries are now highly urbanised and their major cities have developed strong linkages to the global economy and have created huge wealth. There is also an emerging middle class in these cities who live in a range of well-functioning neighbourhoods. At the same time, there are serious inequalities in income, living standards, housing, and access to infrastructure and public services, especially between the rural to urban migrants and the established residents. Through their growing economic power, these countries now influence the development and urbanisation courses of neighbouring countries. In the second group we selected Rwanda, Tanzania, Bangladesh and the Philippines to reflect different regions, economic development levels, political and administrative systems, and cultural/historical backgrounds.

Consultation with Partners in Design

Much of the current sustainable cities debate focuses on large cities, but the majority of all urban dwellers reside in far smaller urban settlements (Henderson 2002; Bhattacharya, 2016). In developing countries, research emphasis has often been on large cities. To give a better representation and to understand the regional complexity in urbanisation, **in consultation with all partners**, we decided to study two cities in each country: one major national city or the country's capital and one 'typical' regional city. As urban systems become much more complex in every country, moving from standalone cities to metropolitan regions, the study of these 'cities' will cover changes in the suburban areas and smaller towns around them. In each case study city, we categorised all neighbourhoods into five groups ranging from slums to rich residential areas/gated communities and carry out detailed examination of one typical neighbourhood from each group. This design allowed comparative analysis from several dimensions - within country and region, between countries and regions, and between different economic development levels and types of cities and neighbourhoods. Our work consisted of:

- review and analysis of planning and urban development policy documents for the previous twenty years
- a series of in-depth interviews (about 20 in each city) with planners, politicians and directors of key government departments and bureaux at municipal and urban district levels, as well as developers and local academics
- identification and collation of multi-source and multi-scale spatial, physical and social-economic, health and educational data, housing characteristics and market data (drawing on local official statistics and research data resources, GPS data and internet mapping resources such as Google map data)

- a comprehensive audit of the housing and living conditions and public service provision, and related sustainability indicators through on-site observation and field recording (data sheets and photographs), key actor interviews (5 in each neighbourhood) and focus groups (one for each different type of neighbourhood) with neighbourhood workers (e.g. personnel from community committees, neighbourhood committees, social workers, estate managers, home-owner committees)
- a stratified sample of households selected in proportion to the size of population in these neighbourhoods for a face-to face survey, with the aim of achieving a total of 1000 responses in each case city (about 200 for each different type of neighbourhood)

Forming Partnerships

We formed our **partnership carefully drawing on our strong academic links** with institutions in these countries but also extending our networks. International partners were: Human Sciences Research Council and University of Witwatersrand in South Africa, University of Dar es Salaam in Tanzania, University of Rwanda, National Institute of Urban Affairs in India, Khulna University in Bangladesh, University of the Philippines Diliman and Nankai University in China. The local research teams in each partner institutions consisted of senior professors in urban studies and planning, health and education, full time post-doctoral research fellows and postgraduate research assistants, associated PhD students and project managers.

Capacity Strengthening and Enhancement Strategy with Partners and Beyond

A core task of the programme was **capacity strengthening through international partnerships** based on mutual respect and understanding and around the large-scale and comparative research project. The **key capacity strengthening objectives** were:

- To set up the GCRF Centre for Sustainable, Healthy, and Learning Cities and Neighbourhoods (CSHLH) centred in Glasgow with collaborating partners in seven developing countries;
- To **strengthen and develop the research capacity** of a long-lasting network of urban researchers in the UK and seven countries in Africa and Asia;
- To facilitate the **development of a new generation** of multi-disciplinary urban researchers;
- To achieve genuine **knowledge exchange** between the UK and developing countries, and between developing countries from different regions and at varying development stages;
- To develop **innovative quantitative and qualitative research methods**, and data systems for the study of urbanisation and fast-growing cities.

Our capacity-strengthening agenda embraced research capacity, organisational capacity, individual researcher career development, sustainable international networks, and support and mentoring. Capacity was strengthened through the coordinated work of the international consortium of nine institutions. While knowledge exchange between the UK and developing countries is important, we also emphasised the great benefits to be accrued from **sharing research experiences and understanding between different cities and countries of the developing world.**

Significant project resource were therefore dedicated to the movement of members of research teams over the course of the project⁹, to ensure the establishment and continued reinforcement of relationships within the team, to refine and develop the work programme in response to changing local needs, to ensure that individuals and teams gain a comparative perspective, and to facilitate **mentor/mentee relationships** between the senior team, and early career researchers related to the project.

Beyond this core research group, the programme involved other partner organisations at various stages of training, research design, implementation and dissemination. They included PhDs and early career researchers from other UK and international institutions, policy makers in city governments and national government departments (planning, housing, education, and health), local NGOs, and international organisations (e.g. UN Habitat). Other academic staff at the partner institutions and academic staff from other institutions/countries were invited to project meetings/workshops. They became eligible to apply for funding to support pilot projects that complement the core work programme through a **capacity development acceleration fund (CDAF)**. The fund also ensured that the project had a flexible mechanism to respond to urgent needs. This ultimately led to some 20 CDAF projects being supported in various parts of the global south.

We also through the life of the programme built-up an international network of researchers and end-users of research including civil society organisations (CSOs), linked virtually through a Web2.0 platform, the events that we organised and through their co-production of CDAF projects. We developed and organised **four Capacity Strengthening Packages (CSP)** as follows:

CSP 1: UK Based Workshops and Training: A Kick-off Workshop

CSP 2: Knowledge Exchange and Capacity Strengthening in/between Countries: Knowledge exchange within and between countries within the partnership, and capacity strengthening at the level of cities/regions, communities, institutions and individuals at different levels were key objectives of this programme. This included **knowledge exchange workshops** in partner countries, timed at key fieldwork stages. Externally, they were used to disseminate and exchange initial findings with city/region representatives. **Impact symposia** were also held in partner countries that were open to researchers, policy makers, NGOs and British Council representatives.

CSP 3: A **visiting research fellow programme** was established to support researchers (at a variety of career stages), and stakeholder organisation staff to spend a period in either the UK or at international partner/stakeholder institutions. This programme was organised through the CDAF, to provide equitable and flexible access to secondment opportunities.

CSP 4: Research Seminars, International Conference and Wider Network Building: As the programme involved comparative research packages in each partner country, a research seminar series was organised by each country team (including the UK team) to report and disseminate research findings.

⁹ stymied to an extent by COVID-19 and the unanticipated cuts in UK government fund towards the end of the project

Fostering Learning Cities for Resilient Futures

Professor Roberta Piazza, University of Catania

The interconnection between global sustainability and the future trajectories of cities is indisputable. With urban areas accommodating more than half of the world's population, their pivotal role in driving social and economic advancement as the primary engines of national and regional economies cannot be overstated. However, this prominence comes at a cost, as cities account for over 70% of global carbon dioxide emissions and are increasingly susceptible to the ramifications of extreme weather events, particularly because of their frequent proximity to coasts, floodplains, and arid regions. Nevertheless, the United Nations Population Division underscores that cities hold a central position in tackling the myriad global challenges of the 21st century, encompassing poverty, inequality, unemployment, and the imperative of climate change mitigation and adaptation to facilitate resident flourishing (UN Habitat, 2022).

While the Sustainable Development Goal (SDG) 11 – *Make cities inclusive, safe, resilient, and sustainable* – explicitly addresses the multifaceted role of cities in fostering inclusivity and sustainability, other SDGs, such as SDG 3 (health), SDG 8 (economic development), SDG 16 (peace), and SDG 13 (climate change mitigation) also emphasize the importance of cities. Additionally, SDG 4 (*Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*) highlights lifelong learning as essential for building sustainable cities and achieving the 2030 Agenda. This urgency underscores the need for sustainability research and practice that focuses on the transformative potential of cities and regions (Wolfram et al., 2019).

Addressing sustainability challenges such as climate change requires innovative systemic solutions that transcend disciplines and institutions, often unfolding gradually (Edmondson et al., 2019). Adopting a sectoral approach, as advocated by Oksanen (2000), involving various levels of government and engaging diverse stakeholders and civil society is essential to adequately respond to communities' economic and social security needs while meeting the learning requirements of all citizens. Cities' sustainable development strategies focus on delineating tangible actions to bolster lifelong learning within communities, aiming to enhance skills and knowledge transfer for community well-being. The economic, social, and cultural progress of cities relies on integrated actions to fortify their capacity to respond to and adapt to continuous change (UNESCO, 2016). Studies on city resilience indicate that those promoting inclusive learning and innovation processes tend to make more progress than their counterparts do (Tibitt, 2014). Engaging city stakeholders maximizes the benefits of resilience-building processes by promoting local capacities and pooling available resources (Gimenez et al., 2018).

City governments endeavor to address multifaceted climate and energy challenges by crafting sustainability and resilience agendas, which are typically reflected in planning documents, civic mandates, and associated policy and programmatic actions (Keeler et al., 2019). However, tackling intricate sustainability and resilience challenges demands transformative shifts and presents formidable hurdles to attainment (Fazey et al., 2018). Municipal efforts are often hindered by institutional constraints, organizational frameworks, limited cross-jurisdictional coordination, and

a lack of expertise and capacity to navigate the unpredictable landscape of sustainability and resilience challenges (Polk, 2015; Norstrom, 2020). Overcoming these challenges requires cross-sectoral and interinstitutional partnerships and collaborations, enabling the realization of innovative and holistic solutions (Lozano, 2021). Partnerships with institutions such as universities are increasingly vital, aiding cities and municipal governments in addressing multifaceted challenges, devising innovative solutions, and bolstering capacity for sustainability problem solving...

The implementation of S3 within EU regions has yielded promising outcomes, showcasing the transformative capacity of science and technology innovation to address regional challenges. Nonetheless, it is imperative to acknowledge the limitations of Science, Technology, and Innovation (STI) in isolation when tackling multifaceted societal issues. A noteworthy paradigm shift is the growing recognition of the pivotal role of socioecological innovation in regional development. This paradigmatic evolution underscores the EU's commitment to fostering holistic approaches that integrate environmental, social, and economic dimensions, as evidenced by quadruple and quintuple helix models (Borkowska & Osborne, 2018)...

By examining the nexus between scientific and social innovation, the SSIASDG Network aims to provide a comprehensive understanding of how S3 can mobilize diverse voices and expertise to propel efforts towards achieving SDGs. By fostering collaboration and knowledge exchange, the network endeavors to chart new pathways for sustainable development and societal progress. The project contends that addressing the multifaceted challenges facing our world requires more than technical resources alone (Wilson & Shortis, 2020). Obtaining the requisite funding for interventions across various domains, particularly universal and essential services, is equally pivotal. However, the predominant emphasis on market-based approaches prioritizes economic objectives over social and environmental imperatives. This underscores the significance of values and the imperative to recognize the intricate human dimensions underlying the issue...

The concept of learning cities and collaborative partnerships for sustainability presents a promising framework to address the multifaceted challenges of urban development. By prioritizing lifelong learning and inclusive education, these initiatives empower individuals and communities to actively participate in shaping their future. Moreover, emphasis on cross-sectoral collaboration fosters innovation and resilience, enabling cities to develop holistic solutions to complex problems. However, despite their potential benefits, learning cities and their partnerships face several challenges. Institutional constraints, limited resources, and lack of expertise often hinder municipal efforts to promote sustainability and resilience. Moreover, ensuring equity and inclusion remains a persistent obstacle, as marginalized communities may be overlooked in the planning and implementation of initiatives. Additionally, achieving transformative shifts in policy and practice requires overcoming deep-rooted mindset.

Extracts from: R. Piazza, forthcoming 'Learning Cities: Catalysts for Sustainable Urban Development through Collaborative Partnerships. The research Initiatives of the Jean Monnet SSIASDG Network'

Panel 4: Shaping Policy for Transformation – how to accelerate?

Accelerating Policy Learning and Implementation

Bruce Wilson, RMIT, with help from Ben Cashore, National University of Singapore

A key insight from the place-based work of many of the researchers in the Network has been the importance careful and responsive engagement with communities in diverse settings across both develop and less developed economies. This takes time and can be very productive in shaping transformative action. Where it can be underpinned and reinforced by relevant policy initiatives, that also takes time. There is an inevitable inertia in policy-making, partly because of the nature of our institutions, and partly because of the complexity of the issues themselves.

However, all available evidence indicates that taking time is to imperil the planet and its citizens. How to accelerate not our learning, but also the capacity to translate that learning into practice and into policy that extends the action necessary and institutionalises it. This imperative is greater than ever, as we see the reaction of vested interests to policies which do aim to generate appropriate change. The reaction of far-right groups and certain stakeholders to the action promoted through the European Union's Green Deal gives some indication of this challenge. The recent EU elections have seen a swing towards parties which in some measure at least, are opposed to key elements of the Green Deal. A bid to extend the life of cars with internal combustion engines is one example of this.

Ben Cashore and colleagues have examined this challenge closely. Part of the issue is the assumptions and processes that are central to global governance. However, the policy design and implementation process itself is also problematic:

Combining these arguments from policy design, policy mix and policy feedback literature creates a view of policy change being an integral part of long-term feedback loops between policy, policy outcomes and subsequent politics. Policy design thinking contributes an understanding of the policy elements that can change as well as their effectiveness, policy mix thinking contributes the view that policies are not isolated but part of a larger complex mix where individual policies can influence each other, and policy feedback thinking provides a framework for considering how policies and their real-world impact affect subsequent politics...

... we want to present two novel pathways towards paradigmatic policy change. Each pathway builds on a distinct underlying logic of policy change.

The first pathway builds on the logic that changes to low-level policy elements can – if they are effective, that is, if they have real-world impact – induce (more) positive (than negative) feedback effects that, over time, cumulate to feedback-induced ideational change at the higher level... What this pathway therefore describes is a 'virtuous' policy feedback loop driven by low-level policy changes having societal impact that accumulates over time.

A second pathway to paradigmatic policy change is conceivable when considering the interplay of various policies in a mix. Here, changes to low-level design elements of one policy can, if they create sufficient resource and ideational effects on targeted actors, lead to changes in mid-level policy design elements of another policy. This can happen when actors that profit from (the effects of) one policy assert their newly won influence in another policymaking process that revolves around a second policy. If the combination of the effect of these two (or, indeed, further additional) policies leads to a shift in actor constellations, the menu of policy alternatives can expand ... opening the opportunity for high-level policy change in a third policy...

To tackle the manifold crises of our times, most strikingly the plethora of environmental crises we face, ambitious policy action is urgently needed to achieve the necessary radical transformation of our industrialised societies. In other words, paradigmatic policy change is needed to achieve transformative societal change. Yet, while there is increasing demand for public policy scholarship to be able to provide guidance on how policy should be designed to reach paradigmatic policy change, existing policy change scholarship struggles to provide 'forward-looking' recommendations instead of ex-ante explanations.

(see Sewerin, S., Cashore, B., & Howlett, M. (2022). New pathways to paradigm change in public policy: combining insights from policy design, mix and feedback. *Policy & Politics*, 50(3), 442-459.
<https://doi.org/10.1332/030557321x16528864819376>).

Panel 4 will allow us to explore these concepts with relevant local examples: can we seek to accelerate policy change in a direction which can address the climate and wider SDG imperatives.

Two Different But Connected 'Hows'

Dr Mary Johnson, RMIT University

Engaging with institutional partners

Many of the issues that prevent practice changes are mediated by the policy and political context. Engagement with the governance environment requires navigation at wider political, legal and institutional frameworks.

In a recent study of agricultural and health extension projects and programs Bardosh, Johnson and Colgrave (2023) found that paradoxically, most projects kept their engagement with governance issues to a minimum due to the challenges and uncertainties involved, reporting requirements and a primary focus on field activities. However, avoiding engagement ensured an ongoing disconnect between the policy makers, policy implementers and wider public.

The study found that engagement with the governance environment spanned a binary spectrum, from the narrow to the broad. Narrow engagement involved working within or helping to define or provide modest changes to a specific legal or policy framework. For example, assisting with a priority setting process for a national strategic plan. Broader governance engagement referred to efforts to seek high-level political leverage, through advocacy, on major system issues and intersect with the critical issue of public good. Both approaches are necessary for transformative change.

The power of discourse in policy making

Discourse is fundamentally linked to power as it shapes policy and sets direction and funding priorities. Power is enacted through the preferential access to and control over public discourse. Worldviews are often contested, some may polarise and actors may try to influence debate and discussion. Those who 'know' the discourse can participate in, define and maintain the discourse.

Citizens and governments define their realities (worldview) through discourse in order to negotiate their position. Therefore, the **act of understanding** these discourses provides a mechanism for facilitating change and learning and determining how civil society and governments can work together.

In addition to institutional and policy settings, the SDG discourse is located in cultural politics, where people reflect on who they are and what they want. The potency of social transactions (i.e. goodwill, long-term relationships, trust, respect and honesty) that underpin the language used will lead to meaningful interaction and communication.

REFERENCE

Bardosh K, Johnson, M and Colgrave L 2023, Final Report, *A framework for assessing agricultural extension approaches and an analysis of transferrable public health approach* Australian Centre for International Agricultural Research, Canberra
<https://www.aciar.gov.au/sites/default/files/2023-02/SSS-2019-186-final-report.pdf>

Panel 5: From instrumental to systemic innovation

Karen Cain

Dealing with urgent complex matters that are present in the Sustainability Goals naturally requires a coordinated, systems approach to action. The problem is we are not very good at doing this. So, what does this mean for a shift in practice?

Technology innovation and social innovation

At present it appears unclear what the contemporary definitions of these two terms mean from a practical application perspective. If we are to support changes in practice and connect the system interdependency of these two terms, then clarity is important. Shifting practice requires a definition of change, the 'from to' framing' to able to have the discussion. In Australia we also need a contemporary definition of 'productivity' associated with this shift. This has been very clearly cited at a national level regarding the future of economic change debate.

Identifying and encouraging innovation through incentivised local collaboration can practically demonstrate the shift in practice as achievable. Being able to see, describe and value the change as it occurs builds confidence in actions, effort and commitment of time and resources particularly when it leads to demonstrable benefit. Finding the achievable 'sweet spot' and building on experience for more to be done can and does lead to more ambitious decisions. Importantly understanding the system put in place to reach that point is important to learning 'what worked and why'.

Instrumental social innovation rebranding previous agendas in ways that is more appealing to stakeholders.

One of the challenges faced in introducing and support for system innovation particularly beyond the traditional meaning of technical innovation is the propensity of departments and agencies to rebrand activities through use of innovative language that does not bear out the understanding of or change in practice required. This often occurs in corporate plans, vision statements etc. with little actual change on the ground. Over decades it is not hard to see this rebranding recycle approaches that have not been fully analysed in terms of impact and not recognised in corporate history. In fact, public positions can sway policy decisions based on 'popular opinion'. The question then is how can we show a different way of working that will lead to better outcomes for people through a systems approach that tackles complexity and collaboration across policy and programs through new thinking?

Wide social change in scale and scope

Regardless of current practice, the critical multiple challenges society now faces in time will disrupt and change society in both scale and scope in ways we may not be able to predict. In order to get ahead of the game, we need to organise to collaborate across influential agencies, organisations with authority to demand and support change. Incremental change will not suffice.

Local agents that are organised and ready to take on opportunities will be the early adopters who can demonstrate more quickly benefit to their own communities and other places, building momentum. Partnering with influencers to show what is possible and advocate for change is the gravitas need to change the bigger system.

Panel 6: Global, Local, Methodical, Radical: The Melbourne City Portrait and Other Place-Based Innovations

Regen Melbourne: OUR STORY

Regen Melbourne was born in the dual crisis of the Black Summer fires and the COVID-19 pandemic. A small group of interested organisations and individuals quickly became a larger group and a nine-month community-led research process began. We explored our collective vision for a regenerative Melbourne and included participatory workshops, leadership interviews, roundtables, and countless hours of data analysis. The result was our foundational report, [Towards a Regenerative Melbourne](#), which was released in April 2021.

Our initial work used [Doughnut Economics](#) as a framework and resulted in our co-created vision statement, our goal to move Melbourne into the safe and just space of the Melbourne Doughnut, and a roadmap for collective action.

After two years of initial experimentation and discovery, Regen Melbourne has emerged as a new way of organising. Our purpose is to bring deeply impactful research and projects to life. Together, we are activating our alliance to (reimagine and) remake Melbourne.

THE MOMENT IS NOW

Despite the many strengths of our beautiful city, we are facing a web of social and environmental challenges including climate impacts, housing access, inequality, food security, insecure work, loneliness and declining trust. We can all remember the smoke that covered Melbourne during the Black Summer in early 2020, and the unequal way different parts of this city suffered during the COVID-19 pandemic.

We live in a metacrisis of interconnected challenges.

Systemic problems need systemic solutions. Single actors don't solve systems problems. We need coherent action by alliances of unusual actors, from business, non-profit, government, universities and the general public.

The trouble is that our current system is not built for this type of epic collaboration. We urgently need to break out of our siloes and increase our collective ambition. We need new structures that reactivate and reorganise our system. And we need radically ambitious and tangible projects that chart a collective course to a regenerative and resilient future.

We need new approaches. The moment demands it.

A Small Change in Practice is a Change.

Dr Mary Johnson, RMIT

Place-based decision making

Those involved in farming and natural resource management are concerned with everyday problematic situations. Problem solving approaches are inherently pragmatic and ultimately dependent on local place-based individuals and/or communities to implement. Therefore, how place is perceived and who gets to decide is critical to developing reasoned responses.

Social commentator Eva Cox (1995) noted that civil societies are also civic societies and must take some responsibility for changing what we do not like. Furthermore, civic activity must recognise the importance of connection, goodwill, and trust (social capital) to sustain difference and debate.

This calls for social inclusion approaches that provide opportunities for all to have a say on local priorities. The role of local voices (civil society) is fundamental to the success of a place-based approach and requires local government, business, industry, vested interests and community to identify their local strengths and assets, but also 'park' specific agendas in favour of working collaboratively.

Where tension does exist how can partnerships operate successfully? Part of the answer may lie in the discursive practice of, for example, government extension officers. It is their role to implement policy, initiate and maintain partnerships and explore ways to enable the discourse and dialogue to occur both within and outside the institutional frameworks of government.

With this in mind the Australian Centre for International Agricultural Research (ACIAR) funded Fiji Landcare agriculture extension research project has been supporting alliances between farmers, researchers, extension officers and others to collaborate in a way that is pragmatic, solutions-focused and locally-oriented.

Grassroots innovation – a small change in practice is a change

The origins of the Landcare model can be traced back to Australia in the 1980's. The practice of Landcare is grounded in the physical landscape through a framework that recognizes the legitimate relationship of people with place. Landcare is described as having three elements. First, a philosophy that influences the way people live and work in the landscape; second, a movement of local community action founded on stewardship and volunteerism, and third, a model that is based on knowledge generation, sharing and support mechanisms. The Landcare approach complements existing traditional and customary practices for example Fijian *solosolevaki* coming together for the greater good and the Philippine *bayanihan* the spirit of communal unity.

One of the key measures of success for any agriculture extension project is seeing the adaptation and adoption of agricultural practices and technologies that support farming communities.

Meli Taivei, a Fijian farmer, has been trialling a new innovation he had learned in growing long beans with trellis following his involvement in a study tour to the

Philippines. Meli's previous practice was to allow the bean to creep on the ground, but following his observations in the Philippines, Meli has been growing his beans on a trellis system with significant improvements in production. He now starts his morning harvesting long beans to be bundled for the local municipal market.

As a farmer, participating in the study tour challenged Meli to move away from an approach of '*this is how I've always grown beans*' to a more adaptable mindset of, '*hey, what if I try it this way?*' Consequently, Meli is enjoying a high yield and a more prolonged harvesting.

Using Viber groups, the farmers and project team share and document a growing number of different practices and technologies that have been adapted to a Fijian context following the study exchanges between project sites, in addition to the international travel exchanges. These might appear to be incremental changes but a small change in practice is a change and this increases farmer confidence to go further.

Panel 7: European Union Policy and building alliances to drive climate adaptation

The EU in the Pacific: Challenges and Opportunities in a Shifting Landscape *Mathew Doidge*

The Pacific has a long history of engagement with the European Union as a development donor. The original *Articles of Association* of the Treaty of Rome – the precursor to a formal EU development policy – incorporated the French Pacific territories, including what is now Vanuatu. But the big bang, as far as EU–Pacific relations is concerned, was the accession of the United Kingdom in 1973, and the reimagining of development policy that this entailed. The subsequent Lomé Convention established a framework for EU engagement with a new group – the ACP (African, Caribbean and Pacific grouping of states) – to which the island states of the Pacific were progressively added over the next quarter century, the final tranche being incorporated with the Cotonou Agreement in 2000. And, notwithstanding a change in nomenclature to the Organisation of African, Caribbean and Pacific States (OACPS) at the grouping’s 2019 summit, it is that EU–OACPS structure that has inhered ever since, the 2023 Samoa Agreement being the latest iteration.

From a Pacific perspective, however, it has never been clear that the policies pursued in the EU–OACPS relationship have been entirely appropriate to the needs of the region. In fact, the EU’s approach has routinely been critiqued as being once focused on sub-Saharan Africa – and built around that reality – with the needs or wants of the Pacific Islands very much being an afterthought. So notwithstanding long recognition of the special needs of the Small Island Developing States of the Pacific, the EU approach has largely been to squeeze the region into existing frameworks and priorities, rather than to focus clearly on Pacific needs and interests. It has been a form of benign neglect facilitated by a lack of substantive EU interest in the region, and the comparative lack of weight of the Pacific states in engagement with Europe. This in turn has meant that the Pacific states have themselves been largely unable to shift the parameters of the development relationship in a substantive fashion.

Nevertheless, when considering the role of the European Union as a partner to the Pacific Islands region, it is clear that both the Union’s frameworks for engagement, as well as the broader global landscape, have shifted in recent years, and notably since the launching of the Sustainable Development Goals (SDGs). From the position of 2024, the circumstances in which EU–Pacific relations are now embedded is markedly different than was the case less than a decade ago. This altered context offers both challenges and opportunities for EU–Pacific Islands engagement more broadly, and by extension to any fundamental cooperative action with the European Union within the region to achieve sustainable development outcomes.

EU Funding Frameworks and Priorities

The first notable change is the reframing of the funding structures for the European Union’s external actions – the budget lines under which its engagement with the developing world is paid for. For the OACPS states (through which Pacific Island engagement with the EU is structured), the key element here has been the ‘budgetisation’ of the European Development Fund.

The European Development Fund (EDF), which was first set up under the Treaty of Rome, and which for much of the last 70 years has been the primary funding package through which the EU's role in Pacific Island development has been structured, was a ring-fenced fund set aside for spending on development in the OACPS. It existed outside of the EU budget, meaning that for those states that fell under its umbrella, there was in effect a guaranteed funding stream that existed free of competing budgetary priorities. It was, in effect, almost a form of development patronage. In 2021, a decision was taken to rationalise various external action budget lines into a single instrument: the Neighbourhood Development and Cooperation Instrument – Global Europe (NDICI-GE). This meant an end to the EDF's standalone nature, with it in effect being brought in-house. While positively this meant that those EDF funds were now subject to European Parliamentary political and budgetary oversight from which they had previously been insulated, this change is also potentially significant in that the protective ring-fence has now been removed. There is no longer a guaranteed funding stream for the ACP, and the new instrument is explicitly linked to EU strategic interests and priorities in a way that the EDF wasn't, meaning that it is now easier for funding allocations to be shifted elsewhere to reflect those changing interests and priorities or indeed emergent crises. There are, in short, now potentially competing claims for the limited EU aid pot, with which the Pacific Island states will need to contend. And these allocated budgets are already coming under pressure – 79 per cent of the so-called 'cushion' of funding set aside under the NDICI-GE to address emergencies and crises over the 2021–2027 funding period, for example, had by the end of 2023 been spent addressing just such unforeseen issues (European Commission 2024: 44). While reallocations will not take place in the current package, the lessons of this funding round will necessarily be carried through to the 2028–2034 cycle.

Ukraine Conflict and Aid Diversion

The issue of changing EU priorities also becomes important when the potential diversionary impact of Ukraine is considered. Much of the spending from the financial cushion mentioned above went toward Ukraine, before a separate Ukraine Facility was created. Funding diversion to reflect changing priorities and interests is a significant factor shaping the policies of all development actors. Over the 1990s, for example, we saw a significant decline in development assistance across the board, as funder priorities changed in the aftermath of the Cold War. By the late 1990s, global aid allocations were about one-third lower than at the beginning of that decade.

For the European Union specifically, we saw a significant diversion of funding away from its traditional development partners across the 1990s, and towards its near neighbourhood following the break-up of the Soviet Union. And that EU support for political and economic transitions was strengthened as the Central and Eastern European Countries (CEECs) began to tread the path to membership. In the period from the 1980s to the end of the 1990s, assistance to the CEECs grew from 0.5 per cent of EU aid allocations (ODA + Official Aid) to 36.5 per cent (Greenaway and Milner 2001: 40). Similar aid diversion was also evident during the European migrant crisis from 2015, when rather than being spent on things like the fight against poverty in the developing world, aid was instead spent within the Member States of the EU dealing with refugees (Shriwise and Bruzelius 2017).

With the Ukraine situation, on the assumption that the country survives the conflict intact, estimates of the rebuild cost are currently approaching US\$500 billion (World Bank 2024). Post-conflict allocations to contribute to the rebuilding of Ukraine are a

certainty, particularly as the country was granted candidate status for EU membership in 2022. The extent to which such funding to the near neighbourhood results in declines in funding elsewhere remains to be seen, but if historical trends are an indicator, and allied with the changed funding framework highlighted above, there is a strong likelihood that countries of the global south will be impacted.

Paradigm Shifting: Geopolitics and Intra-European Politics

The second notable change has been the evolving external geopolitical landscape, and particularly that in the Pacific Island space, alongside the shifting internal politics of the European Union. These shifting internal and external configurations of power again have the potential to shape EU–Pacific engagement.

Geopolitical Contestation

Perhaps the clearest pressure point in the EU–Pacific relationship is the increased geopolitical contestation taking place in the Pacific region, centring on the role of China. This is a product of the benign neglect with which the Pacific has been treated by both the EU and the US over recent decades, which has opened space for other actors to make their presence felt.

China has been increasing its aid footprint in the Pacific as a mechanism for increasing its international support, and for supporting its own strategic priorities. This is nothing new in the field of development – this sort of chequebook diplomacy was a defining feature of Cold War geopolitical competition. But a number of headline issues have raised the profile of China’s action in the region in this respect. The first has been the significant increase in China’s aid, notably as part of the Belt and Road Initiative (BRI). Much of this has been in the form of loans rather than grants, raising the question of debt sustainability. And China’s assistance appears to be moving further in this direction, with a decline in flows that can be classed as aid and an increase in those that cannot. China has also eschewed the sort of conditionality that Western aid has tended to favour, a position that has been viewed positively by Pacific governments, and less so by Western donors.

Alongside development assistance has been the issue of China’s increased diplomatic and security footprint in the Pacific. In 2016, following the election of Tsai Ing-wen as President of Taiwan, China ended an eight-year ‘diplomatic truce’ and began to campaign once again to draw states to its side. As a result, in 2019 both Kiribati and the Solomon Islands switched formal diplomatic recognition from Taiwan to China, reducing to three (Marshall Islands, Palau and Tuvalu) the number of Pacific Island states that maintain full diplomatic relations with Taiwan. Most recently have been moves by China to establish an active security presence in the region. The most prominent result in this respect was the signing in April 2022 of a security pact with the Solomon Islands, the first such agreement in the Pacific region. A subsequent proposal for a wider agreement involving security, policing, data cooperation and other matters with the 10 Pacific states with which China has formal ties was, however, rejected by those states at the end of May of the same year.

Nevertheless, this active push by China has raised significant concerns particularly among Western powers, drawing their attention back to the region. This has been embodied in a range of new strategies for defining regional interests (Tarte 2022: 29), centred on the concept of the Indo-Pacific. Thus has been seen the US’s adoption of the Indo-Pacific framing in its 2017 *National Security Strategy* and its 2019 *Free and Open Indo-Pacific Strategy*, Australia’s *Pacific Step-Up* in its 2016 *Defence White Paper* and 2017 *Foreign Policy White Paper*, New Zealand’s 2018 *Pacific Reset*, and

the publication of Indo-Pacific strategies from France in 2019, Germany and the Netherlands in 2020, the European Union in 2021, as well as an ‘Indo-Pacific tilt’ in the United Kingdom’s 2021 *Integrated Defence Review*.

In short, the Pacific Island states now find themselves in the frame of geopolitical contestation, positioned between two competing groups. The extent to which this may be leveraged to increase the Pacific voice in relation, for example, to the European Union, however, depends very much on the emphasis of Indo-Pacific engagement over time. Certainly much of the attention so far has been focused on the northern maritime arc, taking in the key transport routes through the Strait of Malacca and the South China Sea. And indeed this is very much the conception of the German Indo-Pacific Strategy. The French vision is wider, penetrating the South Pacific, largely as a consequence of their territorial possessions which therefore allows them to claim to be an Indo-Pacific power. The EU’s own strategy document takes this broader French conception incorporating the Pacific Islands, though the focus is still very much the northern arc in which ASEAN is seen as central. That said, the increased diplomatic and security gains of China in the region have drawn attention to the south, elevating the significance of the Pacific Island states in a manner that has not been seen for some decades.

Instrumentalisation of EU Policy

Further reflecting the re-emergence of geopolitics and international competition has been the trend within the EU to align its development policies more closely with other strategic priorities – in other words, its instrumentalisation in support of broader external relations goals (see e.g. Furness *et al.* 2020). Intrinsic to this has been the emergence of non-traditional aid donors, changing the aid landscape and creating what has been referred to as an ‘age of choice’ for developing countries (Greenhill, Prizzon and Rogerson 2013). Commercial and geopolitical interests have come to the fore embodied in frameworks like China’s BRI, while the normative frameworks and conditionalities previously favoured by the EU have become a more difficult sell. In this context, we have seen EU development assistance beginning to follow the path trod by newer donors, coming increasingly to be seen as a foreign policy tool, rather than purely as an instrument of solidarity with the developing world. It is one element in a foreign policy toolbox that can be used to achieve the EU’s strategic goals.

The 2016 *European Union Global Strategy* signalled this transition in asserting the need for development policy to be “more flexible and aligned with our strategic priorities” (European Union 2016: 11). Ursula von der Leyen’s comment on assuming office as European Commission President that “My Commission will be a geopolitical Commission” (European Commission 2019) gave further impetus to this transition, with a new Commissioner for International Partnerships (in place of Development) directed to “ensure the European model of development evolves in line with new global realities. It should be strategic and effective... and should contribute to our wider political priorities” (von der Leyen 2019: 4). Stated more starkly, “the Commission seeks to use aid to influence external countries, an approach that has been prompted by China’s and Russia’s own influence strategies” (Haroche 2023: 979).

For the Pacific Island states, the inclusion of EU political and strategic priorities in their regional engagement is likely to be more prominent than has previously been the case. Balancing such interests with development-focused initiatives, with relations with other external powers, and with the Pacific’s own intra-regional priorities, will be an important element in the future relationship.

European Parliament Elections and the Shift Right

Finally, internal political reconfigurations within the EU itself have also contributed to the altered landscape. The rise of populist nationalism within Europe (reflecting broader international trends) has put pressure on political priorities, including commitments to international development and responding to the climate emergency. The European Parliament (EP) elections held on 6–9 June 2024, while not producing the scale of gain for far-right parties that was initially forecast, has nevertheless produced a notable shift in ideological representation. When factoring in the European Conservatives and Reformists (ECR) and Identity and Democracy (ID) groups, along with the seats gained by Germany’s Alternative für Deutschland (AfD, which had been ejected from the ID group shortly before the election for pro-Nazi comments from its lead candidate) and Hungary’s Fidesz, the far-right now holds 156 seats in the 720 seat Parliament. Allied with a strong showing from the centre-right European Peoples’ Party (EPP) on 190 seats, the steady performance of the centre-left Socialists and Democrats (S&D, down 3 seats to 136), and the collapse in support for the liberal Renew group (down 22 seats to 80) and the Greens (down 19 seats to 52), the EP of 2024 looks very different to that of 2019.

This very much reflects political shifts that have taken place at the national level in recent years. Six EU Member States – Italy, Finland, Slovakia, Hungary, Croatia and the Czech Republic – include far-right parties in government, while the Swedish government relies on a confidence and supply agreement with the nationalist Sweden Democrats. The 2023 election in Netherlands saw the far-right Partij voor de Vrijheid (PVV) of Geert Wilders returned as the largest party, soon to form the most right-wing government in recent Dutch history as coalition negotiations near their conclusion.

The policy implications of this shift in the EP (and indeed Europe more broadly) are potentially significant, particularly as the new NDICI-GE financing framework outlined above gives the Parliament greater influence over the goals toward which external funding should be directed. And indeed, the influence of the far-right on policy is already being felt. Most clearly we have seen this in relation to the issue of migration. Already prior to the EP election, the centre-right EPP had begun adopting some of the far-right rhetoric around migration flows as part of its political platform (leading to the tongue-in-cheek declaration by far-right MEPs that EPP group leader Manfred Weber was the ‘poster boy’ for their policies) (Nielsen 2023), while S&D and Renew joined them in voting in favour of stricter border protection measures. While adding strength to this policy perspective within the EP itself, this again reflected trends at the national level, with more centrist parties borrowing migration messaging from the far-right. This strengthening of anti-immigration voices has also been reflected in EU policy positions. Migration is also closely tied to the instrumentalisation of EU development policy outlined above. The EU–Africa Valletta Action Plan of 2015 explicitly linked migration control and development policy. With the establishment of the NDICI-GE financing framework, this instrumentalisation was formalised, with 10% of funding directed toward “supporting management and governance of migration and forced displacement” (s.51). The new EU–OACPS Samoa Agreement further reflects this, with a migration and mobility chapter that, while addressing legal migration pathways and links between diaspora and development, devotes three times as much space and significantly more detail to addressing irregular migration, return and readmission (including devoting one of two annexes to the agreement to outlining return and readmission processes).

Alongside the migration issue, it is likely that the realigned European Parliament will have an impact on green policies and the fight against climate change, including EU

support for such in the developing world. The European Green Deal, a foundation stone of European Commission President Ursula von der Leyen's agenda, and central to the European Union's international climate and biodiversity commitments, had increasingly come under challenge in the EP prior to the election, with the EPP, for example, positioning itself as a champion of farmers and therefore in opposition to aspects of the Green Deal likely to impact this sector. It has consequently pushed back firmly against new rules on pesticides and nature restoration (aimed at reversing the decline of pollinating insects). In the new EP, with the collapse of the Greens and the strengthening of climate-sceptical voices on the far-right, such measures are likely to be watered down further. While the Green Deal itself is likely to stay in place, it will be significantly more difficult in the new Parliament for the Commission to pursue a climate agenda. In terms of external action, in the face of far-right scepticism, it will also be more difficult for the EU to exercise leadership around achieving COP goals on energy transition, in contributing substantively to the Loss and Damage Fund agreed at COP28, and indeed in helping to support mitigation and adaptation measures in the developing world.

Conclusion

As can be seen from the brief outline above, the contours of EU development policy, the landscape within which EU–Pacific engagement is rooted, has undergone significant evolution since the Sustainable Development Goals were adopted in 2015. For the Pacific, this reconfiguration creates new pathways and challenges in the pursuit of sustainable development outcomes. Ideological shifts within Europe, aligned with the increasing instrumentalisation of development policy, pose challenges either to core interests such as the fight against climate change in the Pacific, or will require an understanding that development relations are no-longer solely development focused, but will now involve engagement with Europe in a range of other policy spaces. For the SDGs more broadly, already well-behind track and unlikely to be achieved by the 2030 goal, the increasing presence of climate-scepticism within the institutions of a key actor such as the EU is not helpful. Further, the budgetisation of the European Development Fund, raising the potential for reallocation of limited resources to reflect changing EU strategic priorities, means that funding is no longer as secure as it once was. Should the EU's historic disinterest in the Pacific be maintained, then this new funding framework is potentially a recipe for stagnation or decline in aid to the region.

However, the emerging strategic importance of the Pacific Island space as a consequence of elevated geopolitical competition also creates opportunities. If navigated well, the renewed significance of the region offers the potential for the Pacific Island states to gain greater weight in their engagement with the European Union. If this is achieved, we can expect a push for a reframing of the relationship to better reflect Pacific priorities. This might include a move away from the donor–recipient dynamic that has characterised engagement to date. A more equal partnership has long been advocated by the Pacific states with donors, including the European Union, and this is something to which the EU has long paid lip-service in its development relationships, though the practical reality has been underwhelming. It will also likely include a push to recognise the Pacific states' own goals, including regional capacity building, and also reflecting the priorities being progressively elaborated within the Pacific Islands Forum's '*Blue Pacific*' strategy. Such a strengthened Pacific voice in a key partnership for the achievement of sustainable development outcomes in the region would be a significant step in shaping interventions to suit local needs.

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Panel 8: The SDGs and transforming the EU – policy learning to accelerate place-based change

UN SDG mapping

Circular practices in buildings and construction to achieve the sustainable development goals *under publication by Springer*

For the UN One Planet Network's Sustainable Buildings and Construction Programme

**Part of the UN SDG Mapping chapter has been provided for discussion here
Professor Usha Iyer-Raniga**

1. Built environment and the SDGs

The built environment contributes to our overall carbon impacts. Yet, there has not been a great deal of empirical research undertaken to link the built environment with the SDGs. The property and construction sector have an essential role to play in facilitating and achieving the SDGs. A shift within the industry is needed to ensure widespread achievement. Collaboration is critical and supported by policy and strategies, health, education, economic growth, and mitigative and adaptive measures may be applied globally successfully (BRE n.d.). There needs to be alignment across countries, organisations and at a project level.

Academic research has increased in recent times, however, there are some inherent contradictions. For instance, with the use of advanced building materials there is a contradiction with SDG 1 on no poverty, as costs to use such types of building materials are prohibitive which will make it difficult to involve local labour. If building materials have some form of toxicity, it is also difficult to reuse them, which in turn, has an impact on the manufacturing and use process. These in turn, impact SDG 12 and SDG 3. Indana and Pahlevi (2023) report that there are as many studies on SDGs in wealthy nations as there are in poor nations. The economic and social effects of the SDGs are the main areas of focus amongst the SDGs. This is followed by exploratory and case studies on the application of the SDGs. The theoretical and policy implications of the SDGs need to be considered carefully so they are not contradictory.

2. The SDG mapping process and attendant survey

Nowhere in the 169 targets or its associated indicators are there any mention of circular economy. Despite the apparent lack of connection between the SDGs and circular economy, the principles underpinning sustainability and circular economy are the same: the quest to equally consider social, economic, and environmental imperatives. The circularity aspects in the built environment are well covered in SDG8, SDG9, SDG11, SDG12 and SDG13, and more specifically addressed in SDG3, SDG4, SDG6 and SDG7.

As outlined in the *Transforming our world: the 2030 Agenda for Sustainable Development* (UN 2020), the SDGs, with targets and associated indicators are integrated with each other. They balance the three dimensions of sustainable development across environmental, economic, and social considerations. The 2030 Agenda focuses on *People*, to end poverty and hunger, and live in dignity and equality in a healthy environment. It focuses on *Planet*, to ensure that the planet is protected from degradation for present and future generations. It focuses on *Prosperity*, to ensure that all citizens on the planet lead prosperous lives in harmony with nature. It focuses on *Peace*, to cultivate peaceful, just and inclusive societies. It focuses on *Partnerships*, to ensure that we collaborate to ensure goals of the SDGs are realised.

Circular economy (CE) is also about ensuring that social and technological progress continues without adverse environmental impacts. While there are many definitions of CE, it is about designing out waste, keeping materials and products circulating in the system, optimising resources, providing long lasting solutions so we do not draw on the use of virgin resources and regenerating natural systems. It has also been corroborated in other documents, such as Habitat III, UNEA4 SCP innovative sustainable and consumption practices (UN 2019) and the SDG progress reports (2021, 2022 and 2023).

The SBC programme started planning for the development of a scalable assessment framework for the state of circular economy of the buildings and construction sector at the national level in 2018. There were three reasons to undertake this understanding of circular built environments and to start developing a survey instrument. The first was due to the existence of the SDGs and its time frame to 2030. The 15-year timeframe and in particular, the 10 year horizon left for the application of the SDGs made logical sense when this study was undertaken. The second reason was the development of a reporting scheme for the Paris Agreement where countries were planning their NDCs (COP 21) and the development of NAPs (UNFCCC 2023) (resolution at COP 16, guidelines adopted at COP 17), and links to the Sendai framework. The role of the built environment in GHG emissions creates high impact, particularly in the developing regions of the world. Therefore, an urgent need to ensure building and construction practices are empirically aligned to the SDGs, and the need to ensure principles of the CE underpin this research work. It is essential to 'lock -in' circular practices of planning, design operation and end of life, rather than the current linear trajectory that the developed world has followed to date. The third reason is the fragmented nature of the tools and metrics as it currently exists in reality. Rather than creating something new, the intent was to develop the existing frameworks already available and link these to create a more holistic approach to circular built environments.

This study of the SDGs can be considered to be an explorative study for understanding the drivers and barriers for circularity, both at the SDG goal level, and subsequently at the target and indicator levels. The intent in undertaking this work is not to seek confidence from the survey instrument, rather to use the responses as an investigative starting point for further discussion in mapping the built environment from a circularity perspective with the SDGs. The targets and indicators are provided by the UN, but since these have been reviewed over a period of time, the exact wording may have changed since the deployment of the survey. It must also be noted that yearly progress reviews of the SDGs have brought changes in fine tuning the targets and indicators, so while nuances may change, the essential intent underlining the targets and indicators are essentially consistent.

The state of play reports were produced by the SBC programme as indicated in the other paper: *Linking place-based initiatives with global challenges*. Based on the literature and specifically those covering the SDGs, from the total 247 indicators of the SDGs, 58 indicators (UN 2023) were identified by the SBC programme team for respondents to choose from for the survey. A survey was deployed from May 2020 to determine if these indicators resonated with the SBC programme's network

partners and experts. The survey was kept open for a year beyond the timeline of the SBC programme launch of these reports. The survey undertaken was done at two levels: at the level of the overall goal and then a more detailed set of indicators across the various targets and indicators. These are presented in more details with attendant analysis in the following section. The indicators were then examined against each of the regional reports to understand in order of importance, first and second level indicators to determine the urgency in these regions to chart a way forward. The survey respondents were from various regions but were skewed to developed countries. While this gave an overall signal of which are the indicators particular to the built environment, it did not provide an understanding of the regional variations in climate, building and construction materials used, skills, use of technology, digitalisation and so on.

To counteract this and to ensure capture of regional nuances, in addition to the global survey, workshops across Africa, Asia and Latin America were undertaken with local experts prior to the launch of the state of play reports undertaken by the authors for the global report. Ethics approval was obtained. The workshops were undertaken at convenient time zones for each of the participants. Each of the workshops lasted at least an hour with some going up to 75 minutes. Workshops followed a consistent format where the authors of this report presented the background and the context, followed by regional author presentations. Then, themed discussions took place with online questions and real time responses that supported rich discussions in the regions and where appropriate, across regions. While the overall number of workshop participants in each region were not high due to issues associated with the pandemic; nevertheless, productive discussions resulted.

Three virtual circular built environment workshops were organized in 2020: 15th October in Africa, 19th October in Latin America and 28th October in Asia. The participants were first introduced to the main findings from the State of Play of Circular Built Environment reports in Africa (Gibberd 2020), Latin America (Moreno 2020) and Asia (Niazi et al 2020). The Oceania state of play report was used to compare the findings of the survey for the Australian respondents (Iyer-Raniga 2020). The SDGs and indicator survey results were shared, discussed, and prioritized in each regional workshop. Since the number of responses from each region remained rather low, no direct conclusions could be drawn from the survey results. However, it formed the basis for facilitated discussions in each of the regional workshops and provided regional insights.

Some of the results were presented in papers (Iyer-Raniga and Huovila, 2022) focusing on the Global South. This chapter presents the findings from the full survey (N=185).

3. Mapping results and analysis

Complete responses from the survey over the 2020-22 period were further analysed to understand the priorities for different regions and variations in the SDG indicators. The total number of responses were 185 (N=185). As indicated in the previous section, the analysis was undertaken at two levels: the SDG level and the indicator

level. Each of these were then further analysed based on the regional variations; it made logical sense to group these individually. At the SDG level, since the numbers of responses from Asia, Africa and Latin America was a smaller proportion of the overall response, it was reasonable to assess this at an overall goal level only. Exploratory analysis at the indicator level was undertaken across the individual regions and this was supplemented by focus group workshops to validate the survey results as mentioned.

3.1 Goal level

At the overall goal level, it was not surprising to see that the SDGs related to the built environment were rated highly by the participants. The two levels of analysis took place at the overall global level and then across the Global North (comprising EU and Australia) and the Global South (comprising Africa, Asia and Latin America). The responses are presented in Table 3.1 below.

Table 3.1 SDG responses at goal level: global

Sustainable Development Goals	ALL [N=185]
SDG 11 Resilient and Sustainable Cities	78%
SDG 12 Sustainable Consumption and	76%
SDG 13 Climate Change	72%
SDG 9 Sustainable Industrialization	63%
SDG 7 Access to Energy	50%
SDG 6 Water and Sanitation	46%
SDG 8 Economic Growth and Productive	45%
SDG 3 Health and Well-being	36%
SDG 17 Global Partnerships	34%

SDG 11 targets sustainable cities, while SDG 12 is all about responsible consumption and production. The importance of climate change has been highlighted as being more important than industrialisation, with energy, water and economic growth coming at the lower levels of ranking. Health and partnerships represented just a third of the responses, clearly, they do not directly impact the built environment. Further details are provided in Table 3.2 below.

Table 3.2 SDG responses at the goal level: Global and North

Sustainable Development Goals	ALL [N=185]	North [N=88] (EU n=57)
SDG 11 Resilient and Sustainable Cities	78%	84%
SDG 12 Sustainable Consumption and	76%	80%
SDG 13 Climate Change	72%	78%
SDG 9 Sustainable Industrialization	63%	65%
SDG 8 Economic Growth and Productive	45%	48%
SDG 7 Access to Energy	50%	45%
SDG 6 Water and Sanitation	46%	36%
SDG 17 Global Partnerships	34%	36%
SDG 3 Health and Well-being	36%	32%

For the Global North, the results are aligned to that of the global responses, except for SDG 8 on economic growth that was ranked higher as well as SDG 17 on Partnerships. See Table 3.3 below.

Table 3.3 SDG responses at the Goal level - Global and Global South

Sustainable Development Goals	ALL [N=18 5]	South [N=97] (Africa Asia)
SDG 12 Sustainable Consumption and	76%	73%
SDG 11 Resilient and Sustainable Cities	78%	72%
SDG 13 Climate Change	72%	67%
SDG 9 Sustainable Industrialization	63%	62%
SDG 7 Access to Energy	50%	55%
SDG 6 Water and Sanitation	46%	55%
SDG 8 Economic Growth and Productive	45%	42%
SDG 3 Health and Well-being	36%	40%
SDG 17 Global Partnerships	34%	32%

When comparing the Global set of responses with the Global South, SDG 12 on responsible sustainable consumption and production ranked the highest instead of SDG 11 on resilient and sustainable cities. The rest followed the same rankings in importance as that of the Global.

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Sustainability Victoria: Its Key Strategic Priorities

Tony Luo, Sustainability Victoria

Build the case for circularity in Victoria

Speaking the same language and being clear on measures of circular success.

Outcomes to achieve

Key decision makers know what a circular economy is, and how it can effectively address the triple planetary crisis of climate, nature, and pollution.

Key decision makers in industry and government are supported by circular economy baselines, data and measures showing where impacts can be made and the benefits that going circular provides Victoria.

Clear plans of action are available for shifting key systems and sectors and for jobs and skills to be more circular – and they identify the critical gaps to be addressed

Close the loop between recycling, design and manufacturing

Catalyse investment and innovation in circularity for business and industry.

Outcomes to achieve

Across critical materials and priority sectors, Victorian businesses are collaborating and sharing knowledge to build bigger systemic impacts and working with each other.

Victorian markets are growing because of matchmaking across supply chains and feedstocks; funding opportunities with the right ideas; and between technology and industry.

Key activities to deliver

Grow markets and match-make across supply chains and feedstocks, and from funding and technology to ideas and industry.

Provide product-to-market support for products using recycled and recovered materials.

Partner with businesses to trial and de-risk ideas - providing resources, information, training and events so businesses connect and learn from each other.

Leverage government procurement processes to drive market uptake.

Provide advice to support product stewardship and extended producer responsibility initiatives.

Use partners and place-based organisations to show others what is possible – where it works now, increase the profile of circularity and build new norms.

Drive the uptake of key circular behaviours in our communities

Work at the intersection of people, place, and policy to drive community uptake of key circular initiatives and actions.

Outcomes to achieve

Victorians know how to be more circular in their daily lives and are taking up the behaviours and opportunities available to them.

Circular practices are becoming more visible to Victorians – being integrated into high profile places and events.

Victorian councils are demonstrating their support for a circular economy by procuring circular materials, goods and services.