THE YIDINJI PROPOSITION

earoph

INTRODUCTION

The Yidinji Declaration was developed at a workshop on Yidinji lands in Far North Queensland, Australia, in April 2023, focussing on the principles for achieving climate justice for Australian First Nations and Indigenous Pacific Islander communities. It was subsequently promoted to a broader audience in the Asia Pacific Region and globally, receiving considerable support. The Declaration document and associated video are available for further dissemination.

A workshop and subsequent webinar were held in June 2024 to build on the Declaration in identifying effective mechanisms for achieving climate justice within Australia and the Pacific Region, with potential applications globally. This includes proposing how a global Loss and Damages framework might operate to address the adverse impacts of climate change being experienced by First Nations communities and Pacific Islanders. These outcomes have now been further developed by a working party to arrive at the current Yidinji Proposition, which was presented to the 2024 World Urban Forum in Cairo and COP29 in Azerbaijan.

The Yidinji Proposition focuses on the crises faced by communities throughout the Blue Pacific Continent, including Indigenous communities in Australia and New Zealand. It is recognised that a response is needed to the impact of climate change in the context of the existential trifecta threats of Climate–Waste–Biodiversity[1] and as articulated by the *Planetary Boundaries*[2] framework which recently found that in 2024 humanity has now 'crossed' seven of the 'safe operating' boundaries.

In July 2024 the United Nations Special Rapporteur on Climate Justice suggested the four pillars for responding to climate damage (including damage to cultural resources) as Adaptation, Remediation, Mitigation and Transformation. These are recognised in the following propositions.

THE YIDINJI PROPOSITION FOR CLIMATE JUSTICE IN THE PACIFIC REGION (INCLUDING AUSTRALIA) CONSISTS OF THE FOLLOWING PARTS.

PROPOSITION FRAMEWORK – a Pacific–Australia Approach
Proposition 1: Fully Realised Local Communities
Proposition 2: Enabling Adaptation
Proposition 3: Enabling Remediation
Proposition 4: Enabling Mitigation
Proposition 5: Enabling Transformation

YIDINJI PROPOSITION SUMMARY
Case Study 1: Implementation within a Pacific Atoll Island Community
Case Study 2: Implementation within a Pacific Volcanic Island Community
Case Study 3: Implementation within an Australian Aboriginal Community
Case Study 4: Implementation within an Australian Torres Strait Island Community

EAROPH Australia pays respects to the Traditional Custodians of the beautiful Country on which our events have been hosted. We acknowledge the Djabugay Nation represented by Djabugay, Yirrikandji, Bulwai, Nyakali and Guluy Traditional Custodians. We are also grateful to the following sponsors who supported this work: Climate Action Network Australia (CANA), Reef and Rainforest Research Centre, Mirabou Energy, James Cook University/Cairns Institute, Deakin University, Keemin Energy, Susmet (sustainable engineering), Rainbow Bee Eater (biochar manufacture), ANZ Biochar Industry Group, South Pole (carbon trading), Choice Homes, Murphy Tax Lawyers and Associates, McCullough Robertson (legal advocacy) and Social Outcome Solutions. We acknowledge the significant additional support provided by the EAROPH International leadership and secretariat.

[1] *as articulated at the Clean Pacific Round Table 2024*

[2] *Richardson, J., Steffen W., Lucht, W., Bendtsen, J., Cornell, S.E., et.al. 2023. Earth beyond six of nine Planetary Boundaries and https://www.stockholmresilience.org/research/planetary-boundaries.html*

PROPOSITION FRAMEWORK:

A PACIFIC–AUSTRALIA APPROACH

The objective of the Yidinji Proposition is to provide decision makers with evidence to support practical and financial action to address Climate Justice in the Pacific and First Nations communities that are negatively impacted by climate change. The principles under which the Yidinji Propositions are formulated are separately documented in the Yidinji Declaration and are summarised as follows.

1. Place cultural knowledge, cultural sovereignty and the rights of Mother Earth at the centre of climate mitigation and adaptation through ensuring Indigenous people are decision makers and enact decisions with authority to implement solutions.

2. Protect cultural knowledge systems as a vital resource for future generations in addressing climate change, also recognising the embodiment of knowledge within Indigenous languages and the need to protect language as a knowledge resource.

3. Ensure that those who are most affected by climate impacts but who contribute least to causing increases in greenhouse gas emissions and pollution are supported in leading the design and implementation of appropriate local solutions, and provided with the necessary resources for effective outcomes.

4. Support Indigenous and non–Indigenous people in drawing on their cultural knowledge and experience to educate the wider community, mainstream their understanding of Mother Earth, and change the focus of decision making towards healing land and sea country which also must explicitly codify the present role played by Indigenous and Non–Indigenous women in linking cultural practice with practical action.

5. Empower Indigenous and non–Indigenous young people to respect and maintain cultural knowledge, applying this in their roles as future leaders of change.

6. All communities, educators and scientists must be made aware of how mobilising Indigenous knowledge to heal land and sea country can be of direct economic benefit to the whole community.

7. Co–designed systems for managing land and sea country must be developed to prioritise regenerative social, environmental, cultural and economic benefits for the whole community over profits for sections of the community.

8. Strong Indigenous–led coalitions amongst individuals and communities, including businesses, can establish personal and collective responsibility for reducing their carbon footprint and treading lightly on Mother Earth.

9. The marine territories established in relation to coastal delineations must be retained by customary/ traditional owners and national governments even after coastal recession or loss of island landforms.

The Yidinji Proposition asserts that communities suffering the most adverse effects of climate change should be represented in decision making by UN and sovereign country agencies in addressing Climate Justice, and should be partners in design of policy response, identifying evidence of impact and need, and delivery of solutions. Not only are these communities most keenly aware of how climate change is affecting them, but they are also the holders of traditional knowledge that can help to inform successful action.

Pending agreement on a global framework for addressing the needs of the most vulnerable countries, it is proposed that an Australia–Pacific framework be established (with possible additional participation by New Zealand) to pilot implementation in a way that can contribute from experience to the development of the global framework.

YIDINJI PROPOSITION 1:

FULLY REALISED LOCAL COMMUNITIES

The number one challenge in configuring resource distribution to enable an effective response to the impacts of climate change is how to get the resources to local communities where the response is needed most. In many cases achieving effective local action requires ensuring that available resources are channelled through a pathway for enabling local communities to take action. There are several blockages that are evident.

- Existing global funding mechanisms prioritise mega-projects and have highly complex application processes. This means that even at the national level, the governments of Small Island Developing States have are often unable to access these funds. Applications that are made commonly require participation of international institutions which can put together the applications. These institutions then require active project management and liaison which substantially reduces the proportion of the funds being made available to local communities.

- Donor agencies have similar practices for most of their large funding programs, and often require involvement of consultants from the funding country, even where they have little familiarity with the recipient communities. It is common for the proportion of funding reaching the people who can take effective action to be a small proportion of the allocated program funding.

- Where funding access is successful, funds are often channelled to national governments where there is limited capacity to manage the allocations to local communities. Cash strapped national government agencies may understandably choose to maintain control of these funds, with priorities for allocation determined by agency priorities that are not necessarily informed by local needs. National governments and the regional expert networks that advise them commonly prioritise projects requiring major one off capital expenditure (often with significant asset management liability) rather than projects that invest in local low-cost solutions implemented incrementally over time.

- Part of the hesitancy about allocating funds directly to local agencies is that there is a lack of confidence in their capacity for funds administration and local implementation. While there are local governments operational in some but not all Pacific Island countries, they have a limited range of functions and human resources. Customary governance structures often have significant authority but in most countries these are not part of the formalised government structure.

The Yidinji Proposition calls for an enabling mechanism to be supported in each country, that can work alongside national government to fill the gaps in local skills, while steadily building the capacity for localised project control. A potential model can be seen in the way some international organisations act as an embedded agency within national governments in seeking localised capacity building for project implementation. Some national NGOs may also have a potential to provide this role.

The Yidinji Proposition also calls for global funders and international donors to facilitate better access to resources for smaller scale localised projects. It would be appropriate for a performance test to be applied to any funded program involving at least 75% of funding being spent within the local recipient area rather than on international intermediaries, advisers and consultants, and for an asset management affordability test to be applied to any capital expenditure.

The following method is recommended for calculating the resource requirements for climate adaptation.

- Putting local communities at the centre of the entire process including the full realisation of Indigenous peoples role as per the Yidinji Declaration objectives
- For essential services and net zero emission infrastructure and assets, standard engineering studies are needed to meet the adaptation and mitigation objectives and to establish the capital investment and lifecycle operating costs required to manage the climate change assets sustainably
- For community and personal assets, including adjustment to incomes, the use of human capital costing models could be used as applied by insurance companies.

As wealthy countries provide financing / funding for adaptation and mitigation, this must be supported by local solutions leading:

- governance arrangements
- management and delivery arrangements
- agreement on detailed standards for quality, reliability and sustainability of the infrastructure and climate change assets
- a detailed implementation plan for infrastructure and climate change assets
- post commissioning evaluation to confirm infrastructure and climate change assets are fit for purpose to achieve the adaptation and mitigation outcomes for the heavily impacted countries and communities.

Multi-year commitments are essential to facilitate planning and orderly implementation including development of local capabilities, particularly for local Indigenous practitioners. Delivery should be subject to a range of performance indicators that encourage transparency, learning and progress.

YIDINJI PROPOSITION 2:

ENABLING ADAPTATION

Despite the existential challenges, there are ways in which many local communities can improve their resilience to the adverse impacts of climate change, if the required resources are channelled to local governance bodies. It may not be possible to protect everything everywhere, but at least these adaptations may enable the impacts to be moderated.

The Yidinji Proposition calls for mobilisation of existing global and donor funding mechanisms to address climate adaptation, but with much better localised access to this funding. National governments can support local communities in planning and cost effective local action in the areas of coastal protection, marine ecosystem protection, water and food security, housing and infrastructure protection, flood protection, waste management and disaster response. Local plans should budget for:

- movement or strengthening of existing essential infrastructure
- creation of new essential infrastructure
- movement of community and personal infrastructure and assets
- promotion of community safety
- establishing ongoing food and water security.

The Pacific Resiliency Fund (PRF), to which Australia has committed $AUD100m, is one of the funding sources that can be directed to climate adaptation. However the available funding from this and other programs needs to be far greater. It is also noted that the PRF includes both funding for disaster recovery from weather events (discussed under Proposition 3) as well as for investments in adapting essential infrastructure.

COASTAL PROTECTION: this often involves creation of new infrastructure, in the form of seawall construction, mangrove planting, and reinforcement of fringing reefs. There are emerging best practices for building seawalls so that they absorb rather than deflect wave energy, for replanting mangroves so that they stand a good chance of survival, and for maintaining coral growth on the reefs. There are also pilot projects in parts of the Pacific for decontaminating motor vehicles and boats so that they can be sunk as artificial reefs. This work may be top priority for the communities that are most vulnerable to coastal erosion and tidal flooding.

MARINE ECOSYSTEMS: monitoring changes and recording them will assist in planning for remediation (eg shifting marine habitat, declining harvest of particular species, coral bleaching/recovery). Establishment of local marine protected areas for community management can help in restoring shellfish populations, and act as nurseries for other marine species, in a situation where natural habitats have been threatened by climate change and/or over harvesting.

WATER SECURITY: in low lying areas, water supplies reliant on groundwater or river water may need to be regularly tested. Water from desalination or rainwater harvesting may need to be prioritized for drinking and food preparation, as well as washing people. All households need access to good quality water, and if this is in short supply some supplementary low quality resources may be needed for irrigating food production areas. Use of compost and biochar in food gardens will increase soil moisture retention and reduce water demands.

FOOD SECURITY: pigs and poultry can survive on slightly salty water, but may need shelter in increasingly hot conditions. Climate adaptation for plants includes use of raised beds, soil amendment using compost and biochar, composting beach–cast seaweed (which is increasing as a result of climate change and urban pollution), use of salt/climate tolerant plant species, and use of marine vegetables such as seagrapes. Maintaining a diversity of plant types will also provide a buffer against weather patterns that could adversely affect particular crops. Establishing nurseries and fresh produce markets will assist local households in gaining a living from food production, and maintaining the food security of the whole community. Controlling invasive weeds and pests will be increasingly important to maintain environmental health and biodiversity, removing the threat to food trees and beneficial insects.

HOUSING: much of the existing housing stock offers poor resistance to storms. Improved construction could be promoted by adaptation of the shelter guides developed for use in Fiji and the Solomon Islands, and incentives for those involved in building to be trained in the relevant practices. Note that the building codes being introduced in Pacific island countries are often not appropriate for self–built housing, which is often the norm.

FLOOD PROTECTION: increased flooding can come from inland rainfall events as well as the increased incidence of tidal flooding. Local communities need support in mapping flood liable areas to help decision making about where to locate (or invest in) housing and infrastructure, often involving movement of essential infrastructure. Flood protection measures can include raising land and raising floor levels in houses, with temporary barriers (eg sandbags) often preferred to fixed flood barriers to avoid trapping water so it takes longer to drain away. Flooding of poorly constructed septic tanks results in a significant health hazard to local communities and appropriate remediation could include construction of artificial wetland areas as a replacement. These can be vegetated with plants that can be regularly harvested to promoting ongoing growth and nutrient absorption.

WASTE MANAGEMENT: littering should be discouraged eg with local bylaws and penalties and community policing, so that drains and natural watercourses are not blocked, exacerbating flooding, and so that wastes are not washed into the sea. Separation and composting of organic wastes will reduce the waste burden and provide a valuable input to food production, also reducing greenhouse gas emissions.

DISASTER PREPAREDNESS: early warning and response strategies including local communications should be established within each local community/village area. In addition, a building within each village should be designated as an emergency shelter – this needs to be fully enclosed and raised above flood levels.

PROPOSITION 3:

ENABLING REMEDIATION

LOSS AND DAMAGES INSURANCE FUND

There is agreement under the Paris Agreement that a global fund for addressing Loss and Damages should be established. The reporting system established for countries under the terms of the Paris Agreement should provide the basis for calculating the appropriate contributions to be made by carbon polluting countries (identified in Annexe 1 of the Paris Agreement) towards a fund for remediating climate impacts on the most vulnerable countries that are not major carbon emitters. This requires a price to be set per tonne of CO2e emitted net on a yearly basis. It would be logical for this to be aligned with the carbon price established for sale of carbon credits, which needs a global standard.

For the initial establishment of the fund it is proposed that the contribution should reflect the net emissions made over the previous five years. Annual contributions from that point on would reflect changing levels of emissions, providing added incentives to the polluting countries for emissions reduction. However it is recognised that it may take time for agreement to be reached on the appropriate level of contributions.

The Yidinji Proposition calls for a pilot for the fund be established for the Pacific Blue Continent focussing on the emissions from Australia and New Zealand, based on a modest levy of AUD$25 per tonne CO2e, to be adjusted later when the global arrangements are finalised. The funding pool could be established over five years with Australia contributing $4B per year and New Zealand contributing $800M per year. These contributions should be deducted from any greater obligations established through the global agreements that are to be negotiated.

While these are large sums, they should be seen in the context of the proposed $100B per year fossil fuel tax proposed for tackling emissions reduction within Australia[3]. However the sums are large enough to make a start and establish a funding flow that can contribute to localised climate action in the Pacific.

While these funds would demonstrate mechanisms for a just redistribution of resources from major polluting countries to more vulnerable countries, it is also appropriate to ensure that there is funding distribution to vulnerable communities within countries, particularly providing resources for heavily impacted First Nations Indigenous communities. **The Yidinji Proposition calls for the Australian and New Zealand Governments each to set aside an initial AUD$500M for addressing remediation within their own most vulnerable First Nations communities, with an additional annual contribution based on assessed needs.**

The Yidinji Proposition calls for remediation to be applied to physical loss by way of a regional insurance scheme, compensating for damage caused by asymmetric weather driven events or progressive loss of habitable coastal land.

Asymmetric weather events can be defined as those events which are infrequent in occurrence but have significant value impacts, for example Category 4 and above cyclones. Loss of habitable coastal land can be defined as previously inhabited land that has to be evacuated due to rising sea level or increasing frequency of tidal flooding, using agreed parameters. Given the level of threats faced by vulnerable communities, insurance is no longer available through conventional means. There are several similar insurance schemes in operation which could be used to guide the design and implementation of the asymmetric weather events insurance fund.

[3]https://theconversation.com/ross-garnaut-and-rod-sims-have-proposed-a-100-billion-a-year-fossil-fuel-tax-and-its-a-debate-australia-should-embrace-223722

The heavily impacted countries and communities experiencing these asymmetric weather events face the real economic and financial costs of:

- disaster recovery, security and safety of people and property
- repair, refurbishment and complete replacement of damaged essential services infrastructure, community infrastructure and personal assets
- loss of lives and injuries.

It should be noted that many countries have existing systems in place for placing a financial value on loss of assets including buildings, fences, food trees, livestock and the like. A standardised system for compensating for damage to life and limb can make reference to insurance schemes established elsewhere.

The Yidinji Proposition suggests a possible framework for a loss and damages insurance fund would be:

a. participating national governments to agree to be voluntary members of the asymmetric weather events insurance fund

b. Australia and New Zealand to provide annual funds to the insurance fund as determined by reference to the level of carbon emissions of each country

c. impacted countries and communities to make claims against the insurance fund when impacted by asymmetric weather events or climate induced displacement for implementing remedial work – the beneficiary pool of countries and communities to include eligible (vulnerable) First Nations Indigenous communities in Australia and New Zealand

d. the insurance scheme to provide a one-off payment when there is an asymmetric weather event or displacement based on an insurance assessors review of total costs to restore the heavily impacted country and or community, and

e. information on infrastructure, community and personal assets and the claims made to be maintained to inform further development of the scheme.

There would need to be an initial one-off up-front contribution by Australia and New Zealand as described above. Both of these countries could augment the funds by providing tax credits to its citizens who make direct donations either one-off or as an annual premium. Ongoing annual premiums would need to be set at a level that provides sufficient funds to the insurance fund to make it sustainable.

ADDRESSING INTANGIBLE LOSS

It is also important for wealthy countries to provide financial resources to heavily impacted countries and communities for addressing intangible loss and damage, including cultural loss, loss of community and mental wellbeing. This requires a different approach. Available resources could be applied to cultural recording and keeping places, maintaining cultural and community networks, and provision of mental health support, as examples.

Given the lack of mechanisms for placing a value on these categories of loss, the Yidinji Proposition calls for an initial provision is made for an additional 50% of the claim for physical loss and damages to be made available to affected communities that face displacement or loss of cultural assets, to be allocated on the basis of a community-driven plan and budget.

SEEKING LEGAL REMEDIES

Legal professionals are already involved in applying mechanisms that exist through national or international law, and are seeking to establish new precedents. It is highly desirable that consistent mechanisms be established that avoid the high public and private costs that would be incurred by vulnerable communities relying on legal redress, and that prevent establishment of legal precedents outside the global framework.

YIDINJI PROPOSITION 4:

ENABLING MITIGATION

Pacific and First Nation's communities contribute relatively little to global emissions. However mitigation of their own emissions is important for financial as well as political reasons. The recent UN Rapporteur's mitigation definition is as follows.

"19. Mitigation entails reducing the causes of climate change by decreasing greenhouse gas emissions into the atmosphere and/or removing such gases from the atmosphere, including through carbon sinks. Mitigation strategies include phasing out fossil fuels, ending fossil fuel expansion, enhancing energy efficiency, reducing food waste, transiting towards sustainable food systems, conserving and restoring nature and building new carbon-neutral houses." [4]

The Yidinji proposition calls for mitigation support for Pacific and Australian First Nations communities by:

A. Phasing out fossil fuels used in electricity and transportation

B. Implementing energy efficiency

C. Reducing or recycling waste

D. Carbon sequestration in forest or marine environments.

PHASING OUT FOSSIL FUELS USED IN ELECTRICITY AND TRANSPORTATION

Based on project work undertaken by Yidinji partners, Mirabou Energy [5], the estimated funding required to support mitigation for negatively impacted communities in the South Pacific (excluding Australia and New Zealand) lies between $AUD170 billion and $AUD230 billion. The investment required for Australian First Nation communities in remote locations lies between $AUD5 billion and $AUD7 billion. However this investment need not rely on public funding alone.

Generally, power generation and electricity network assets are developed in such a way that the final capital structure includes at least 20% equity with the balance funded by way of debt finance, which can incorporate concessional finance (for example in Australia from the Australian Renewable Energy Agency), environmental sustainability linked finance, and grants. Additionally, for power generation development the pre-feasibility development including technical and commercial design generally is budgeted at around 10% of the total capital costs of commissioned asset.

The Yidinji Proposition calls for an industry approach to power generation / electricity network to seek the following funding support:

1. A commitment of up to $AUD1.2 billion over the next three years to undertake pre-feasibility technical and commercial assessments of mitigation electricity supply assets recognising:

a. Group 1 Country affected climate change communities (PNG, Fiji, Solomon Islands, Micronesia, Vanuatu, Samoa, Kiribati, Tonga, Marshall Islands, Palau, Nauru, Tuvalu) of $AUD550 million

b. Group 2 Pacific affected climate change community members of other Countries (New Caledonia-France, French Polynesia-France, Guam-USA, American Samoa-USA, Northern Mariana Islands-USA, Cook Islands-NZ, Wallis and Futuna-France, Tolelau-NZ, and Niue-NZ) of $AUD550 million

c. Group 3 Australian affected climate change First Nations communities of $AUD100 million.

[4]UN – General Assembly (17 July 2024): Report of the Special Rapporteur on the right to development, Surya Deva – Climate Justice: loss and damage, page 6.

[5]Mirabou Energy.

2. Oceania countries and First Nations communities utilise the UN COP framework to establish an Oceania CO2 emissions reduction certificate scheme as the basis for funding the equity component of the integrated energy solutions determined through technical and commercial pre-feasibility considering:

   a. A legal obligation for non-impacted countries to acquire / procure eligible certificates reflecting the reduction in CO2 emissions in the affected climate change impacted countries and communities

   b. Eligible projects would qualify to create certificates, ie similar process as per Australia's Large Renewable Energy Target (LRET) Scheme

   c. Ensure transferability of the certificates

   d. Requirement for a penalty payment by liable parties where certificates are not submitted

   e. Minimum penalty payment equivalent of $AUD120 per CO2 tonne emissions.

3. Concessional and private debt funding through UN COP led arrangements supported by Country Reserve Banks or equivalent as the basis to provide the necessary debt funding for projects. The arrangements would need to consider best means for collateralisation of the debt and repayments against the integrated renewable energy assets and liability associated with the penalty regime for CO2 emission reduction certificates.

Mitigating CO2 emissions for negatively affected climate change communities from transportation is more challenging for Pacific and First Nation communities. Factors contributing to the challenge of reducing transport emissions include:

- the region's significant dependence on aviation and maritime transport for passenger and freight connectivity between the Pacific and First Nation communities and the rest of the region and world
- limited technology innovation to replace aviation and maritime fossil fuels, and
- limited progress in research and development and policy formulation on the design of transport CO2 emissions reduction scheme.

The Yidinji Proposition calls on the Australian and NZ governments to establish funding specifically for addressing the above factors in reducing Pacific and First Nation communities transport CO2 emissions. There are various options available include waste-to-biodiesel technologies (discussed below).

IMPLEMENTING ENERGY EFFICIENCY

The UN recognises energy efficiency as a critical contributor to climate change mitigation, where energy efficiency means the use of technology, designs and processes which use less energy while providing the same or better output. The UN Environment Programme (UNEP) and United for Efficiency (U4E) found that energy efficiency in electrical products, such as lighting, appliances and equipment can save consumers and businesses $USD130 billion annually by 2040 mainly through reduced electricity bills[6]. UN COP28 pledged to double the gains from energy efficiency from 2% to 4% per annum until 2030[7].

The Yidinji Proposition calls for the following actions for UN and signatory countries to the UNCOP28 global renewables and energy efficiency pledge:

i. development of Pacific regional energy efficiency standards and rating systems for lighting, appliances and equipment for consumer and business use

ii. agreement between country product licensing and standard agencies and manufacturers to establish Pacific regional efficiency standards

iii. use of country level concessions on taxes, rates and equivalent on lighting, appliances and equipment products that meet the Pacific regional efficiency standards

iv. requiring compliance with these standards in international aid programs.

[6] *https://www.unep.org/topics/energy/energy-efficiency/about-energy-efficiency*

[7] *https://www.cop28.com/en/global-renewables-and-energy-efficiency-pledge#:~:text=Noting%20that%20the%20International%20Energy,efficiency%20improvements%20from%20around%202*

REDUCING OR RECYCLING WASTE

Data on waste production across the Pacific is improving with support from the South Pacific Regional Environment Program (SPREP). Generally around half of all wastes are organic, which can be a significant source of greenhouse gas emissions if left to decompose. There are possibilities for processing into compost or biochar that can be used as a soil amendment (see Proposition 3), and some jurisdictions are active in this area. Support is needed to ensure that these opportunities are maximised, working towards total diversion of organic wastes from landfill.

Some other wastes can be recycled locally or otherwise returned to manufacturers for recycling. For residual wastes including legacy wastes stored in landfill, there are emerging small scale technologies that can convert these wastes to energy (electricity or biodiesel) which would reduce dependence on fossil fuels including the energy involved in shipping liquid fuels. However there are many pitfalls that could arise from selecting technologies that are not well tested or otherwise fit for purpose, for example adopting a similar approach to technology development to that used by the Australian Renewable Energy Agency (ARENA).

Some technology providers are willing to fund the capital costs of introducing these technologies in return for a guaranteed return from sale of product, and the business case for this model can be very attractive. However there is sometimes a lack of confidence about payments from small country governments which are already burdened by debt.

The Yidinji Proposition calls on donor agencies to agree on a system for underwriting the returns from sale of product from approved W2E technologies, with possibilities for recovering any non-payment through their own program arrangements. It also calls for a technical advisory system to be established to advise national and local governments on the viability of particular technologies before they are introduced.

CARBON SEQUESTRATION

The current systems for trading in carbon credits to incentivise carbon sequestration is not satisfactory. Appropriate requirements would include the following.

- A standardized global system as proposed by the UN, possibly administered by the World Bank or aligned regional finance bodies (for the Pacific and Australia the Asian Development Bank) with a global price for carbon established and reviewed in line with global performance in reducing emissions
- A system that is fully captured in individual country reporting in relation to the Paris Agreement, that also avoids double counting through private carbon trading agreements
- A validation system that ensures that claims are realised and performance maintained
- A system that incentivises local communities to take action that has co-benefits in terms of local wellbeing, and avoids adverse local outcomes, with the value of credits being fully realised by local actors.

The Blue Continent has enormous potential to make a significant contribution to carbon sequestration in ways that have local co-benefits. Examples are:

- farming edible seaweeds can achieve 20–30 times as much sequestration per hectare compared with terrestrial afforestation, with a co-benefit of replacing land based food systems that are declining as a result of climate change
- planting of seagrass and mangroves also achieve high rates of sequestration with co-benefits in coastal protection and restoration of habitat for a range of seafood species
- processing organic wastes into compost and biochar not only reduces the methane emissions from decomposing wastes, but also ensures long term stabilisation of carbon if used as a soil amendment; co-benefits are reduced waste management costs (financial and environmental) and improved local food production from soils that are becoming saline.

Reform of carbon trading to incentivise preservation of forests on volcanic islands in the Pacific needs to be carried out. While incentivisation of local communities to protect their forests is highly desirable, distortion of outcomes by commercial interests can undermine trust in the system.

The Yidinji Proposition calls on the UNCOP to work with Pacific Island states, as well as Australian and New Zealand First Nations communities to develop a comprehensive strategy for blue carbon sequestration in ways that promote restoration of marine ecosystems. This should be funded by the major polluting countries, but should not reduce their obligations to reduce their carbon emissions under the Paris Agreement – rather this should be pursued as a way of mitigating the impacts of historical emissions through a global carbon sink. National governments should be supported in developing systems for funding to incentivise local communities to participate in and gain financial benefit from carbon sequestration initiatives. This is proposed as a major component of COP31 if this is located in the Australia–Pacific region.

YIDINJI PROPOSITION 5:

ENABLING TRANSFORMATION

The Yidinji Declaration outlines the principles for a just transition, with resource distribution from the carbon polluting countries to those most affected by adverse climate impacts, including Indigenous communities in Australia, New Zealand and the Pacific Island States. An essential component of the transition is recognition of the value of traditional knowledge in combatting the impacts of climate change, recognising that this knowledge is informed by coping with more gradual changes that have occurred over past centuries, and empowering Indigenous leadership to take effective local action.

In developing the Yidinji Proposition we have used current economic models to consider policy, process and effective mechanisms for efficient resource allocation. An additional model that has been explored is expounded as Doughnut Economics The Doughnut Economics model enables quantification of each country's performance against the global Sustainable Development Goals (SDGs), distinguishing between those that aim for social wellbeing and those that either support or threaten planetary resources. Further discussion has looked at how the activities taken in one country can adversely impact performance in another country, and climate change demonstrates this dynamic.

The global–local transformation that is now required needs to demonstrate the following:

1. Established governance mechanisms within and amongst Pacific small island nations provide a basis for a regionally coordinated policy framework, as well as regional data collection that can inform policy implementation. Mechanisms for addressing Loss and Damages across the Pacific region together with other funding mechanisms can be implemented through the emerging Blue Continent regional framework for harmonising policies and regulation.

2. A Pacific pilot of the various funding mechanisms could be established as a pathway to establishing a globally consistent framework. This should involve the Australian and New Zealand Governments developing a funding model for substantially funding climate justice initiatives in Pacific Island states as well as within First Nation Indigenous communities. The model should include a Loss and Damages component, carbon trading platform and insurance scheme as a demonstration for what should be introduced globally.

3. Climate Justice initiatives should be based on localised solutions derived from traditional knowledge systems and an understanding of each area's ecology as a whole rather than promoting single-issue proposals and one-size-fits-all solutions. Co-planning should incorporate Indigenous perspectives within the decision making processes for building resilience through adaptation, pre-event mitigation and preparation, as well as post-event remediation.

4. Resource ownership and investment should be shifted towards grassroots communities, so that there is local control of how investments are made, local control of outcomes including risks, and local benefits in both the short and long term. Cost-benefit analyses of major projects, public and private, should include risk assessments of the project's adverse impacts on climate change, and recognise ecological boundaries and core benefits (environmental, social and cultural) rather than just focusing on economic results.

5. Any mechanism for addressing the impact of climate change needs to address maintenance of cultural knowledge, values and practices, as well as reversing damage and providing reparations to enable land and sea country to be revitalised. While there are established systems for assessing material loss in monetary terms, addressing cultural loss requires a mix of financial and non-financial solutions.

The actions called for by the Yidinji Proposition would do much to advance this transformation.

YIDINJI PROPOSITION

SUMMARY

1. Communities suffering the most adverse effects of climate change should be represented in decision making by UN and sovereign country agencies in addressing Climate Justice, and should be partners in design of policy response, identifying evidence of impact and need, and delivery of solutions. Not only are these communities most keenly aware of how climate change is affecting them, but they are also the holders of traditional knowledge that can help to inform successful action.

2. Pending agreement on a global framework for addressing the needs of the most vulnerable countries, it is proposed that an Australia–Pacific framework be established (with possible additional participation by New Zealand) to pilot implementation in a way that can contribute from experience to the development of the global framework.

3. An enabling mechanism should be supported in each country, that can work alongside national government to fill the gaps in local skills, while steadily building the capacity for localised project control. A potential model can be seen in the way some international organisations act as an embedded agency within national governments in seeking localised capacity building for project implementation. Some national NGOs may also have a potential to provide this role.

4. Global funders and international donors should facilitate better access to resources for smaller scale localised projects. It would be appropriate for a performance test to be applied to any funded program involving at least 75% of funding being spent within the local recipient area rather than on international intermediaries, advisers and consultants, and for an asset management affordability test to be applied to any capital expenditure.

5. Mobilisation of existing global and donor funding mechanisms is required to address climate adaptation, but with much better localised access to this funding. National government can support local communities in planning and cost effective local action in the areas of coastal protection, marine ecosystem protection, water and food security, housing and infrastructure protection, flood protection, waste management and disaster response. Local plans should budget for:
    - movement or strengthening of existing essential infrastructure
    - creation of new essential infrastructure
    - movement of community and personal infrastructure and assets
    - promotion of community safety
    - establishing ongoing food and water security.
6. A pilot for the Loss and Damages Fund should be established for the Pacific Blue Continent focussing on the emissions from Australia and New Zealand, based on a modest levy of AUD$25 per tonne CO2e, to be adjusted later when the global arrangements are finalised. The funding pool could be established over five years with Australia contributing $4B per year and New Zealand contributing $800M per year. These contributions should be deducted from any greater obligations established through the global agreements that are to be negotiated.

7. The Australian and New Zealand Governments should each set aside an initial AUD$500M for addressing remediation within their own First Nations communities, with an additional annual contribution based on assessed needs.

8. Remediation should be applied to physical loss by way of a regional insurance scheme, compensating for damage caused by asymmetric weather driven events or progressive loss of habitable coastal land. The Yidinji Proposition suggests a possible framework for a loss and damages insurance fund would be:

a. participating national governments to agree to be voluntary members of the asymmetric weather events insurance fund

b. Australia and New Zealand to provide annual funds to the insurance fund as determined by reference to the level of their carbon emissions

c. impacted countries and communities to make claims against the insurance fund when impacted by asymmetric weather events or displacement to enable remediation – the beneficiary pool of countries and communities to include eligible (vulnerable) First Nation Indigenous communities in Australia and New Zealand

d. the isurance fund to provide a one-off payment when there is an asymmetric weather event or displacement based on an insurance assessor's review of total costs to restore the heavily impacted country and or community, and

e. information on infrastructure, community and personal assets and the claims made to be maintained to inform further development of the scheme.

There would need to be an initial one-off up-front contribution by Australia and New Zealand as described above. Both of these countries could augment the funds by providing tax credits to its citizens who make direct donations either one-off or as an annual premium. Ongoing annual premiums would need to be set at a level that provides sufficient funds to the insurance fund to make it sustainable.

9. Given the lack of mechanisms for placing a value on these categories of loss, an initial provision should be made for an additional 50% of the claim for physical loss and damages to be made available to affected communities that face displacement or loss of cultural assets, to be allocated on the basis of a community-driven plan and budget.

10. Mitigation in Pacific and Australian First Nations communities should be supported by:

A. Phasing out fossil fuels used in electricity and transportation

B. Implementing energy efficiency

C. Reducing or recycling waste

D. Carbon sequestration in forest or marine environments.

11. An industry approach should be adopted in seeking the following funding support for phasing out fossil fuels used in power supply networks:

1. A commitment of up to $AUD1.2 billion over the next three years to undertake pre-feasibility technical and commercial assessments of mitigation electricity supply assets recognising:

a. Group 1 Country affected climate change communities (PNG, Fiji, Solomon Islands, Micronesia, Vanuatu, Samoa, Kiribati, Tonga, Marshall Islands, Palau, Nauru, Tuvalu) of $AUD550 million

b. Group 2 Pacific affected climate change community members of other Countries (New Caledonia-France, French Polynesia-France, Guam-USA, American Samoa-USA, Northern Mariana Islands-USA, Cook Islands-NZ, Wallis and Futuna-France, Tolelau-NZ, and Niue-NZ) of $AUD550 million

c. Group 3 Australian affected climate change First Nations communities of $AUD100 million.

2. Oceania countries and First Nations communities utilise the UN COP framework to establish an Oceania CO2 emissions reduction certificate scheme as the basis for funding the equity component of the integrated energy solutions determined through technical and commercial pre-feasibility considering:

a. A legal obligation for non-impacted countries to acquire / procure eligible certificates reflecting the reduction in CO2 emissions in the affected climate change impacted countries and communities

b. Eligible projects would qualify to create certificates, ie similar process as per Australia's Large Renewable Energy Target (LRET) Scheme

c. Ensure transferability of the certificates

d. Requirement for a penalty payment by liable parties where certificates are not submitted

e. Minimum penalty payment equivalent of $AUD120 CO2 per tonne emissions.

3. Concessional and private debt funding through UN COP led arrangements supported by Country Reserve Banks or equivalent as the basis to provide the necessary debt funding for projects. The arrangements would need to consider best means for collateralisation of the debt and repayments against the integrated renewable energy assets and liability associated with the penalty regime for CO2 emission reduction certificates.

12. The Australian and NZ governments should establish funding specifically for reducing Pacific and First Nation communities transport CO2 emissions. There are various options available include waste-to-biodiesel technologies. Donor agencies should agree on a system for underwriting the returns from sale of product from approved W2E technologies, with possibilities for recovering any non-payment through their own program arrangements. A technical advisory system should also be established to advise national and local governments on the viability of particular technologies before they are introduced.

13. The UN and signatory countries to the UNCOP28 global renewables and energy efficiency should support:

i. development of Pacific regional energy efficiency standards and rating systems for lighting, appliances and equipment for consumer and business use

ii. agreement between country product licensing and standard agencies and manufacturers to establish Pacific regional efficiency standards

iii. use of country level concessions on taxes, rates and equivalent on lighting, appliances and equipment products that meet the Pacific regional efficiency standards

iv. requiring compliance with these standards in international aid programs.

14. The Conference of Parties established under the Paris Agreement should work with Pacific island states to develop a comprehensive strategy for blue carbon sequestration in ways that promote restoration of marine ecosystems. This should be funded by the major polluting countries, but should not reduce their obligations to reduce their carbon emissions under the Paris Agreement – rather this should be pursued as a way of mitigating the impacts of historical emissions through a global carbon sink. National governments should be supported in developing systems for funding to incentivise local communities to participation in and gain financial benefit from carbon sequestration initiatives. This is proposed as a major component of COP31 if this is located in the Australia-Pacific region.

CASE STUDY 1:

IMPLEMENTATION WITHIN PACIFIC ATOLL ISLAND COMMUNITIES

Kiribati and Tuvalu are two Pacific Island countries that are highly vulnerable to the impacts of climate change. There are some similarities as well as differences in the needs and aspirations of local communities in these countries.

Both countries consist of atoll islands, with most having an average height of 2m above sea level or less. Increasing tidal inundation and unpredictability of rainfall patterns, as well as salination of groundwater and soils, is leading to severe problems of water and food insecurity. Increasing prevalence of storms and heat induced damage to fringing coral reefs combined with tidal flooding is causing damage to housing and infrastructure, and threatening to make a large proportion of the land area uninhabitable.

KIRIBATI (POPULATION AROUND 130,000)

In Kiribati there has been a focus on local initiatives that can improve food security, as soil and groundwater salinity has made it increasingly difficult to grow fruit and vegetables, and deteriorating marine water quality has reduced the availability of seafood. Local populations have become dependent on cheap imported processed foods, with disastrous health outcomes for adults and children. The COVID-19 pandemic disrupted food imports, highlighting further risks from being import dependent.

Adaptation initiatives now being promoted in Kiribati include:

- Creating compost-rich raised beds for growing vegetables, countering salinity and retaining moisture
- Making compost from beach deposits of seaweed (which are increasing as another outcome of climate change) to make particularly nutrient rich compost
- Making biochar from woody wastes to counteract soil and water salinity
- Selecting salt- and heat- resistant plants
- Replacing vegetables grown on land with highly nutritious edible seaweeds such as seagrapes that grow locally
- Finding replacements for saline well water.

While there are some resettlement opportunities involving movement to islands with a more elevated landmass (such as Kiritimati Island in Kiribati and part of a Fijian island bought for this purpose) the Kiribati Government is keen to prioritise adaptation for continued occupation of the atoll islands rather than resettlement.

TUVALU (POPULATION AROUND 10,000)

Local communities are struggling to maintain food production, but the situation is not so dire as in Kiribati. However the existential threats arising from coastal erosion and tidal inundation are more severe, and are raising doubts about the ongoing habitability of these atoll islands. An exit strategy has been negotiated with the Australian Government enabling progressive resettlement in Australia. Some of the challenges that now need to be faced by Tuvaluans are:

- How to retain cultural values, knowledge and practices amongst a displaced population
- How to maintain national sea territories (measured out from the coast) as a vital economic resource after land areas have disappeared
- The level of support that may be needed for families being resettled in an alien environment
- The level of support that may need to be provided to any residual population in Tuvalu, which is likely to have an increasingly high proportion of elderly people
- Appropriate investments in climate adaptation if continued habitation is in doubt.

CASE STUDY 2:

IMPLEMENTATION WITHIN PACIFIC VOLCANIC ISLAND COMMUNITIES

The Pacific Islands are a mix of low lying atoll islands and mountainous volcanic islands. The atolls are characterised as narrow strips of land located around a lagoon with shallow soils lacking organic matter or nutrients, and the volcanic islands commonly have steep forested slopes and fertile soils. Some countries have a mix of these island types.

Honiara, the capital of the Solomon Islands, is an urban centre which faces a range of challenges arising from climate change. It has a population of around 100,000, most living in informal settlements which are encroaching onto previously forested steep slopes. Some of these settlements are already providing a new home for communities displaced from their original island homes by rising sea levels combined with increasingly frequent tidal flooding. It is notable that this goes beyond national boundaries, as Honiara is already accommodating climate refugees from the northern atoll islands of Kiribati, which have become uninhabitable.

One of the informal settlements in Honiara is home to the previous residents of the Solomon Islands atolls of Ontong Java some distance away. The migrating families have built their houses on a flood liable part of the coast, from where they could be further displaced due to sea level rise in the future. This community is trying to maintain its culture and attachment to place by making annual voyages to the partly submerged atoll islands that was the original home, to conduct ceremony and assert traditional fishing rights.

The Solomon Islands Government recognises that in future there will be an increasing need to accommodate communities whose island homes are becoming uninhabitable. There are policies in place to address this issue, despite the lack of resources required for such resettlement. Finding land and building houses to accommodate the present population is already a significant challenge.

A particular threat arising from climate change is the increased frequency and severity of tropical cyclones, which cause devastating damage to houses and infrastructure, as well as destroying food gardens. While Vanuatu has suffered most in recent years, with multiple cyclones hitting some of the islands in a single year, the Solomon Islands and Fiji are also highly vulnerable. In Honiara, the houses located on steep lands are particularly vulnerable to storm damage and landslip, and those on lower land are threatened by severe downstream flooding.

Steps taken to address these threats include:

- mapping out the areas that are most at risk from landslip or flooding, with some initiatives taken to relocate some of the occupants and discourage building of new houses on these lands
- establishing a user friendly "Shelter Guide" to advice local builders of houses in the informal settlements on how to establish more resilient structures, based on anchoring the building components from the bottom up
- working with the customary governance structures that have arisen in each of the informal settlements to ensure there is a local early warning system and identified cyclone shelters in place.

In contrast with the atoll islands, there is far less demand for compost or biochar to maintain the productivity of soils, as many of the gardens are located on the elevated volcanic soils. However there is a significant waste management problem, with waste collection made difficult by the steep terrain and lack of roads. This compounds the problems of flooding, as discarded waste often finds its way into watercourses and blocks natural drainage patterns.

CASE STUDY 3:

IMPLEMENTATION WITHIN AN AUSTRALIAN ABORIGINAL COMMUNITY

Wujal Wujal provides a useful case study of how climate change results in cultural loss as well as the more easily recognisable physical loss of resources. The people living in and around Wujal Wujal have knowledge systems that are relatively undisturbed compared with those of other Australian Indigenous communities, as they have never been removed from their traditional lands, and the period of mission administration was relatively recent and of short duration. They hold particularly rich knowledge about management of food and medicinal plant resources through the rainforest catchments of each clan group, with key sites critical to the protection of this knowledge.

Cyclone Jasper devastated this community in December 2023, with torrential rain flooding the catchment of the Bloomfield River, leading to the whole community of around 300 people being evacuated by air to Cairns or Cooktown, some 2–300 km away. It has taken most of a year to bring some of the houses back to a habitable standard, with much infrastructure remaining unusable. So far the funding has been focussed on physical repair work in the village area, with little attention being paid to the loss of tangible and intangible cultural resources within the broader catchment. This is despite the fact that Wujal Wujal is located in the Wet Tropics World Heritage Area, within which cultural values and traditional knowledge is recognised as an essential value to be protected.

The Burra Charter is the international framework for addressing cultural heritage places, recognised as an essential guidance document for Australia. Clause 1.2 provides the following guidance:

"Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects."

The extent of cultural damage arising from Cyclone Jasper has yet to be fully assessed, so that this assessment would be a first step in addressing cultural loss. It is clear that cultural places including sacred sites and traditional teaching spaces have been physically damaged by fallen trees and landslip. The access tracks that enable local people including the knowledge keepers to reach these sites have also been severely damaged, with some made impassable. The cyclone has destroyed camping areas that have previously enabled young people to stay at these sites and be taught about customary knowledge, essential to the passing on of knowledge between generations. A full assessment should lead to budget provision for physical restoration and recovery of these resources.

While there has previously been partial documentation of these critically important knowledge systems, this does not capture the potential range of cultural understanding of the environment, much of which could be applied to enhanced management of the World Heritage Area. Community members are concerned that these cultural resources are now in danger of being completely lost, as there is a lack of clarity about how the old people should be passing on their knowledge for future benefit. It will be important as part of the recovery process to document and preserve this knowledge, and provide interpretive materials that can encourage full appreciation within local clan groups (keepers of the knowledge) as well as the broader Indigenous and non-Indigenous communities (who can benefit from what can be shared about this deep environmental and spiritual understanding of place).

Another aspect of cultural loss relates to the way the settlement of Wujal Wujal is being repaired to resemble its previous configuration. This is not a particularly attractive option for families who are fearful of a repetition of the disaster event, and some may choose to remain in urban centres. The loss of population would exacerbate the irreversible loss of traditional knowledge amongst the younger generation. The opportunity to reconfigure the settlement pattern in a way that will be more resilient in the face of future climate induced events is being ignored. In particular, many of the family groups would prefer to settle on their traditional lands in a manner which resembles the pre-mission settlement, so that they are better able to care for country, including protecting it from the impacts of climate change.

CASE STUDY 4:

IMPLEMENTATION WITHIN AN AUSTRALIAN TORRES STRAIT ISLAND COMMUNITY

The Torres Strait lies between Far North Queensland and Paua New Guinea, and contains 274 small Islands of which 16 are inhabited, all part of the Australian Territory. Indigenous Torres Strait Islanders have a distinctive Melanesian culture strongly influenced by their marine surroundings.

The Islands vary in topography, with some being low lying Islands formed around sediments or coral atolls, and others containing more elevated areas. All are experiencing the adverse impacts of climate change, with the lowest lying Islands being particularly negatively impacted by rising sea levels.

Ocean acidification is affecting marine food sources on which the Islanders depend, and extreme weather events are a threat to life and property. Particular impacts on low lying settlements include coastal erosion, tidal flooding, salination of soils and groundwater supplies. Tidal incursions are leading to property damage as well as erosion of cemeteries, with the loss of graves causing much distress. Some Islands are little more than 1 metre above sea level, so that continued occupation under the current arrangements shall be problematic.

Native title was successfully demanded by Torres Straight Islanders in the past, and there is strong regional identity and governance through the Torres Strait Regional Authority (TSRA) and the local government entities and organisations, namely:

- the Torres Strait Island Regional Council (TSIRC) representing the amalgamated Island Councils previously constituted as separate Island Councils under the *Community Services Act 1984*
- the Torres Shire Council covering Thursday, Horn and Prince of Wales Islands
- the Northern Peninsula Area Regional Council (NPARC) representing the amalgamated Island and Aboriginal Councils previously constituted as separate Aboriginal and Island Councils under the *Community Services Act 1984*
- the Gur A Baradharaw Kod ("GBK") the Native Title Representative Body (NTRB) for the Torres Strait.

The Torres Strait regions importance is reflected by the bilateral treaty with Papua New Guinea guaranteeing the Islanders' traditional fishing rights and customary rights.

A group of eight people from the vulnerable islands of Boigu, Poruma, Warraber and Masig (the Torres Strait 8) successfully lodged a complaint against the Australian Government to the UN Human Rights Committee, claiming lack of effective protection of these Islands from adverse climate impacts. This has led to a broader claim for material compensation a class action involving Saibai and Badu Islands. The present Australian Government has indicated its commitment to taking more effective action in future.

In 2023, the Australian and Queensland Governments announced a further AUD $40m for the construction of seawalls to provide protection of settlements, and a recent program is enabling further strengthening of coastal defences on Boigu, Poruma, Iama, Masig and Warraber Islands. The funding support provides much needed protection against the negative impacts of climate change and also provides economic opportunities for employment and to local businesses.

However, there remains the ongoing risks of climate change impacts. Present projections suggest that significant population displacement is likely by 2050. Even if resources were provided for resettlement, there would be significant distress caused by removal from traditional land and sea country, loss of cultural sites

as well as impediments to maintaining cultural knowledge and practice including substantive fishing rights and practices. The class action is seen as a fight for survival.

The Australian National and State Governments' response to the needs and demands of vulnerable Torres Strait Islanders is seen as a litmus test for how the adverse impacts of climate change on the worst affected communities is addressed.

Steps that the Australian and Queensland Government can take in addressing these impacts include:

- more effective action in reducing Australia's greenhouse gas emissions which are identified as the main cause of climate change
- land reclamation on a large scale with effective seawall construction
- coral reef restoration to counteract bleaching events
- seagrass bed restoration to counter ocean acidification possibly amplified by seaweed cultivation
- mangrove protection and restoration as part of coastal defence
- provision of rainwater tanks and/or desalination plants to replace contaminated well water supplies
- soil remediation initiatives to support ongoing terrestrial food production
- upgrading of housing
- improving infrastructure to provide greater resilience, including ports, waste and energy infrastructure, with committed funding for ongoing maintenance.

These need to be part of a comprehensive strategy backed by long term funding budgets rather than relying on one–off short term initiatives. Relocation of communities should be seen as a last resort. If this does become necessary, resources should be provided to compensate for both material loss and intangible loss (social and mental wellbeing, maintenance of culture).

[i]The author of the original concept, Kate Raworth, participated in our webinar sessions and her global team (The Doughnut Economics Action Lab – DEAL) subsequently assisted in our deliberations.