# IMPLEMENTING TOOLS FOR THE RESEARCH BRIEF ON LAND TENURE AND CLIMATE MOBILITY IN THE PACIFIC REGION

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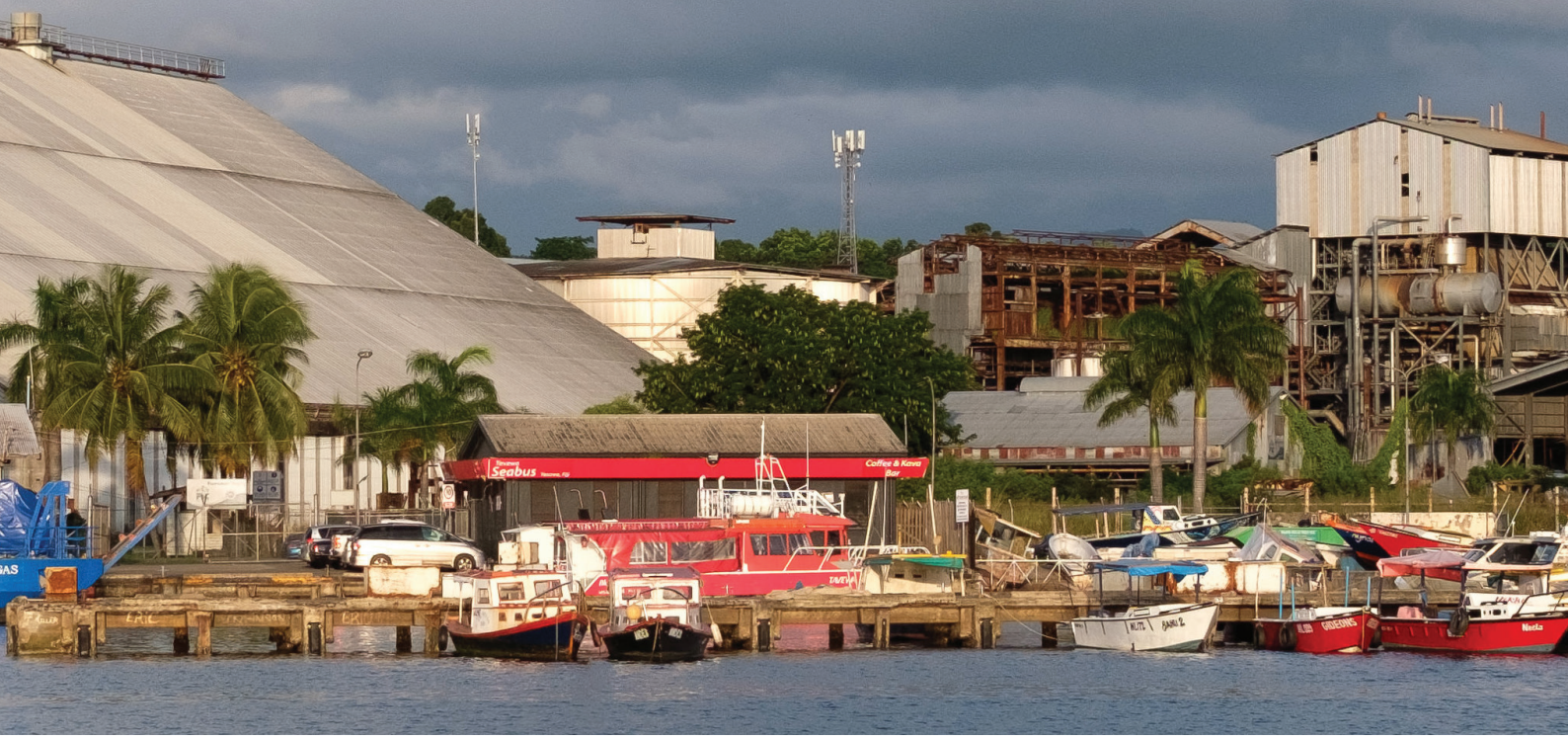


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This research brief was prepared by Daniel Fitzpatrick, Professor, Faculty of Law, Monash University, under the guidance of the Pacific Resilience Partnership Technical Working Group on Human Mobility (PRP TWG-HM), chaired by the International Organization for Migration. Inputs were received from a peer review committee with membership drawn from the PRP TWG-HM. The TWG acknowledges all the valuable inputs received from TWG members and others in developing this research brief. Progressing the research brief has been made possible with the generous support of the Swiss Confederation through the Intra-ACP GCCA+ Adaptation to Climate Change and Resilience Building (PACRES) Action. It was identified as a means to provide critical information to fill knowledge gaps which can feed into policy and programmatic recommendations and support policy development with the areas of the research briefs identified and selected by the PRP TWG-HM through outcomes from webinars, online surveys and consultations with stakeholders.

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# 1.0 Introduction

## 1.1 Aims and background

This report provides implementing tools for the *Pacific Resilience Partnership's Research brief on land tenure and climate mobility in the Pacific region*.[1] The research brief recommended measures to incorporate land tenure into climate change adaptation (CCA) and disaster risk management (DRM) in the Pacific region.

The following tools are practical instruments to implement research brief recommendations. Some implementing tools take the form of guidance for users to develop policies and guidelines. Others are more specific and include checklists and surveys.[2]

Thisis intended as a 'living document' that may be developed further for country contexts in the Pacific region. While the tools may be used as stand-alone instruments, they are designed primarily as 'plug and play' inputs into Pacific CCA and DRM frameworks.[3]

## 1.2 Definitions and scope

Human mobility includes migration, displacement, and relocation. Climate mobility is a shorthand description for human mobility related to climate change.[4]

Land tenure describes relations among people with respect to land and associated natural resources. Land tenure includes customary as well as government systems of land administration. Customary land tenure systems in the Pacific region have a rich diversity that spans small and larger island states.

Land tenure intersects with other issues covered by land administration systems, including land-use planning and spatial data infrastructure. Although this report focuses on land tenure, the following tools set out connections to land-use planning and spatial data infrastructure.

1 See https://www.resilientpacific.org/en/resources/research-brief-land-tenure-and-climate-mobility-pacific-region.

2 The form of each tool depends on access to materials and key actors, as well as feedback from the PRP Technical Working Group on Human Mobility (TWGHM).

3 This approach aligns with the Framework for resilient development in the Pacific, 2017–2030: Pacific Community. 2016. Framework for resilient development in the Pacific: An integrated approach to address climate change and disaster risk management (FRDP). 2017–2030. Suva.

4 See further Cancun Outcome Agreement for the UN Framework Convention on Climate Change (UNFCCC), Para. 14(f).

## 1.3 Audience

The report is aimed at governmental and non-governmental agencies with responsibilities for CCA and DRM. Most tools will require coordination with land administration agencies in the Pacific region.

## 1.4 Format

The tools are divided into two CCA and DRM categories: vulnerability assessments and resilience planning. The tools apply to communities at risk of displacement or relocation, as well as 'host' communities for migration or displacement.

Vulnerability assessment tools include:

- community land tenure screening – customary land;
- community land tenure screening – informal settlements;
- focus group discussion – customary land;
- focus group discussion – informal settlements;
- household land tenure survey; and
- common resource inventory.

Resilience planning tools include:

- household land tenure survey;
- checklist for leases over customary land; and
- risk-informed land-use planning.

The report also provides guidance on the development of tools relating to (i) leases over customary land, and (ii) the legal status of foreshore and coastal land.

## 1.5 Types of climate mobility

Each tool takes into account classifications of land tenure and climate mobility set out in the research brief. These classifications are:

- movement within customary territory;
- movement to other customary territory (rural);
- movement to alienated land (rural);
- movement to other customary land (peri-urban); and
- movement to alienated land (urban).

The research brief noted that Pacific jurisdictions, with the exception of Tonga, have legislation to recognise customary rights to land.

## 1.6 Pacific contexts

There can be political sensitivities to land policies in the Pacific region because land is central to identity, culture, social welfare and resource control.[5] The tools are based on 'do no harm' principles and include scope for decisions not to undertake a land policy intervention.

The tools include culturally appropriate methods for the Pacific region, such as *talanoa* methodologies involving participatory processes of story-sharing, empathy-building and collective decision-making. The tools will require further adaptation to localised cultural and tenure contexts in the Pacific region.

5 This report acknowledges, in particular, the inherent potential for land interventions to affect the political economy of access and control in relation to land.

# 2.0 Locating Land Tenure in CCA and DRM

Figure 1 illustrates the range of CCA and DRM activities that require information on land tenure.

Figure 1: Land tenure and CCA/DRM


The CCA circles are blue and are on the left-hand side; the DRM circles are green and are on the right-hand side.

This report considers these CCA and DRM activities through a lens of climate mobility risk. The following section explains land tenure and climate mobility risk through categories of hazards, exposure and vulnerability.

## 2.1 Climate hazards

Climate hazards in the Pacific region include sea-level rise, storm surges, floods, saltwater intrusion, soil salinisation, shoreline retreat, high-wind damage and coral mortality.[6] Mapping and predicting hazards require information on topography, hydrology, meteorology, agriculture and ecology, as well as historical disaster, loss and damage catalogues.

Table 2: Hazard mapping in the Pacific region

| Climate hazard | Mapping method |
|---|---|
| Topographical and bathymetric surveys | Satellite/Light detection and ranging (LIDAR) imaging |
| Coastline changes | Maps, aerial photos and satellite/ LIDAR imaging |
| Flood and storm surge height contours | Historical records, meteorological, hydrological and geomorphological data |
| Sea-level rise | Tide gauges, sea-level measurements and LIDAR imaging |
| Cyclone and storm risks | Meteorological forecasting, long-term and seasonal weather forecasts, climate change models |
| Landslip and landslide risk | Soil stability surveys, topographic information |
| Drought | Soil type and moisture content surveys, water source surveys, vegetations, historical records |

*Sources: SPREP Pacific Environment Data Portal, https://pacific-data.sprep.org/*

6 See *Australian Bureau of Meteorology, Pacific Climate Change Data Portal*, http://www.bom.gov.au/climate/pccsp/; United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP) (2020). *The disaster riskscape across the Pacific Small Island Developing States: Key takeaways for stakeholders*, https://www.unescap.org/sites/default/d8files/IDD-APDR-Subreport-Pacific-SIDS.pdf

## 2.2 Climate exposure

Exposure to hazards is necessary to generate risks of climate mobility. Mapping exposure requires information on topography, geology and soils, land cover and land use, buildings and settlements, infrastructure, population distribution, transport and utility networks, water, and land parcels. Most types of information on exposure require spatial data infrastructure.[7]

**Box 1: The Pacific Risk Information System (PacRIS)**

With support from SPC and SOPAC, the Pacific Risk Information System (PacRIS) provides detailed country-specific information on hazards and exposure in the Pacific region. The datasets include:

- historical hazard catalogue and loss and damage database;
- hazard models that include wind, storm surge, and excess rainfall predictions for tropical cyclones or storms; and a
- geo-referenced exposure database that includes information on buildings and infrastructure, agriculture, land cover/land use, and population.

Sources: https://risk.spc.int/

7 For a comprehensive account see Barra, A. F., Mika-Petteri Törhönen, A. Rajabifard, K. Potts, R. Grover, Solid Ground: Increasing community resilience through improved land administration and geospatial information systems (World Bank Group and the Global Facility for Disaster Risk Reduction 2020), https://openknowledge.worldbank.org/handle/10986/33706 (last accessed 17 December 2020).

## 2.3 Spatial data infrastructure

Where available or feasible, spatial data on exposure should be geo-located through land administration systems in order to facilitate climate risk management. Geo-location allows information on exposure to connect with data on hazards in such a way as to allow risk visualisation and resilience planning.

Spatial data infrastructure describes systems that support datasets on hazards and exposure. National spatial data infrastructure includes the policies, standards, technology and human resources required to ensure accessibility and interoperability among spatial datasets.

**Box 2: Land administration and geospatial information for resilience**

The World Bank publication – *Solid ground: Increasing community resilience through improved land administration and geospatial information systems* – includes a land and geospatial information for resilience checklist.[8] The format for the checklist is a series of questions based on four themes:

- hazards, exposure and risks;
- disaster risk management;
- geospatial information access and fundamental data sets; and
- comprehensiveness, accuracy and resilience of the systems.

The checklist notes the importance of national spatial data infrastructure (NSDI) – including the interoperability of systems for land administration and DRM.

Source: Barra, A. F., Mika-Petteri Törhönen, A. Rajabifard, K. Potts, R. Grover. 2020. Solid ground: Increasing community resilience through improved land administration and geospatial information systems. World Bank Group and the Global Facility for Disaster Risk Reduction. H.

8 Barra, A. F., Mika-Petteri Törhönen, A. Rajabifard, K. Potts, R. Grover, Solid Ground : Increasing community resilience through improved land administration and geospatial information systems (World Bank Group and the Global Facility for Disaster Risk Reduction 2020), https://openknowledge.worldbank.org/handle/10986/33706 (last accessed 17 December 2020).

## 2.4 Land tenure and climate vulnerability

Climate mobility risk is a function of vulnerability as well as hazards and exposure. The research brief sets out the many ways in which land tenure intersects with climate vulnerability in the Pacific region.

Table 1: Land tenure intersections with climate vulnerability

| Land tenure issue | Nature of climate vulnerability |
|---|---|
| Tenure insecurity | • Exclusion from CCA/DRM<br>• Susceptibility to evictions or displacement<br>• Unsafe housing<br>• Hazardous locations |
| Unsustainable land use | • Flooding/inundation<br>• Coastal erosion.<br>• Loss of livelihoods<br>• Marginal or unsafe settlements |
| Poor urban planning | • Unsafe settlements<br>• Exclusion of informal settlements<br>• Insufficient access to services and infrastructure<br>• Poor management of coastal retreat |
| Weak land administration | • Exclusion of customary or informal settlements<br>• Incomplete or inaccurate land data<br>• Institutional incapacity |
| Land-related discrimination | • Insufficient access to land services and institutions of justice<br>• Lack of access to land<br>• Tenure insecurity for 'outsiders' on customary land |

*Source: Adapted from Fitzpatrick, D. (primary author). 2010. Addressing land issues after natural disasters: Guidance for practitioners. United Nations Human Settlements Programme (UN-Habitat),*

The following land tenure tools are designed as inputs into CCA and DRM vulnerability assessments.

# 3.0. Vulnerability Assessments: Land Tenure Inputs

There are multiple global tools for vulnerability assessments in different contexts of climate mobility.[9] Key tools applied in Pacific contexts include:

- integrated vulnerability assessments and vulnerability and risk assessments;
- social impact assessments and socio-economic surveys; and
- post-disaster needs assessments and disaster recovery frameworks.

Integrated vulnerability assessments (IVA) and vulnerability and risk assessments (VRA) are tools applied to communities at risk of relocation or displacement.

**Box 3: Integrated vulnerability and risk assessments in the Pacific region**

Integrated vulnerability assessments (IVA) are a tool developed by the Pacific Community (SPC) and the South Pacific Regional Environmental Programme (SPREP). Applications include Tuvalu, Kiribati and Solomon Islands. IVA frameworks measure:

- livelihood assets – natural resources, infrastructure and services, financial resources, human skills, and institutions and governance; and
- human security objectives – ecosystem health, community health, security of place, water security, food security, energy security, and income security.

9 See e.g. World Bank/Global Facility for Disaster Risk Reduction (GFDRR), *Understanding risk in an evolving world: Emerging best practices in natural disaster risk assessment*; Germanwatch, *Global Climate Risk Index 2021*; UN Food and Agriculture Organization (FAO), *Gender and Land Rights Database, Legal Assessment Tool for Gender Equitable Land Tenure* (2020).

**Box 3: Integrated vulnerability and risk assessments in the Pacific region (*cntd.*)**

Vulnerability and risk assessments (VRA) are a tool developed by UN-Habitat. Applications include Solomon Islands, Vanuatu and Fiji. VRA generate community vulnerability profiles through information on:

- population – people and demographics;
- land use – residential, commercial, industrial, recreational;
- natural resource-based production – agriculture, fisheries, forests;
- critical point facility – services such as schools, hospitals, health units, local government buildings, evacuation centres, bridges;
- lifeline utilities – transportation, water distribution, wastewater, drainage, power distribution networks.

Sources: Pacific Community, Secretariat of the Pacific Regional Environment Programme & Pacific Islands Forum Secretariat (2016). *Integrated vulnerability assessment framework for atoll islands: A collaborative approach*.

Pacific Community, Secretariat of the Pacific Regional Environment Programme and Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH; UN-Habitat (2020). *Climate change vulnerability and risk – A guide for community assessments, action planning and implementation*.

## 3.1. Vulnerability assessments and planned relocation

Vulnerability assessment tools for planned relocation include social impact assessments (SIA) and socio-economic surveys (SES). Both SIA and SES are required under the environmental and social safeguards (ESS) of institutions such as the European Union and the World Bank. SIA are also required by the draft standard operating procedures for the Fiji resettlement guidelines.

**Box 4: Social impact assessments and census surveys in planned relocation**

Social impact assessments (SIA) provide a means to identify the *risks* and *impacts* of a planned relocation project. SIA form part of differentiated measures to avoid adverse impacts on the vulnerable, both to ensure participation and consent by all affected individuals and groups, and to support restoration of livelihoods in new sites for resettlement. Land tenure components of SIA include analysis of cultural and historical relationships with land and associated resources, including the nature and status of legal, customary and informal rights.

Census and socio-economic surveys form part of resettlement action planning. The census identifies affected persons to support sustainable restoration of incomes and livelihoods in new sites for resettlement. Land tenure components of the census include (i) identifying non-owners of land such as renters or informal settlers; and (ii) compiling inventories of assets and sources of livelihood (including access to common resources). Socio-economic surveys provide further information on livelihoods, including the potential for gender disaggregated data within a household or family.

Sources: Environmental and social management system (2020), *Guidance note on environmental and social impact assessment*; International Finance Corporation (2002). Handbook for preparing a resettlement action plan.

## 3.2. Vulnerability assessments and disaster displacement

Vulnerability assessment tools for disaster displacement include post-disaster needs assessments (PDNA) and disaster recovery frameworks (DRF). The World Bank, European Union and UN Development Fund have developed a PDNA tool that has been applied to rapid-onset disasters in the Pacific region.[10] The tool includes risks of conflict with 'host' communities, as well as vulnerabilities relating to female-headed households and renters or informal settlers.

Other aspects of a PDNA with relevance to land tenure include measures for:

- identification of safe land for reconstruction/rebuilding;
- multi-hazard and risk mapping to inform recovery planning;
- regulatory measures to restrict rebuilding and restoration in risk zones; and
- appropriate land use planning for affected regions to build back better.

The UN-Habitat publication – *Addressing land issues after natural disasters: Guidance for practitioners* – provides a set of land tenure tools for post-disaster needs assessments and disaster recovery frameworks.[11]

## 3.3. Land tenure and vulnerability assessments

The following tools are designed as land tenure inputs into different types of vulnerability assessments, including:

- integrated vulnerability assessments and vulnerability and risk assessments (at-risk individuals or communities);
- social impact assessments or (communities requesting relocation); and
- post-disaster needs assessments and disaster recovery frameworks (host communities).

The tools relate to: (i) community land tenure screening; (ii) community focus group discussions; (iii) household land tenure surveys; and (iv) inventories of common resources. These are discussed in the following sections.

10 World Bank, UNDP, EU, *Post-disaster needs assessment guidelines, Volume A* (2013), https://www.gfdrr.org/en/publication/post-disaster-needs-assessments-guidelines-volume-2013 (last accessed 28 September 2020); World Bank, UNDP, EU, *Guide to developing disaster recovery frameworks* (2014), https://www.gfdrr.org/en/disaster-recovery-frameworks (last accessed 28 September 2020).

11 Fitzpatrick, D [primary author], *Land and natural disasters: Guidance for practitioners* UN-Habitat, 2010, https://unhabitat.org/sites/default/files/download-manager-files/Land%20and%20Natural%20Disasters%20Guidance%20for%20Practitioners.pdf,.

## 3.4 Community land tenure screening

Community screening provides a preliminary means to assess vulnerability before in-depth assessment (if required). Screening is a threshold tool for decisions to undertake further land tenure assessments.

Community screening is applicable primarily to: (i) communities at risk of displacement or relocation; and (ii) communities receiving migrants or the displaced. The tools should be used in conjunction with other screening tools that identify data on population, demographics, housing, livelihoods and social protection.

The screening tools are separated into: (i) communities on customary land; and (ii) communities classified as informal settlements.

## 3.5 Community screening: customary land

The aim of the community land tenure screening tool for customary land is to provide preliminary information on land tenure structures as well as the potential for disputes or discrimination in relation to land. The primary application is to customary communities assessed as at high risk of relocation or displacement.

Tool 1: Community land tenure screening – customary land

| | | | | |
|---|---|---|---|---|
| General Information | 1. Name of village | | | |
| | 2. Name of island | | | |
| | 3. Name of district | | | |
| | 4. Name of province | | | |
| | 5. Name of the site-specific project | | | |
| | 6. Objective of the site project and brief description | | | |
| | | Please tick mark (✔) | | |
| | | Yes | No | Not Applicable |
| Type of Settlement | 7. Is the village on land classified as customary land? | | | |
| Land tenure risk screening | 1. Is there a recognised community leader? | | | |
| | 2. Does the community consist of related families/lineages? | | | |
| | 3. Are community lineages recognised as patrilineal or matrilineal? | | | |
| | 4. Are there studies of customary law in the community – including rights to land after inheritance or divorce? | | | |

| | | | | |
|---|---|---|---|---|
| | 5. Are there reports of in-migration by 'outsiders' that are not members of community lineages? | | | |
| | 6. Are there reports of disputes over community leadership? | | | |
| | 7. Are there reports of conflict or disputes over land in the customary territory? | | | |
| | 8. Are there reports of conflict or disputes over access to common resources (e.g, marine or forest)? | | | |
| | | | | |
| Other information (if any) | | | | |
| Recommendation for land tenure assessment | | | | |
| Signature of the land tenure/social safeguards specialist | | | | |

## 3.6 Community screening: informal settlements

It is to be noted that most informal settlements in the Pacific region were established as a result of migration through family and kin networks. As a consequence, informal settlements tend to have established governance mechanisms, such as community or neighbourhood associations, customary and family leadership, and church-based networks. The following community land tenure screening tool for informal settlements provides preliminary information on land governance, as well as the potential for disputes or discrimination in relation to land.

The tool identifies sources of land information that may assist with strengthening tenure security and integrating with CCA and DRM programming. These sources of information include documents of sale or lease, and aerial photos or satellite imagery. The aim is to strengthen community capacity to absorb climate migration, while also managing other forms of climate risk.

Tool 2: Community land tenure screening – informal settlements

| | | | | |
|---|---|---|---|---|
| General Information | 1. Name of settlement | | | |
| | 2. Name of island | | | |
| | 3. Name of district | | | |
| | 4. Name of province | | | |
| | 5. Name of the site-specific project | | | |
| | 6. Objective of the site project and brief description | | | |
| | | Please tick mark (✔) | | |
| | | Yes | No | Not Applicable |
| Type of Settlement | 7. Is the settlement on land classified as customary land? | | | |
| | 8. Is the settlement on land classified as alienated land (e.g. state or freehold land)? | | | |
| Land tenure risk screening | Elements of land tenure risk | | | |
| | 1. Is there a recognised mechanism for community governance (e.g. community association)? | | | |
| | 2. Is there a customary group that claims ownership of community land? | | | |
| | 3. Does the community primarily consist of related lineages as a result of migration to the settlement? | | | |
| | 4. Are there data on population growth and migration in the community? | | | |
| | 5. Has migration to the community taken place outside family or kin networks? | | | |
| | 6. Are there reports of conflict or disputes when migrants access land for housing and livelihoods? | | | |
| | 7. Are there reports of leases or other agreements as a means for migrants to access land? | | | |
| | 8. Are there public records of land tenure documentation in the community? | | | |

| | | | | |
|---|---|---|---|---|
| | 9. Are there aerial photos or imagery that show buildings and boundaries for plots of land? | | | |
| | 10. What land use zoning or urban planning controls apply to community land? | | | |
| | 11. Are there recognised high-risk areas for housing, such as riverbanks, low-lying coastal zones, or steep incline slopes? | | | |
| | 12. Are there reports of disputes over land in the community? | | | |
| | | | | |
| Other information (if any) | | | | |
| Recommendation for land tenure assessment | | | | |
| Signature of the land tenure/social safeguards specialist | | | | |

## 3.7 Community screening: sources of data

The community land tenure screening tools should rely on key informant interviews. It is unlikely that there are public records of land tenure in relation to customary land and informal settlements. Key informants may include community leaders and local or provincial government officials. The aim is to obtain general information on land tenure in advance of other tools such as focus group discussions and household surveys.

## 3.8 Community screening: implementation

The screening tools should be implemented by land tenure or social safeguards specialists working with CCA and DRM teams.

## 3.9 Community screening: analysis

Community screening may give rise to recommendations for follow-up land tenure assessment. These may include focus group discussions and household surveys. They should complement other information on vulnerability derived from assessment methods such as transect walks or field visits, and participatory hazard and risk mapping.

The analysis of community screening for informal settlements may be supported by country data on informal settlements. Potential data sources include SDG Indicator 11.1.1 – which measures the proportion of urban population living in slums, informal settlements or inadequate housing.

## 3.10 Focus group discussions

Focus group discussions (FGD) are an established methodology for obtaining qualitative information on vulnerability. They are a way of exploring land tenure issues, such as landlessness, tenure insecurity, and tenure-based discrimination as components of vulnerability. Where appropriate, separate groups, such as women-only groups, may be required.

The following tool applies to vulnerability assessments in circumstances of:

- migration – vulnerability indicators for communities receiving climate migrants;
- relocation – vulnerability indicators for communities requesting relocation; and
- displacement – vulnerability indicators for communities displaced by disasters, or communities affected by displacement.

Standard methodologies separate FGD questions into engagement, exploration and exit. Engagement questions introduce a topic. Exit questions request concluding contributions to the discussion. The following FGD tools set out open-ended exploration questions only.

**Box 6: Use of *talanoa* and other cultural methods in focus group discussions**

The FGD methodology must encourage culturally-informed storytelling and discussion as a familiar means of knowledge-sharing in local language. Useful methodologies for the Pacific region include *talanoa* methods – which describe a way of communication familiar to Tokelauan, Fijian, Tongan and Samoan peoples. Similar methods will be required as appropriate to other cultural contexts. FGD facilitators must be trained and experienced in Pacific cultural methodologies.

Source: P. Fairbairn-Dunlop & E. Coxon (Eds.). 2014. *Talanoa: Building a Pasifika research culture*. New Zealand: Dunmore Publishing.

## 3.11 Focus group discussions: implementation

FGD for land tenure assessments require trained and experienced facilitators. Female facilitators are necessary for women-only FGD. FGD data analysis requires a social safeguards specialist.

## 3.12 Focus group discussion: customary land

The following FGD questions concern issues of authority relating to land, as well as tenure relationships with land. The rationale is that authority systems are closely related to land tenure in customary land contexts.

Tool 3: Focus group discussion – customary land

| Land tenure issue | Exploration questions |
|---|---|
| Community governance | What are the origin stories of the community?<br>Is there a senior lineage?<br>Are community leaders always members of a senior leading lineage?<br>Are community leaders supported by an advisory group or committee? |
| Marriage, inheritance and divorce | Is the group patrilineal or matrilineal?<br>Is it exogamous, i.e. must spouses come from another group?<br>Does the wife move to the land of the husband (patrilocal)?<br>Or does the husband move to the land of the wife (matrifocal)?<br>Do sons and daughters inherit equally?<br>What happens to marital land if there is a divorce? |
| Access to land | Have community 'outsiders' ever obtained access to land in your area? How did they do so?<br>Have non-resident relatives of a mother/father ever obtained access to land here?<br>Do you think they have the same rights to land as community members? |
| Common property resources | How are decisions made in relation to the use of common resources such as marine or forest resources?<br>Are there problems with over-exploitation or disputes in relation to common resources?<br>How do community members obtain permission to clear land for a bush garden? |

## 3.13 Focus group discussion analysis: customary land

The FGD for customary land analysis must identify vulnerabilities arising from FGD findings. Table 2 provides an illustration.

Table 2: Focus group analysis for customary land

| FGD findings | Vulnerability analysis |
|---|---|
| Community governance | • Leadership structures and conflict potential relating to community governance<br>• Capacity to represent group in displacement/relocation discussions |
| Marriage, inheritance and divorce | • Potential for gender-based discrimination<br>• Widow/daughter rights to land if disaster causes death |
| Common property resources | • Potential drivers of climate migration, as well as conflict or loss of livelihoods<br>• Access to livelihoods for displaced groups; compensation assessments for relocated groups |

## 3.14 Focus group discussion: informal settlements

Land tenure in informal settlements has the potential to change rapidly as a result of rapid increases in climate migration. The FGD should try to capture dynamic changes in land tenure and use patterns arising from migration and population growth. These issues may be sensitive and a 'do no harm' approach to FGD has particular importance for informal settlements.

The following FGD tool for informal settlements includes questions on land dealings (agreements). These are likely to increase as a result of climate migration. The tool also includes questions on land use (including subdivisions). Land use challenges include settlement expansion, housing density, shoreline movements, and access to water and sanitation.

Tool 4: Focus group discussion – informal settlements

| Land tenure issue | Exploration questions |
|---|---|
| Community governance | Is there a recognised mechanism for community governance (e.g. community association)?<br>Is there a recognised community leader?<br>What external groups are influential in community governance, such as church groups? |
| Ownership | Is there a customary group that claims ownership of some or all community land?<br>Do you know whether some or all land is classified as state land or freehold land?<br>Are there clear boundaries for settlement land? |

| Land tenure issue | Exploration questions |
|---|---|
| Marriage, inheritance and divorce | Is it your understanding that widows have rights to marital land when the husband dies?<br>Or do the children inherit marital land?<br>Do sons and daughters inherit rights to land in equal shares? |
| Access to land | How do migrants to the settlement access land?<br>Is the primary mechanism through family agreement?<br>Are there written leases over land?<br>Is land ever sold to migrants? |
| Land conflict | Are there disputes over land in the community? What type of disputes?<br>How do family or community leaders attempt to manage conflict over land?<br>Are you aware of land disputes being taken to court? |
| Subdivisions | Are community leaders consulted if family land is subdivided for new housing?<br>Is there community planning for future subdivisions of family land? |
| Land use | How does the community determine the use of various areas of land (e.g. residential, agricultural, associated marine/forest resources)?<br>Do all community members have access to common resources such as forest or marine areas? |

## 3.15 Focus group discussion analysis: informal settlements

The FGD analysis for informal settlements must identify vulnerability as a host community for climate migration, as well as the potential for community displacement or relocation.

Table 3: Focus group analysis for informal settlements

| FGD findings | Exploration questions |
|---|---|
| Community governance | • Leadership structures and conflict potential relating to community governance<br>• Capacity to represent group in displacement/relocation discussions |
| Marriage, inheritance and divorce | • Potential for gender-based discrimination<br>• Widow/daughter rights to land if disaster causes death |
| Common property resources | • Potential drivers of climate migration; as well as conflict or loss of livelihoods<br>• Access to livelihoods for displaced groups; compensation assessments for relocated groups |
| Tenure security | • Potential conflict with customary land-owners<br>• Legal status of agreements/leases over land |
| Access to land | • Potential conflict with customary land-owners<br>• Legal status of agreements/leases over land |
| Land use | • Irregular subdivisions<br>• Housing in high-risk areas<br>• Poor access to water and service |

## 3.16 Household land tenure surveys

Household surveys for vulnerability assessments obtain information on demographics, religion, mobility, migration and duration of residence. Land tenure inputs into household surveys focus on rights to land as well as means of access to associated resources.

The following tool is based on the vulnerability and risk assessment household survey developed by UN-Habitat. The questions have been adapted to climate mobility risks in Pacific contexts. Questions relating to vulnerable groups, such as women and children, had been removed on the basis that they are more appropriate to FGD.

The survey replaces a question relating to perception with questions on disaster displacement. The rationale is that issues of tenure insecurity are better determined through a FGD. The survey also adds a question on preferred measures to increase tenure security. This question is derived from the application of the UN-Habitat survey in Solomon Islands.[12]

12 Trundle, A.; McEvoy, D. *Honiara urban resilience and climate action plan*; UN-Habitat: Fukuoka, Japan, 2017.

Note that household land tenure surveys may not be needed in customary land contexts where entitlements to land and associated sources are based solely or primarily on membership of a customary landholding group.

Tool 5: Household land tenure survey

| Questions | Answers |
|---|---|
| Who do you understand owns this land? | (Insert options based on country's types of land tenure) |
| Do you have an agreement with a landowner or another person to occupy this land? | Yes, with a landowner |
| | Yes, with another person |
| | No |
| | Can´t answer |
| What is the form of this agreement with the landowner/leaseholder? | Written |
| | Informal (e.g. verbal agreement with landowner) |
| | Other, please specify: |
| Please specify type of agreement | Purchase<br>Lease<br>Other |
| Did you obtain your land through inheritance, family relations or sale/lease of land? | Inheritance<br>Family<br>Sale/Lease |
| Do you pay any fee for living on this land? | Yes/no |
| Do you have access to common resources such as forest, bush, or marine areas? | Yes/no |
| Have you ever been asked to resettle or sell your land? | Yes/no |
| (If yes) please explain by whom and why | |
| Have you ever been forced to evacuate from your land as a result of a disaster? | Yes/no |
| (If yes) please explain by whom and why | |
| Have there been any disputes while you have lived here about the ownership or lease of this land? | Yes/no |
| (If yes) who else claimed ownership of this land? | |
| Is this dispute still ongoing? | Yes/no |
| (If no) how was this dispute resolved? | |
| What would help the household most to strengthen the rights to land? | Government documentation<br>Better access to dispute resolution<br>Local systems for recording rights<br>Other (please specify) |

## 3.17 Household survey: gender disaggregation

Household-level tenure may be sufficient to record entitlements such as ownership, lease and possession. These entitlements include co-ownership of marital land. Further tenure identification for individual members of a household is required where the community land tenure screening report identifies risks of gender discrimination. This information is better obtained through FGD than a household survey (see 3.12 and 3.14 above). Relevant FGD questions relate to:

- spouse or partner rights in the event of divorce or death of a spouse/partner;
- daughters' rights to inherit in the event of the death of one or both parents; and
- women's rights to access common resources for livelihoods.

The UN Food and Agriculture Organization (FAO) has developed a Legal Assessment Tool for Gender Equitable Land Tenure that supports the analysis of legal frameworks relating to gender and land tenure.

## 3.18 Household survey: implementation

Household land tenure surveys require experienced community facilitators (enumerators). Enumerators require training on community facilitation, as well as implementing household surveys and uploading data to digital platforms.

## 3.19 Common resources inventory

Common resource inventories are necessary supplements for household land tenure surveys whenever a community relies on access to marine or forest resources for their livelihoods. Land tenure assessments must include rights of access to common resources in order to identify vulnerability to loss of livelihoods. Common resource inventories also provide a basis for resilience planning in the event of displacement or relocation.

Tool 6: Common resources inventory

| Resource | Use/rights/ restrictions | Village area | Custom territory | Other Customary Areas |
|---|---|---|---|---|
| Timber/ construction materials | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |
| Fuel Wood | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |
| Fishing | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |
| Reef resources | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |
| Bush gardens | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |
| Other gardens | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |
| Other resources | Current use / importance for livelihoods | | | |
| | Use rights | | | |
| | Rights | | | |

*Source: Adapted from Environmental and Social Management System (ESMS). 2020. ESMS Guidance note on social impact Assessment.*

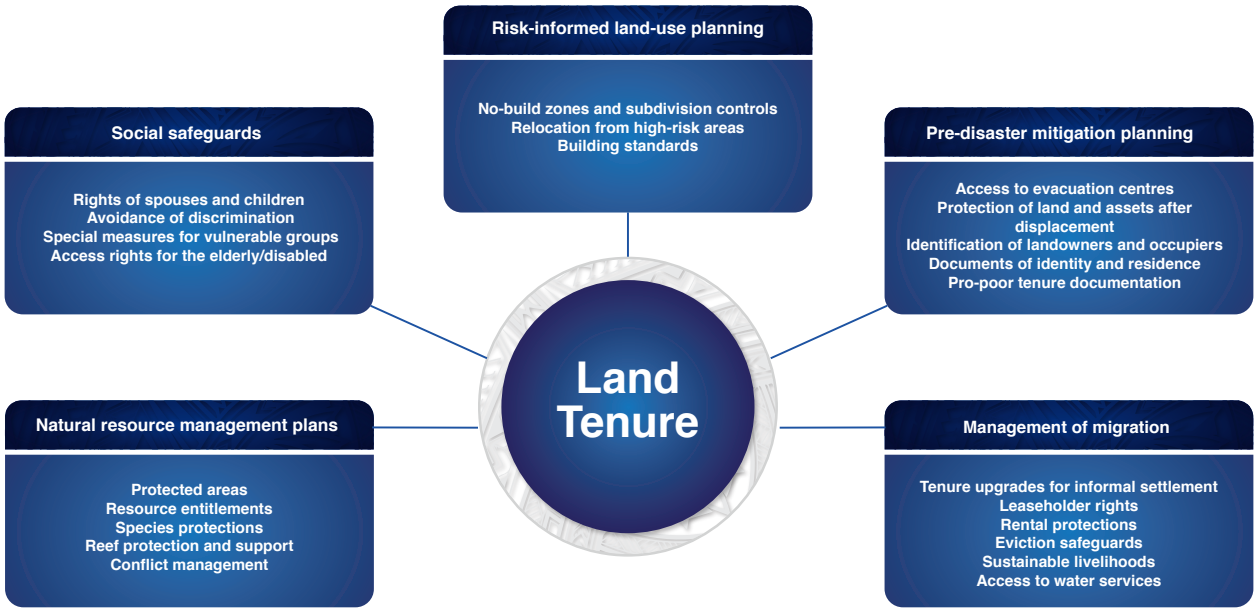
# 4.0 Resilience Planning: Land Tenure Inputs

The research brief identified the following references to land tenure in current Pacific CCA and DRM instruments.

- Land tenure insecurity as a cause of disaster vulnerability
- Land tenure as an element of land-use planning to reduce disaster risk
- Land tenure as a component of spatial data systems to improve decision-making

Land tools are required to support resilience planning under CCA and DRM instruments in the Pacific region. Figure 2 identifies areas of resilience planning that require land tenure inputs.

Figure 2: Land tenure and resilience planning



The following land tools provide inputs into resilience planning in relation to:

- recording land tenure for risk reduction;
- securing land tenure for the vulnerable; and
- restricting land tenure for land use planning.

Some tools take the form of guidance for development according to national contexts. The tools may also require further adaptation to sectoral contexts (e.g. social safeguards, mitigation planning, tenure upgrading, natural resource management).

## 4.1 Land tenure recording

Land tenure describes people and their relationships with land. The primary aim is to connect data on who has entitlements, and what those entitlements are, with information on where people are located, how they use their land, and what exposure they have to climate or disaster risks.

Land tenure recording may not be necessary or appropriate where community screening identifies elevated risks of conflict, or where customary governance mechanisms identify people and their relationships with land with sufficient certainty for CCA and DRM.

## 4.2 Tenure recording and community planning

Measures to record land tenure should be embedded in broader community maps of land use, common resources, services and infrastructure, critical facilities, and access to water and sanitation. Examples include participatory 3-D modelling projects in Fiji, Samoa and Solomon Islands.[13]

Where feasible or appropriate, community maps or models should be digitised with areas and parcels of land identified through low-cost surveying techniques. These techniques include tracing boundaries from aerial photos and satellite imaging (vectorising).

13 Giacomo Rambaldi, *Participatory 3-dimensional modelling: Guiding principles and applications*, 2010.

**Box 7: Tenure recording for resilience in Port Vila and Honiara**

The World Bank and UN-Habitat have projects in Port Vila and Honiara respectively to record land tenure in informal settlements as part of planning for climate risk and resilience.[14] The World Bank Vanuatu Affordable and Resilient Settlement Upgrading Project aims to develop an integrated land management information system (LMIS) to underpin risk-informed affordable land development, including through regularisation of land subdivisions in urban settlements. The project aims include piloting tenure regularisation options for informal settlements in the Greater Port Vila area.

The Climate Resilient Honiara Project is funded by the UN Framework Convention for Climate Change (UNFCC) Adaptation Fund and administered by UN-Habitat. The project builds on vulnerability and risk assessments (VRA) to develop community climate action plans in a number of informal settlements in Honiara. The land tenure information provided by household surveys is integrated with spatial data on exposure through software programs developed by the Cadasta Foundation.

Sources: World Bank 2021. Vanuatu Affordable and Resilient Settlements Project, https://documents1.worldbank.org/curated/en/593231554208591129/pdf/Concept-Program-Information-Document-PID-Vanuatu-Disaster-Risk-Management-Development-Policy-Grant-with-a-Catastrophe-Deferred-Drawdown-Option-CAT-DDO-P168749.pdf;

Trundle, A. and McEvoy, D. 2017. *Honiara urban resilience and climate action plan*. UN-Habitat: Fukuoka, Japan,

## 4.3 Tenure recording: a descriptive approach

Land tenure recording for CCA and DRM does not need to reach the level of accuracy and certainty required for registration of rights in government land administration systems. Land tenure recording need only be descriptive. The aim is to reduce climate mobility risk rather than legally determine rights to land.

Types of tenure recorded are not limited to 'legal' rights to land. Recorded tenures may include possession, use, tenancy, customary rights and informal rights. The record may simply be a photo of a resident standing before their house, or the recording of an origin story of a village or settlement. Other records may include transaction documentation, such as sale or lease, or government documentation, such as utility bills or electoral rolls.

14 Mitchell, D.; Barth, B.; Ho, S.; Sait, M.S.; McEvoy, D. *The benefits of fit-for-purpose land administration for urban community resilience in a time of climate change and COVID-19 pandemic*. Land 2021, 10, 563

## 4.4 How to record land tenure

Recording land tenure for resilience planning requires participatory techniques with enumerators drawn from the community. Enumerators require training on community facilitation, as well as on implementing household surveys and uploading data to digital platforms.

The household tenure survey set out as Tool 5 may be used as a basis for recording land tenure for resilience planning. UN-Habitat has set out steps for community-led tenure recording ("participatory enumeration") in the following guides:

- Tackling tenure security in slums through participatory enumerations, https://gltn.net/download/tackling-tenure-security-in-slums-through-participatory-enumerations-brief-1-eng-2010 1
- Count me in: Surveying for tenure security and urban land management, https://gltn.net/download/count-me-in-surveying-for-tenure-security-and-urban-land-management/7

## 4.5 Tenure recording for planned relocation

Land tenure recording for communities requesting relocation may be necessary to identify vulnerability and to determine compensation entitlements. Once relocated, however, communities should receive legal rights to land to ensure tenure security.

Tenure security for relocated communities depends on whether relocation takes place to alienated or customary land, as explained below.

Relocation to alienated land requires the grant of statutory rights that are registered or recorded in government land administration systems.

Relocation to customary land may not require grant of statutory rights where the relocation takes place within customary territory.

Relocation to the customary land of another group may require the grant of a lease to the relocated community in accordance with national laws and regulations.

## 4.6 After relocation: rights to original land

People who move as a result of climate change do not lose their rights to land because of their displacement or relocation to another area. An exception may arise in relation to land that falls below the mean high tide mark as a result of erosion or sea-level rise (see Box 8).

Re-zoning land from residential to agricultural/fisheries or conservation/regeneration may help to protect original land from grant for other purposes, including coastal tourism or commercial developments. The Resettlement Action Plan should also protect rights to original land by stipulating access and use rights for community members who have relocated.

Pacific jurisdictions that allow the grant of leases over customary land should prohibit the grant of leases to land previously occupied by a relocated community.

**Box 8: Rights to land lost to the sea: legal rules and reforms**

Subject to the application of national statutes or customary law, common law jurisdictions in the Pacific region include rules relating to the loss of land to the sea. A landowner loses rights to land where there is a slow and imperceptible process of encroachment by the sea (or other body of water). This gradual process is known as reliction. However, a landowner may not lose rights to land in the case of sudden loss of land (avulsion). In this event, a landowner may take steps to recover land suddenly lost under the law of avulsion.

This report recommends statutory clarification to confirm that a private landowner will lose rights to land suddenly lost under the law of avulsion, where the land is not recovered within a reasonable period of time. Such statutory provisions may be found in a number of states in the United States of America. The aim is to maintain public rights and access to the sea, while avoiding the uncertainty of a notional under-water land boundary. Whether or not landowners should receive compensation for lost land is a matter for individual jurisdictions, which may include any such compensation in loss and damage calculations for climate impacts.

Sources: United States Environment Protection Agency, Rolling Easements, https://www.epa.gov/system/files/documents/2023-01/rollingeasementsprimer.pdf.

## 4.7 Leasing customary land

Tenure security tools are required to supplement tenure recording for CCA and DRM. While registered ownership provides the strongest protection, leases over customary land are a potential tenure security tool due to the limited availability of alienated land in the Pacific region.

The research brief provides an overview of legal frameworks for leasing customary land in the Pacific region. Some jurisdictions do not allow leases over customary land. Others allow leases through intermediaries (e.g. a land trust board or an incorporated land group), and/or require approval from the president, relevant minister or a court.

Developing a tool for leasing customary land must balance tenure security for displaced or relocated groups with the inalienable ownership of the customary landholding group. The issues are complex and there is no 'off-the-shelf' tool for leases over customary land. This is particularly the case as leases should differ according to the type of climate mobility (i.e. migration, displacement or relocation).

The following checklist provides a tool to assess the general suitability of a lease for people who move as a result of climate change to the land of another customary group.

Tool 6: Checklist for leases over customary land

Leases over customary land should include terms and conditions that respond to the following risks identified by the research brief:

- the legal authority of leaders/representatives to enter into land agreements;
- the nature and status of land rights granted to people who move (and their descendants);
- rights to access water, forest, and marine resources for people who move and their descendants;
- management of population growth when people who move are limited to fixed areas of land;
- management of conflict, including through interactions with formal mechanisms of dispute resolution;
- provision of social, educational and health services;
- specification of standards for construction of roads and other infrastructure;
- regular rental reviews to take into account increases in the value of leased land;
- requirements for avoiding and repairing environmental damage as a result of settlement construction;
- procedures for agreed enlargement of land in circumstances of population growth;
- procedures for access to land for livelihoods and water and sanitation; and
- procedures for renewal of leases includes payment of compensation for improvements if a lease is not renewed.

This report recommends pilot programmes to trial standard form leases as part of resilience planning for informal settlements in the Pacific region. The adoption of standard form leases supports records of transactions over land in informal settlements.

Standard form leases also provide a tool to link land tenure with land use planning. The process involves incorporating community agreements on land use as covenants in leases (see 4.8 below).

## 4.8 Risk-informed land-use planning

Land-use planning includes restrictions on land tenure. These restrictions control what a land-owner or occupier can do with their land. The restrictions should accompany public planning instruments, such as zoning ordinances, coastal wetland regulations, and housing and infrastructure development permits.

Restrictions on land tenure may be agreed as part of community planning for resilience. Once agreed, they should have a legal status that allows them to 'run with the land'. That is: the restrictions will continue to exist even though there are changes to the identity of owners or occupiers of land.

Tenure restrictions that promote community resilience include:

- subdivision controls – conditions and restrictions on subdivisions for new households/housing.
- shoreline construction setbacks – the closest a development may be permitted to the shore-line.
- easements – establishing obligations on land-owners to preserve protective features such as natural buffers or floodways, or to provide evacuation routes in the event of a disaster.
- removal covenants – agreements to remove structures should shore-line movements cause encroachment on public land.

The University of Hawai'i has published a policy toolkit on sealevel rise and coastal land use that describes these types of tenure restrictions in detail.[15]

15 Douglas Codiga and Kylie Wager. *Sea-level rise and coastal land use in Hawai'i: A policy tool kit for state and local governments*. 2011. Center for Island Climate Adaptation and Policy. Honolulu, HI. Available at http://icap.seagrant.soest.hawaii.edu/icap-publications.

## 4.9 Planning for shoreline movements

Climate impacts, such as rising sea levels will move low and high tide marks landward. High tide marks will approach the boundaries of private land, creating a 'coastal squeeze', with implications for public rights to coastal or foreshore land as detailed below.

Public rights of access may be limited or obstructed. This includes rights of access for fishing.
Public buffer zones may be lost or limited. This sites of environmental, ecological or cultural significance.

Private land may also be lost as the high tide mark continues landward movement. In response, some private landowners may attempt 'hard armouring' such as concrete or rock walls. Hard armouring is not a preferred climate adaptation action where it exacerbates erosion and other impacts on neighbouring lands.

## 4.10 Rolling easements

Rolling easements act as a restriction on land tenure that takes into account the landward movement of beaches and coastlines. The easement establishes a rolling boundary that divides public land from private land.

Rolling easements allow the maintenance of public access rights and buffer zones. They may also:

- require an owner to remove structures that encroach on public land as a result of shoreline movement; and/or
- prevent a landowner using hard armouring, such as concrete or rock walls.

Rolling easements may be established by statute and/or through participatory land use agreements. They may be easier to enforce than public planning instruments because they create community expectations of appropriate land use by private landowners.

The US Environment Protection Authority has published a primer on rolling easements for jurisdictions affected by rising sea levels.[16] Further adaptation of rolling easements for Pacific contexts will be required, particularly for atolls, informal settlements, and areas of customary land.

16 United States Environment Protection Agency, *Rolling Easements*, https://www.epa.gov/system/files/documents/2023-01/rollingeasementsprimer.pdf.

## 4.11 Land adjustments and managed retreat

Risk-informed land-use planning may also require land swaps to complement restrictions on land tenure. The UN-Habitat participatory land readjustment tool known as PILaR facilitates land-for-land swaps in informal settlements.[17] The process of readjusting land parcels allows for agreed relocation of informal settlers from high-risk areas, while also ensuring access to roads, infrastructure and evacuation routes.

The Georgetown Climate Centre has published a managed retreat toolkit that includes legal and policy tools for governments to facilitate managed retreat in vulnerable coastal areas experiencing sea-level rise, flooding and land loss.[18] The toolkit includes tax and insurance measures to encourage the relocation of households from high-risk coastal areas. These measures have the potential to complement the current Pacific focus on planned relocation of communities through construction of new sites for settlement.

# 5.0 Conclusion

This report is a 'living policy document'. All tools require national adaptation. Some tools require further development. More tools will be required for a future of climate mobility. The report is intended as a beginning for policy development – particularly so that people and their relationships with land are incorporated into CCA and DRM frameworks in the Pacific.

17 UN-Habitat. *Remaking the urban mosaic: Participatory and inclusive land readjustment* (2016).

18 Georgetown Climate Centre, *Managed Retreat Toolkit*, https://www.georgetownclimate.org/adaptation/toolkits/managed-retreat-toolkit/introduction.html?full#:~:text=Georgetown%20Climate%20Center's%20Managed%20Retreat,%2C%20flooding%2C%20and%20land%20loss.

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