



# Baseline information for PNG's National Adaptation Plan financing and investment strategy

---

## Baseline assessment report

Final (26 May 2022)

Johannes Wolff | Climate Finance Development Specialist Consultant  
USAID's Climate Ready Project



Climate  
Law & Policy  
Global Impact Partner

## Table of Contents

Lists of figures and tables	ii
Abbreviations	iii
Executive Summary	iv
1. Introduction	1
1.1 Background	1
1.2 Context	2
1.3 Approach	4
2. Planning and performance relevant to adaptation	5
2.1 Planning and plan implementation in PNG	5
2.2 Suitable approach for the NAP	7
3. Costing and economic appraisal of adaptation measures	11
3.1 General considerations	11
3.2 Situation in Papua New Guinea	12
3.3 Suitable approach for the NAP	14
4. Financing climate change adaptation in PNG	21
4.1 Financing landscape	22
4.1.1 Overview of financing sources	22
4.1.2 Global financing landscape	24
4.1.3 Financing landscape in PNG	27
4.2 Resource mobilization approach	35
4.2.1 General considerations	35
4.2.2 Suitable approach for the NAP	36
5. Tracking and reporting of adaptation financing	46
5.1 General considerations	46
5.2 Situation in PNG	47
5.3 Suitable approach for the NAP	48
6. Enabling environment for adaptation financing	50
6.1 Public financial management	50
6.2 State owned enterprises and public private partnerships	52
6.3 Business environment	52
References	54
Annex: Assessment of climate expenditure tracking system components	56

## Lists of figures and tables

### Tables

Table 1. Selected indicators from the 2015 Public Expenditure and Financial Accountability Assessment	6
Table 2. Simplified example of a database of NAP adaptation measures	10
Table 3. Commonness of costing and appraisal approaches by intervention stage	12
Table 4. Examples of ballpark cost estimates from Saint Lucia's NAP documentation	16
Table 5. Summary of costing approaches by intervention stage	17
Table 6. Basic summary table with cost estimate breakdown	18
Table 7. Basic table for the bottom-up costing of activities	18
Table 8. Example of cost categories for an infrastructure project	18
Table 9. High-level mapping of donors in NAP priority sectors in PNG and globally, 2010-19	33
Table 10. Broad mapping of selected financing sources by types of interventions	35
Table 11. High-level overview of potential finance sources to develop climate-resilient codes	41
Table 12. Application of criteria to narrow down potential finance sources for climate-resilient codes	42
Table 13. Basic information on ADB as illustration for financing intelligence database	43

### Figures

Figure 1. Support arrangements and tools under the NAP vis-à-vis existing systems	v
Figure 2. Aggregate PEFA scores for PNG and other countries	3
Figure 3. Interlinkages between financing and other parts of the project and budget/PFM cycle	4
Figure 4. Adaptation planning approach under the NAP	8
Figure 5. Overview of NAP financing sources, channels, and implementation arrangements	22
Figure 6. Global climate finance architecture	23
Figure 7. Landscape of climate finance in 2019-2020, annual average, USD billions	24
Figure 8. Average annual climate finance composition, 2017/18 and 2019/20, US\$	25
Figure 9. Development partner climate finance commitments, 2010-2019, US\$ billions	25
Figure 10. Adaptation finance by actor (left) and region (right), 2019/20 annual average, US\$ billions	25
Figure 11. Climate (left) and adaptation (right) finance and estimated future annual needs, US\$ billions	26
Figure 12. National tax and non-tax revenue, 2015-2025, Kina billion and US\$ billion	27
Figure 13. Public capital investment program, 2015-2025, Kina billion and US\$ billion	28
Figure 14. Development partner adaptation finance commitments, 2010-2019, US\$ millions	31
Figure 15. Adaptation finance commitments by recipient country, 2015-19	31
Figure 16. Adaptation financing in PNG by partner and sector, total commitments, 2015-19 (\$m)	32
Figure 17. Illustration of formality of financing decision-making in PNG	36
Figure 18. Possible institutional arrangements for NAP financing	39
Figure 19. Synched approach for intervention design, costing and financing	40
Figure 20. Chart of Accounts in PNG	47
Figure 21. Assessment of climate expenditure tracking system components	48
Figure 22. Simplified progress tracking and reporting template	49
Figure 23. Ease of Doing Business ranking for Papua New Guinea, 2020	53

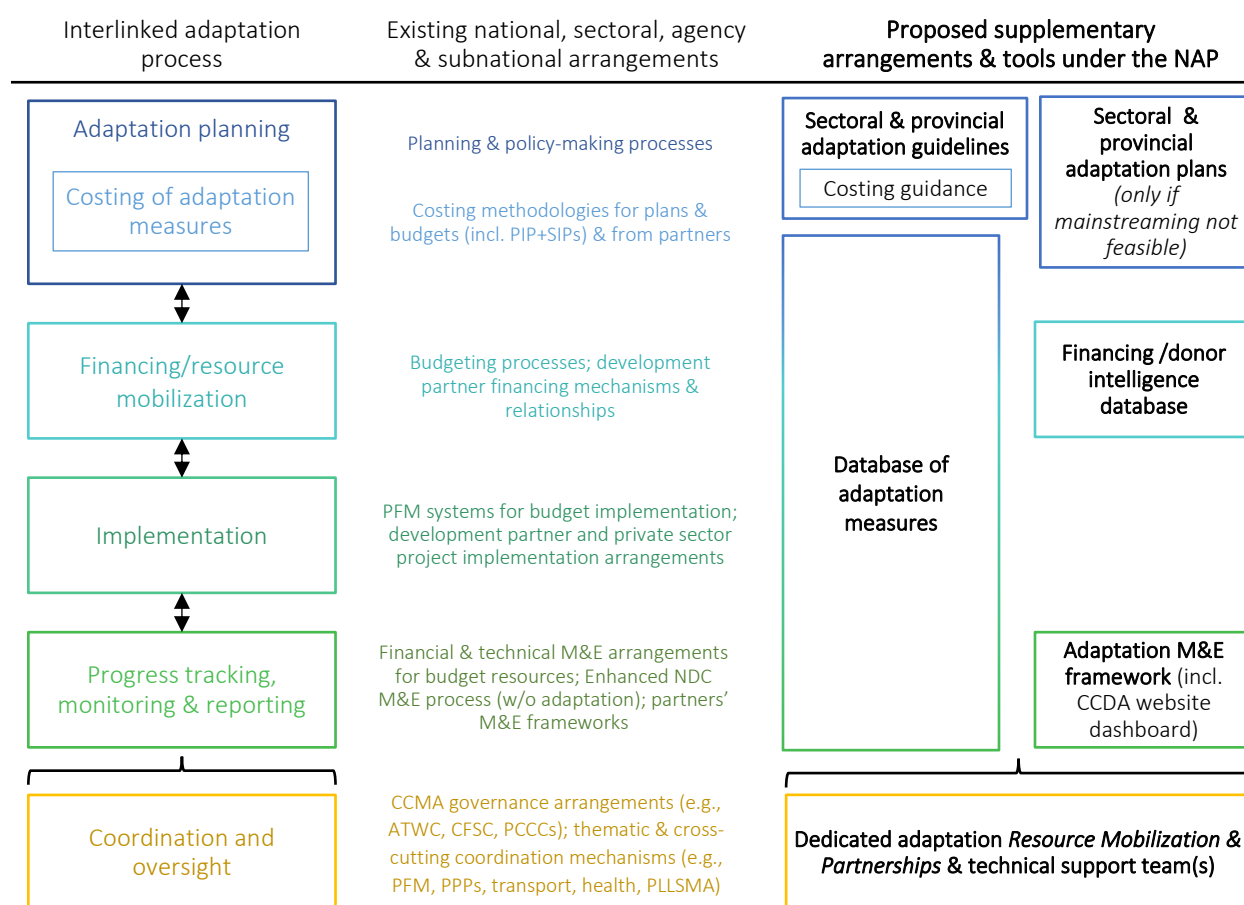
## Abbreviations

ADB	Asian Development Bank
ATWC	Adaptation Technical Working Group
CCDA	Climate Change and Development Authority
CCMA	Climate Change (Management) Act
CFSC	Climate Finance Steering Committee
CLP	Climate Law and Policy
CPEIR	Climate Public Expenditure and Institutional Review
CRGGTF	Climate Resilience and Green Growth Trust Fund
DAC	Development Assistance Committee of the OECD
DIRD	Department of Implementation and Rural Development
DNPM	Department of National Planning and Monitoring
DOF	Department of Finance
DOT	Department of Treasury
DoW	Department of Works & Implementation
DPLGA	Department of Provincial and Local Government Affairs
EU	European Union
GCF	Green Climate Fund
GoPNG	Government of Papua New Guinea
IFMS	Integrated Financial Management System
MCA	multi-criteria analysis
MTDP	Medium Term Development Plan
M&E	monitoring and evaluation
NAP	National Adaptation Plan
NDF	Nordic Development Fund
NEC	National Executive Council
NEFC	National Economic and Fiscal Commission
NDC	Nationally Determined Contribution
OECD	Organisation for Economic Co-operation and Development
PCCC	Provincial Climate Change Committee
PEFA	Public Expenditure and Financial Accountability
PFD	Project Formulation Document
PFM	public financial management
PID	Project Identification Document
PIFS	Pacific Islands Forum Secretariat
PIP	Public Investment Program
PLLSMA	Provincial and Local-level Services Monitoring Authority
PNG	Papua New Guinea
PPP	public private partnership
SIP	Service Improvement Program
SOE	state-owned enterprise
TA	technical assistance
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development

## Executive Summary

1. **Background.** The assessment aims to provide substantive and quality baseline information to inform the development of the National Adaptation Plan (NAP) financing and investment strategy. It supports the third outcome of the Green Climate Fund (GCF) Readiness support grant project Advancing Papua New Guinea's National Adaptation Plan implemented by the Climate Change and Development Authority (CCDA), with support from the United Nations Development Programme (UNDP): "Financing framework for climate change adaptation action for medium-to long-term is established". The assignment is part of USAID's Climate Ready Project (Climate Ready) implemented by DT Global. Analysis and findings were shared throughout the assignment duration, as they became available, to inform the NAP, including its section on the financing strategy and the sectoral adaptation guidelines.
2. **Context.** Climate change adaptation is a complex issue due to its cross-cutting nature that spans across sectors and requires a whole-of-government approach and close international and private sector cooperation. It further requires a combination of (highly) technical (e.g., environmental, engineering), economic, financial, political, and cultural factors to be considered. This is faced with (i) the complex public institutional landscape in PNG, comprising multiple, evolving government levels and a high number of government institutions that tend to increase over time; (ii) a high-cost operating environment in PNG; (iii) limited financial and human resources; and (iv) weak enabling environments for public financial management (PFM), state-owned enterprises (SOEs) and public-private partnerships (PPPs), and private sector businesses.
3. **Approach.** In view of these needs and challenges, the question of resourcing is even more critical. It is highly important to be strategic in the approach to prioritize financial and non-financial resources across all areas, and focus on robust solutions, starting simple and building on achievements to minimize capacity and resource needs. Interlinkages between the different stages of the budget/PFM and project cycle are further taken into consideration to provide direction on how a practical, strategic NAP financing approach could look like. The assessment suggests integrated, practical tools that link planning, resource mobilization, implementation progress tracking/monitoring, and reporting (Figure 1).

**Figure 1.** Support arrangements and tools under the NAP vis-à-vis existing systems



ATWC = Adaptation Technical Working Group, CCDA = Climate Change and Development Authority, CCMA = Climate Change (Management) Act, CFSC = Climate Finance Steering Committee, M&E = monitoring and evaluation, NDC = Nationally Determined Contribution, PCCC = Provincial Climate Change Committee, PFM = public financial management, PLLSMA = Provincial and Local-level Services Monitoring Authority, PPP = public private partnership, PIP = Public Investment Program, SIP = Service Improvement Program.

Source: Author.

4. **Planning and performance relevant to adaptation.** PNG has a complex, highly ambitious cascading governmental planning framework comprising national, sector, agency, provincial, provincial sector, district, local level government and ward level plans. Compliance with mandated plans is mixed, generally decreasing with the planning level. Further, weaknesses in PFM undermine the implementation of plans. Both issues equally apply to climate change adaptation given its cross-cutting nature across the whole-of-government. In view of this, rather than adding planning layers at national, sector, and subnational government levels, the NAP should be seen as a support and accountability mechanism for adaptation planning and implementation. NAP processes should be integrated as much as possible into existing governmental planning processes and documentation requirements, including through the mainstreaming of regular planning and budgeting processes and guidance. As a temporary support measure, a database of adaptation measures, aligned to adaptation guidelines and supplemented by fundraising and implementation progress information, could be a practical tool to support implementation of the NAP. Technical support to government agencies, starting with the NAP priority sectors, for the identification of adaptation measures and the gradual mainstreaming of adaptation into plans will be important.

<b>Recommendation 2.1: Integrate NAP approach, to the extent possible, into existing governmental planning processes and documentation requirements.</b> This includes a preference for gradually mainstreaming existing planning documents over producing standalone sectoral and subnational adaptation plans.	Immediate <i>(partially addressed in NAP and guidance)</i>	<b>CCDA</b> , UNDP, CLP
<b>Recommendation 2.2: (i) Mainstream planning and budgeting guidance and templates, and (ii) provide technical support to the gradual mainstreaming of climate change adaptation (and mitigation) into national, subnational, sector, and agency plans, as these are updated.</b> This should cover the recurrent budget, the PIP and SIP, and subnational planning and budgeting. Wherever possible, plans and budgets should be aligned to facilitate tracking of financing and implementation performance.	Short- to medium term	CCDA, <b>DNPM</b> (PIP & aid), <b>DOT</b> (recurrent budget), <b>DIRD/DOF</b> (SIPs), <b>DPLGA</b> (subnational)
<b>Recommendation 2.3: Create a portfolio of appraised NAP measures that evolves over time.</b> Such a database can form the basis for resource mobilization, progress tracking and reporting.	Ongoing	<b>CCDA</b> , <b>NAP priority sectors</b> , other agencies
<b>Recommendation 2.4: As a quick win, explore the inclusion of adaptation elements into ongoing and pipeline projects with secured or likely funding.</b>	Immediate	<b>CCDA</b> , <b>NAP priority sectors</b> , other agencies

5. **Costing and economic appraisal of adaptation measures.** Costs are, within limits, a variable factor that can be adjusted through changes to scale and technical specifications of an intervention, and are only one of several factors that determine the selection of a particular measure and its design; other factors can include the available financing, financing preferences of decision-makers (both within government and of partners), and technical feasibility, among others. Economic appraisal approaches are faced with real-life complexities, data gaps, and resource limitations in terms of capacity and funding more broadly. While basic costing and appraisal approaches, guidance, and templates exist for GoPNG financing sources, their use is limited in PNG and more comprehensive approaches are mostly supported by technical assistance. Climate funds as well as bilateral and multilateral development partners prescribe their own guidance and templates for the development of costings and project budgets, which are generally completed by staff from the organization, with inputs from government staff as required.

6. These points suggest to pragmatic approach for the costing and appraisal of adaptation measures. Rather than developing an adaptation-specific costing methodology (such as Fiji), the costing of adaptation options should utilize the established costing/budgeting and appraisal approaches from GoPNG and development partners. This aims to strengthen existing processes, avoids duplication, and reduces resource demands in terms of funding and capacity. To avoid the inefficient use of resources on costing, estimates should be developed step-wise as part of the project or activity design process and in parallel with progress made on resource mobilization. In parallel, the government's established costing and appraisal approaches should be strengthened and staff capacity developed.

<b>Recommendation 3.1: (i) Limit initial costings at the idea stage to ballpark estimates covering investment and recurrent costs, and (ii) rely on funding instrument-specific detailed costing and</b>	Immediate <i>(partially addressed)</i>	All government agencies
--	---	-------------------------

<p><b>economic analysis requirements at concept and detailed design stages.</b> This implies that no NAP specific methodology for costings and economic analysis should be developed. This approach should be reflected in the NAP and in sectoral and provincial adaptation guidance.</p>	<p><i>in draft adaptation guidance)</i></p>
<p><b>Recommendation 3.2: Strengthen existing government costing, appraisal, and selection processes to ensure climate risks are considered, low value-for-money proposals are filtered out, and recurrent cost implications are factored into decision-making.</b> These processes should be used for all larger measures where detailed funding instrument-specific appraisal and economic analysis processes are not required.</p>	<p>As soon as revision of guidance is feasible      CCDA, DNPM (PIP &amp; aid), DOT (recurrent budget), DIRD/DOF (SIPs), DPLGA (subnational)</p>
<p><b>Recommendation 3.3: Develop capacity of national and subnational agencies in using established costing, appraisal, and selection processes for regular activities and for adaptation.</b></p>	<p>Ongoing      Central agencies, CCDA, partner programs</p>

7. **Financing climate change adaptation in PNG.** Financing for the NAP is taking place in a promising environment framed by high-level political commitments globally and in PNG, a recognized large financing gap for climate action (including for adaptation) to reach politically agreed targets, ambitious corporate commitments of key development partners and increasing resources for international climate change funds, and a private sector increasingly aware of the importance of climate resilience. Maximizing resources for climate change adaptation measures under the NAP framework requires a strategic approach. Scarce available capacities and resources across the CCDA, central agencies, priority sectors, and subnational government entities will need to be allocated to where the potential and likelihood for mobilizing resources is highest. Where possible utilizing and strengthening existing channels, processes, and systems is preferable. While data on adaptation financing remains patchy and methodological inconsistencies persist (Climate Policy Initiative, 2021), available data from domestic and international sources helps inform and guide the strategic allocation of resources for mobilizing adaptation financing.

8. Domestic public finance sources constitute the largest potential financing for the NAP. Earmarking specific revenue sources and/or expenditure programs for adaptation may provide supplementary domestic public financing. International public finance sources constitute another significant financing source for adaptation, mainly through concessional loans and grants. Sources include bilateral providers, multilateral climate funds under the UNFCCC and outside of the UNFCCC, non-climate-focused multilateral funds, and multilateral development banks. While data is limited on private sector financing for adaptation in PNG, funds from corporations, commercial financial institutions, philanthropy, and households and individuals have potential, particularly in the medium and long-term.

9. Given the evolving climate financing landscape and key characteristics of how financing decisions are taken (i.e., a mix of formal and informal approaches and varying time horizons), a suitable strategic approach for resource mobilization for the NAP and its portfolio of adaptation measures could be a long term continuous, actively managed stakeholder engagement process using both formal and informal channels (rather than a standalone financing strategy document). To strengthen CCDA's role as climate finance coordination and support hub and support resource mobilization, a dedicated team of CCDA staff, supported by priority sector and central agency focal points and technical expertise provided by development partners, could be established. A financing intelligence database (or toolkit) could be a



practical support instrument to gather financing source information and a record of formal and informal engagement and complement the proposed database of adaptation measures.

<b>Recommendation 4.1: Design the envisioned financing and investment strategy for the NAP as a long term, continuous, actively managed stakeholder engagement process that uses both formal and informal channels.</b> This should be reflected in the NAP and be in place of a standalone financing strategy document.	Immediate ( <i>partially addressed in draft NAP</i> )	<b>CCDA,</b> DNPM, DOT
<b>Recommendation 4.2: Focus and strengthen CCDA's role as climate finance coordination and support hub with resource mobilization expertise, including through the establishment of a partnerships and resource mobilization team.</b>	Immediate	<b>CCDA,</b> partner support
<b>Recommendation 4.3: Carefully assess and prioritize the pursuit of (new) financing sources and channels based on their potential return on investment to avoid spreading scarce capacity too thinly.</b>	Gradual	<b>CCDA,</b> partner support
<b>Recommendation 4.4: (i) Establish a database of financing sources and related intelligence for adaptation and (ii) become an expert in understanding programming and access processes, both domestically and internationally covering public and private sectors.</b>	(i) Immediate, (ii) ongoing	<b>CCDA</b>
<b>Recommendation 4.5: Establish and maintain formal and informal relationships with stakeholders through focal points in the various institutions.</b>	Ongoing	<b>CCDA</b>
<b>Recommendation 4.6: Actively support fundraising efforts for the evolving portfolio of appraised NAP measures.</b>	Ongoing	<b>CCDA,</b> sectors, subnational

10. **Tracking and reporting of adaptation financing.** The tracking of climate change related budget allocations and expenditure would be technically feasible, building on global typology and a suitable tagging approach and using either the government's integrated financial management system (IFMS) or a separate spreadsheet approach. However, budget and financial management capacity in central agencies and line agencies is constrained, and substantial weaknesses in (i) the planning framework at agency and sector level in regard to climate change, (ii) translating plans into budgets, (iii) implementing budgets and tracking financial and physical progress, and (iv) establishing a feedback loop to influence subsequent strategic and annual plans and budgets, result in low budget and expenditure credibility and thereby risk undermining a climate expenditure tracking system.

11. A phased approach is recommended, starting with a simple monitoring and reporting approach and templates that bring together financial and physical progress information. Its coverage should, at least in the first years, focus on the NAP and its growing portfolio of adaptation measures, before expanding to agency budgets in NAP priority sectors and beyond. The portfolio database of adaptation measures, and potentially a corresponding website dashboard, could facilitate ongoing monitoring and public reporting. As implementation performance and transparency is key in securing additional resources in the future, CCDA could help implementing agencies identify and resolve implementation issues, and comply with reporting requirements, whenever possible.

**Recommendation 5.1: Focus climate budget and expenditure tracking to the adaptation measures developed under the NAP framework (e.g., through mainstreaming of sector plans) before expanding to agency budgets in priority sectors and beyond over the medium- to long-term.** This approach should be consistently reflected in the NAP and accompanying guidelines. Simple supporting tools, comprising the proposed database of adaptation measures (with financial and physical progress information fields), reporting formats, and a CCDA website dashboard, should be developed for the initial phases before moving the tracking system gradually onto the budget and IFMS.

Immediate, with gradual expansion over the medium- and long-term

**CCDA, NAP** priority sectors DOT, DOF, and DPLGA/DIRD/NEFC in the medium-term

**Recommendation 5.2: Carry out regular monitoring and reporting using the adaptation portfolio database, existing climate reports, and the website dashboard, and help identify and address any implementation issues, as a basis for successful future fundraising.**

Immediate

**CCDA, NAP** priority sectors

12. **Enabling environment for adaptation financing.** The enabling environments for adaptation as well as public and private sectors more broadly are critical to mobilize and effectively and efficiently use resources for adaptation. These include (i) strong planning and coordination arrangements for adaptation, (ii) the PFM system to resource and implement plans, (iii) frameworks for SOEs and PPPs that can play important roles in service provision and in the mobilization and use of public and private finance, and (iv) the business environment to direct private finance toward adaptation. All these enabling environments can contribute to adaptation in two ways: first, by a general strengthening of the frameworks, systems, and capacities to ensure resources are mobilized and used effectively and efficiently for established development objectives, which is done as part of sector specific reform programs; and second, by mainstreaming adaptation considerations into these enabling environments to increase the impact on adaptation. Entry points in the area of PFM are the mainstreaming of budget, PIP and SIP processes, and the phased approach to tracking climate financing while scoping studies can help identify opportunities in the other areas. As frameworks are mainstreamed, mitigation considerations should equally be reflected.

**Recommendation 6.1: Continue strengthening legal, policy, and institutional frameworks for (i) PFM, (ii) SOEs and PPPs, and (iii) the business environment, which serve as enabling environments for mobilizing and implementing climate finance.**

Ongoing

**Central agencies,** Department of Public Enterprises, KCH

**Recommendation 6.2: Assess opportunities and find entry points to mainstream climate change considerations into the legal, policy, and institutional frameworks for (i) PFM, (ii) SOEs and PPPs, and (iii) the business environment.** Entry points for PFM are the mainstreaming of budget, PIP and SIP processes (see Recommendation 2.2), and the phased approach to tracking climate financing (see Recommendation 5.1) while scoping studies can help identify opportunities in the other areas.

Ongoing

**Central agencies,** CCDA

## 1. Introduction

### 1.1 Background

13. The assessment aims to provide substantive and quality baseline information to inform the development of the National Adaptation Plan (NAP) financing and investment strategy. It supports the third outcome of the Green Climate Fund (GCF) Readiness support grant project Advancing Papua New Guinea's National Adaptation Plan implemented by the Climate Change and Development Authority (CCDA), with support from the United Nations Development Program (UNDP): "Financing framework for climate change adaptation action for medium-to long-term is established".

14. The assignment is part of USAID's Climate Ready Project (Climate Ready) implemented by DT Global. The assessment was prepared by Johannes Wolff, Climate Finance and Development Specialist (International) under the guidance of assignment supervisors Peniamina Leavai (until end September 2021) and Lee Baker (from October 2021) and with support from Harry Gubala.

15. Based on initial assessment findings as well as consultations with CCDA, UNDP, and the Climate Law and Policy (CLP) team that supports the development of the NAP and accompanying guidelines, the assessment has been refocused compared to its original scope of works and the analysis tailored to the ongoing NAP development process (see list below). It provides analysis and recommendations for tailored approaches to support NAP implementation in the areas of adaptation planning, costing, resource mobilization, and tracking and reporting. This aims to provide CCDA, together with other stakeholders, with practical tools and supporting arrangements to lead the implementation of the NAP. The assessment also includes information and examples for matching NAP priority sectors and specific adaptation measures, which will be developed under the NAP framework going forward, with potential financing sources.

- **NAP approach in light of planning and PFM performance in PNG:** The assessment looks into implications of planning and PFM weaknesses in PNG for adaptation planning and implementation. Based on this, it provides recommendations for the integration of the NAP with existing government plans and processes, including through a proposed database of adaptation measures as a practical tool to implement the NAP while minimizing resource demands and duplication (Section 2).
- **Costing of adaptation measures:** The assessment provides a brief stock take of costing methodologies in PNG and in other countries, and proposes a suitable costing approach that can be included in the sectoral adaptation guidelines (Section 3).
- **Resource mobilization approach:** The assessment outlines a strategic approach for fundraising for the NAP, suggesting practical tools and supporting institutional arrangements (Section 4).
- **Tracking and reporting of climate related allocations and expenditure:** An output of the UNDP/CLP work plan comprises the development of climate change adaptation markers and budget codes. To inform this work and help identify suitable approaches, the assessment looks into the Chart of Accounts and the Integrated Financial Management System (IFMS) as well as different options for tracking climate related budget allocations and expenditures (Section 5).

16. Analysis and findings were shared throughout the assignment duration, as they became available, to inform the NAP, including its section on the financing strategy and the sectoral adaptation guidelines. The consultant further provided inputs for the NAP and the sectoral adaptation planning guidelines.

17. The baseline assessment builds on analytical work done in the areas of climate financing, legal and institutional arrangements for climate change, and public financial management, including (i) Options for Strengthening Climate Finance Coordination and Accessibility in Papua New Guinea prepared by the Pacific Islands Forum Secretariat for the Department of National Planning & Monitoring (DNPM) and the Climate Change and Development Authority (CCDA) in 2019; (ii) the Joint Organizational Assessment Report of PNG's Climate Change and Development Authority prepared by USAID Climate Ready in 2018; (iii) the Analysis of Laws, Institutions, Policies and Plans, and Institutional Capacity Assessment prepared by CLP in 2021; and (iv) Public Expenditure and Financial Accountability (PEFA) reports, with the most recent publicly available assessment from 2015 (2019/20 assessment remains unpublished to date).

18. As part of the assessment preparation, consultations were undertaken with CCDA; the Department of National Planning and Monitoring; the Departments of Agriculture and Livestock, Health, Transport, and Works and Implementation responsible for the four NAP priority sectors; and UNDP and CLP. The preliminary assessment findings were presented and discussed with participants at the NAP workshop on 27 January 2022.

## 1.2 Context

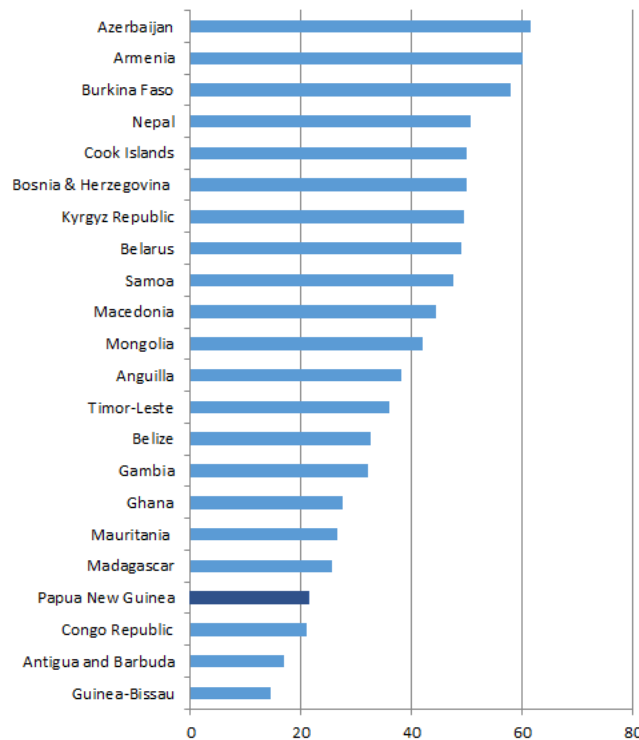
19. **A complex topic in a complex context.** Climate change adaptation is a complex issue due to its cross-cutting nature that spans across sectors and requires a whole-of-government approach and close international and private sector cooperation. It further requires a combination of (highly) technical (e.g., environmental, engineering), economic, financial, political, and cultural factors to be considered. This is faced with (i) the complex public institutional landscape in PNG, comprising multiple, evolving government levels and a high number of government institutions that tend to increase over time; (ii) a high-cost operating environment in PNG; and (iii) limited financial and human resources.

20. **The enabling environments have weaknesses in PNG.** Given its multi-sectoral nature requiring collective action across, and financing from, public and private sectors, enabling environments are important to help identify and coordinate priorities and interventions, and facilitate the mobilization and efficient implementation of resources. However, these exhibit substantial weaknesses in PNG.

- **Policy and institutional environment:** The World Bank's Country Policy and Institutional Assessment average scores for PNG have been decreasing across all four clusters, i.e., economic management, public sector management and institutions, structural policies, and social inclusion, over the past decade. The Asian Development Bank (ADB) Country Performance Assessment shows a similar picture, with scores substantially below the fragile situations threshold. Apart from voice and accountability, Worldwide Governance Indicators for government effectiveness, control of corruption, political stability, regulatory quality, and rule of law all show negative scores, leaving PNG among the 18 to 31 percent (depending on the indicator) lowest scoring countries globally. The scores for government effectiveness and regulatory quality, both important for implementing priorities like adaptation, have decreased over the past decade.

- **Public financial management (PFM):** The PFM system in PNG exhibits significant weaknesses across all major areas assessed through the Public Expenditure and Financial Accountability (PEFA) methodology. While there are issues with aggregating and [comparing PEFA assessment results](#) across countries, a brief analysis published on the [PFM Connect Blog](#) provides a broad picture of the PFM system performance in PNG based on the 2015 PEFA assessment vis-à-vis selected other countries (Figure 2). Since, reforms have progressed slowly and results have been mixed while the 2019/20 PEFA assessment remains unpublished.

**Figure 2.** Aggregate PEFA scores for PNG and other countries



Source: Adapted from [PFM Connect Blog](#) (accessed 14 January 2022).

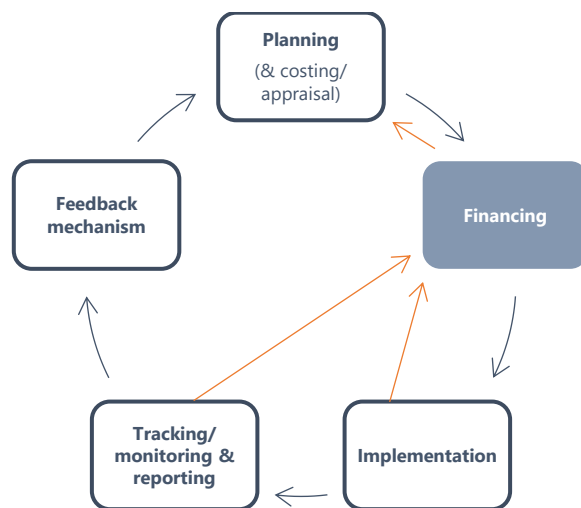
- **Corruption.** PNG stood at position 124 out of 180 countries in Transparency International's Corruption Perceptions Index 2021, with a score from 31 of 100. According to the Global Corruption Barometer, 96% of people think that corruption in government is a big problem, 54% of public service users paid a bribe in the previous 12 months, and 57% of people were offered a bribe in exchange for their vote in the last 5 years.
- **Private sector environment.** PNG occupied place 120 of 190 nations in the World Bank's Ease of Doing Business rankings for 2020. Particular low country rankings are in 'enforcing contracts' (173 of 190 countries), 'resolving insolvency' (144), and 'starting a business' (142). SOEs that operate across multiple sectors of the economy have shown mixed performance and PPP frameworks and institutional arrangements are nascent.

### 1.3 Approach

21. **Prioritization and sequencing, and a focus on robust solutions is important.** In the context of PNG's substantial needs, its high cost environment, system and capacity constraints, and the complex political economy that results in complex institutional arrangements and decision-making processes, the question of resourcing is even more critical. It is highly important to be strategic in the approach to prioritize financial and non-financial resources across all areas, and focus on robust solutions, starting simple and building on achievements to minimize capacity and resource needs while less critical features can be added once a basic level of functionality is established (more advanced practices can of course be continued). The baseline assessment aims to take this into consideration by attempting to answer in each section the question '*what information, tools and processes can lead to changes in practice?*'.

22. **Given the importance of the other stages of the project and budget/PFM cycle for resource mobilization, these are part of the analysis throughout the assessment (Figure 3).** PIFS (2019, p. 50) also highlights the interlinkages, emphasizing that efficient project implementation and the achievement of goals, meeting grant administration and reporting obligations, and the effective coordination of the national climate and disaster program all contribute to better access to climate finance, including through encouraging donors to invest resources.

**Figure 3.** Interlinkages between financing and other parts of the project and budget/PFM cycle



Source: Author.

23. **Overall, the assessment attempts to provide direction on how a practical, strategic NAP financing approach could look like.** It suggests integrated, practical tools that link planning, resource mobilization, implementation progress tracking/monitoring, and reporting. General considerations are presented upfront in several chapters; while naturally simplifying complex realities, these aim to be thought-provoking to help the reader reflect on what approaches and tools could make a positive difference in practice.

## 2. Planning and performance relevant to adaptation

24. This section briefly discusses the planning framework in PNG and its implementation, prior to outlining a suitable approach for the NAP from a planning and PFM perspective. As alluded to above, designing a practical, robust adaptation planning approach that supports accountability through transparent progress tracking and reporting is critical to enable successful resource mobilization.

<b>Recommendation 2.1: Integrate NAP approach, to the extent possible, into existing governmental planning processes and documentation requirements.</b> This includes a preference for gradually mainstreaming existing planning documents over producing standalone sectoral and subnational adaptation plans.	Immediate <i>(partially addressed in NAP and guidance)</i>	<b>CCDA</b> , UNDP, CLP
<b>Recommendation 2.2: (i) Mainstream planning and budgeting guidance and templates, and (ii) provide technical support to the gradual mainstreaming of climate change adaptation (and mitigation) into national, subnational, sector, and agency plans, as these are updated.</b> This should cover the recurrent budget, the PIP and SIP, and subnational planning and budgeting. Wherever possible, plans and budgets should be aligned to facilitate tracking of financing and implementation performance.	Short- to medium term	CCDA, <b>DNPM</b> (PIP & aid), <b>DOT</b> (recurrent budget), <b>DIRD/DOF</b> (SIPs), <b>DPLGA</b> (subnational)
<b>Recommendation 2.3: Create a portfolio of appraised NAP measures that evolves over time.</b> Such a database can form the basis for resource mobilization, progress tracking and reporting.	Ongoing	<b>CCDA</b> , <b>NAP</b> <b>priority sectors</b> , other agencies
<b>Recommendation 2.4: As a quick win, explore the inclusion of adaptation elements into ongoing and pipeline projects with secured or likely funding.</b>	Immediate	<b>CCDA</b> , <b>NAP</b> <b>priority sectors</b> , other agencies

### 2.1 Planning and plan implementation in PNG

25. **PNG has a complex, highly ambitious cascading governmental planning framework.** It comprises numerous plans at the national, sector, agency, province, provincial sector, district, local level government and ward levels. Overarching guidance is provided by the national planning framework comprising the National Strategy for Responsible Sustainable Development for Papua New Guinea (StaRS), the Vision 2050, the Development Strategic Plan 2010-2030, and the Medium Term Development Plan (MTDP) III. Agency-level plans include corporate plans and annual implementation (or activity) plans. At the subnational level, the Organic Law on Provincial Governments and Local-level Governments prescribes provincial and local-level governments to formulate and implement rolling five-year development plans. Compliance with planning requirements is mixed, particularly at the subnational level.<sup>1</sup>

<sup>1</sup> See, e.g., National Research Institute Papua New Guinea. 2014. [Provincial Development Planning in Papua New Guinea, An Appraisal](#), which found that only a small share of provinces prepared required plans and plans were generally of low quality.

26. **Several issues risk undermining the implementation of plans.** The multitude of planning processes and extent of planning documentation absorb substantial resources, which are in turn not available for implementation, progress monitoring and reporting. Weak links between plans and budgets and inconsistent documentation obstruct comparison between plans and budgets at all levels (e.g., program-activity structure in plans often does not match with that in the budget). Program based budgeting is its infancy in the national and subnational budgets, with budget development instead relying largely on line-item incremental approaches. Budget implementation is poor, as evidenced by high expenditure variation versus approved budgets, and progress monitoring and reporting limited. The lack of progress-tracking in turn undermines corrective action. Capacity gaps are widespread and inter- and intradepartmental coordination is often limited. Table 1 provides an overview of selected PEFA indicators along the PFM cycle that are critical to implement government plans from the 2015 PEFA assessment. The 2019/20 PEFA assessment that could provide an update on PNG's more recent PFM performance remains unpublished.

**Table 1.** Selected indicators from the 2015 Public Expenditure and Financial Accountability Assessment.

<b>PFM area</b>	<b>PEFA Performance Indicator</b>	<b>Score (A=highest to D=lowest)</b>
Planning and performance	8. Performance information for achieving efficiency in service delivery	D
Budgeting	PI-4 Classification of the budget	C, due to the lack of a functional classification
	PI-16. Medium-term perspective in expenditure budgeting	D
	(i) Coverage and content of sector strategies	D
	(ii) Reconciliation of top-down and bottom-up approaches in the medium-term financial framework	D
	(iii) Links between the medium-term framework and annual budgets	D
Implementation	PI-21 Predictability in the availability of funds to support service delivery	C
	PI-22 Effectiveness of payroll controls	D+
	PI-23 Transparency, competition and complaints mechanisms in procurement	D
	PI-24 Effectiveness of internal controls for non-salary expenditure	D+
Accountability	PI-26 Accounts reconciliation and financial data integrity	D
	PI-27 Quality and timeliness of in-year budget reports	D
	PI-28 Quality and timeliness of annual financial reports	D

Note: The 2019/20 PEFA assessment could provide updates but remains unpublished.

Source: IMF. 2015. Papua New Guinea Public Expenditure and Financial Accountability Assessment.

27. **Systemic weaknesses in PFM apply equally to climate change adaptation.** Given climate change is a cross-cutting issue that requires contributions across the whole-of-government, these general observations directly apply to the NAP and its adaptation measures at sectoral and subnational level. Similar observations also apply to the CCDA as the main stakeholder in the area of climate change, as, e.g., USAID Climate Ready's *Joint Organisational Assessment Report* from 2018 suggests. These findings should be considered in the design of the NAP approach and its documentation, which can become extensive, judging from other countries' NAPs. As briefly noted in Section 1.2, approaches should be designed as robust as possible and be introduced in a phased manner to minimize capacity and resource needs while taking advantage of already established processes, institutional arrangements, and capacities.

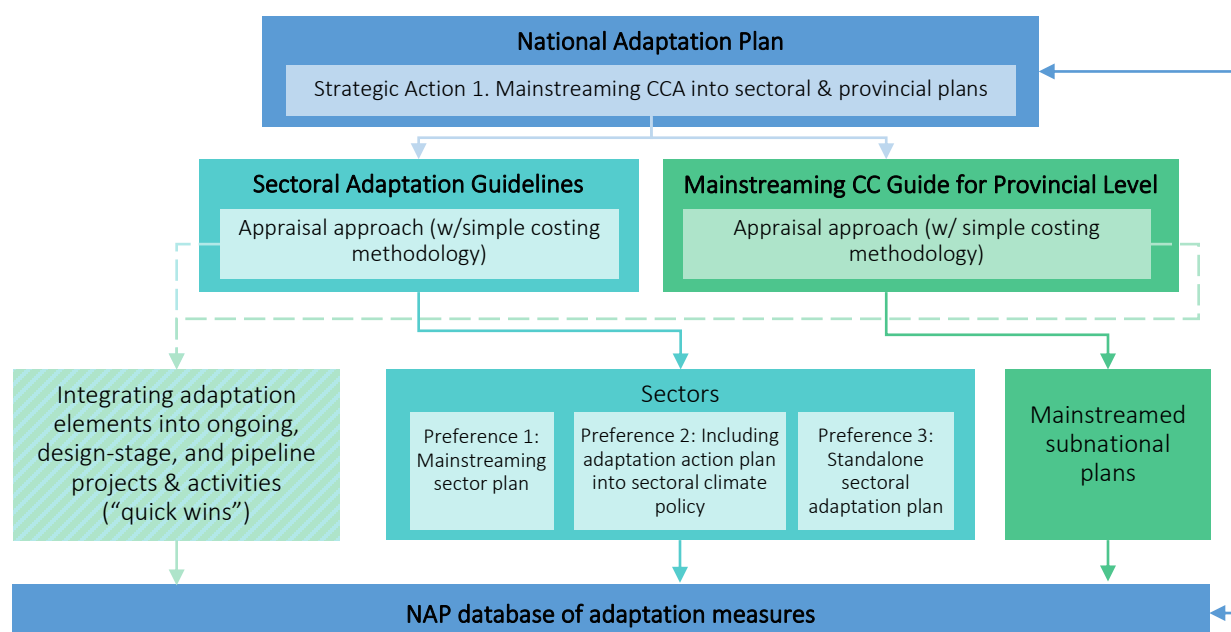


## 2.2 Suitable approach for the NAP

28. **The NAP should be seen as a support and accountability mechanism for the integration of adaptation considerations and subsequent implementation of identified adaptation measures.** The NAP is an overarching framework that aims to facilitate the systematic integration of climate change adaptation considerations throughout government, partner, and private sector operations. It can be seen as a lens that brings together information on adaptation in a single place, increasing its visibility and facilitating the (i) mainstreaming of plans, policies, and systems; (ii) mobilization of resources for adaptation; and (iii) tracking of progress against agreed adaptation targets. It can therefore be seen as a temporary aide to stress the importance and urgency of strengthening adaptation and provide a tool for identifying, funding, and tracking progress of adaptation measures until government legal, policy, planning frameworks and implementation systems are fully mainstreamed. It should not replace existing plans and policies, processes, and mechanisms, and any supporting arrangements that are necessary to facilitate responding to the urgent and complex nature of climate change adaptation in PNG should supplement the existing systems in a way that minimizes resource demands and avoids duplicating established arrangements.

29. **Ideally, the NAP approach should be integrated as much as possible into existing governmental planning processes and documentation requirements.** The relationship and hierarchy between the NAP and other policies, plans, and strategies should be clearly presented. Wherever possible, the NAP should be aligned—through integration or cross-referencing—with the programmatic areas and adaptation measures identified in, e.g., the Enhanced NDC and its sectoral implementation roadmaps as well as the GCF Country Programme, to reduce complexity in adaptation planning documentation. The sectoral adaptation guidelines currently under development should prioritize the mainstreaming of sector plans and policies over the development of standalone sector adaptation plans. At the subnational level, no separate provincial adaptation guidelines may be needed in light of the ongoing development of the *Mainstreaming Climate Change Guide for the Provincial Level*. Figure 4 summarizes the proposed mainstreaming approach; the integration of adaptation elements into ongoing, design-stage, and pipeline projects and activities and the NAP database of adaptation measures are further explained below.

**Figure 4.** Adaptation planning approach under the NAP



Source: Author.

30. **Mainstreaming regular planning and budgeting processes and guidance should be pursued as soon as possible.** The sectoral and subnational adaptation planning guidance, together with the provisions made by the Climate Change Management Act 2015 and its 2021 amendment in regard to adaptation planning and related assessments<sup>2</sup>, could be integrated into regular planning and budgeting processes to streamline guidance and templates. This could be done either through full integration or through annexing to and cross-referencing the adaptation guidelines in the regular guidance. A list of existing planning and budgeting guidance and templates is below. Supplementary fit-for-purpose practices and tools from the Pacific region and elsewhere could be adapted to PNG as needed. For example, Tonga uses a practical risk screening toolkit for planners in government line ministries for the mainstreaming of risks (including from climate change) into its national budget and corporate planning process, which was developed with UNDP support.

- **General guidance on budgeting** is provided in the Department of Treasury's *Budget Manual* from 2008 and the *Consolidated Budget Operating Rules* from 2017 ([2015 version](#) available online).
- For the **recurrent budget**, the annual budget circular and information sessions provide guidance and templates for the budgeting of new priorities in Stage 1 and ongoing activities in Stage 2 of the budget preparation process.
- For the **capital budget's Public Investment Program (PIP)**, the DNPM issued *PIP Guidelines* in 2007, which are currently being updated and will feature basic risk screening. Any further guidance on climate change adaptation (and mitigation) that can be integrated in the current review, (closer) aligning the PIP process and templates with the adaptation guidance and the

<sup>2</sup> The Climate Change Management Act 2015 and its 2021 amendment provide for annual climate change adaptation plans to be prepared by organizations, bodies and individuals (Section 74), and for climate risk and resilience assessments of any newly planned infrastructure projects (Section 68A).

multi-criteria analysis (MCA) approach, could fast-track the mainstreaming of the PIP and should be pursued in collaboration between DNPM and CCDA.

- For the **capital budget's Service Improvement Program (SIP)**, the Department of Implementation and Rural Development's issued *SIP Administrative Guidelines* (4A/2019) in 2019. The Department of Finance issued complementary financial instructions for the SIP.
- **Annual Activity (or Implementation) Plan** templates for agencies

31. **Technical support to the gradual mainstreaming of adaptation (and mitigation) into plans is important.** It will be instrumental to build up mainstreaming expertise in CCDA, priority sectors, and subnational governments. CCDA could position itself as a technical service center/support hub to assist sectors and subnational governments in the mainstreaming. Complementary capacity development and, particularly in the short-term, capacity supplementation by development partners could be useful. For this, it could be useful to develop an inventory of plans, policies, and strategies across the government's cascading planning framework for tracking their mainstreaming status and their next update cycle. Engagement in the various planning processes and technical mainstreaming support could be phased based on available capacity and resources, starting with the NAP priority sectors. As plans are mainstreamed, identified measures with meaningful contributions to adaptation can be added to the adaptation portfolio database to support fundraising, implementation progress tracking, and reporting

32. **Alignment of plans and budgets would facilitate tracking of implementation performance and financing.** As briefly discussed above, missing links between planning and budgeting documentation hinder progress tracking and break the accountability chain. Therefore, when reviewing planning and budgeting guidelines and templates at all levels, ensuring that main programs, programs and activities in plans and budgets align would benefit not only climate change action but the implementation of government budgets at all levels that enable the achievement of plans. It would facilitate (i) strategic discussions in the budget preparation process on, (ii) the gradual inclusion of performance targets linked to budget allocations for, and (iii) the tracking of resources of climate change mainstreaming and other cross-cutting themes.

33. **A database/portfolio of adaptation measures could be a practical tool to implement the NAP.** Such an approach would allow the NAP to evolve over time, keeping it actually a "living" document/framework (not as most plans that are defined as living documents but are then never updated). The database could be a 'home' for adaptation measures from existing plans, policies, and strategies; future mainstreamed plans; and measures not (yet) included in plans, e.g., resulting from feasibility studies or implemented outside the public sector (e.g., by the private sector, non-government organizations, or communities). This could provide a (gradually more) comprehensive, real-time overview of adaptation activity in PNG. The database could integrate appraisal, fundraising, implementation monitoring, and reporting aspects, thereby enabling the NAP to fulfill its mainstreaming, fundraising support and accountability functions effectively, while minimizing duplication with established processes and documents.

34. **Database design could be aligned to adaptation guidelines, supplemented by fundraising and implementation progress information.** The database could be aligned to the Adaptation Option Factsheet from the sectoral adaptation planning guidelines (including a score from the MCA approach), which could be merged with the Climate Change Project Profile Form included in Appendix 6 of PIFS (2019), as well as include additional fundraising and implementation progress information (and any other relevant

information). Table 2 provides a simplified example. It could be useful to establish a flexible process, referencing the sector and provincial adaptation planning guidance, on how to identify, document, and submit adaptation measures (as well as programmatic areas and strategies as needed) for consideration for inclusion into the database under the NAP framework. To avoid ending up with an unwieldy portfolio of adaptation measures, one could consider including minimum criteria for (i) a preliminary MCA score, and (ii) funding probability for a proposed adaptation measure. The latter could be done, e.g., by requiring some form of an initial expression of interest from decision-makers or funding instrument representative, even if it is just an internal memo/note from an informal exchange. Pre-designed summary reports or a dashboard showing information derived from the database could be published on the CCDA website.

**Table 2.** Simplified example of a database of NAP adaptation measures

**Programmatic adaptation area:** \_\_\_\_\_

NAP Strategy	Title	Identifier	Stage	Sector	Location	Adaptation priority areas	MCA score	Benefits	Costs/budget	Funding sources	Implementation progress	Add additional columns
		e.g., number from <i>Adaptation Option Factsheet</i>	Idea, concept, detailed design, implementation, completed		e.g., national, province, district							e.g., based on <i>Adaptation Option Factsheet</i> fields

Source: Author, with input from Sectoral Planning Guidelines for Climate Change Adaptation (Draft V.1, March 2022).

35. **The inclusion of adaptation elements into ongoing and pipeline projects could be a quick win.** Financing decisions for interventions are often made years in advance, whether through the government's PIP and subnational SIP or development partners, making it difficult to secure financing for new proposed measures in the short term (see also Section 4). Including climate change elements into projects that have secured or (pre-)committed funding, or are already ongoing or under development, can provide an avenue to achieve progress in adaptation in the short run. Agency staff across sectors are aware of ongoing and pipeline projects and have established relationships to project implementation teams. Information can also be found, e.g., in budget documentation; national, subnational, sector, and agency plans and policies; and development partner strategies and investment/business plans. Government and development partners' institutional commitments to increase funding for climate change can provide a shared incentive for project implementation teams to be open to incorporate adaptation elements into their projects and activities (see also discussion in Section 4).

### 3. Costing and economic appraisal of adaptation measures

36. The GCF Readiness Proposal includes the establishment of a “system for economic analysis (...) of priority adaptation options”. This section discusses general considerations on costing and economic appraisal and current practices in PNG, before delineating a suitable approach for the NAP.

<p><b>Recommendation 3.1: (i) Limit initial costings at the idea stage to ballpark estimates covering investment and recurrent costs, and (ii) rely on funding instrument-specific detailed costing and economic analysis requirements at concept and detailed design stages.</b> This implies that no NAP specific methodology for costings and economic analysis should be developed. This approach should be reflected in the NAP and in sectoral and provincial adaptation guidance.</p>	<p>Immediate (<i>partially addressed in draft adaptation guidance</i>)</p>	<p>All government agencies</p>
<p><b>Recommendation 3.2: Strengthen existing government costing, appraisal, and selection processes to ensure climate risks are considered, low value-for-money proposals are filtered out, and recurrent cost implications are factored into decision-making.</b> These processes should be used for all larger measures where detailed funding instrument-specific appraisal and economic analysis processes are not required.</p>	<p>As soon as revision of guidance is feasible</p>	<p>CCDA, DNPM (PIP &amp; aid), DOT (recurrent budget), DIRD/DOF (SIPs), DPLGA (subnational)</p>
<p><b>Recommendation 3.3: Develop capacity of national and subnational agencies in using established costing, appraisal, and selection processes for regular activities and for adaptation.</b></p>	<p>Ongoing</p>	<p>Central agencies, CCDA, development partner programs</p>

#### 3.1 General considerations

37. **Economic appraisal in reality varies measurably from an ideal world.** In an ideal world, the detailed assessment of costs and benefits of various interventions and different design options of each intervention would lead to the selection, specific design and prioritization of effective, value-for-money adaptation measures. In practice, however, real-life complexities, data gaps, and resource limitations in terms of capacity and funding more broadly, render such an approach unfeasible. Even high capacity, well-resourced organizations carry out economic analysis only at the detailed design stage for a specific intervention, rarely comparing different design options and more often modeling costs and benefits of a single option after most intervention design features have been pre-determined.

38. **Costs are only one factor among several that influences decisions and design.** Available financing is a critical factor that often drives the scope and specific design of interventions, rather than estimated costs of a proposed intervention. The way funding decisions are taken is also important, regularly involving informal decision-making processes, such as preferences of the political leadership or a specific development partner reflected in earmarked resource allocations (see also discussion in Section 4). Lastly, technical feasibility influences costs of an intervention. In this context, costs are a variable factor that can be adjusted based on a proposed intervention’s approach, scope and design features.

39. **Financing instruments generally prescribe specific approaches.** Approaches and templates are often included in guidance for the planning, appraisal, and budgeting of interventions. For domestic public finance sources, this can include guidance for multi-year national, sector, agency, and subnational plans as well as annual implementation plans; separate guidance for recurrent budget activities and capital projects; and guidance for specific expenditure programs, e.g., for grants/transfers provided to authorities or organizations outside the government. Most development partners also have their own requirements, methodologies and templates for costing and economic analysis, which need to be followed when funding for a specific intervention is requested. On the private sector side, detailed costings and financial analysis is generally required for obtaining financing.

40. **Different costing and appraisal approaches are available.** Approaches vary depending on an intervention's stage, generally becoming more comprehensive as an idea is developed into a concept and ultimately into a detailed design. At the idea stage, either no estimates of benefits and costs exists or a short list of probable benefits and ballpark costs is developed to serve as an initial estimate when exploring potential funding sources. At the concept stage, the absence of any estimates of benefits and costs is less common, with templates generally requiring a list of non-monetized, probable benefits and ballpark costs (e.g., subdivided into main cost categories or by activity). Only in few cases, more detailed information on benefits and costs is developed at concept stage. At detailed design stage, substantiated information on benefits and costs is compiled and, at times, benefits are monetized and put into relation with costs in the form of a cost-benefit analysis or similar methodology.

**Table 3.** Commonness of costing and appraisal approaches by intervention stage

Approach		Intervention stage		
		Idea	Concept	Detailed design
No estimates of benefits and costs		Often	Sometimes	No
List of probable benefits (non-monetized) and ballpark costs	Only intervention	Often	Often	Sometimes
	Also alternatives	Rarely	Sometimes	Rarely
Substantiated list of benefits (non-monetized) and costs	Only intervention	Rarely	Sometimes	Often
	Also alternatives	No	Rarely	Rarely
Economic analysis (e.g. cost-benefit)	Only intervention	No	Rarely	Often
	Also alternatives	No	Rarely	Rarely

Source: Author.

### 3.2 Situation in Papua New Guinea

41. **Costing and budgeting approaches, guidance, and templates exist for GoPNG financing sources.** These assist responsible officers when developing cost/budget breakdowns for an intervention from the initial idea into a detailed design. The following guidance is available from central agencies for the different GoPNG financing sources.

- **General guidance on budgeting and costing** is provided in the Department of Treasury's *Budget Manual* from 2008. Section 10 focuses on costings. The *Consolidated Budget Operating Rules* from 2017 ([2015 version](#) available online) outlines guidance for preparing a Budget Business Case following approval of an initial concept for a new project.

- For the **recurrent budget**, the annual budget circular and information sessions provide guidance and templates for the budgeting of new priorities in Stage 1 and ongoing activities in Stage 2 of the budget preparation process, using the economic classification breakdown of the Chart of Accounts (3-digit level: 211 Salaries & Allowances, 212 Wages, etc.).
- For the **capital budget's PIP**, the Department of National Planning and Monitoring's *PIP Guidelines* from 2007 include templates for the Project Identification Document (PID) and the Project Formulation Document (PFD), both with a high-level cost table. The guidelines are currently being updated and will include more detailed costing requirements.
- For the **capital budget's SIP**, the Department of Implementation and Rural Development's *SIP Administrative Guidelines* (4A/2019) include templates for the PID (without costing information) and the PFD (with high-level cost breakdown).

42. **Climate funds as well as bilateral and multilateral development partners also produce guidance and templates for the development of costings and project budgets.** These are generally completed by staff of the partner organization, requesting specific information inputs from government counterparts in the process as needed. Selected examples are listed below, with further information available online on respective development partner websites.

- **GCF** provides detailed guides and templates, including for Concept Notes, Funding Proposals, and [Detailed Budget Plans](#). For smaller projects following the simplified approval process, Concept Note, Funding Proposal, and [Budget](#) templates are also available, together with an extended list of supporting documents, including for [economic and financial analysis](#). The [Project Development Manual](#) for PNG provides a comprehensive overview and references.
- **ADB** does not publish templates, but high-level guidance on cost estimates, financial analysis, and economic analysis of projects as part of an [Operations Manual](#), a [Technical Guidance Note: Cost Estimation in Sovereign Operations](#) (see also Annex 3), and [Examples of Good Practice: Cost Estimates and Financing Plans](#).
- **USAID** publishes detailed budgeting templates and guidance for its projects, including a [Budget Template](#), a sample [Detailed Budget](#), and [Budget Instructions and Cost Principles](#).

43. **The use of costing methodologies and economic analysis is limited in PNG and more comprehensive approaches are mostly supported by technical assistance.** Substantial experience exists with basic costing approaches, largely as part of the recurrent and capital budgeting processes. However, overall, assessments have found that the fiscal impact of policy proposals is not systematically assessed in PNG and that economic appraisals are, if carried out at all, mostly done after financing has been approved. The following list shows examples of costing and economic analysis approaches undertaken in PNG.

- Aggregate ballpark cost estimates are common in PNG and are found, e.g., in the MTDP III, the Enhanced NDC, and the GCF Country Program.
- Basic cost estimates of activities and projects are done as part of the recurrent and capital budget (PIP and SIP) preparation processes using the guidance and templates listed above. Subnational governments also prepare annual budgets.
- Costing of plans is less systematic, with the National Health Plan, 2010-2020 (Chapter 7) and the National Education Plan, 2020-2029 (Section 6) providing examples of plans with aggregate cost

breakdowns. The Medium Term Transport Plan 2 (2019-2022) also includes high-level estimates and is complemented by a sector funding study funded by the Australian Government. Corporate plan costings are less common, e.g., CCDA's Corporate Plan 2018-2022 does not include cost estimates/budget requirements.

- A sophisticated costing exercise has been done by the NEFC in the past as part of its Cost of Services Study, prepared with development partner funded technical assistance. Similarly, the Department of Health's Free Primary Health Care and Subsidized Specialist Services Policy costings have been supported by technical assistance.
- Anecdotal evidence suggests that basic forms of economic analysis are at times conducted in selected government departments, e.g., for revenue generating projects in the agriculture sector or for road transport projects.
- Several development partners prepare and publish detailed costings as well as economic and financial analysis for their projects in PNG, following their own prescribed requirements and templates. An example is the [detailed economic analysis](#) for the Building Resilience to Climate Change in PNG project prepared by ADB. The World Bank's Project Appraisal Document summarizes project costings and economic and financial analysis in the main text, with detailed breakdowns and analysis provided in annexes.

### 3.3 Suitable approach for the NAP

44. **The systematic economic analysis of adaptation measures appears to be overly complex and not a priority use for scarce resources.** The systematic economic analysis of adaptation measures would require the investment of substantial resources without generating adequate value in return, as quality and comparability will be constrained by data availability and capacity; the fact that funding decisions are also influenced by other factors than economic returns (e.g., political preferences, technical feasibility, earmarked development partner resources); and detailed costings and some form of economic analysis is often done, in any case, at design stage once funding has been (pre-)committed. If not otherwise required and supported by feasibility studies and development partners, economic analysis (e.g., cost-benefit or cost-effectiveness analysis) of adaptation options could therefore only be considered as an option in the long-term once a basic costing and MCA approach have been institutionalized.<sup>3</sup>

45. **A similar case can be made for preparing comprehensive and consistent costings across adaptation measures.** While less complex without the consideration of monetized benefits, the preparation of comparable costings across measures, outlined, e.g., in the [NAP costing methodology for Fiji](#), still appears to be highly ambitious without providing clear value-for-money and would absorb substantial capacity and resources that are better invested elsewhere.

---

<sup>3</sup> For an overview and examples of economic analysis for adaptation interventions see, e.g., UNFCCC. 2011. [Assessing the Costs and Benefits of Adaptation Options. An Overview of Approaches](#); USAID. 2013. [Methods for Economic Analysis of Climate Change Adaptation Interventions](#); FAO and UNDP. 2018. [Cost-benefit analysis for climate change adaptation policies and investments in the agriculture sectors](#). A simple step-by-step guide can be found, e.g., in Coast Adapt. [A brief guide to comparing the costs and benefits of climate adaptation](#). Specific guidance is available for some development partners and climate funds on their respective websites.



46. **Three main conclusions can be drawn from the previous discussion to inform a suitable costing approach for the NAP.** (1) No upfront, one-off costing exercise is applicable, which is otherwise often done for a plan, since the NAP is an umbrella framework under which adaptation interventions are being developed gradually (e.g., as plans are being mainstreamed); (2) the development of a separate NAP costing methodology should be avoided in an effort to strengthen existing (financing source-specific) processes, avoid duplication, and reduce resource demands in terms of funding and capacity; and (3) costing exercises should be kept simple and done step-wise as part of the project/activity design process and in parallel with progress made on resource mobilization to avoid inefficient use of resources for costing. These conclusions as well as the proposed approach below could be referenced in the NAP and integrated into the sectoral and provincial adaptation guidelines.

47. **There are selected downsides to this proposed approach, but these are outweighed by its benefits.** One downside is the lack of an initial total financing gap figure for the NAP to help communicate the urgency and magnitude of financing needs; however, there is both, high-level awareness of existing financing gaps globally and in PNG (see also Section 4), including from the Enhanced NDC, and such awareness is only one factor to influence financing decisions, next to “bankable”/investment-ready projects/activities and absorptive capacity, among others. Going forward, regular reporting of the aggregate financing gap can be done, e.g., as part of a CCDA website dashboard and reports (see Section 4), as financing data is built up through the gradual development of adaptation measures and their inclusion in the proposed adaptation database. A second criticism could be that costings are not consistent across measures and sectors; however, inconsistencies would remain even when using the same costing methodology, as information availability and assumptions vary across measures and sectors. In both cases, costs of pursuing “double” costings using the financing source methodology and a NAP specific methodology would far outweigh the benefits.

48. **The costing process should follow the project/activity development stages.** Only direct costs of a measure, e.g., for the investment and operations of a project or the development and implementation of policies and regulations, should be considered (if financing source specific requirements do not stipulate otherwise).

- **Idea stage:** At this stage, generally only a broad idea for an adaptation intervention exists. The source could be, for example, the NAP or a national, subnational, sector, or agency plan; or it could be a new idea, e.g., resulting from an analysis or study. Potential financing sources may have been identified but no further discussions have taken place yet and no formal or informal financing commitment has been obtained. To develop the idea and initiate fundraising efforts, the Adaptation Options Factsheet of the sectoral adaptation guidelines can be used and help with an initial appraisal. The factsheet includes initial ballpark estimates covering investment and recurrent operations and maintenance costs, which provide a high-level orientation on the likely cost of an adaptation option.<sup>4</sup> While a single estimate each for capital and recurrent costs often suffices at this stage, a high-level breakdown by main activities, inputs, or cost categories can make a cost estimate more dependable as well as support technical discussions and resource mobilization engagement while generally not requiring a substantial investment. An example of a slightly more detailed ballpark cost estimate is included in selected project proposals of Saint Lucia’s sectoral strategies and action plans under its NAP (Table 4).

---

<sup>4</sup> Investment costs are usually one-off costs at the beginning of an intervention, e.g., for the purchase or construction of buildings, equipment and machinery, and/or technical expertise to design and implement a project or policy measure. Recurrent costs are ongoing and necessary to finance the operation of an intervention and can comprise, e.g., wages and salaries, utilities, consumables, and maintenance.

**Table 4.** Examples of ballpark cost estimates from Saint Lucia’s NAP documentation

<b>Intervention idea</b>	<b>High-level cost estimates (US\$)</b>	
Enhancement of Saint Lucia’s early warning systems and flood emergency response through flood hotspot analysis, guidelines, training plan, procurement and installation of flood level gauges	Consultancy fees (Flood hotspot analysis, guidelines, training plan)	200,000
	Procurement of flood gauges	10,000
	Installation of gauges	2,000
	Training of community members	3,000
	<b>Total</b>	<b>215,000</b>
Improving energy efficiency within the water sector in Saint Lucia through the introduction of renewable energy technologies into the operations of the Water and Sewerage Company Inc.	Consultancy on design of renewable energy solutions and training of staff	100,000
	Procurement and commissioning of renewable energy solutions	500,000
	<b>Total</b>	<b>600,000</b>

Source: Government of Saint Lucia. (2018). Saint Lucia’s Sectoral Adaptation Strategy and Action Plan for the Water Sector (Water SASAP) 2018-2028, under the National Adaptation Planning Process.

- **Concept stage:** Once interest of a financing source has been established formally or informally, the initial ballpark estimates can be developed into high-level cost estimates, in close consultation with the focal point of the identified financing source to reflect requirements and preferences in the intervention design. This can be done, for example, by breaking down the initial ballpark cost estimate by main activity and/or cost category, using a simple table, such as the one included in Annex 3, or the financing instrument specific template. The GoPNG provides direction in the form of guidelines for its two large capital investment programs, the Public Investment Program (PIP) and the Service Improvement Program (SIP), as well as through the annual budget preparation process. For example, the SIP Administrative Guidelines include a breakdown into the major cost categories ‘manpower’, ‘equipment’, ‘materials’, and ‘capital works’ as part of the Project Formulation Document template. Development partners also generally prescribe a concept note template, which contains cost or budget information in a specific format, and is often completed directly by or in close collaboration with the staff of the particular organization.
- **Detailed design stage:** Upon approval or endorsement of the concept note (or similar document), the detailed cost estimates can be developed, again following the prescribed requirements and templates of the secured financing source(s). In the case of development partner financing, staff will often lead the compilation of cost estimates and also prepare an economic cost-benefit and/or financial analysis as required. In these cases, no additional costing or economic analysis is needed.

49. Table 5 provides a summary of the proposed costing approaches by intervention stage and possible sources of information. If additional information on costs (and benefits) is available for a proposed adaptation measure, e.g., from (initial or pre-) feasibility studies or other assessments or similar projects implemented in recent years, this information should be used to substantiate the costing assumptions.

**Table 5.** Summary of costing approaches by intervention stage

Stage	Documentation	Costing approach	Sources of information (examples)
Idea	CCA Option Factsheet, <i>Project Identification Document for GoPNG projects</i>	Ballpark cost estimate	Existing plan, expert knowledge, experience from similar interventions in PNG or elsewhere
Concept	Concept note using prescribed templates and guidance from specific financing source, <i>Project Formulation Document for GoPNG projects</i>	High-level cost estimates by main activity and/or cost category	Quantities and unit costs of main inputs, expert knowledge, experience from similar interventions in PNG or elsewhere
Detailed design	Project document package using prescribed templates and guidance from specific financing source	Detailed cost estimates; cost-benefit and/or financial analysis as required	Quantities and unit costs of inputs, feasibility studies, impact evaluations, cost-benefit analysis from similar interventions

Source: Author.

50. **Simple cost or budget tables can be used where financing source approaches are absent or insufficient.** In rare cases, financing from development partners, private sector, or other (unconventional) sources does not come with adequate costing requirements. In such cases, government costing and appraisal processes can be applied to help filter out low value-for-money proposals or help re-design or more accurately cost them, increasing value-for-money for the government. Simple cost breakdown tables could also be used, such as the one shown in Table 6 for the concept stage (or for small interventions at the detailed design stage). The table could also be completed for each main activity to arrive at more detailed cost estimates at an intervention's detailed design stage. It can be developed using a bottom-up costing approach that combines unit costs with quantities of the different input factors needed for an activity to arrive at the annual and aggregate total cost. Table 7 provides an example. In the case of a training, inputs could comprise, e.g., rental of a training venue, travel and per diem for participants, and hiring of trainers. Table 8 provides a list of common cost categories for an infrastructure project. Selected cost categories, such as research and development, consulting services, and training, also apply for policy or similar initiatives.

**Table 6.** Basic summary table with cost estimate breakdown

<b>Cost category</b> (select/add applicable ones)	<b>Cost</b>					<b>Type of funding</b>	
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>...</b>	<b>Total</b>	<b>Cash</b>	<b>In-kind</b>
<b>Development costs (up-front)</b>	...	...	...	...	...	...	...
Personnel	...	...	...	...	...	...	...
Consultants	...	...	...	...	...	...	...
Travel	...	...	...	...	...	...	...
Training/workshop	...	...	...	...	...	...	...
Professional services	...	...	...	...	...	...	...
Materials, goods & supplies	...	...	...	...	...	...	...
Equipment	...	...	...	...	...	...	...
Capital works	...	...	...	...	...	...	...
Other	...	...	...	...	...	...	...
<b>Recurrent costs (annual)</b>	...	...	...	...	...	...	...
Personnel	...	...	...	...	...	...	...
Goods and services	...	...	...	...	...	...	...
Utilities and rentals	...	...	...	...	...	...	...
Maintenance	...	...	...	...	...	...	...
Other	...	...	...	...	...	...	...

Source: Author.

**Table 7.** Basic table for the bottom-up costing of activities

<b>Activity</b> (e.g., training)	<b>Unit cost</b>	<b>Quantity</b> (units, days, months, participants, etc.)					<b>Total</b>
		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>...</b>	<b>Total</b>	
...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...
<b>Sub total</b>	...	...	...	...	...	...	...

Source: Author.

**Table 8.** Example of cost categories for an infrastructure project

<b>Category</b>	<b>Description (examples)</b>
Civil works	<ul style="list-style-type: none"> <li>· Earth moving, excavation, cut and fill, grouting etc.</li> <li>· Concrete work including rebar and formwork (e.g., foundations, building components, tanks, and bridge components)</li> <li>· Metal fabrication (building framework, tanks, and other metal structures, etc.)</li> <li>· Building construction on roads, embankments, pipelines, etc.</li> <li>· Landscaping, planting, fences, etc.</li> <li>· Plumbing, electrical wiring, and other utility services</li> <li>· Other construction services</li> <li>· Cost of special purpose construction equipment (e.g., earthmovers, cranes, arc welding equipment, and site dewatering pumps) if not already included in construction contracts</li> </ul>

Category	Description (examples)
Materials	<ul style="list-style-type: none"> <li>Major purchases of materials that are procured separately from associated construction services (e.g., aggregate, rock, steel, cement, sand, wood, rebar, pipes, asphalt, seedling trees, grass seeds, and paving blocks)</li> </ul>
Equipment, vehicles, furniture	<ul style="list-style-type: none"> <li>General-purpose vehicles (cars and trucks, etc.)</li> <li>General-purpose tools (e.g., landscape and building maintenance equipment)</li> <li>Office furniture and equipment (desks, cabinets, computers, copiers, and phones, etc.)</li> </ul>
Capital goods	<ul style="list-style-type: none"> <li>Electrical equipment (e.g., motors, pumps, controllers, electrical panels, telecommunication antennae)</li> <li>Mechanical equipment (e.g., overhead cranes, water and wastewater treatment process equipment, meters and other measuring devices, gates, refrigeration, heating and air conditioning)</li> <li>Special-purpose vehicles for project operations (e.g., bulldozers and compacters used in a landfill operation, and warehouse vehicles)</li> <li>Other larger machinery and equipment manufactured off-site</li> </ul>
Research and development	<ul style="list-style-type: none"> <li>Scientific investigations (e.g., water quality modeling, bench test of a treatment process, archaeological investigation, and survey of flora and fauna)</li> <li>Technical support services (e.g., agricultural extension and small business)</li> <li>Demonstration projects (e.g., crop production, soil conservation, and water harvesting)</li> </ul>
Consulting services	<ul style="list-style-type: none"> <li>Any costs relating to consultant services during implementation</li> </ul>
Training and fellowships	<ul style="list-style-type: none"> <li>Technical training for project operations (e.g., training in water or wastewater treatment, and hydrological modeling for reservoir operations in a water project)</li> <li>Training in project and enterprise management (finance and accounting, etc.)</li> <li>Other training (e.g., participatory methods)</li> </ul>
Land acquisition and resettlement	<ul style="list-style-type: none"> <li>Land purchase</li> <li>Compensation for loss of assets and livelihood</li> <li>Cost to resettle displaced persons (new housing, new land, retraining, moving costs, and costs to assist the host community, etc.)</li> <li>Land acquisition and resettlement monitoring</li> </ul>
Environmental protection	<ul style="list-style-type: none"> <li>Any costs of construction and procedures relating to environmental protection during project implementation</li> </ul>
Taxes and duties	<ul style="list-style-type: none"> <li>Value added tax and other taxes and duties on works, equipment and goods, and services</li> </ul>
Project management and others	<ul style="list-style-type: none"> <li>Project reporting, project audits</li> <li>Project accounting and financial management</li> <li>Funds for the purchase of initial inventories of materials and supplies and for the financing of startup activities for project administration and operation (no double-counting with other items)</li> <li>Implementation of management software and methods (e.g., accounting software and project management procedures)</li> <li>Assistance in developing new institutions</li> <li>Any costs related to bid document preparation</li> <li>Any other costs relating to project management</li> </ul>

Source: Asian Development Bank. 2022. [Cost Estimation in Sovereign Operations. Technical Guidance Note.](#)

51. **There government's established costing and appraisal approaches should be strengthened and staff capacity developed.** As part of, or independent from, the mainstreaming of guidelines suggested in Recommendation 2.1, existing costing and appraisal guidance and templates could be strengthened to support activity and project implementation and ensure climate considerations are reflected. CCDA could provide inputs to DNPM's ongoing update of the PIP Guidelines for submission of funding requests under the government's PIP budget to ensure costings and listing of benefits for proposed measures adequately

consider climate change. This could be done by integrating, or referencing and attaching, relevant parts of the sectoral and provincial adaptation planning guidance (including the MCA approach's elements relating to costs and benefits) developed under the NAP framework. The same could be done for the SIP guidelines and any other existing costing/budgeting and appraisal guidance. Complementary capacity development support for staff in CCDA, priority sectors, and other departments and agencies will be important to further institutionalize established processes and any changes. Where available capacity and expertise is insufficient, additional technical assistance may also be sought at any project development stage to support costings and appraisal activities or to provide a "second opinion" on prepared cost breakdowns and analysis.

#### 4. Financing climate change adaptation in PNG

52. Outcome 3 of the GCF Readiness Proposal aims to establish a “financing framework for climate change adaptation action in the medium-to long-term”. To inform this framework, this section provides first an overview of the financing landscape in PNG, including financing sources available for interventions developed under the NAP framework as well as current climate financing trends globally and in PNG. Subsequently, this section sets out a tailored resource mobilization approach for the NAP in PNG.

53. This section attempts to answer the question ‘*what information, tools and processes can increase access to financing for climate change adaptation?*’. It provides an overview of past, current and potential future financing sources for climate change adaptation in PNG, the section makes the case that understanding financing decision-making processes is at the core of successful fundraising.

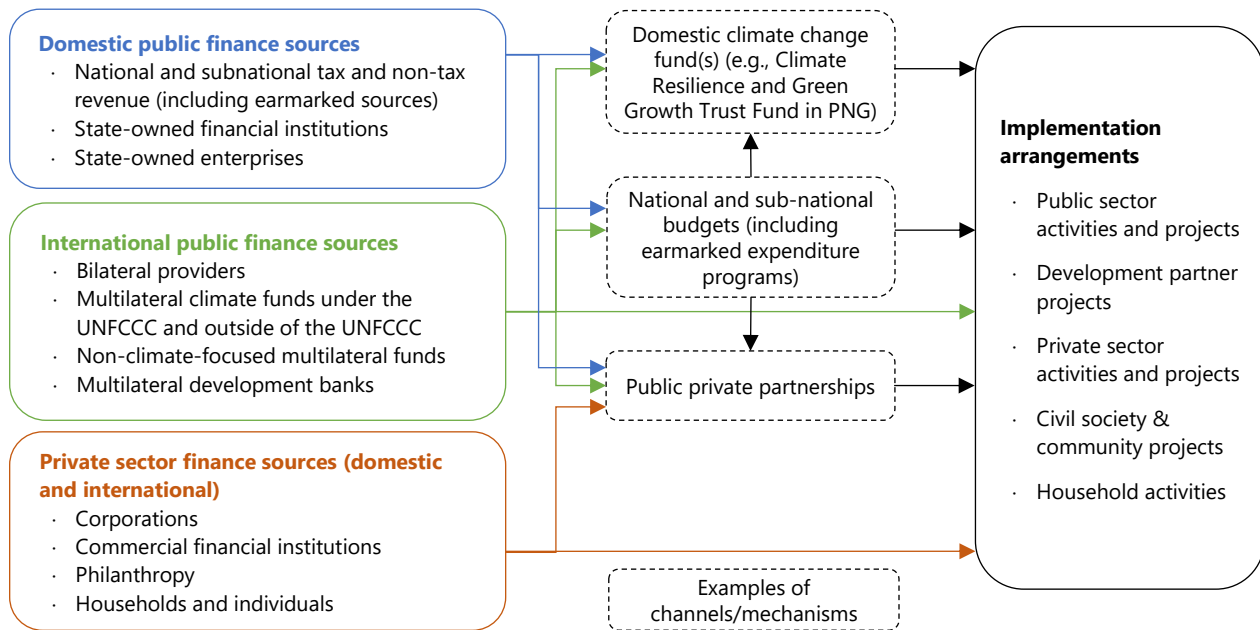
<b>Recommendation 4.1: Design the envisioned financing and investment strategy for the NAP as a long term, continuous, actively managed stakeholder engagement process that uses both formal and informal channels.</b> This should be reflected in the NAP and be in place of a standalone financing strategy document.	Immediate (partially addressed in draft NAP)	<b>CCDA,</b> DNPM, DOT
<b>Recommendation 4.2: Focus and strengthen CCDA’s role as climate finance coordination and support hub with resource mobilization expertise, including through the establishment of a partnerships and resource mobilization team.</b>	Immediate	<b>CCDA,</b> development partner support
<b>Recommendation 4.3: Carefully assess and prioritize the pursuit of (new) financing sources and channels based on their potential return on investment to avoid spreading scarce capacity too thinly.</b>	Gradual	<b>CCDA,</b> development partner support
<b>Recommendation 4.4: (i) Establish a database of financing sources and related intelligence for adaptation and (ii) become an expert in understanding programming and access processes, both domestically and internationally covering public and private sectors.</b>	(i) Immediate, (ii) ongoing	<b>CCDA</b>
<b>Recommendation 4.5: Establish and maintain formal and informal relationships with stakeholders through focal points in the various institutions.</b>	Ongoing	<b>CCDA</b>
<b>Recommendation 4.6: Actively support fundraising efforts for the evolving portfolio of appraised NAP measures.</b>	Ongoing	<b>CCDA,</b> sectors, subnational entities

## 4.1 Financing landscape

### 4.1.1 Overview of financing sources

54. **A wide range of financing sources is available to fund NAP interventions.** This comprises domestic and international public and private sector finance sources. Figure 5 provides an overview of these sources.

**Figure 5.** Overview of NAP financing sources, channels, and implementation arrangements



Source: Author, with inputs from NAP Global Network. 2017. Financing NAP Processes: Contributing to the achievement of NDC adaptation goals, Guidance Note; NAP Global Network. 2016. Snapshot: Domestic public finance for implementation of NAPs; and Climate Policy Initiative. 2021. Global Landscape of Climate Finance 2021.

55. **Financing sources are distinct from funding channels or mechanisms and implementation arrangements.** An example of a channel that is often confused with a financing source is a domestic climate change fund, through which government and development partner financing may be channeled. Similarly, PPPs are a mechanism that brings together public and private sector finance sources. While a well-administered channel or mechanism can help redirect resources towards adaptation or unlock additional resources (e.g., by addressing financial management or political risks), establishing and maintaining it requires resources (financial and capacity) and it can also risk reducing or blocking resources for adaptation, e.g., due to weak financial management or a perception that a special fund takes care of the matter, which could reduce support for mainstreaming. The same applies to implementation arrangements. The potential benefits, costs, and risks should be taken into consideration when considering establishing mechanisms and deciding on suitable implementation arrangements. PIFS (2011), summarized in Appendix 2 of the [Pacific Climate Change Finance Assessment Framework](#) provides an interesting overview of merits and cautions of selected financing sources and channels.

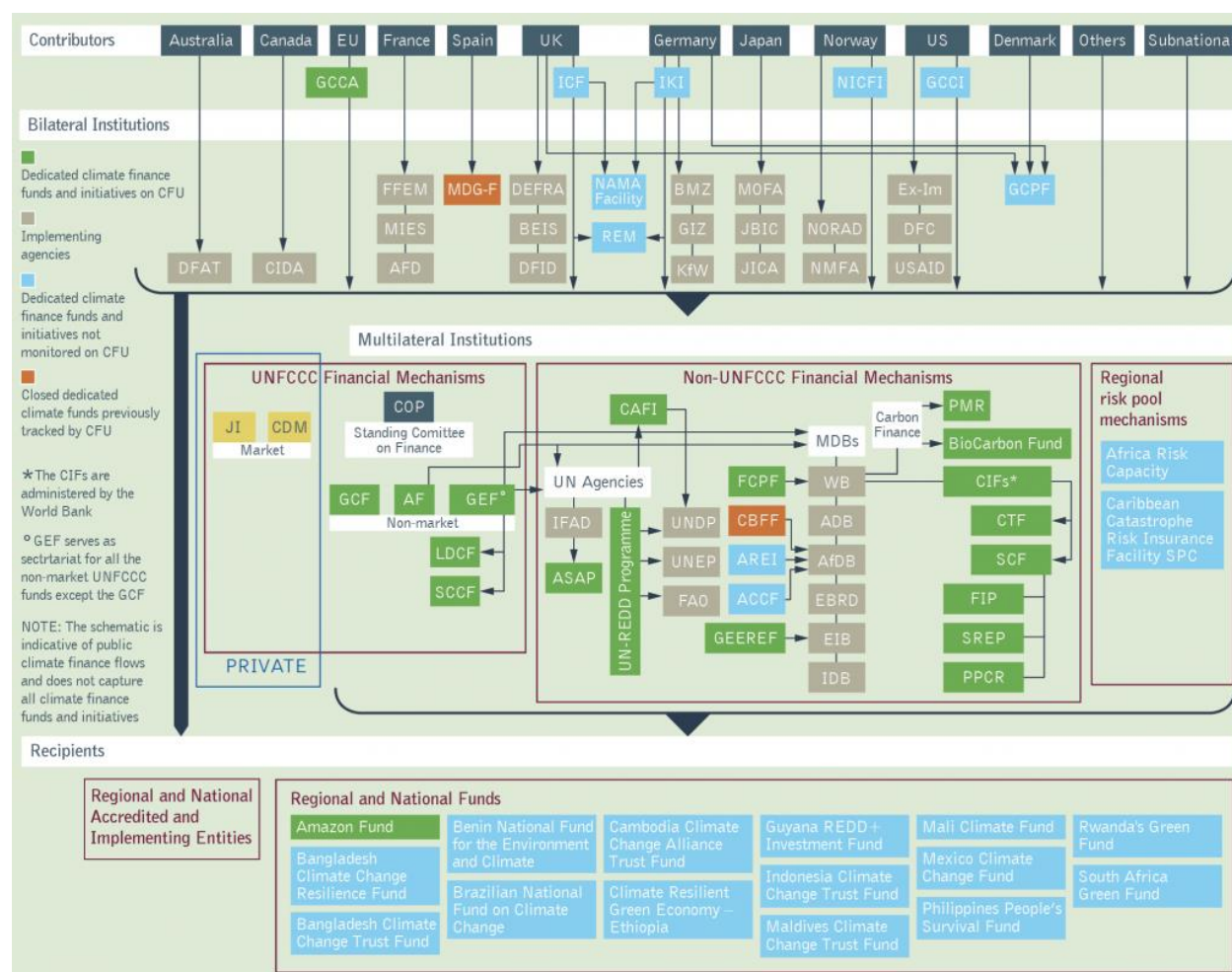
56. **National climate funds and direct access to climate funds are examples that do not automatically increase resources for adaptation.** Establishing and managing a trust fund absorbs



substantial capacity and resources, which only provide an adequate return on investment if significant additional resources have been identified and secured. Most fees and charges are, often by definition, only able to recover funds used for their administration and control of compliance. Development partner contributions require generally (i) a history of sound financial management, which takes time to establish, and (ii) are often not additional but would have to come from other sources, such as budget support provided to the country. Direct vs. indirect access to global climate funds is an example on the implementation side. Direct access only provides an adequate return on investment if it results in substantial additional resources for climate change. Overheads should not be seen as additional or separate from an intervention, as these are needed to successfully implement a project, including for project support services that are provided at the organizational level. Successful project implementation is in turn a critical precondition to attract future funding, while any major issues risk reducing climate financing.

57. **The international climate finance architecture is complex and continuously evolving.** Figure 6 provides an overview of the global climate finance architecture as of 2021. The climate finance landscape is continuously evolving and also comprises additional climate finance funds and initiatives not included in the chart below.

**Figure 6.** Global climate finance architecture



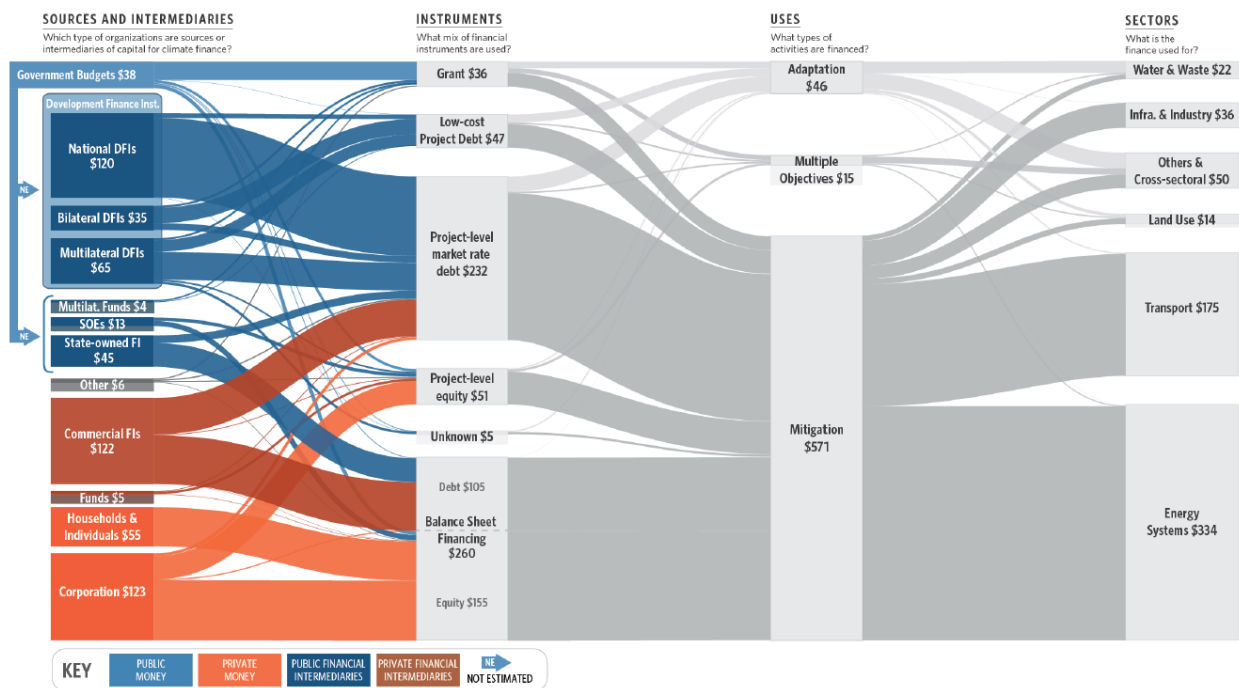
Source: Overseas Development Institute, 2021, The Global Climate Finance Architecture.

### 4.1.2 Global financing landscape

58. **Painting a comprehensive picture of climate finance is difficult, particularly for adaptation.** Data gaps and methodological issues continue to persist in climate finance data, and qualitative information on the impact of climate finance continues to be scarce and dispersed. This limits our understanding of progress and impact. Data is most comprehensive for international public sources of finance, while UNEP's [Adaptation Gap Report 2020](#) notes that there is not enough data to identify trends in domestic public or private finance flows. The report (page 26) further provides an overview of challenges that complicate the estimation of adaptation finance (and adaptation costs).

59. **Global climate financing is significant and increasing, but only a small share is for adaptation.** According to data collated by the Climate Policy Initiative, global climate finance flows reached US\$ 632 billion in 2019-2020 (Figure 7), with adaptation financing only accounting for US\$ 46 billion.

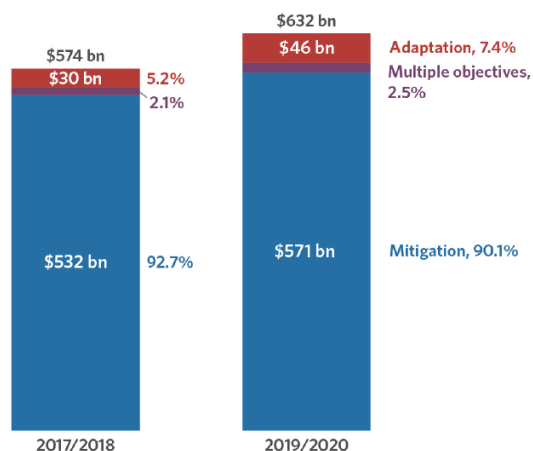
**Figure 7.** Landscape of climate finance in 2019-2020, annual average, USD billions



Source: Climate Policy Initiative. 2021. Global Landscape of Climate Finance 2021.

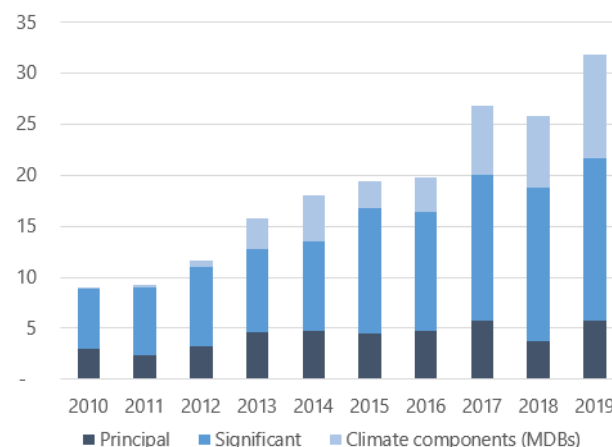
60. **Trends show positive and negative developments.** Growth in global climate finance has slowed in the last few years, increasing by only 10% between 2017-2018 and 2019-2020 (Figure 8). In comparison, annual climate finance flows between 2013-2014 and 2017-2018 grew more than 24% each period. Positively, while annual adaptation financing remains low, it has been growing faster from US\$ 30 billion in 2017-2018 to US\$46 billion in 2019-2020, reflecting an increase of over 50%. This is driven by adaptation increasingly prioritized in development finance climate portfolios. The OECD DAC database confirms the growing trend of financing commitments tagged against the Rio Marker for adaptation and the multilateral development bank climate components (Figure 9).

**Figure 8.** Average annual climate finance composition, 2017/18 and 2019/20, US\$



Source: Climate Policy Initiative. 2021. Global Landscape of Climate Finance 2021.

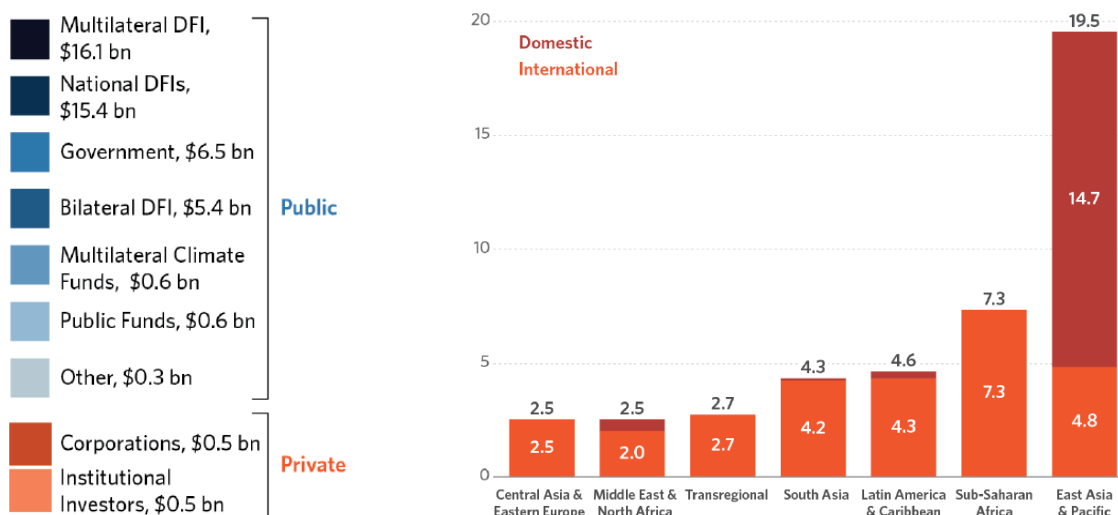
**Figure 9.** Development partner climate finance commitments, 2010-2019, US\$ billions



Source: OECD DAC Database, contributions tagged against Rio Markers and MDB climate components (share applied).

61. **Almost all adaptation finance tracked globally was funded by public actors (Figure 10).** Main sources of adaptation finance are government budgets and state-owned financial institutions on the one hand and bilateral and multilateral development finance institutions on the other. Adaptation finance accounted for 14% of all public finance flows in 2019-2020. Private finance does not play a significant role. Regionally, Sub-Saharan Africa received the greatest share (approximately 25%) of international adaptation finance. In East Asia and Pacific, adaptation is primarily financed by domestic public finance sources (the high level is explained by domestic financing in China).

**Figure 10.** Adaptation finance by actor (left) and region (right), 2019/20 annual average, US\$ billions

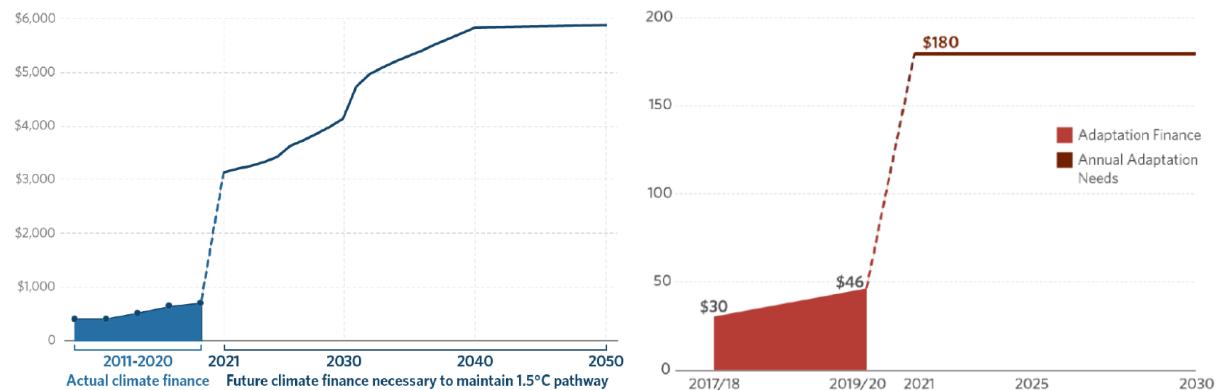


Source: Climate Policy Initiative. 2021. Global Landscape of Climate Finance 2021.

62. **Adaptation finance falls well short of estimated annual needs over the next decade.** The Adaptation Gap Report notes that there is insufficient evidence that the observed increases in global adaptation finance narrow the distance to meet the increasing adaptation costs. Projections by the Climate

Policy Initiative show that annual adaptation finance would have to amount to US\$180 billion per year over the next years to close the gap, which is substantially lower than for mitigation but still far above the current financing level (Figure 11).

**Figure 11.** Climate (left) and adaptation (right) finance and estimated future annual needs, US\$ billions



Source: Climate Policy Initiative. 2021. Global Landscape of Climate Finance 2021.

63. **Recognizing the large financing gap, governments and development partners across the world have set ambitious climate finance targets.** Many major development partners have increased their climate finance commitments in recent years, including for adaptation. Such commitments increase internal organizational pressures to mainstream climate considerations into their operations, which in turn can help with mobilizing resources for adaptation. Examples of corporate commitments by development partners active in PNG are listed below.

- The **Asian Development Bank** [Strategy 2030](#) includes tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability as one of its operational priorities. Corporate climate targets comprise 75% of ADB's committed operations to support climate action by 2030, and [\\$100bn \(US\\$34 billion for adaptation\)](#) cumulatively from 2019–30 from ADB's own resources. This amounts to an annual average of US\$8.3 billion, requiring a substantial increase compared to the annual average of US\$5.6 billion over 2019-2021.
- **Australia** [announced](#) to increase its climate finance commitments to developing countries to US\$1.5 billion for 2020-2025, of which US\$500 million is earmarked for climate adaptation and resilience, disaster preparedness and renewable energy projects in the Pacific.
- **Japan** [reaffirmed](#) its commitment to provide climate finance from public and private sector sources equivalent to about USD 11.8 billion per year over 2021-2025, including increased assistance for adaptation.
- The **United States** [announced](#) annual public climate financing of US\$11.4 billion, with USAID planning to draw from these funds to leverage private sector financing and public sector investments from partner country governments to mobilize a total of US\$150 billion in public and private climate finance by 2030. This includes adaptation financing, including NAP country support, aiming to support the climate resilience of 500 million people, as per USAID's forthcoming [2022-2030 Climate Strategy](#).

- The **World Bank** [announced](#) an ambitious target for 35% of its financing to have climate co-benefits, on average, over 2021-2025, replacing the earlier target of reaching 28% over 2016-2020. Half of this financing will support adaptation and resilience.

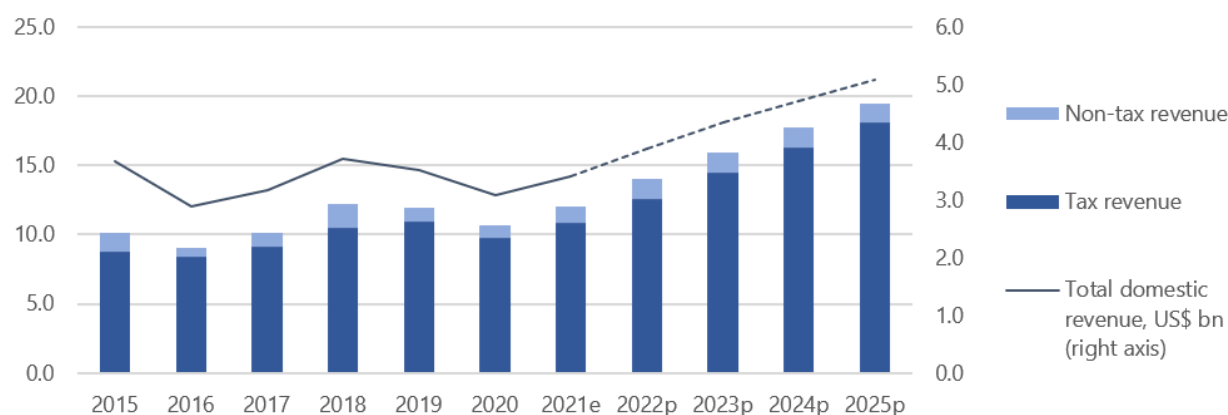
### 4.1.3 Financing landscape in PNG

64. **The government is committed to climate adaptation and has defined an initial financing target for infrastructure.** High-level recognition of the importance of climate change action, including for adaptation, is highlighted in the United Nations Paris Agreement (Implementation) Act 2016 and the Enhanced NDC. The Enhanced NDC further includes a financial target to build or rehabilitate transport, building and utility infrastructure and assets according to climate resilient codes and standards in the amount of US\$ 1.7 billion.

#### *Domestic finance sources*

65. **Domestic public finance sources constitute the largest potential financing for the NAP.** In 2019, prior to the COVID-19 crisis, annual national tax and non-tax revenue amounted to close to Kina 12 billion, equivalent to US\$3.5 billion. Tax revenue accounted for an average of 90 percent of total national domestic revenue over 2015-2020. This is complemented by subnational revenue collected by provincial administrations, public bodies active at the subnational level (such as Provincial Health Authorities), and local-level governments. Budget projections foresee a (somewhat optimistic) steady increase of domestic revenue collections on the back of an economic recovery, increased public investment, and potential new liquefied natural gas and other resource projects, reaching almost Kina 20 billion by 2025, equivalent to over US\$5 billion (Figure 12). Tax revenue is expected to continue to dominate domestic resource mobilization with a share above 90 percent.

**Figure 12.** National tax and non-tax revenue, 2015-2025, Kina billion and US\$ billion



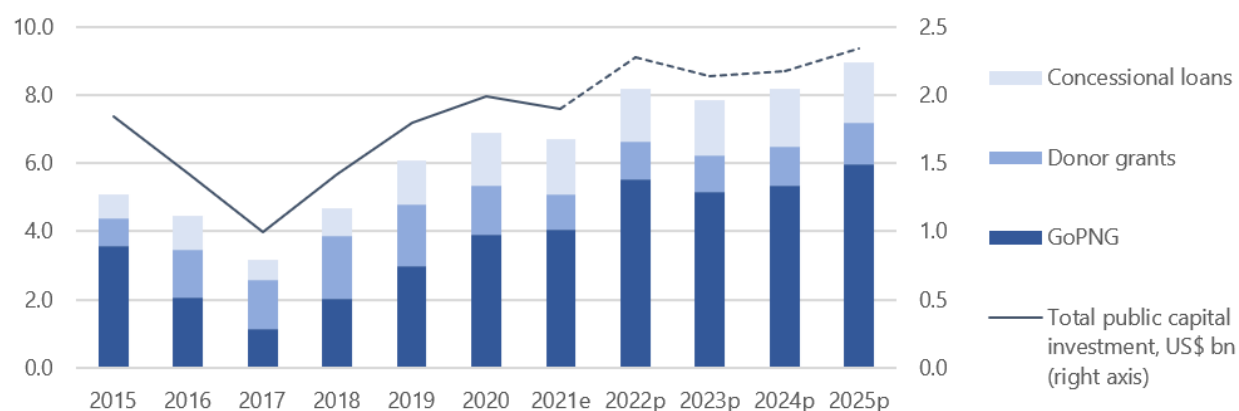
bn = billion, e = estimate, p = projection.

Source: Government of Papua New Guinea. Final Budget Outcome 2016-2020; Mid-Year Economic and Fiscal Outlook 2021; National Budget 2021.

66. **Supplemented by grants and deficit financing from domestic and international sources, this finances a substantial capital investment program.** Public capital investment (including cash and in-kind development partner support) reached almost Kina 7 billion in 2020, equivalent to more than US\$1.5 billion,

and is expected to reach around Kina 8 billion (US\$2 billion) annually over 2022-2025 (Figure 13). The recurrent budget reached almost Kina 14 billion (US\$ 3.7 billion) in 2020 and is expected to stabilize at that level over the medium-term. Together, this constitutes a substantial financing potential for both capital investments in adaptation (e.g., to climate-proof infrastructure) as well as recurrent activities (e.g., to develop and implement sectoral resilience policies).

**Figure 13.** Public capital investment program, 2015-2025, Kina billion and US\$ billion



bn = billion, e = estimate, GoPNG = Government of Papua New Guinea, p = projection.

Source: Government of Papua New Guinea. Final Budget Outcome 2016-2020; Mid-Year Economic and Fiscal Outlook 2021; National Budget 2021.

67. **Earmarked revenue sources can potentially supplement adaptation financing, e.g., to fund operational activities of the CCDA and fill gaps for specific adaptation interventions.** The Climate Change (Management) (Amendment) Act 2021 stipulates revenue sources to be levied by the CCDA. This comprises import levies on fertilizers, fuel, coal, and other goods contributing to greenhouse gas emissions; climate levies on factories, installations, and other entities contributing to greenhouse gas emissions, and the transport of hazardous waste; deforestation levies on logging companies; and other fees and charges set in consultation with the Department of Finance.

68. **Data limitations hinder revenue potential estimates for CCDA's sources, but it is likely low to moderate.** Publicly available data on international and domestic trade and economic activity is scarce, hindering the estimation of revenue potential for CCDA's sources. Several considerations suggest that revenue potential is moderate and could likely mainly allow for cost recovery, some operational funding, as well as minor gap filling for adaptation interventions. In view of this, careful weighing of costs and benefits of administering revenue sources with scarce capacities should be done.

- Potential trade-offs with development objectives limit the flexibility to set high-yielding rates, particularly in the short- to medium-term where limited substitution options exist for some levies. The majority of greenhouse gas emissions in PNG stems from energy and to a lesser degree from agriculture and forestry activities. However, PNG faces high energy (including electricity) prices and the agriculture sector is faced with competitiveness concerns, including due to high transport costs. A substantial levy would further increase input prices for agricultural and industrial production and the service industry, undermining nascent economic activity in non-resource sectors in PNG. This would likely be particularly pronounced in the short- and medium-term where alternatives, such as cleaner electricity and transport services, are not yet available. While a



levy would make investment in cleaner technologies more attractive, such structural changes of the economy often require longer time periods, during which business activity could be severely hampered if the transition is not managed carefully. High revenue potential could therefore likely only come from licenses or a tax (surcharge) that channels excessive profits away from the extractive (including forestry) or large polluting industries without undue harm to the domestic economy. Central government revenue sharing (e.g., of natural resource sector dividends) could be another option. However, both appear to be complex endeavors, including due to ongoing fiscal constraints and no fiscal buffers (e.g., sovereign wealth fund remains unfunded), which could make high-yielding resource rents indispensable for financing the general government budget.

- Levies, fees, and charges have to be coordinated with other revenue policies, including in the area of forestry and other natural resources. Fees generally have the primary objective of a regulatory function, with revenue collections targeting cost recovery.
- Overall, most levies, fees, and charges tend to be small, e.g., due to small trade volumes, such as a climate levy for imported vehicles. The same applies for the list of fees and charges discussed in PIFS (2019). The collection cost (as well as wider economic costs) is often substantial relative to the revenue yield. In some cases, surcharge and revenue sharing arrangements can help reduce collection costs.
- There are also potential downsides from the earmarking of taxes and non-tax revenue sources. This can include a perception of reduced mainstreaming importance, with the earmarked funds supposed to cater for addressing the issue. This is particularly problematic for a cross-cutting issue like climate adaptation.
- Lastly, revenue potential estimates have to take into consideration the evolving public money management regularization legislation, which prescribes a revenue remittance arrangement for collected fees and charges to the consolidated fund.

69. **Innovative financing instruments are complex, but some could be promising, potentially warranting a more in-depth expert assessment.** PIFS (2019, p. 27) discusses the Green Bonds issued by Fiji in the last years. However, green bonds involve a complex process of project selection and certification, and international bonds remain costly for PNG in comparison to concessional financing sources. Other specialized instruments, such as debt-for-nature swaps as well as financing for [ecosystem based adaptation](#) approaches, are complex as well but could have substantial potential in PNG, potentially warranting detailed expert assessments involving relevant stakeholders from CCDA, central agencies, and sectors.

70. **Adaptation financing data for state-owned financial institutions, SOEs, the private sector, and other is limited for PNG.** A [review of climate finance flows related to land-use](#), including for adaptation, prepared by a team comprising CCDA, the PNG Forest Authority, and UNDP in 2018 provides detailed analysis of finance sources and recommendations for reform in sectors affecting land-use. While no information is available on the financing from the domestic private sector and non-government organizations, this could be pursued as part of the fundraising activities for sectoral and subnational adaptation measures, such as Oil Search Foundation working on health and community development. In regard to financing from SOEs, PPPs, and the private sector, putting in place and strengthening the relevant enabling frameworks is critical, which have substantial weaknesses in PNG (see also Sections 1 and 6).

71. **The planned Climate Resilience and Green Growth Trust Fund (CRGGTF) is a channel.** As discussed above and by PIFS (2011), a fund is a channel/mechanism, which is often mixed up with being a financing source. The establishment and maintenance of a trust fund is associated with substantial costs in terms of financial resources and capacity and does not automatically lead to an increase in resources. For example, the Tonga Climate Change Fund and the Tuvalu Climate Change & Disaster Survival Fund mentioned in PIFS (2019) have not received development partner contributions following their set-up (except for the initial endowment of the Tongan fund from the ADB project that set up the fund), but have been financed from domestic government resources instead. At the same time, a well-administered trust fund can be a transparent pooling mechanisms.

72. The CCDA team noted that they will work with stakeholders to develop the final organizational and operation framework for the CRGGTF, including by determining the objectives, funding arrangements, institutional design, establishment of small grant funding windows, and governance and accountability arrangements. To advance this work, the plan is to establish a Sub-Technical Working Committee to design the architecture of the CRGGTF, taking into consideration experiences from similar funds in the region, including the Mama Graun Trust Fund, PNG Sustainable Development Program, Solomon Islands Arnavon Endowment Fund, Micronesia Climate Change Foundation and other such establishments. Based on the discussion of dedicated funds and PFM constraints above, the CCDA could consider reassessing the need to establish the CRGGTF in the short term or if a simpler solution, like a trust account, could fulfill needs for now, allowing the pooling of resources and establishing a financial management track record with regular bank reconciliations and financial reporting and audit. As contributions increase in the medium or long-term, arrangements could be adapted to evolving needs. In all cases, a focus on fit-for-purpose, robust arrangements is important to avoid the fund ties up scarce PFM capacity.

73. **Earmarking expenditure programs for climate adaptation are being discussed within CCDA.** Stakeholder consultations have expressed interest in exploring an earmarked function grant for climate action. Function grants are established under the Intergovernmental Relations (Functions and Funding) Act 2009 and cater for recurrent expenditure to deliver a set of minimum priority activities across main sectors (administration, education, health, primary production, transport infrastructure maintenance, village courts, land mediation, and local level government grants). While securing any funds for adaptation is positive, it would need to be clarified what the recurrent funding should be for (e.g., funding climate change committees at subnational levels, funding community resilience activities) and there would need to be a window of opportunity to make required legislative changes (e.g., an ongoing amendment of the functions and funding act), which can be difficult in the area of decentralization in PNG (e.g., see experience with changing the recipient of health function grants from provincial administration to provincial health authorities, which took years and did not require a legal amendment). In view of this, mainstreaming subnational plans and budgets, partially funded through function grants and SIPs (see Sections 2 and 3 for a discussion of mainstreaming SIP guidelines), could be a more suitable approach to address the cross-cutting issue of climate adaptation. Mainstreaming tax credits for infrastructure development as well as rural development, primary production, and agricultural production extension services incentive schemes could also be worth pursuing and less cumbersome than the establishment of a new function grant.

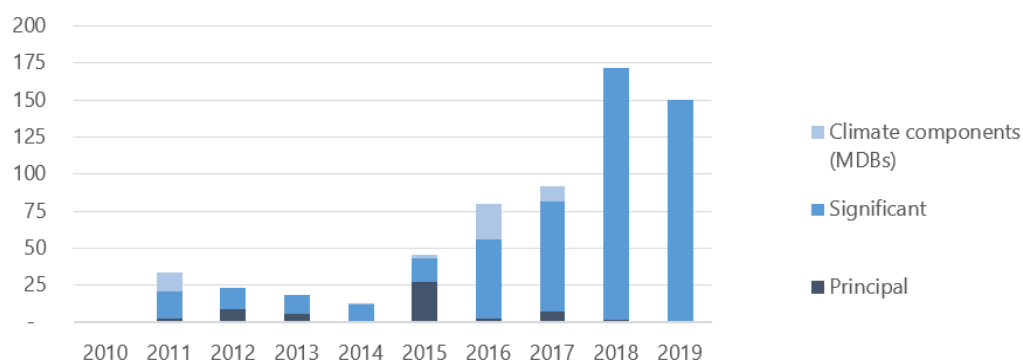
### ***International finance sources***

74. **Adaptation finance commitments from international public finance sources have been increasing over the past decade (Figure 14).** While some national and regional mechanisms, (e.g., African and Caribbean risk insurance facilities and regional and national funds listed in Figure 6), selected multilateral financing sources (e.g., African Development Bank, European Bank for Reconstruction and



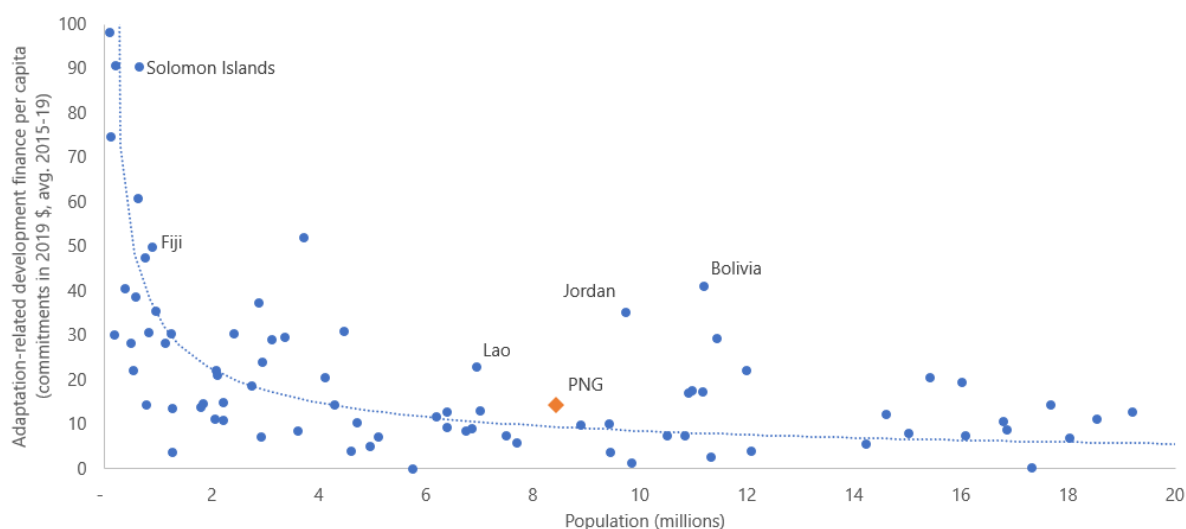
Development, Inter-American Development Bank), and specifically focused funds (e.g., the Least Developed Countries Fund earmarked for least developed countries only) do not provide access for PNG, most financing sources and implementing agencies are available. Noting data limitations discussed above that equally apply to PNG, adaptation finance commitments have been increasing substantially in PNG in recent years, reaching US\$150-175 million per year in 2018-2019. These are largely funded through projects with significant (not principle) climate adaptation components. In comparison to other countries, PNG's per capita climate adaptation finance commitments are above the expected level for its population size (smaller countries generally receive relatively higher per capita allocations), but there remains substantial room for improvement (Figure 15).

**Figure 14.** Development partner adaptation finance commitments, 2010-2019, US\$ millions



Source: OECD DAC database, contributions tagged against Rio Markers and Multilateral Development Bank (MDB) climate components (share applied).

**Figure 15.** Adaptation finance commitments by recipient country, 2015-19

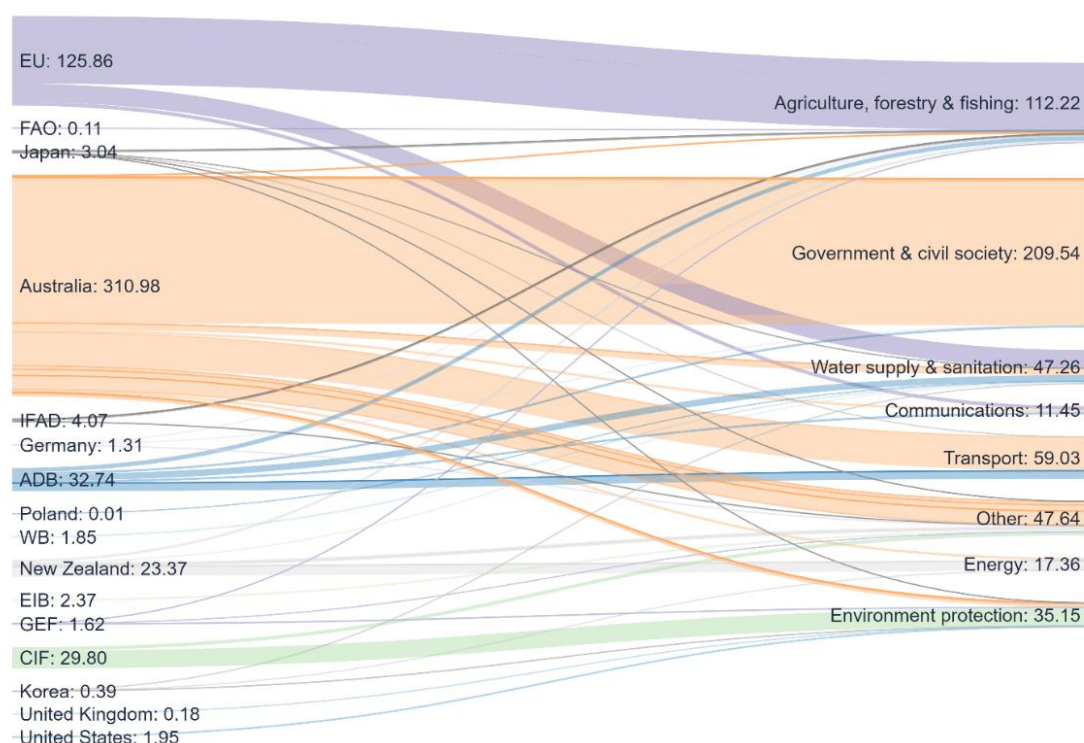


Source: OECD DAC database, contributions tagged against Rio Markers and Multilateral Development Bank (MDB) climate components.

75. **Figure 16 shows recent adaptation finance commitments in PNG by development partner and sector.** Based on available data from the OECD DAC database, important bilateral providers committing resources for adaptation in 2015-2019 have been Australia, the European Union, and New Zealand.

Multilateral development bank commitments were from ADB, the European Investment Bank (EIB), and a minor allocation from the World Bank. Vertical climate related funds include the Climate Investment Funds (CIF), the Global Environment Facility (GEF), and the International Fund for Agricultural Development (IFAD). Sectors benefitting mostly from adaptation commitments were the general government & civil society; agriculture, forestry & fishing; and to a lesser extent infrastructure sectors (transport, water and sanitation, energy) and environmental protection.

**Figure 16.** Adaptation financing in PNG by partner and sector, total commitments, 2015-19 (\$m)



Source: Author's calculation based on OECD DAC Database.

76. **Multiple development partners have been active across NAP priority sectors in PNG (Table 9).** The high-level mapping below further provides entry points to identify potential future development partners. It could be further expanded to also include general official development assistance in the sectors as well as other mitigation climate financing globally and in PNG to provide additional leads for potential finance sources. However, a more detailed analysis for specific adaptation measures would be useful as part of ongoing resource mobilization efforts. In line with the discussions above on the importance of ensuring revenue potential of a financing source (substantially) outweighs collection costs, it may not make sense to carry out a deeper analysis and establish relationships with all potential donors since each donor will have their own processes, templates, and requirements that will require resources to comply with (e.g., this could apply to some of the smaller foundations and donor countries listed in Table 9 below).

**Table 9.** High-level mapping of donors in NAP priority sectors in PNG and globally, 2010-19

NAP sector	Adaptation commitments	
	Global	PNG
<b>Agriculture</b>	<p>Top 10: WB (\$4.75bn), IFAD (\$2.1bn), ADB (\$463m), GCF (\$433m), AIIB (\$250m), GEF (\$204m), Howard G. Buffett Foundation (\$201m), Adaptation Fund (\$162m), Bill &amp; Melinda Gates Foundation (\$159m), CIF (\$116m)</p> <p>Others: FAO, EIB, IKEA Foundation, EBRD, Dutch Postcode Lottery, NDF, McKnight Foundation, Margaret A. Cargill Foundation, Oak Foundation, Rockefeller Foundation, David &amp; Lucile Packard Foundation, Swedish Postcode Lottery, People's Postcode Lottery, BBVA Microfinance Foundation, CIFF, Ford Foundation, Grameen Crédit Agricole Foundation, Gordon and Betty Moore Foundation, Wellcome Trust, Charity Projects Ltd (Comic Relief), GGGI, William &amp; Flora Hewlett Foundation, Norwegian Postcode Lottery, MasterCard Foundation</p>	IFAD (\$3.1m), ADB (\$3.0m), GEF (\$0.2m), FAO (\$0.1m)
<b>Infrastructure</b> (communications only, other sectors covered below)	<p>Top 10: WB (\$180m), EU (\$116m), ADB (\$19m), Germany (\$16m), Japan (\$13m), United States (\$9m), Sweden (\$8m), Canada (\$7m), Korea (\$6m), Australia (\$5m)</p> <p>Others: UK, Denmark, Belgium, Finland, Spain, Norway, Italy, France, Switzerland, IFAD</p>	EU (\$5.0m), Australia (\$3.4m), ADB (\$3.0m)
<b>Transport</b>	<p>Top 10: Japan (\$3.3bn), AIIB (\$1.4bn), WB (\$1.1bn), EU (\$810m), Germany (\$674m), ADB (\$590m), UK (\$417m), Australia (\$211m), Korea (\$200m), IFAD (\$86m)</p> <p>Others: NDF, CIF, United States, Netherlands, New Zealand, GCF, Canada, Denmark, GEF, Oak Foundation, Belgium, EIB, Austria, David &amp; Lucile Packard Foundation, Italy, Sweden, Spain, France, GGGI, Ireland, Switzerland, Lithuania</p>	Australia (\$47m), ADB (\$25m), Japan (\$0.2m)
<b>Health</b>	<p>Top 10: EU (\$582m), France (\$264m), Japan (\$253m), UK (\$250m), United States (\$161m), Canada (\$145m), Spain (\$118m), Australia (\$63m), Germany (\$58m), Ireland (\$55m)</p> <p>Others: Netherlands, Sweden, Belgium, Switzerland, Korea, Denmark, Italy, Finland, Austria, Norway, Luxembourg, Greece, Iceland, Poland, Slovak Republic, Czech Republic, Slovenia</p>	Australia (\$0.1m)
<b>Environment</b>	<p>Top 10: Germany (\$5.8bn), EU (\$3.0bn), UK (\$2.3bn), France (\$2.0bn), United States (\$1.8bn), Japan (\$1.6bn), GEF (\$1.4bn), Sweden (\$1.1bn), Norway (\$668m), Denmark (\$661)</p> <p>Others: Netherlands, GCF, Switzerland, WB, Australia, CIF, Spain, Italy, Canada, Belgium, ADB, Korea, Finland, NDF, Dutch Postcode Lottery, David &amp; Lucile Packard Foundation, FAO, New Zealand, Ireland, Bloomberg Family Foundation, GGGI, Austria, Adaptation Fund, Swedish Postcode Lottery, EIB, People's Postcode Lottery, MAVA Foundation, Oak Foundation, Portugal, Poland, Greece, John D. &amp; Catherine T. MacArthur Foundation, Slovenia, Luxembourg, William &amp; Flora Hewlett Foundation, Czech Republic, Norwegian Postcode Lottery, Rockefeller Foundation, Hungary, Ford Foundation, Iceland, Lithuania, Slovak Republic, Latvia</p>	<p>CIF (\$25m), Australia (\$17m), GEF (\$2m), United States (\$2m)</p> <p>Others (&lt;\$1m): Korea, UK, Spain, France, Japan, New Zealand</p>

NAP sector	Adaptation commitments	
	Global	PNG
Forestry	Top 10: CIF (\$379m), GCF (\$256m), WB (\$140m), EIB (\$112m), GEF (\$93m), FAO (\$15m), Gatsby Charitable Foundation (\$15m), Adaptation Fund (\$12m), ADB (\$11m), Oak Foundation (\$8m)  Others: IFAD, NDF, David & Lucile Packard Foundation, Ford Foundation, GGGI, Swedish Postcode Lottery, BBVA Microfinance Foundation	FAO (0.1m)
Fisheries	Top 10: WB (\$446m), IFAD (\$191m), GEF (\$40m), FAO (\$38m), Bloomberg Family Foundation (\$24m), NDF (\$12m), CIF (\$5m), Adaptation Fund (\$4m), ADB (\$3m), Bill & Melinda Gates Foundation (\$2m)  Others: David & Lucile Packard Foundation, Oak Foundation, Swedish Postcode Lottery, BBVA Microfinance Foundation, Gordon and Betty Moore Foundation, EIB	ADB (\$3.0m)
Energy	Top 10: EU (\$1.6bn), Germany (\$1.2 bn), Canada (\$613m), GCF (\$590m), United Arab Emirates (\$411m), WB (\$315m), Italy (\$266m), Sweden (\$250m), UK (\$197m), Finland (\$173m)  Others: Netherlands, France, Switzerland, New Zealand, Norway, Korea, United States, Denmark, AIIB, Australia, Japan, Oak Foundation, ADB, Belgium, GEF, Iceland, David & Lucile Packard Foundation, Dutch Postcode Lottery, Luxembourg, NDF, Austria, Spain, Ireland, Slovenia, GGGI, EIB, Adaptation Fund, Rockefeller Foundation, Poland, Lithuania, Portugal, Czech Republic, Swedish Postcode Lottery, William & Flora Hewlett Foundation, Slovak Republic, Greece, Hungary	New Zealand (\$14.5m), Australia (\$3.4m), Korea (\$0.01m)
Water and sanitation	Top 10: Japan (\$9.0bn), Germany (\$6.6bn), France (\$4.2bn), WB (\$3.3bn), EU (\$2.5bn), Netherlands (\$1.4bn), ADB (\$933m), Korea (\$875m), GCF (\$747m), Sweden (\$635m)  Others: Switzerland, United States, Australia, UK, Denmark, Spain, Belgium, GEF, CIF, United Arab Emirates, Finland, Adaptation Fund, Canada, EIB, Austria, Italy, New Zealand, NDF, Ireland, Iceland, Norway, Czech Republic, Luxembourg, IFAD, Portugal, Slovenia, H&M Foundation, Bill & Melinda Gates Foundation, Poland, Hungary, Margaret A. Cargill Foundation, FAO, Swedish Postcode Lottery, Dutch Postcode Lottery, Slovak Republic, Rockefeller Foundation, GGGI, AIIB, Wellcome Trust, David & Lucile Packard Foundation, Greece, Lithuania	EU (\$26m), Australia (\$13m), ADB (\$9m), WB (\$2m), New Zealand (\$1.3m), Japan (\$0.04m), Korea (\$0.03m), Poland (\$0.01m)
Disaster Management (including reconstruction & rehabilitation)	Top 10: WB (\$5.0bn), Japan (\$1.6bn), UK (\$1.4bn), EU (\$777m), Germany (\$446m), Sweden (\$444m), Canada (\$313m), Australia (\$303m), Belgium (\$287m), GCF (\$193m)  Others: Norway, Switzerland, Netherlands, United States, CIF, Denmark, Italy, Spain, Ireland, New Zealand, Korea, Adaptation Fund, Dutch Postcode Lottery, GEF, EIB, NDF, Austria, Finland, France, FAO, Margaret A. Cargill Foundation, People's Postcode Lottery, Czech Republic, Poland, Iceland, Luxembourg, Slovenia, Portugal, Bill & Melinda Gates Foundation, Slovak Republic, Romania, Ford Foundation	Australia (\$5.0m), New Zealand (\$2.8m), Japan (\$0.02m), Korea (\$0.02m)

Note: NAP priority sectors in bold. Multilateral development bank sources that are not available to PNG excluded.  
Source: Author based on OECD DAC databases.

77. **The government has specific funding channels for recurrent activities and capital projects, while major development partners generally support all types of interventions (Table 10).** A similar picture would emerge for other larger bilateral and multilateral partners. A mapping of financing sources

by these high-level intervention categories therefore appears to be less helpful, suggesting an adaptation measure specific mapping to narrow down promising financing sources. An example for a more specific intervention is included at the end of the next subsection under 4.2.2.3.

**Table 10.** Broad mapping of selected financing sources by types of interventions

Financing source	Type of adaptation intervention			
	Research and feasibility studies	Policy development	Capacity building	Infrastructure investment
Domestic public finance				
Recurrent budget				
PIP				
SIP				
International public finance (examples)				
GCF				
ADB				
World Bank				
Australia				
EU				

Source: Author.

## 4.2 Resource mobilization approach

78. This subsection brings together the discussion above with general considerations on fundraising to inform a suitable resource mobilization approach for the NAP. Simple tools and institutional arrangements to help implement the proposed approach are described and concrete examples provided for illustration.

### 4.2.1 General considerations

79. **It is critical to understand how financing decisions for each source are made to successfully mobilize resources.** The political economy and external factors often play important roles, and can result in high-quality, prioritized and sequenced plans not being funded as envisioned. CCDA officials highlighted a similar experience in their ongoing efforts to mobilize resources for the GCF Country Programme. Three aspects need to be considered that may also partially explain CCDA's fundraising experience.

80. **First, financing is not a standalone activity.** In many instances, however, financing is seen as a discrete step that follows after a plan is completed and that ends when the financing agreement is signed. Instead, financing should be seen as an interlinked process (see also Section 1.2) that (i) should move hand-in-hand with the planning and costing of strategies and specific activities, e.g., to ensure alignment with financing source priorities and avoid inefficient resource use on the planning and costing of unrealistic 'wish lists' (see also discussion in Section 3); (ii) is influenced by the implementation and accountability performance of ongoing and completed interventions, e.g., by increasing or reducing confidence of decision-makers in GoPNG, partners, and the private sector to allocate further resources; and (iii) substantially depends on the enabling environment, including the public financial management system, capacity, and performance; the private sector business environment; and frameworks for SOEs and PPPs and their implementation.

81. **Second, decision-making processes for financing can be formal, informal or a mix of both.**

Formal processes start with the inclusion of a prioritized intervention in a country's, sector's or agency's planning framework and subsequent funding of the activity. This is more likely to happen in situations where the planning entity has sufficient own resources and/or strong institutional arrangements in place that ensure compliance with established processes. Countries historic approach to planning for the public and private sector can also play a role (e.g., planned economies as an extreme case). On the other side of the spectrum, informal decision-making processes bypass established processes and decide on funding interventions that are not included in plans or have low priority. This could be due to changes in political priorities following plan completion, available development partner financing specifically earmarked for an activity, or ulterior motives of influential stakeholders, among others. As the first two reasons suggest, informal processes are not automatically negative and can legitimately exist beside formal processes. Attempts are made in many countries, often led by planning ministries, to ensure that plan inclusion is a pre-condition for a project's selection for financing. However, in practice, countries and development partners exhibit a combination of formal and informal processes.

82. In PNG, financing decision-making is skewed toward the informal and development partner processes similarly comprise important informal elements. The PEFA assessment also finds that while DNPM coordinates and helps prioritize projects to be included in the budget, the actual procedures for selecting projects to be funded does not appear to follow the established criteria, and other factors are determining priorities. Development partner financing decisions similarly depend on a combination of factors, including alignment to government plans on the one hand and political priorities, existing sector strategies and comparative advantages, and own needs assessments of the development partner on the other.

**Figure 17.** Illustration of formality of financing decision-making in PNG



Source: Author.

83. **Third, time horizons of financing decisions can vary vastly from several years in advance to ad hoc.**

Particularly larger financial commitments, e.g., by development partners, often evolve over multiple years and can involve preparatory analytical work that result in strategies and funding pipelines. This can make it harder to mobilize resources on a short timeframe. At the same time, newly tapped financing sources, windfall revenues, or changes in political priorities (such as the prioritization of agriculture under the current government that was highlighted in stakeholder interviews) can result in unexpectedly emerging financing opportunities, which are difficult to anticipate, regularly do not align with formal financing strategies, and often require pre-established relationships.

#### 4.2.2 Suitable approach for the NAP

84. **The NAP Financing and Investment Strategy should be designed as a long term, continuous, actively managed stakeholder engagement process using both formal and informal channels.** Just as the NAP is designed as a flexible approach, through being an umbrella framework under which adaptation measures can be developed and included in the proposed database of adaptation measures, the resource mobilization approach needs to be flexible to accommodate different levels of formality and time horizons

under which financing decisions are taken. This could be efficiently done by defining the strategic resource mobilization approach—centered around developing partnerships and fundraising expertise—in the NAP document, while abstaining from preparing a standalone NAP Financing and Investment Strategy given the constantly evolving nature of the financing landscape (including changes to relationships, priorities, financing source availability, access requirements, templates, etc.) in which such a strategy would become quickly outdated. This does not mean, however, that climate finance mobilization should be carried out on an ad hoc basis. Instead, resources should be used to design and begin implementation of a practical interactive climate finance mobilization approach centered around continuous stakeholder engagement, for which several elements and simple tools can be put in place that facilitate systematic fundraising:

- **Database of adaptation measures.** This could serve as a ‘home’ for identified adaptation measures under the NAP umbrella framework and help link planning, financing, implementation, and monitoring and reporting processes. This is discussed in more detail in Section 2 above.
- **Financing intelligence (database).** This could serve as a ‘home’ for intelligence gathered on the different financing sources within GoPNG, of development partners, and from the private sector, covering both formal and informal knowledge. Such a database can support fundraising efforts and help preserve expertise during staff turnover (while being aware that a share of intelligence will be of intangible nature, such as relationships and informal information exchanges).
- **Partnerships & Resource Mobilization Team.** This could pool the resource mobilization expertise generate financing intelligence, build relationships, lead or support fundraising efforts, could maintain and use the databases of adaptation measures and financing and donor intelligence.

85. **In parallel, it will be critical to strengthen and mainstream the enabling environment.** This aims to facilitate the increased availability of resources for adaptation as well as their effective, value-for-money implementation. The enabling environment comprises (i) adaptation planning and coordination arrangements (see Section 2), including of CCDA as a technical support hub next to its role in facilitating adaptation financing; (ii) public financial management systems and capacity; (iii) frameworks for the performance of SOEs that are operating in several NAP priority sectors; and (iv) the private sector business environment (see Section 6).

86. **Lastly, it will be important to strategically position CCDA and use financing sources, channels, and implementing arrangements.** A strategic position for CCDA could (predominantly) be as a coordination and support hub for climate financing, in comparison to being an implementer of climate adaptation projects directly.<sup>5</sup> Further, carefully assessing potential benefits, costs, and risks of financing sources, channels, and implementing arrangements, taking into account available systems and capacity, will be important to ensure the strategic allocation of scarce resources to where they have the biggest impact of maximizing resources available for adaptation and ensuring their effective and efficient use. Direct control and management of funds should be of secondary importance. Specialized development partner TA can help carry out assessments for current and potential sources, channels, or implementing arrangements, including the pursuit of innovative ones (e.g., green bonds). This can lead to a prioritized and sequenced approach to sources, channels, and implementation arrangements. For example, if establishing the CRGGTF

---

<sup>5</sup> A strategic discussion could be carried out as part of the next corporate planning process, which could also consider revisiting and prioritizing the high number of corporate plan strategies, objectives and key performance indicators as well as recommendations from PIFS (2019) report on options for strengthening climate finance coordination and accessibility in regard to functions, institutional arrangements, and priorities vis-à-vis available resources and capacity.

and/or direct access to global climate funds would not significantly increase resources in the short- and medium-term while absorbing substantial capacity and resources, pursuing these could be postponed to the medium-term. In that case, capacity and resources could be invested in the short-term into (i) mainstreaming adaptation elements into agencies' PIP projects and pipelines as well as (ii) working with international accredited entities organizations to access climate funds in behalf of PNG, while taking a stronger oversight role in these often large and complex projects. Consolidating/packaging smaller adaptation measure ideas, or integrating them into a larger intervention idea (e.g., involving capital investments), can be a strategic approach to secure funding for some smaller adaptation measures.

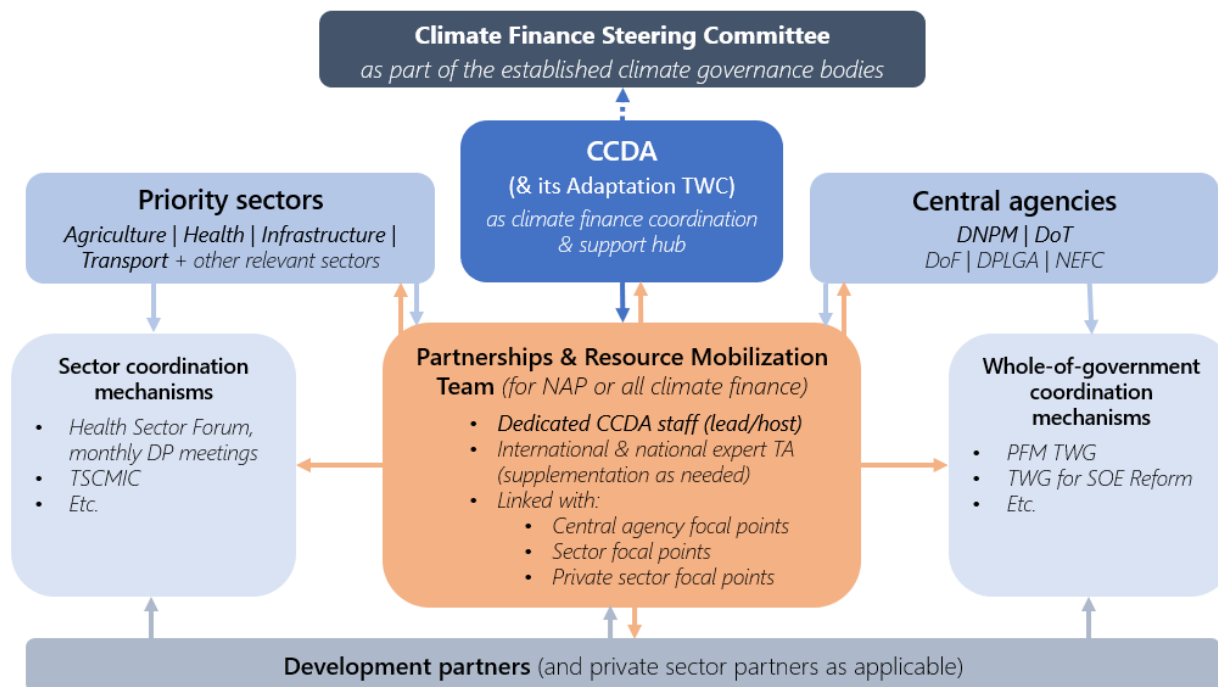
#### **4.2.2.1 Partnerships and resource mobilization team**

87. **Developing partnerships and fundraising expertise will be critical.** Brought together with technical expertise that helps identify and design adaptation opportunities in ongoing, pipeline and new activities and projects, this will enable successful adaptation resource mobilization efforts. A practical way of approaching the financing side is through the establishment of a partnerships and resource mobilization team within CCDA, with central agency and priority sector focal points and supported by development partner technical assistance. Its main role would be to facilitate financing for adaptation measures to be implemented under the NAP priority and other sectors at national and subnational levels, while ensuring adequate financing of the CCDA is a precondition for the CCDA to establish itself as a technical and financial support hub as well as for this team to effectively operate. Given overlaps between adaptation and mitigation financing, there could be synergies in defining the team's responsibility to cover both aspects.

88. **Recognizing scarce resources and capacity of CCDA and the government administration more widely, a pragmatic institutional approach is important.** The team could either be established under a separate unit, i.e., the Climate Finance Unit envisioned in Strategy 2.1 of the CCDA Corporate Plan 2018-2022, or as a cross-divisional team. In either case, close collaboration with financial and technical staff within CCDA, in central agencies, and NAP priority (and other) sectors will be critical to effectively carry out its support role. Given the multitude of existing climate governance bodies and mixed experiences with the effectiveness of technical working groups in PNG, rather than establishing a Climate Finance Technical Working Group as suggested by PIFS (2019), the focus could be on establishing day-to-day working relationships between all stakeholders involved. With most, if not all, stakeholders relationships already exist that can be built upon. This includes the government's central agencies, with DNPM actively attending NAP workshops and the CCDA engaging with DOT and DOF as part of the annual budget and PFM cycle. The team could report to CCDA management and upwards to the Climate Finance Steering Committee, newly established under the Climate Change Management (Amendment) Act 2021 (Section 14A), while keeping the Adaptation Technical Working Committee informed. The team could link into established sectoral and thematic coordination mechanisms, such as the transport sector coordination mechanism TSCMIC, either directly or through sector and central agency focal points, rather than attempting to duplicate these.



**Figure 18.** Possible institutional arrangements for NAP financing



Source: Author.

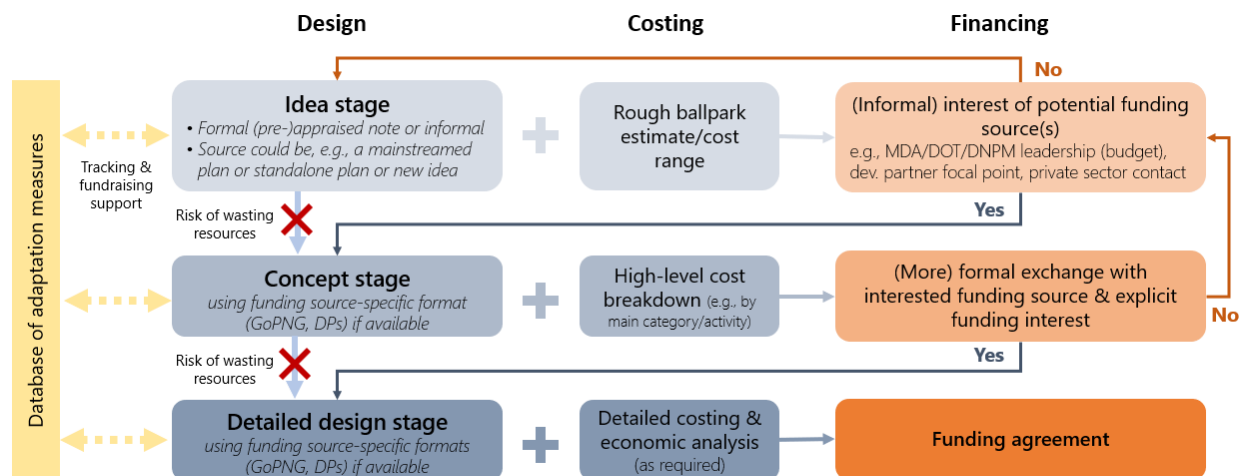
89. **The team could provide comprehensive support.** Core functions of the team could include (i) generate “donor” intelligence, including through organizing and participating in training sessions or courses and knowledge exchanges with specific development partners and/or financing instrument officials; (ii) strengthen existing and establish new partnerships with potential funding sources within GoPNG (including DOT, DNPM, PPP and SOE bodies, SOEs themselves, and subnational actors), with development partners, and private sector contacts; (iii) maintain the portfolio of adaptation measures at various design stages (using the database mentioned above); (iv) facilitate the matching of measures with suitable funding sources; and (v) track and report on implementation progress and financing (using the database of adaptation measures).

90. **Relationship building with financing source representatives is important.** This should be done through establishing and maintaining formal and informal relationships with stakeholders through focal points in the various funding institutions, taking into consideration that a substantial share of information relevant for fundraising is not available in writing or hard to obtain without established relationships. This could be done through regular briefings with political leaders, NEC submissions, ministerial briefings in priority sectors, involvement of technical officers in priority sectors, and formal and informal meetings with development partner and private sector representatives, among others.

91. **Relationship building with technical design and implementation teams is important.** As the development of adaptation measures from idea to detailed design should evolve jointly with fundraising efforts, the latter should be initiated at the idea stage (Figure 19). For this, the Partnerships and Resource Mobilization team has to work closely with the implementing agency from the conception of a project idea, rather than only after a concept note has been developed. At times, the initiative to design a new adaptation

measure may also come from climate financing intelligence, pointing to an available financing source or specific donor interest.

**Figure 19.** Synched approach for intervention design, costing and financing



Source: Author.

92. **Development partner support for capacity building and supplementation could be useful.** Apart from strengthening the capacity of the partnership and resource mobilization team, it will be important to build technical expertise for adaptation mainstreaming and intervention design support in CCDA and the priority sectors. On the financing side, the in-country Climate Finance Access Network (CFAN) advisor can play a key role in supporting the team on the ground. Additional resource mobilization and partnerships expertise could be a good investment for partners with the potential to leverage substantial financing for adaptation (and mitigation) in PNG.

#### 4.2.2.2 Financing intelligence—database

93. **A financing intelligence database could be a practical tool to gather financing source information and a record of formal and informal engagement.** Such a database could comprise, among others, contact details of focal points, programming and access procedures, sector priorities, scope or preferences for certain types of interventions, including modalities available and co-financing requirements or preferences; funding cycle timing; and a history of past and ongoing funding. The database can be gradually expanded based on intelligence gathered from fundraising efforts for specific adaptation measures.

94. **Knowledge of financing sources, together with relationships, can inform the matching of intervention ideas with financing sources.** Each funding source has characteristics that may or may not match well with a proposed adaptation measure. This matching process can help narrow down suitable funding sources and identify sources with the highest potential, for which formal and/or informal engagement can be initiated at the intervention idea stage. The next subsection provides examples of financing source characteristics and how such an identification and matching process can be designed.

95. **While adaptation financing data limitations persist, some useful data sources exist to supplement locally available knowledge.** Rich information sources with detailed data are the OECD DAC

databases. The OECD DAC [Creditor Reporting System](#) (CRS) provides information on general official development assistance as well as on aid activities targeting global environmental objectives including climate adaptation. The latter includes detailed information by recipient, development partner, sectors and subsectors, and detailed information on the project title and description, among others. Other sources include the Overseas Development Institute's [Climate Funds Update](#) and the [Climate Policy Initiative](#), among others. Detailed information on specific development partners and their different financing sources and modalities is available on their online presences.

#### 4.2.2.3 Financing intelligence—examples

96. Two examples are presented below to illustrate how financing intelligence can be developed. The first one focuses on a specific adaptation measure while the second one looks at a specific development partner. The intelligence gathered in both examples is based on publicly available information. In practice, this would be supplemented by insights gained from informal and formal relationships on the ground.

#### Financing intelligence for a specific adaptation measure

97. **Example of climate-resilient codes and standards.** As an example, NAP Strategy 3.1, which aims to “develop climate-resilient codes and standards for the construction/rehabilitation of buildings and transport and utility infrastructure”, is chosen. Applying the financing source and landscape discussion above to the example, it makes sense to seek financing from international public finance sources, followed by domestic public finance sources, before exploring any less conventional sources of finance.

**Table 11.** High-level overview of potential finance sources to develop climate-resilient codes and standards

Source		Potential
Domestic public finance	Recurrent	<b>Possible</b> , but likely to come from within existing budget ceiling
	Capital	<b>Possible</b> , as part of larger PIP project funding
International public finance	Technical assistance	<b>Yes</b> , high potential, including from ongoing interventions
	Investment project	<b>Yes</b> , high potential, either under an ongoing intervention (short-term) or as part of a new, larger funding request (medium- to long-term)
Private sector finance		<b>Unlikely</b> given public policy focus, except in exceptional cases, e.g., from large philanthropic organizations

Source: Author.

98. **Domestic public finance.** To access GoPNG financing, the responsible departments, such as the Department of Works & Implementation (DoW) and the Department of Transport, or authorities could include the costs to develop sector specific codes and standards into their 2023 budget submission, either as a new activity in the Stage 1 submission or as part of an ongoing policy and regulatory development activity in the Stage 2 submission (e.g., under the main program Construction Regulation and Technical Services of the Department of Transport or DoW). However, before pursuing this avenue, seeking external financing should be attempted to increase overall resources available to PNG, which is particularly important in the ongoing fiscal crisis aggravated by COVID-19. The resulting severe budget constraints suggest GoPNG financing only as a potential source of last resort for gaps and co-financing requirements that leverage other sources of finance.

99. **International public finance.** Several criteria can be used to narrow down potential financing sources. This includes (i) likely cost range of intervention (e.g., large investment needs will reduce potential pool of partners); (ii) key development partners in the sector in PNG and elsewhere; and (iii) support to

similar interventions, both ongoing and completed and in PNG or elsewhere. These can be complemented with knowledge from established partnerships as well as donor intelligence on any additional suitable sources gathered by the NAP Partnerships & Resource Mobilization Team and its central agency and sectoral focal points. Such intelligence can, for example, come from an analysis of partners' priorities in PNG found in country strategies (see also next example). Table 12 provides an overview of the applied criteria.

- (i) **Cost range:** The likely budget needs for developing climate-resilient codes and standards is low to moderate, most likely below \$5m. Adaptation of codes and standards from similar countries to PNG may help reduce the overall funding need. This will make funding from very small organizations or organizations without measurable own resources (e.g., UN organizations) unlikely, except if these are part of a larger project or technical assistance (TA). Otherwise, all medium and larger-size development partners, such as bilateral partners, multilateral development banks, and vertical funds, constitute potential funding sources.
- (ii) **Key development partners:** Based on financial data from the publicly available OECD DAC databases, largest partners active in PNG's transport sector are Australia, ADB, Japan, the World Bank, and the European Union (the same analysis could be done for the housing sector or at subsector level). In terms of global adaptation financing commitments over the most recent five year period for which data is available, the GCF, the World Bank, France, the EU, and the ADB are largest partners in the area of transport policy, and the EU, the World Bank, ADB, the UK, and Australia in the area of housing policy (excluding financing sources to which PNG does not have access to like the Interamerican Development Bank and the European Bank for Reconstruction and Development).
- (iii) **Similar interventions:** In PNG, the ADB is currently supporting the development of climate-resilient port standards and USAID the development of the DoW Climate Resilience Policy. A regional example is the World Bank supported climate- and earthquake resilient national building code in Samoa while globally the Nordic Development Fund (NDF) funded an activity titled [Developing Climate Resilient Infrastructure Standards](#) for €4 million in Zambia as part of the larger Strengthening Climate Resilience Project with World Bank financing.

**Table 12.** Application of criteria to narrow down potential finance sources for climate-resilient codes and standards

(ii) Key development partners				
PNG transport sector (disbursements, 2015-20)		Global adaptation commitments (2015-19)		(iii) Similar interventions (examples)
(i) Cost range		Transport policy	Housing policy	
<\$5m	Australia: \$252m	IDB: \$871m	IDB: \$258m	PNG:
Most medium and larger-size development partners (MDBs, vertical funds, bilateral partners, etc.)	ADB: \$223m	GCF: \$144m	EU (excl. EIB): \$250m	· ADB: Support to climate-resilient port standards
	Japan: \$138m	WB: \$140m	EBRD: \$237m	· USAID: Support to DoW Climate Resilience Policy
	WB: \$89m	France: \$80m	WB: \$219m	Region:
	EU: \$10m	EU (excl. EIB): \$21m	ADB: \$143m	· World Bank: Support to climate-resilient infrastructure standards in several Pacific countries
	Other partners: OPEC	ADB: \$16m	UK: \$129m	· World Bank: Support to climate- & earthquake resilient National Building Code in Samoa
	Fund, Climate	IFAD: \$10m	Australia: \$83m	Global:
	Investment Funds, Korea, United States	Korea: \$4m	AfDB: \$63m	· NDF: Developing Climate Resilient Infrastructure Standards in Zambia (€4m)
		EBRD: \$3m	Germany: \$32m	
		Germany: \$3m	Nordic Development Fund (NDF): \$26m	

Sources: OECD DAC databases for financial data, development partner websites.

100. Based on this quick, illustrative analysis, promising avenues include the ongoing support provided by ADB and USAID (potential short-term funding); approaching the NDF for funding, including for co-financing of a larger project with the GCF or the World Bank (medium-term); and approaching major bilateral partners active in the sector, starting with Australia, Japan, and the EU (short- to medium-term). A more in-depth online search could yield further opportunities. The outlined approach can be refined by the NAP Partnerships & Resource Mobilization Team and applied to any adaptation measure idea identified, for example, as part of mainstreaming or adaptation planning exercises.

### Financing intelligence for a specific development partner

101. **Example of the Asian Development Bank.** Understanding in-detail how financing sources work is, next to establishing close relationships with management and technical officers, critical to maximize the access of resources for adaptation. For ADB, a high-level exercise yields information on, e.g., (i) corporate climate targets for projects and financing, (ii) corporate and country strategies and plans for the programming of resources, (iii) priority sectors over the medium-term, and (iv) a list of ongoing and pipeline projects where adaptation elements may be integrated (Table 13). Such an analysis could be expanded into more detail to comprise ADB interventions in the region and beyond that are comparable to identified adaptation measures, information from informal engagement with ADB, and a review of specialized technical assistance funds and other financing modalities for the public and private sector, and so on.

**Table 13.** Basic information on ADB as illustration for financing intelligence database

Representation	HQ: Manila, Philippines, <a href="#">Pacific Department</a> (PARD) Resident Mission: <a href="#">Papua New Guinea Resident Mission</a> (PNRM)
Government focal point	Lead: Department of Treasury, Department of National Planning and Monitoring Supporting: Departments and agencies in sectors of ADB operation (executing and implementing agencies under ADB operations)
Overall strategy and climate targets	<a href="#">Strategy 2030</a> provides strategic guidance to ADB operations. Operational priority 7 is 'Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability' The strategy defines climate operations targets that were <a href="#">updated</a> as follows: <ul style="list-style-type: none"> <li>· 75% of ADB's committed operations to support climate action by 2030, and</li> <li>· \$100bn (US\$34 billion for adaptation) cumulatively from 2019–30 from ADB's own resources.</li> </ul> This amounts to an annual average of US\$8.3 billion, requiring a substantial increase compared to the annual average of US\$5.6 billion over 2019–2021.
Country strategy and programming of resources	<b>Country Partnership Strategy (CPS):</b> ADB's CPS for PNG identifies the broad strategic areas for engagement over a five-year period. The CPS is generally prepared by the ADB country team led by the Country Economist and includes stakeholder consultations with the government and development partners in the year prior to its release.  Its current CPS was released in September 2020 under the theme 'Achieving Diversified, Sustained, and Inclusive Growth' and covers the period <a href="#">2021–2025</a> . Main focus of ADB investment over 2021–2025 is on essential infrastructure (>75% of financing) for transport and energy and smaller interventions in water and urban infrastructure; followed by public sector management (15–20% of financing); and smaller interventions, including in finance and social sectors.  Building climate resilience is a priority area under the third strategic pathway ('Addressing inclusivity and building resilience') and addressing climate change is a cross-cutting theme that ADB aims to integrate throughout its operations in PNG.

	<p><b>Country Operations Business Plan (COBP):</b> The CPS is translated into three-year COBPs on a rolling basis. The latest available COBP covers the period <a href="#">2021–2023</a>. The preparation includes a yearly country programming mission where priorities and the pipeline is discussed with the government.</p> <p>The programmed pipeline is generally followed, but new projects can be included if both government and ADB agree on support.</p> <p>The next CPS will be developed in 2024/25 to cover the period 2026–2030.</p>
Important focal points	<p>Relevant staff include the Country Director, Country Economist, the specialist responsible for climate change, and specialists responsible for NAP priority sectors. The CPS and the latest COBP contain staff lists. When engaging, follow protocol, recognize busy schedules, and consider suitability of formal vs. informal approaches.</p>
Types of interventions supported	<ul style="list-style-type: none"> <li>· Infrastructure investment</li> <li>· Research and feasibility studies</li> <li>· Policy development</li> <li>· Capacity building</li> </ul>
Products and instruments	<p>ADB has a wide range of financial products and modalities that are accessible to PNG, both for the <a href="#">public sector</a> and the <a href="#">private sector</a>. Climate change as a cross-cutting theme in ADB's CPS for PNG and its corporate climate operations targets provide an entry point to mainstream climate change adaptation into all of ADB's future operations in PNG.</p> <p>Public sector products relevant for climate change adaptation:</p> <ul style="list-style-type: none"> <li>· Project investments: ADB's main form of sovereign operations is through project investments.</li> <li>· Technical assistance: Various technical assistance (TA) funds exist within ADB that provide support on a grant basis. The scope of TAs can be either regional or country-specific. TAs can also be attached to a project investment, supporting its design and implementation. Among TA funds, there is also a specialized <a href="#">Climate Change Fund</a>.</li> <li>· Budget support: ADB's main budget support products comprise policy-based lending (PBL), policy-based guarantees (PBG), and results-based lending (RBL). This assistance is provided in the form of general budget support, i.e., funds are not earmarked for a specific purpose, but help finance the government's annual budget. While this type of financing can therefore not be directly used for climate change adaptation, the funding indirectly contributes to adaptation to the extent the national budget includes adaptation related activities. More importantly, however, the funding is linked to policy reform actions in one or multiple areas, which could be climate change related or include individual policy reforms with mainstreamed adaptation elements. These policy reforms are developed jointly between the government and ADB and receive high-level support from the political leadership.</li> <li>· Sector development program: These combine a project investment with a PBL.</li> </ul> <p>ADB also provides a range of private sector finance modalities and public–private partnership support.</p> <p>A full list of <a href="#">funds</a>, and <a href="#">public</a> and <a href="#">private</a> sector products can be found on the respective website pages.</p>
Co-financing requirements	<p>Government co-financing is called <a href="#">counterpart financing</a> and varies based on the product, sector, country, and other factors. It can comprise monetary and in-kind support, and is not for all products required.</p>
Projects	<p>Information on ADB's past, ongoing and planned engagement with PNG is available <a href="#">online</a>. The database shows the intervention title, the country coverage (e.g., regional projects and TAs</p>

	<p>cover other countries as well), sector, status (e.g., closed, active, approved, proposed) and approval data. Links to intervention-specific pages provide further details, including program documents called 'Report and Recommendation of the President' (RRP), procurement information, etc.</p> <p>Ongoing operations in PNG (examples)</p> <ul style="list-style-type: none"> <li>· <a href="#">Sustainable Highlands Highway Investment Program</a></li> <li>· <a href="#">Highlands Region Road Improvement Investment Program</a></li> <li>· <a href="#">Transport Sector Preparatory Project</a></li> <li>· <a href="#">Preparing the Land and Maritime Transport Projects</a></li> <li>· <a href="#">Water Supply Scheme for Tete Settlement</a></li> <li>· <a href="#">Support for Water and Sanitation Sector Management (TA)</a></li> <li>· <a href="#">Health Services Sector Development Program</a></li> <li>· <a href="#">State-Owned Enterprises Reform Program</a></li> <li>· <a href="#">Supporting State-Owned Enterprise Reforms (TA)</a></li> </ul> <p>Private Sector Operations (examples)</p> <ul style="list-style-type: none"> <li>· <a href="#">Regional: ECOM COVID-19 Smallholder Farmer Climate Resilience and Livelihood Support Project</a></li> <li>· <a href="#">Regional: Olam COVID-19 Smallholder Farmer Livelihood Support Project</a></li> </ul> <p>Regional TAs (examples)</p> <ul style="list-style-type: none"> <li>· <a href="#">Support to Climate Resilient Investment Pathways in the Pacific</a></li> <li>· <a href="#">Pacific Private Sector Development Initiative, Phase IV</a></li> <li>· <a href="#">Regional: Supporting the Implementation of ADB's Climate Change Operational Framework 2017–2030 - Establishing Mechanisms to Measure, Monitor, and Report on Commitments made under the Paris Agreement</a></li> </ul>
--	--

102. ADB's corporate push to increase climate operations can help with mobilizing resources. In the short-term, exploring with ADB staff (i) the inclusion of adaptation elements in ongoing operations and the pipeline, and (ii) the availability of additional resources not included in the country program could be done. In the short- and medium-term, strategic engagement on programming of resources for the country partnership strategy and the annually rolling country operations business plan could be pursued. In practice, it could be useful to (a) compile a list of potentially relevant idea notes, with varying cost ranges, from the adaptation measure database based on areas of ADB operation in PNG and similar interventions funded elsewhere; (b) establish or strengthen relationships with relevant ADB staff, and (c) integrate climate adaptation into regular high-level dialogue at ministerial level (e.g., with ADB country director, during Annual Meetings, and/or ADB management country visits). All of these activities should follow established protocols and channels between GoPNG and ADB.



## 5. Tracking and reporting of adaptation financing

103. Outcome 3 of the GCF Readiness Proposal aims to “strengthen the IFMS to track expenditures on climate change by introducing budget codes specific to climate change”. This section assesses the technical feasibility and supporting conditions for such a system to be successfully implemented and outlines a suitable approach for the NAP and climate finance in PNG more broadly.

**Recommendation 5.1: Focus climate budget and expenditure tracking to the adaptation measures developed under the NAP framework (e.g., through mainstreaming of sector plans) before expanding to agency budgets in priority sectors and beyond over the medium- to long-term.** This approach should be consistently reflected in the NAP and accompanying guidelines. Simple supporting tools, comprising the proposed database of adaptation measures (with financial and physical progress information fields), reporting formats, and a CCDA website dashboard, should be developed for the initial phases before moving the tracking system gradually onto the budget and IFMS.

Immediate, with gradual expansion over the medium- and long-term

**CCDA, NAP** priority sectors  
DOT, DOF, and DPLGA/DIRD/NEFC in the medium-term

**Recommendation 5.2: Carry out regular monitoring and reporting using the adaptation portfolio database, existing climate reports, and the website dashboard, and help identify and address any implementation issues, as a basis for successful future fundraising.**

Immediate

**CCDA, NAP** priority sectors

### 5.1 General considerations

104. **To be meaningful, a climate budget and expenditure system needs government support and a functioning system of core PFM elements.** Four core elements should be in place: (1) defined objectives and targets, e.g. as part of the existing planning framework, with whole-of-government support (or of sectors covered if coverage is not comprehensive); (2) a strong link between plans and budgets, including strategic discussions about resource allocations as part of the budget preparation process; (3) credible budget implementation, with regular monitoring and reporting of financial and technical implementation progress; and (4) a feedback loop that ensures future plans and budget allocations are informed by findings from previous and ongoing years. Without these elements functioning, generated climate finance data risks being unreliable and delinked from actual physical adaptation progress, and future changes dependent on coincidence rather than informed decision-making.

105. **Even if core elements are not in place, one-off climate finance tracking exercises can be done, but their knowledge gain and impact is often limited.** In various instances, climate finance tracking is done as a discrete exercise undertaken with development partner support, e.g., as part of a Climate Public Expenditure and Institutional Review (CPEIR). The resulting report provides an estimate of how much resources have been allocated (if budget data is used) and/or expended (if actual expenditure data is used) in previous fiscal years. While such information can be interesting, the conclusion generally is that funding falls short of needs, requiring higher allocations in the future. Without a reform program linked to the assessment that attempts to embed climate considerations across the budget cycle, it is often difficult for governments to systematically act on the findings. In these cases, a one-off exercise is often not worth the use of scarce resources.



## 5.2 Situation in PNG

106. **The tracking of climate change related budget allocations and expenditure is technically feasible in PNG.** It could be done through the government's integrated financial management system (IFMS), using selection type functionality that links to the activity code component of the Chart of Accounts, or through a separate spreadsheet approach. Climate expenditure could be categorized, e.g., based on the CPEIR typology, and a suitable tagging approach developed. International experiences exist that can be built upon.

**Figure 20.** Chart of Accounts in PNG

Possibility to use 'selection type' functionality  
to "tag" climate contributions of an activity



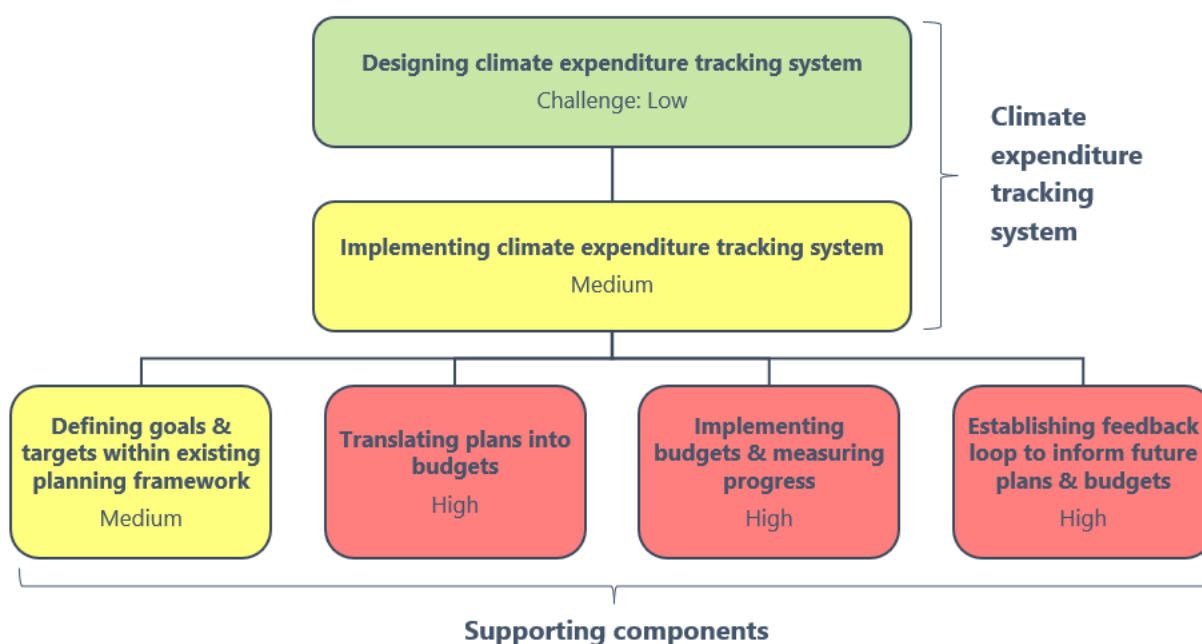
Component	Agency	Activity	Fund source	Economic item
Digits	XXX (3)	XXXXXX (5)	XX (2)	XXXXXXX (6)
Content	Who?	What?	Funded from/by?	Using which inputs?

Source: Author based on information from GoPNG's Department of Finance.

107. **However, PFM capacity and performance in central agencies and line agencies is constrained.** Weaknesses exist in the planning framework at agency and sector level, as well as when translating plans into budgets. Downstream PFM faces substantial challenges in PNG, including in procurement, control of payroll and non-payroll expenditure, accounting and financial reporting, and internal and external audit, as assessed by repeated PEFA assessments. Implementation progress monitoring by government agencies is patchy, and progress reports for sector, corporate and subnational plans are rarely prepared. Annual financial statements are generally not, or only with substantial delays, publicly available and the most recent audited financial statements for central government are for 2015. Feedback loops to influence subsequent strategic and annual plans and budgets are weak, with follow-up and follow-through on audit findings and non-financial instructions issued as part of the budget review process limited. Interdepartmental coordination among central agencies and between central agencies and line agencies offers substantial room for improvement.

108. **Together, these weaknesses risk undermining a comprehensive climate expenditure tracking system (Figure 21).** Overall, in comparison to countries that have substantial experience with climate expenditure tracking, such as Nepal, PFM performance in PNG is weak (see Figure 2 in Section 1). As a result, budget credibility is limited, which reduces the informative value of financial data on budget allocations and expenditure and highlights the need for complementing financial data with implementation progress information. Value-for-money of establishing a climate expenditure tracking system needs to be carefully considered, particularly in view of scarce government capacity and resources vis-à-vis high cost implementation environment in PNG. Capacity supplementation, in addition to capacity development, would be needed if resource tracking system was to be implemented. If such a systematic tracking system were to be considered in PNG, funding needs and expectations should be realistic and ideally secured prior to system design.

**Figure 21.** Assessment of climate expenditure tracking system components



Note: A more detailed assessment of the different components is included in the Annex.

Source: Author.

### 5.3 Suitable approach for the NAP

109. **A phased approach that gradually expands the coverage of adaptation finance tracking and reporting appears best suited.** In light of the observations above, any implementation progress monitoring and climate resource tracking approach should start with a basic design that can be built upon over time. Capacity development and supplementation should be considered to institutionalize basic monitoring and reporting processes. The following phases could be considered, with each step dependent on the institutionalization and ongoing compliance with the previous one. Subnational coverage could evolve in parallel with the national approach.

- **Short-term (“NAP focused”):** Focus on tracking resources for individual adaptation measures contained in the NAP portfolio database. This should be combined with regular reporting and possibly a dashboard on CCDA’s website that shows ongoing status of NAP implementation, including its financing status, using defined financing indicators under the NAP and established annual targets for adaptation financing.
- **Medium-term (“targeted mainstreaming/tracking”):** As mainstreaming work with agencies in NAP priority sectors progresses and adaptation measures are included in sector, corporate, and annual management plans as well as annual budgets, broaden the climate finance tracking system to the NAP priority sectors (phased or all priority sectors in parallel subject to available resources and capacity). At this stage, a basic system of budget tagging and tracking through the IFMS can be piloted (to replace the NAP database tracking approach in the future).

To ensure resulting finance data yields meaningful information, this should be accompanied by reforms across the core PFM elements needed, including strong linkages to and between planning and budget preparation processes at the sector and agency level; in-year and annual monitoring and review processes covering implementation progress and financial data at the sector and agency level; and establishing of a feedback loop to inform future plans and budget allocations. All of these should use, to the extent feasible, existing processes at the sector and agency level (e.g., budget consultations and quarterly budget reviews).

- **Long-term (“full mainstreaming/tracking”):** Gradually expand tracking to all government agencies, as (meaningful) mainstreaming of plans and budgets progresses.

110. **Across phases, the system should bring together implementation progress information with financial data, integrated into the database of adaptation measures.** Summary information, organized, e.g., by intervention stage, sector, and results, could be published as a regularly updated NAP implementation dashboard on the CCDA website and in existing or planned reports, such as CCDA’s annual management report or the climate change annual review report envisioned in its Corporate Plan 2018-2022. Figure 22 shows an example of how a simple progress tracking and reporting format could look like, with monitoring and reporting fields integrated into the database of adaptation measures discussed in Section 2 (see also Table 2 above). Support to identify and address any implementation issues in collaboration with the responsible sector agency (e.g., by helping the sector agency to raise co-financing or other cash flow issues with central agencies) could be provided, if feasible, given the importance of implementation performance for successful future fundraising.

**Figure 22.** Simplified progress tracking and reporting template

Intervention stage	Sector	Agency (lead)	Title	Source	Progress and results achieved	Financing (data by funding source)		
						Estimated costs	Committed	Actual
<i>e.g., idea, concept, detailed design, implementation, completed</i>				<i>e.g., MTDP III, NDC, GCF CP, sectoral plans and policies</i>	<i>Linked to monitoring &amp; reporting framework (7.2, Annex IV)</i>			

Source: Author.

## 6. Enabling environment for adaptation financing

111. As discussed throughout previous sections, the enabling environments for adaptation as well as public and private sectors more broadly are critical to mobilize and effectively and efficiently use resources for adaptation. These include (i) strong planning and coordination arrangements for adaptation<sup>6</sup>, (ii) the PFM system to resource and implement plans, (iii) frameworks for SOEs and PPPs that can play important roles in service provision and in the mobilization and use of public and private finance, and (iv) the business environment to direct private finance toward adaptation. All these enabling environments can contribute to adaptation in two ways: first, by a general strengthening of the frameworks, systems, and capacities to ensure resources are mobilized and used effectively and efficiently for established development objectives, which is done as part of sector specific reform programs; and second, by mainstreaming adaptation considerations into these enabling environments to increase the impact on adaptation. As frameworks are mainstreamed, mitigation considerations should equally be reflected.

**Recommendation 6.1: Continue strengthening legal, policy, and institutional frameworks for (i) PFM, (ii) SOEs and PPPs, and (iii) the business environment, which serve as enabling environments for mobilizing and implementing climate finance.**

Ongoing

**Central agencies,**  
Department  
of Public  
Enterprises,  
KCH

**Recommendation 6.2: Assess opportunities and find entry points to mainstream climate change considerations into the legal, policy, and institutional frameworks for (i) PFM, (ii) SOEs and PPPs, and (iii) the business environment.** Entry points for PFM are the mainstreaming of budget, PIP and SIP processes (see Recommendation 2.2), and the phased approach to tracking climate financing (see Recommendation 5.1) while scoping studies can help identify opportunities in the other areas.

Ongoing

**Central agencies,**  
CCDA

### 6.1 Public financial management

112. PFM is critical to ensure the effective, efficient, and accountable resourcing and implementation of plans. The government prioritizes governance and strengthening PFM systems throughout its development plans as an enabler. Based on PEFA assessments, the government has been developing PFM reform plans/roadmaps to guide a number of major and multiple smaller reform initiatives. Major reform initiatives include (i) the roll-out of the IFMS across national departments and gradually across subnational governments and authorities; (ii) the revamping of the regulatory and institutional frameworks for public procurement; (iii) strengthening of payroll controls to reduce and ultimately eliminate overspending on personnel emoluments that risks crowding out priority spending in other areas; (iv) improving the national budget process and documentation to strengthen its use as a strategic policy tool; and (v) revenue policy and administration reforms to more sustainably fund the budget. These reforms are coordinated through the PFM Technical Working Group and supported by development partner assistance.

<sup>6</sup> The planning and coordination arrangements for adaptation are briefly discussed in Section 2 and in detail in the NAP and its analytical foundations. These are therefore not covered in this section.

113. When planning PFM reforms, including for mainstreaming adaptation, it is important to consider three aspects to ensure that resulting efforts are pragmatic and do not become unwieldy or absorb excessive time and resources at the assessment stage, and are tailored to the local context.

- First, a major reform initiative in PFM, whether in budgeting, FMIS, procurement or other areas, often takes a decade or more to take hold. Given these are generally long processes, pursuing strategic engagement to include climate considerations in any new reforms from the start on the one hand and exploring entry points in ongoing reforms on the other should be complementary strategies. This approach should be pursued with central agencies and through the PFM Technical Working Group. Development partners may also be able to support the integration of climate considerations into their PFM support programs.
- Second, assessments in PFM generally require substantial engagement and input from central and line agencies, with experience showing in PNG that processes can take multiple years (e.g., the 2019/20 PEFA and corresponding PFM reform plan development took together about two years and are still awaiting NEC endorsement). More pragmatic assessments and reform planning in specific areas might be a better suited approach for adaptation mainstreaming.
- Third, in view of weaknesses across basic PFM functions, in many cases it is important to focus on fit-for-purpose solutions that are as robust as possible rather than best or good-practice solutions from textbooks or other countries. Substantial literature exists on prioritizing and sequencing PFM reform as well as on PFM reform in public administrations in Pacific Island countries.<sup>7</sup> The discussion on climate finance tracking in Section 5 is an example of an attempt to apply this point to PNG.

114. There has been substantial progress in the global discourse in recent years in the area of mainstreaming climate considerations into PFM frameworks and systems. This has led to the emergence of useful assessment frameworks, reform guidance, and tools that can be used in PNG.

- **Climate-related frameworks:** The [Climate Responsive Public Financial Management Framework](#) (PEFA Climate) provides a comprehensive assessment tool across PFM areas, including for budget alignment with climate change strategies, tracking climate related expenditure, climate responsive public investment management, climate responsive procurement, climate responsive revenue administration, climate responsive fiscal decentralization framework, and climate related performance information and evaluation. The first pilot of the framework was done in [Samoa](#) in 2020/21. The second and third points above are particularly relevant when considering the use of this assessment tool. The IMF also developed a [framework and guidance note](#).
- **Guidance for specific PFM areas:** The IMF developed a [climate module for public investment management](#) for the Public Investment Management Assessment (PIMA) framework. A research paper published recently looks at the interlinkages between climate change and [public procurement](#). A slightly older World Bank publication provides a good overview on [climate budgeting](#) (noting that medium-term budget frameworks and comprehensive expenditure tracking is often not possible to establish in a meaningful way if budget preparation and execution performance is weak since it requires the ability to have strategic discussions and robust processes to largely stick to budgets and forward estimates over the medium-term).

---

<sup>7</sup> See, e.g., discussion in regard to the previous PEFA framework version ([here](#), [here](#), and [here](#)) and discussion on small public administrations in Pacific Island countries, which in parts also applies to PNG ([here](#), [here](#), [here](#) and [here](#)).

- **Disaster-related framework:** The World Bank recently published a [Disaster Resilient and Responsive Public Financial Management Assessment Tool](#) developed based on a [concept](#) and experiences in the Caribbean that were piloted over the past years. Disaster risk management and resilience aspects substantially overlap with climate adaptation.

115. An example of mandating the mainstreaming of PFM systems is Fiji's Climate Change Act 2021 that prescribes the incorporation of climate considerations into public procurement and the budget process. To enable implementation, this will now have to be translated into financial instructions, procurement regulations, and guidance materials. Entry points in PNG are the mainstreaming of budget, PIP and SIP processes discussed in Sections 2 and 3, and the phased approach to tracking climate financing presented in Section 5. Further opportunities for mainstreaming could be explored through a scoping study or similar.

## 6.2 State owned enterprises and public private partnerships

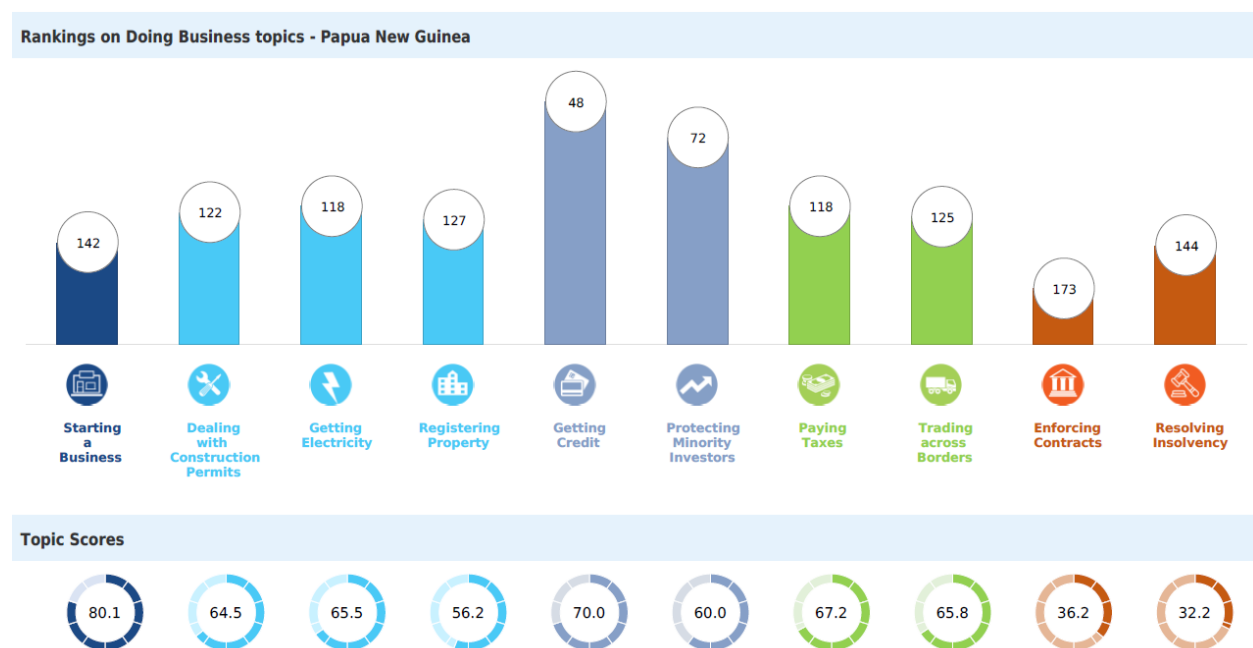
116. SOEs play important roles in providing infrastructure and services in energy, water supply, telecommunications, ports, and air transport, among others. These sectors are highly exposed to climate change and disasters, with the NAP recognizing infrastructure and transport as priority sectors. Weak performance of state-owned enterprises tie up capital for investments in service improvements and hinders adaptation to climate risks, apart from directly affecting service delivery outcomes for citizens and businesses in PNG. Gaps in the regulatory framework, weak corporate governance, and poor financial performance have been concerns of the government and the enterprises themselves. Based on the NEC approved SOE reform blueprint from late 2019 and with support from [ADB](#) and other development partners, the government is currently undertaking a reform program to improve the regulatory framework through the recent amendment of the Kumul Consolidated Holdings Act, oversight, and performance of public enterprises.

117. The government aims to use PPP arrangements to maximize value and increase the quality and competitiveness of public services and infrastructure provision in PNG. However, regulatory and institutional framework for PPPs is still emerging, with an amendment of the PPP Act under discussion, which needs to be followed by the issuance of regulations and the establishment of the PPP Center. The same [ADB program](#) also supports the government in the area of PPPs. Successfully implementing the envisaged reforms and building institutional arrangements and capacity for PPPs will be important to provide the option to bring together public and private financing through this model. Feasibility studies to inform the first PPPs in the energy and water sectors have been undertaken.

## 6.3 Business environment

118. Mobilizing private sector finance for adaptation will be critical to strengthen resilience of businesses and households as well as contribute to climate resilient public goods and services. As briefly discussed in Section 1, the business environment has weaknesses, which is aggravated by a high cost environment driven in part by geographic and population characteristics. Though interpretation and reform planning and design has to be done carefully, the World Bank's Ease of Doing Business Index (prior to its discontinuation in 2021) provides a broad picture of performance and issues across a range of important business topics (Figure 23). Reforms to strengthen key business environment areas are ongoing in PNG.

**Figure 23.** Ease of Doing Business ranking for Papua New Guinea, 2020



Note: Rankings are out of 190 countries assessed. Topic scores are between 0 (lowest) and 100 (highest).

Source: World Bank Group. 2020. [Doing Business 2020, Economic Profile Papua New Guinea](#).

119. An example of mainstreaming regulations for the private sector is the provision for Climate Building Standards in PNG's Climate Change Management (Amendment) Act 2021 (Section 68). The regulations to be developed under the provision will direct private financing toward building resilience of the housing sector (as well as contribute to mitigation). Another example is Fiji's Climate Change Act 2021 that prescribes company disclosure requirements for financial risks of climate change and measures adopted to reduce them, which provides the basis for making businesses more resilient to climate and disaster impacts. Further, anecdotal evidence pointed to an example from Tonga where disaster insurance is a mandatory requirement as part of any new financing obtained for a private housing construction or rehabilitation project. Identifying specific reforms that balance climate considerations with costs of doing business in PNG will require expert assessments.

## References

- Asian Development Bank. 2022. Cost Estimation in Sovereign Operations, Technical Guidance Note. Manila.
- Climate Change and Development Authority. 2018. Corporate Plan, 2018-2022. Port Moresby.
- Climate Change and Development Authority. 2016. Long-Term Strategic Planning for Organizational Restructuring Assessment Report. Port Moresby.
- Climate Change and Development Authority and USAID. 2018. Joint Organizational Assessment. Port Moresby.
- Climate Change and Development Authority and Department of Finance. 2020. PNG Climate Change Fees and Charges – ‘Taking ownership of tomorrow, today’, Regional Stakeholder Awareness Program, Presentation. Port Moresby.
- Climate Change and Development Authority, UNDP, and Climate Law and Policy. 2022. Sectoral Planning Guidelines for Climate Change Adaptation (Draft). Port Moresby.
- Climate Change and Development Authority, UNDP, and Climate Law and Policy. 2022. National Adaptation Plan (Draft). Port Moresby.
- Climate Change and Development Authority. 2021. Papua New Guinea Revised Enhanced NDC 2020 Implementation Plan (2021-2030). Port Moresby.
- Climate Policy Initiative. 2021. Global Landscape of Climate Finance 2021.
- Fiji. 2021. Climate Change Act 2021. Suva.
- Government of Fiji. 2020. Costing Methodology for Fiji’s National Adaptation Plan. Suva.
- Government of Papua New Guinea. 2012-2020. Final Budget Outcomes (FBO) 2012-2020. Port Moresby.
- Government of Papua New Guinea. 2012-2021. Mid-Year Economic and Fiscal Outlooks (MYEFO) 2012-2021. Port Moresby
- Government of Papua New Guinea. 2012-2022. National Budgets 2012-2022. Port Moresby
- Government of Papua New Guinea. 2014. National Climate-Compatible Development Management Policy. Port Moresby.
- Government of Papua New Guinea. 2014. Strategy for Responsible Sustainable Development. Port Moresby.
- Government of Papua New Guinea. 2018. Medium Term Development Plan III (2018-2022), Volumes 1 and 2. Port Moresby.
- Government of Papua New Guinea. 2018. Medium Term Fiscal Strategy, 2018-2022. Port Moresby.
- Government of Papua New Guinea. 2020. Enhanced Nationally Determined Contribution. Port Moresby.
- Government of Papua New Guinea, Department of Education. 2020. National Education Plan, 2020-2029. Port Moresby.
- Government of Papua New Guinea, National Department of Health. 2010. National Health Plan, 2010-2020. Port Moresby.



Government of Papua New Guinea, Department of Implementation and Rural Development. 2019. Service Improvement Program (SIP) Administrative Guidelines (4A/2019). Port Moresby.

Government of Papua New Guinea, Department of National Planning and Monitoring. 2007. Public Investment Program (PIP) Guidelines. Port Moresby.

Government of Papua New Guinea, Department of Treasury. 2008. Budget Manual. Port Moresby.

Government of Papua New Guinea, Department of Treasury. 2017. Consolidated Budget Operating Rules. Port Moresby.

Government of Saint Lucia. 2020. Saint Lucia's Climate Financing Strategy under the National Adaptation Planning Process. Castries.

Government of Saint Lucia. 2018. Saint Lucia's Sectoral Adaptation Strategy and Action Plan for the Water Sector (Water SASAP) 2018-2028, under the National Adaptation Planning Process. Castries.

IMF. 2015. Papua New Guinea Public Expenditure and Financial Accountability Assessment. Washington, DC.

IMF. 2021. Samoa PEFA Assessment of Climate Responsive Public Financial Management. Washington, DC.

NAP Global Network. 2016. Snapshot: Domestic Public Finance for Implementation of NAPs.

NAP Global Network. 2017. Financing NAP Processes: Contributing to the Achievement of NDC Adaptation Goals, Guidance Note.

Overseas Development Institute. 2021. The Global Climate Finance Architecture. London.

Pacific Islands Forum Secretariat. 2011. Options Paper on Improving Access to and Management of Climate Change Resources. Suva.

Pacific Islands Forum Secretariat. 2019. Options for Strengthening Climate Finance Coordination and Accessibility in Papua New Guinea

Pacific Islands Forum Secretariat and Australian Aid. 2013. Pacific Climate Change Finance Assessment Framework, Final Report. Suva.

Papua New Guinea. 2015. Climate Change (Management) Act 2015. Port Moresby.

Papua New Guinea. 2021. Climate Change (Management) (Amendment) Act 2021. Port Moresby.

UNDP and Climate Law and Policy. 2021. Analysis of Laws, Institutions, Policies and Plans, and Institutional Capacity Assessment. Port Moresby.

UNDP and Climate Law and Policy. 2021. Capacity Development Plan for the NAP Process. Port Moresby.

UNEP. 2020. Adaptation Gap Report 2020. Nairobi.

World Bank Group. 2020. Doing Business 2020, Economic Profile Papua New Guinea. Washington, DC.

Additional references are linked throughout the text.

## Annex: Assessment of climate expenditure tracking system components

#	Component	Challenge	Summary
<b>Climate expenditure tracking system</b>			
1	Designing technical system to track climate budget allocations and expenditure	Low	<ul style="list-style-type: none"> <li>Practices and experiences exist to identify and track climate expenditure, e.g., CPEIR typology categorization and different tagging approaches, which could be adapted to PNG.</li> <li>Technical options exist that would allow tracking of resources: <ul style="list-style-type: none"> <li>IFMS: While the flexibility of the Chart of Accounts is constrained, selection type functionality could be used to tag and report on budget activities based on their contribution to climate change. COFOG mapping that is being undertaken by the Department of Treasury through selection type functionality also allows tagging and reporting of activities that predominantly (i.e., not suitable for cross-cutting activities whose main purpose is another sector) contribute to environmental protection and its subsectors (COFOG codes 705XX).</li> <li>Spreadsheet-based: Simpler, spreadsheet-based tracking database(s) could be developed and supplemented with financial data from the IFMS.</li> </ul> </li> </ul>
2	Implementing climate resource tracking system	Medium	<ul style="list-style-type: none"> <li>Budget and financial management capacity in central agencies and line agencies is constrained. Capacity supplementation, in addition to capacity development, needed if resource tracking system was to be implemented.</li> <li>Funding needs and expectations should be realistic and funds ideally secured prior to system design.</li> <li>Relevant PEFA indicator, which likely received a score of D in the 2019/20 PEFA assessment based on publicly available information (assessment remains unpublished as of May 2022): <ul style="list-style-type: none"> <li>PI-8.3 Resources received by service delivery units</li> </ul> </li> </ul>
<b>Supporting components</b>			
3	Defining goals and targets within the existing strategic planning framework	Medium	<ul style="list-style-type: none"> <li>Multiple strategic plans at national level available, which prioritize climate change initiatives.</li> <li>Selected sector plans and policies are available but gaps exist both in terms of plans and their integration of climate change. For details, see "CLP, 2021. Analysis of Laws, Institutions, Policies and Plans, and Institutional Capacity Assessment".</li> <li>Substantial non-compliance with corporate planning and annual management/work planning requirements at the agency level, risking to undermine implementation of national and sector plans.</li> <li>Selected indicators/KPIs related to climate expenditure already exist that can be built upon: <ul style="list-style-type: none"> <li>Vision 2050: 5% allocation for Environment Sustainability and Climate Change in Public Investment Budget Strategy</li> <li>PNG Development Strategic Plan 2010-2030: "Adequate level of resources available" for PNG risk transfer and adaptation initiative</li> <li>CCDA Corporate Plan 2018-2022: PNG NAP launched and resources mobilized for implementation of the plan; Number of climate change projects/programs and resources identified and committed.</li> <li>Enhanced NDC: Transport (US\$1.2b/PGK 4.2b) and infrastructure (US\$172m/PGK 608m) sector financing targets identified.</li> </ul> </li> <li>Such indicators could be specified and additional indicators developed as national and sector (general or adaptation specific) plans are updated as well as in MDAs' corporate plans and annual work plans.</li> <li>Relevant PEFA indicator, which likely received a score of D in the 2019/20 PEFA assessment: <ul style="list-style-type: none"> <li>PI-8.1 Performance plans for service delivery</li> </ul> </li> </ul>

4	Translating plans with targets into budgets	High	<ul style="list-style-type: none"> <li>• PNG can be categorized as having a line-item incremental budget system; program based elements are in their infancy.</li> <li>• Ongoing GFS/COFOG reform a step in the right direction, but still substantial hurdles to overcome to use the budget as a meaningful policy tool (e.g., provinces are considered a sector, underrepresenting functional sector spending across government levels; multi-sector spending, e.g., on service improvement programs, is classified under general public services in latest GFS budget version, misrepresenting functional sector spending).</li> <li>• Medium-term Expenditure Strategy as part of the Medium-term Fiscal Strategy lacks detail and links to development plans and the annual budget (e.g., no functional expenditure composition targets; limited translation of medium-term economic composition targets into the annual budget).</li> <li>• Links between plans and budgets are limited; documentation generally obstructs comparison between plans and budgets at national, sector and agency level (e.g., definition of programs and activities in plans often does not match with program-activity structure in the budget).</li> <li>• Government attention focused on compiling financial data from MDAs and populating information system to produce budget book; generally very limited engagement on strategic and programmatic content and performance.</li> <li>• Sector budget process in its infancy; focus is largely on organizing agencies and obtaining requested information rather than on budget quality and content. Categorization of provinces as a sector results in incomplete functional sector coverage in sector budget and review process (e.g., spending on health at subnational government level is covered in province sector group, not in health sector group).</li> <li>• Relevant PEFA indicators, which likely received scores between C and D in the 2019/20 PEFA assessment: <ul style="list-style-type: none"> <li>· PI-4.1 Budget Classification</li> <li>· PI-11.2 Investment project selection</li> <li>· PI-16.3 Alignment of strategic plans and medium-term budgets</li> <li>· PI-16.4 Consistency of budgets with previous year's estimates</li> </ul> </li> </ul>
5	Implementing budgets and measuring progress	High	<ul style="list-style-type: none"> <li>• Actual spending exhibits substantial variation from budget allocations, both at the program and the economic classification, which undermines credibility of the budget. This reduces the informative value of climate tagging at the budget level and questions the degree planned activities are implemented, emphasizing the need to monitor actual implementation progress to complement fiscal data.</li> <li>• Quarterly budget reviews take place, with sector meetings organized for the mid-year review (July of every year). Focus on finances, human resources and implementation of selected key activities.</li> <li>• In-year budget execution reporting is limited to aggregated spending for main administrative headings; timeliness and data accuracy are problematic.</li> <li>• Annual financial statements are generally not, or only with substantial delays, publicly available and the most recent audited financial statements for central government are for 2015.</li> <li>• Annual management reports are generally not prepared or only with substantial delay, and are generally not publicly available on departmental websites. Progress reporting on sector plans is limited (e.g., a mid-term review of the National Health Plan 2011-2020, but this is not publicly available).</li> <li>• Relevant PEFA indicators, which likely received scores of D in the 2019/20 PEFA assessment: <ul style="list-style-type: none"> <li>· PI-2.1 and PI- 2.2 Expenditure composition outturn by function and by economic type</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>· PI-8.2 Performance achieved for service delivery</li> <li>· PI-11.4 Investment project monitoring</li> </ul>
6	Establishing a feedback loop to influence strategic and annual plans and budgets	High	<ul style="list-style-type: none"> <li>• Basic process in place at whole-of-government level, but very limited information is publicly available (non-financial instructions in national budget volume 1) and focused on significant issues (e.g., on financial reporting, IFMS roll-out and specific high-profile issues like pharmaceutical procurement).</li> <li>• Lack of a systematic approach for and limited follow up on mid-year review findings, non-financial instructions and audit findings.</li> <li>• Relevant PEFA indicators, which likely received scores between C and D in the 2019/20 PEFA assessment: <ul style="list-style-type: none"> <li>· PI-8.4 Performance evaluation for service delivery</li> <li>· PI- 30.3 External audit follow-up</li> </ul> </li> </ul>