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2 Investment Scenarios for Achieving Energy 3 Transition in Developing Countries: a Case Example 4 from Fiji

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11 **Abstract:** Private finance is seen as the financing panacea for resourcing Nationally Determined
12 Contributions (NDC) submitted by >160 countries to the UN system. Mobilizing private investment
13 is challenging, especially for vulnerable Pacific Small Island Developing States (PSIDS). The fourteen
14 PSIDS have submitted ambitious NDCs, in which transition towards a sustainable energy
15 environment through investment in renewable energy (RE) is central. Presently, RE investments in
16 PSIDS are primarily external donor finance however, reliance on limited and uncertain external
17 finance is unlikely to deliver the required energy transition. A future scenario methodology was
18 used with Fiji as a case-study; the analysis provided insight into alternative trajectories towards
19 transition. Based on the scenario analysis, a NDC Resource Mobilization Framework was
20 developed. Conclusions suggest that donors should re-orientate their priorities from investments in
21 RE installations, towards investments that upgrade the current RE readiness levels and promote a
22 long term perspective of ‘organically growing’ the local private RE sector. Channeling resources to
23 target initiatives that will endogenously grow the domestic private sector is critical for PSIDS, as
24 well as other developing countries, which represent a majority of the NDCs and which are projected
25 to dominate global growth in energy demand for decades to come.

26 **Keywords:** Climate Change; Nationally Determined Contributions; Renewable Energy; Climate
27 Finance; Private Sector; Small Island Developing States; Pacific; Fiji

28

29 1. Introduction

30 1.1 NDC financing challenges

31 The landmark 2015 Paris Agreement (hereon referred to as the Agreement) heralded in a
32 new era of global climate change governance. The Agreement set an ambitious target to limit the
33 rise of global mean temperature to below 20C above pre-industrial level and to encourage efforts
34 to limit the increase to below 1.50C. Critical to the achievement of this goal are countries’
35 Nationally Determined Contributions (NDCs) which contains the pledges they have made in
36 terms of emission reductions and resilient development [1].

37 To date, 170 Parties have submitted their first NDC where investment in renewable energy
38 (RE) is central [2, 3]. 86% of submitted NDCs have explicitly identified investment in RE as either
39 a mitigation or adaptation strategy, with 64% of the Parties including some form of quantifiable
40 RE targets in their NDC [3]. Energy production and use accounts for two thirds of the world’s
41 greenhouse gas (GHG) emissions [4] thus, the heavy emphasis on RE investments indicates that
42 the transformation of the energy sector will be essential to achieving the objectives of the
43 Agreement [3].

44 The lack of financial resources to accelerate the implementation of NDCs globally is a cause
45 of concern [5]. It is estimated that the current shortfall of existing NDCs will result in a rise of
46 global mean temperature to 3.4C, and as a consequence, exacerbate the cost of addressing future
47 climate change impacts [2]. The rate of developing countries emissions is rapidly increasing, and
48 forecasts indicate that it will soon outpace those of developed countries [6]. The unsuccessful
49 implementation of developing countries' NDCs will not only hinder the global efforts against
50 climate change, it will also have severe economic and social implication globally; exacerbating
51 the situation of the most vulnerable communities in the process [2].

52 There is also growing uncertainty regarding the scale and the predictability of available
53 climate financing opportunities in the future [7, 8]. This financing uncertainty is driven by the
54 realities of the global political environment such as the withdrawal of the USA from the
55 Agreement- a major donor to the UN system as well as the vagueness of the Agreement's
56 language regarding climate finance [7]. In the Agreement, while developed countries have
57 committed to mobilizing USD100 billion a year from public and private sources by 2020 [1], they
58 however, did not commit to individual financial target. Rather, developed countries will decide
59 on a voluntary basis how much climate finance they will provide, over what time period, in
60 what form, as well as through which channels [9]. This uncertainty surrounding external climate
61 finance undermines the abilities of developing countries especially small and poor developing
62 countries like the Small Island Developing States (SIDS) who are challenged with severe chronic
63 resource limitation, and are heavily dependent on international climate finance to fulfill their
64 obligations as per the Agreement [10, 11]. These countries must now rethink strategies on how
65 to attract and mobilized new and innovative resources that will source sustainable finances to
66 implement their NDC.

67 Private financing has been advocated as the panacea for the shortfall and the uncertainty of
68 public financing sources [3, 12]. Two major factors drive the focus on the private sector, 1) the
69 private sector is the custodian of a large pool of capital that could be directed towards climate
70 change activities [13]. It is estimated that market value of assets, corporate and government
71 bonds, and loans that is managed by the global financial sector alone is worth USD 225 trillion
72 [14]. Secondly, private finance has catalytic properties that could effectively scale-up the 'reach'
73 and the scope of influence of public finances [12, 14] In the right environment a given amount of
74 public finance could leverage 3-15 times the amount of commercial financing [15].

75 Strategies on how to mobilize private investments specifically from the domestic private
76 sector towards climate change efforts are well established [16]. The involvement of the domestic
77 private sector in countries development efforts has been argued to be an important bulwark
78 against the 'resourcing curse' that is plaguing many developing countries [17].

79 While foreign private investments flowing to host countries is beneficial in speeding up
80 economic growth and development, the domestic private finance has a much greater
81 multiplier/catalytic effect [18]. In addition, the domestic private sector has been argued to have
82 a much better stake and interest in bettering the overall status of the domestic economy, and tend
83 to have more leverage in domestic politics when compared to foreign private investments [19]. In
84 addition, the global climate finance flows also provide greater affirmation on the critical role of
85 the domestic private sector.

86 Evidence indicates that 79% of the global climate finance in the 2015-2016 period was raised
87 domestically, and was retained in the country of origin for the purpose of advancing further
88 domestic climate investments [13]. However, the suitability and the success of strategies that
89 stimulate domestic private sector investments have been a 'mixed bag' across developing
90 countries because of the heterogeneous nature of countries' climate change and economic context

91 [20]. This is true for SIDS, whose circumstances are recognized as special and unique, but yet have
92 made ambitious RE targets in their NDCs.

93 For SIDS, mobilizing domestic private investments towards RE investments is a challenge
94 ([21]. Most SIDS are unable to effectively leverage RE investments from their domestic private
95 sector because significant investment barriers exist in their energy environment [22, 23]. These
96 investment barriers include the lack of good infrastructure, unstable political environment, weak
97 legal systems, lack of macroeconomic stability and lack of readily available skilled labor and
98 good institutions [24]. As a consequence, investments in the energy sector of SIDS are
99 predominantly driven by external public finance which tend to prioritize investments in ‘hard’
100 RE infrastructure [10, 25].

101 Sustainable energy experts in the region have long argued that such a financing modality
102 is neither adequate nor sustainable to effectively finance the energy transformation of SIDS, and
103 have consistently argued the need for more involvement and participation of the domestic
104 private sector [26]. As a consequence, donors of climate finance to SIDS are now beginning to
105 earmark investments that specifically target and strengthen the role of the domestic private
106 sector in transforming energy use and generation with the hope of unlocking their potential of
107 sustaining the resource flows to the achievement of SIDS energy targets as envisioned in their
108 NDCs. For SIDS, the successful transformation of their energy sector is critical as it is intrinsically
109 linked to their development aspirations, as well as their ‘moral position’ in the global climate
110 change discourse [20]. Thus, given the uncertainty and difficulty of access to external climate
111 finance, SIDS have much to lose (i.e. economically and politically) if they are not successful in
112 mobilizing their domestic private investments to complement and accelerate their national
113 efforts in implementing the NDCs.

114 Using the case of Fiji, a Pacific SIDS (PSIDS), this paper explores potential resource
115 mobilization strategies that could be adopted to unlock the potential of the domestic private
116 sector to finance the NDC. The NDC resourcing roadmap presented in this study serves as
117 guidance to SIDS on how best to use external public finance to leverage their domestic private
118 finance. The resourcing framework advanced by this study was developed through the use of
119 the scenario analysis technique.

121 2. Scope of the Study

122 2.1 *The Case of the Republic of the Fiji Islands*

123 Fiji is an archipelago of more than 300 islands. Like other PSIDS, Fiji shares their special
124 and unique challenges that increase their vulnerabilities to the impact of climate change [27]. Fiji
125 is very vulnerable to sea level rise and natural disasters made worse by climate change such as
126 cyclones, flooding, and drought [28].

127 Fiji was selected for two primary reasons. Firstly, Fiji’s expanding economy and active
128 private sector makes it an ideal context of studying private sector financing. Fiji’s economy is
129 considered to be one of the largest, and most developed in the Pacific region [29, 30]. Based on
130 its strong economic performance and potential, Fiji has been identified as the only PSIDS that
131 stands a better chance relative to other PSIDS, of reaching its full development potential (i.e. to
132 be self-reliant) [29]. Fiji’s economy has made a significant turnaround since 2010 under a
133 government strongly committed to reform. That period saw Fiji experiencing one of the few
134 episodes of sustained growth in its post-independence economic history, averaging 3.3%
135 annually or nearly four times the average growth during 2000–2009 [31]. Its national elections
136 and return to democracy in 2014 have boosted investor sentiments, with future growth been

137 forecasted because of the attractive financial levers being offered to investors, higher tourist
138 arrivals, low interest rates and sound external financial position [32].

139 While the performance of Fiji's private sector pales in comparison to global average [33],
140 relative to other PSIDS, Fiji's private sector is considered to be more vibrant, stable and profitable
141 [34], and whose economic contributions accounted for approximately 20% of Gross Domestic
142 Product (GDP) in 2017 [35]. The private sector is the primary driver of the largest economic
143 sectors in Fiji which consist of the tourism sector, industries and the financial sector [36]. Tourism
144 is Fiji's highest performing sector which directly contributes 17% to GDP [37]. The direct GDP
145 contribution of the industries and the financial sector is estimated to be 14% each [35]. Fiji's
146 financial sector is heavily bank-centric with six commercial banks, 5 of which are international
147 [34]. Fiji has a national development bank i.e. the Fiji Development Bank (FDB), which has
148 gained accreditation to the Green Climate Fund (GCF). Fiji is also one of the only two PSIDS that
149 has a functioning stock market with an estimated market capitalization of FJD 1.3 billion [38].

150 Efforts by the Government of Fiji (GoF) and most importantly its donors to shift and
151 mobilize the domestic private sector resources towards RE investment have witnessed limited
152 success [25]. Fiji's domestic private sector, despite its 'vibrant' status, is still largely absent from
153 the national effort to transform the energy sector [23].

154 *So why it then, that investments in RE is not easily forthcoming from Fiji's domestic private sector?*
155 A study by the Asian Development Bank (ADB) highlighted that the key challenge for Fiji now
156 is to create an investment environment conducive for greater domestic private sector activity so
157 Fiji can sustain its growth momentum and also make its growth more inclusive [31]. In line with
158 this argument, this study, will explore strategies that will promote inclusive growth within the
159 context of RE, by identifying the critical resourcing constraints that the GoF and its donors will
160 need to address to strengthen investors' sentiment in the energy sector.

161 The second justification for selecting Fiji as the case study, relates generally to the lack of
162 NDC specific studies on SIDS because the NDC phenomenon is still relatively new [26].
163 Exploring such phenomena from the lens of countries that have negligible emission footprints
164 can make a meaningful contribution to the current discussion on how global NDCs could be
165 effectively implemented, as it offers a unique dimension of the challenges different Parties are
166 confronted with in trying to comply with the new climate change regime. Moreover, in the light
167 of growing uncertainty about the availability of international climate finance [7-9], shedding
168 light on the situation of particularly vulnerable countries such as Fiji is critical to ensure that
169 scarce external public climate finance being mobilized for the purpose of transforming
170 economies to a low carbon development pathway, are strategically utilized to ensure that not
171 only will the NDC objectives be achieved, but that the efforts of low carbon transformation are
172 also sustainable in the long run.

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175 2.2 Fiji's NDC: The Road to 2030

176 In its NDC Implementation Roadmap, Fiji has set an ambitious target of reducing the
177 business as usual (BAU) emission trajectory of the electricity sector by 30%. It aims to achieve
178 this by pursuing a two prong approach where 10% will be through economy wide investment
179 in energy efficiency, and 20% will be achieved through a radical transformation of its current
180 grid-based electricity sources to be 100% sourced from RE. Of the 30% BAU reduction, the GoF
181 expects that 10% will be achieved unconditionally using domestic national resources, while 20%
182 will be conditional on the receipt of significant means of implementation and support from other
183 sources [39].

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2.3 *Electricity: The Low Hanging Fruit*

The electricity sector has been identified as the main target for de-carbonization in Fiji's NDC. Electricity is regarded as the low hanging fruit for low carbon transition in the Pacific [40], and has been identified as a high economic priority in notable regional agreements and declarations that Fiji is party to prior to the Agreement. Fiji's current energy mix consists of 53% hydro, 45.5% diesel and heavy fuel, 0.39% wind, with the remaining 1.1% supplied by Independent Power Producers (IPPs) [41], and is concentrated on meeting grid-based electricity demand in urban areas [10]. Fiji's is still highly dependent on imported fossil fuel to sufficiently meet its electricity and its overall energy need [42], and does not possess any established oil reserves. Evidence indicates that Fiji's fuel imports accounts to 14-17 % of GDP, are relative higher than in other PSIDS [43, 44]. Fiji's annual spending on fossil fuels is estimated to be USD 310 million per annum [21]; of which 22% is dedicated to generating grid-based electricity [41].

The burdensome cost of imported oil threatens the successful achievement of Fiji's sustainable development and poverty eradication goals, as it diverts significant national resources needed for other critical development initiatives such as health, education and infrastructure [42, 45]. Unlike the NDC of other developing countries where RE is regarded as a primary mitigation initiative, investments in RE for Fiji is motivated by reasons that span economics, geopolitical, health and livelihood resilience, with energy security and poverty alleviation being highlighted as the two key objectives [26, 43]. Investment in RE in Fiji is both a mitigation and a resilience building initiative that is not only critical in reducing its vulnerability to climate change, but most importantly its vulnerability to external market shocks [43].

Factors that impact the RE investment environment are well established in literature. While suggestions tend to vary according to study context and the nature of RE technology being studied [25, 26], they could be broadly categorize under three underlying themes which are, 1) financial and regulatory frameworks, 2) institutional capacity and 3) fiscal policy levers [46]. Financial policies and regulations are critical in removing barriers of investments, real and perceived risks, insufficient returns on investments, capacity and information gaps, competing development priorities as well as other institutional barriers [47]. Institutional capacity plays a critical role in providing clarity and transparency in RE information as well as technical support to deal with the complex issues surrounding RE technologies [46], while fiscal policy levers such as feed in tariffs, subsidies, tax credits, and carbon taxes etc. influence changes in investment decisions and consumer behaviors toward RE [47].

While the above factors are also recognized as relevant and critical to Fiji, the four fundamental barriers that have been consistently highlighted as particular to Fiji's RE investment environment relates to the unfavorable climate of investment for the private sector, the inadequacy of the feed in tariff rate offered by the state utility (i.e. Fiji Electricity Authority (FEA) now known as Energy Fiji Limited), the lack of a clear and transparent regulatory framework for private generation and supply services, and the lack of a coherent credible publically available data on RE investment opportunities [25]. These context specific factors have been the main drivers for the negligent uptake of incentivized RE installation by domestic private sector suppliers, as well as the initiation of RE technologies by the domestic private sector companies [25].

2.4 *Fiji's Current NDC Investment Strategy*

To fully implement its NDC by 2030, Fiji will need an estimated USD 2.95 billion [39]. The enormity of the scale of investments required for the NDC, outpaces Fiji's current ability to

231 finance the change envisioned. As a consequence, the GoF has conditioned the overall success
232 of the NDC on the receipt of USD 1.67 billion of external support [39]. However, given the
233 financing gap, the high uncertainties of climate finance availability post-2020, and the
234 continuous challenge of accessing climate finance face by PSIDS like Fiji [48], the role of the
235 domestic private finance in complementing and catalyzing the amount of limited external public
236 finance that might be received in the future for the implementation of the NDC is important.
237 Existing efforts that currently focus on strengthening and enhancing the development of the
238 domestic private sector role in RE investments must be accelerated and re-invigorated as the
239 GoF has explicitly acknowledged that its economy is not adequately equipped to pursue
240 expensive financial instruments that will add to its current debt burden [39]. Domestic private
241 finance has been specifically highlighted in Fiji's NDC Implementation Strategy as the main
242 target for potential NDC resourcing with innovative financial instruments being proposed for
243 implementation.

244 Past financing trends to Fiji indicate that the country is one of the largest recipient of RE
245 related assistance in the Pacific because it is been endowed with a wide source of natural RE [23].
246 The RE investment portfolio in Fiji is largely geared towards hydro power generation. RE
247 projects / infrastructure in the country, is largely financed by donors [25]. Reasons for
248 dependency in external assistance is due to the capital intensiveness nature of RE technologies
249 and the inability of the GoF and the domestic private sector to fully fund large scale RE projects
250 [25].

251 A critical assessment of Fiji's NDC Implementation Road Map indicates that the GoF is
252 planning to pursue the same resourcing strategy (i.e. heavy emphasis on external public finance
253 to be channeled to hard RE projects) to achieve its NDC target. The proposed set of actions
254 advanced by the NDC Implementation Road Map strongly emphasize investments in concrete
255 emission reduction projects through the installations of more solar photovoltaic systems,
256 biomass, waste to energy plants and hydro plants. Investing in these initiatives is necessary as it
257 is align with the general purpose of the NDC. However, questions as to whether pursuing the
258 same resource strategy of utilizing limited public finance to fund RE projects will result in
259 achievement of the NDC target as experts have continuously argued that such financing
260 modality on its own is not sustainable and in-adequate to cover the cost of investments needed
261 [26].

262 Consequentially, the continued reliance on external donor finance processed through
263 governmental channels to fund large scale RE projects tend to crowd out the domestic private
264 sector from investing in RE because there are minimal financial incentives to seriously pursue
265 such endeavors (The World Bank, 2015). Fiji's private sector is generally reluctant to investment
266 in RE projects because of the perception that investments have been driven by external parties
267 [25]. There is therefore a danger that if the current RE financing prioritization persist, the uptake
268 of RE in Fiji will lag further behind global trend, and as a consequence both its energy security
269 aspirations as well as their NDC target may not be achieved [25].

270 Fiji has recognized the importance of domestic private sector financing in its energy sector
271 (see for example the 2014 Draft Energy Policy, the 2014 Sustainable Energy For All (SE4All)
272 report, the 2014 Green Growth Framework and the 2017 5 Year & 20 Year National Development
273 Plan). These national policies have clearly recognized that to achieve sustainable economic
274 growth, a critical pre-condition that needs to be fulfill is the development and the strengthening
275 of the investment environment. As such, the energy sector have undergone major reforms [41].
276 An ideal example of such reform is the recent full corporatization of the FEA, which has now
277 been rebranded as Energy Fiji Limited.

Moreover, more financial levers have also been developed targeting both foreign and domestic investors (Table 1). [20] argued that Fiji's RE investment environment is one the most subsidized in the world given the current level of incentives being given to interested investors.

Table 1. Business opportunities to investment in Fiji's Energy Sector [36].

Investment Opportunity	Incentives
1. IPP Tariff Rate	33.08 VEP
2. Bio-Fuel	<ul style="list-style-type: none"> • 10 year tax holiday for new activity but minimum level • Duty free importation of assets required to establish the factory • Duty free on chemicals for bio-fuel production <p><i>*To qualify investors total investment must be FJD 1 million > and must employ 20 people ></i></p>
3. Renewable Energy Production & Power Co-generation	<ul style="list-style-type: none"> • 5 years tax holidays for new activity
4. Energy Efficient Equipment	<ul style="list-style-type: none"> • 5 years tax incentives (only VAT paid) for imported equipment
5. RE equipment	<ul style="list-style-type: none"> • 5 years tax incentives (only VAT paid) for imported equipment
6. Foreign Investment	<ul style="list-style-type: none"> • No minimum investment needed for investment in energy sector

In addition to the above mentioned regulatory/policy reforms and financial levers, financial policies have also been introduced targeting the use of instruments that are designed to attract domestic private investments in RE. Examples include the directive to all commercial banks in Fiji to ring-fence 2% of their lending portfolio to RE projects [49], and the setting up of the Sustainable Energy Development Facility by the FDB which provides ease of access and cheaper financing terms to domestic private investors who plan to adopt new RE technologies [50]. In the build up to the Conference of the Parties (COP) 23, Fiji also issued a sovereign green bond which raised USD50 million from private sources [51]. Grants, loans and equity are the three main financial instruments being used to raise new finance in RE domestically, and it has been estimated that between 2014 and 2017, these instruments contributed to USD 119 million worth of investments in Fiji's energy sector [52]. Fiji plans to extent the use of these financial instruments to include new and innovative financial instruments in order to attract more domestic private investments in the electricity sector.

2.5 Donors role in financing RE in Fiji

299 Donors have recently begun to change the way that they mobilize public finance to RE projects
300 in the Pacific to also include those aspects that are targeted towards enabling domestic private sector
301 investments [20]. Most of the external public finance committed to implementing ‘hard’ RE projects
302 in PSIDS, are now being delivered in the form of programs instead of the short-term project
303 modalities [20]. These funding programs now include strengthening of the ‘software’ (i.e. capacity
304 building, training, and policy making) [10] and the ‘orgware’ component (i.e. institutional set ups
305 and coordination mechanism) [53] of RE projects. Donors are also employing financial instruments
306 as a means of directly intervening to unlock domestic private investments in the energy sector. These
307 instruments usually take the form of short term loans and grants [54].

308 While these initiatives act as a counteracting force to the poor investments levels in RE, the depth
309 of their influence towards the domestic private sector has so far been limited [25]. Ever since 1995,
310 Fiji have recognized the value of RE technologies to its economy and have rolled out various
311 programs that specially targets its’ RE investment environment, and yet attracting the level of
312 domestic private finance that is needed to initiate concrete energy transformations has not been
313 forthcoming [21]. Weak energy sector governance, unavailability of information and the general
314 weakness in the business environment are the major investment barriers in Fiji’s energy sector [55].
315 Recent studies like that of [25] and [56] have extended the argument in stating that actions taken to
316 redress these investment barriers have seen limited success because they have been mainly driven by
317 the GoF and donors with little interphase with the domestic private sector.

318 The inclusion of domestic private sector stakeholders in the process of designing and
319 implementing initiatives that will strengthen the RE investment environment is critical [57]. The
320 domestic private sector is not just a mere consumer of RE technologies but is an agent that can amplify
321 the penetration rate of RE in an economy [58]. The need to enhance the role of the domestic private
322 sector in RE remains an area that has not been adequately addressed by donors and the GoF [56].

323 For Fiji to achieve its NDC, the domestic private sector must be encouraged to be included in the
324 development of the domestic RE market. The process of strengthening the domestic private sector
325 however, must be locally driven, or in other words their growth must be organic [25] so as the whole
326 process leads to sustainable development of the country. [57] argued that facilitating an organic
327 growth trajectory for the domestic private sector is important as it eliminates the negative perceptions
328 associated with investing in RE because the domestic private sector would be in much better position
329 to absorb financial and technical risks, making them more willing to mobilize their resources. Recent
330 RE studies in the PSIDS context like that of [23, 26, 42], have suggested policy initiatives on how to
331 develop the domestic private sector role in RE. However, none have actually explored how the
332 resourcing process might entail endogenously growing the domestic private sector investment in RE
333 for PSIDS.

334 In line with this argument, this study attempts to trace a national resource mobilization pathway
335 on how Fiji’s domestic private sector could be endogenously grown for the purpose of unlocking its
336 potentials towards the implementation of the NDC. This study differs from existing approaches that
337 have addressed the role of the domestic private sector in RE, as it specifically focuses on the resource
338 mobilizing strategies that could be undertaken to develop the domestic private sector to the stage
339 where it can confidently drive the direction of RE investments towards a sustainable future.

340 There is a need to clarify how this resourcing pathway can be achieved. While Fiji is clear on
341 what it envisioned for its domestic private sector within the context of RE; i.e. to play a more
342 prominent role in terms of resourcing the transformation of the energy sector, a knowledge gap exist
343 on the resource mobilization strategies that Fiji could pursue. The assessment of a potential and a
344 practical resourcing potential pathway that will ultimately stimulate and grow the domestic private
345 sector investment towards the NDC objectives is therefore critical.

346 3. Method and Results

347 3.1 The Methodology

348 The scenario technique is a strategic planning tool for improving decision making against the
349 background of possible future environments [59]. Scenarios allow users to envision how possible
350 futures might logically unfold by deciphering how current conditions in a specific environment
351 might evolve [60]. They offer insight to alternative futures on how decisions made today might
352 unfold. Scenarios could also be described as a roadmap that links the present to the future [59].
353 Scenarios are neither predictions of the future or wishful thinking, but rather an insight into the future
354 based on the understanding of the present, and the factors that shaped the current conditions, attitude
355 and trends [59]. Scenarios are most useful in situations where critical decisions about the future are
356 to be made against an environment that is highly complex and dynamic [59].

357 Scenarios can result in better decision making for the future as they force users to consider
358 unexpected issues in the operating environment allowing them to ‘think the unthinkable’ by
359 exploring new horizons and consider alternative future by challenging existing assumptions [59]. The
360 scenario analysis technique has been pervasively used, and has been proven to be very successful in
361 the area of strategic planning especially in the area of business and the military. The global dominance
362 and competitiveness of Shell Oil Company has been attributed to the use of scenario planning [61].

363 Within the context of resource mobilization, [62] argued that scenarios tend to be very effective
364 in developing robust strategies to guide investment decisions against uncertain future. Unlike other
365 planning tools, scenarios focus on the area of ‘critical uncertainty’ in achieving an objective, and it
366 systematically develops several plausible alternative environment in which the objective could be
367 achieved [62]. By focusing on issues of critical uncertainties, they allow users to examine issues that
368 would not have be considered, and thus, they tend to be more effective in dealing with ‘big picture
369 issues’ and setting strategic directions, rather than short term technical decisions [62]. This structured
370 approach to thinking about the future has enabled organizations to be strategic about where and how
371 to direct resources in the mid and long term as they try to secure viable and long term success [62].

372 All the above features make scenarios elaboration the best method for the specific case-study of
373 Fiji and its particular country characteristics.

374 3.2 Applying the Method

375 The data that is used in this work for the scenario analysis emerged from a detailed review of
376 RE literature of Fiji, coupled to a series of discussions with key RE and climate finance experts and
377 private sector representatives. The climate finance experts were from the Climate Change and
378 International Cooperation Division of the GoF and the members of the donor/development partner
379 community such the Global Green Growth Institute, Pacific Islands Forum Secretariat, South Pacific
380 Community, The University of the South Pacific, the ADB, GIZ and UNDP. A total of 15 climate
381 finance experts were consulted. Interactions with the individuals were carried out when the
382 Development Partners in Climate Change (DPCC) meetings convened. This setting provided the
383 most ideal opportunity to carry out the research because not only did it bring national climate change
384 experts together from the government and the donors, but the attendees to this meeting also tend to
385 be consistent as the participating organizations usually send the same experts. Private sector experts,
386 on the other hand, were drawn from financial institutions in Fiji. A total of 5 private sector experts
387 agreed to participate for this study. In total 20 experts participated in this study.

388 The methodology concerned a number of stages in the development, selection and detailing of
389 the future scenario. This study adopted the 5 step scenario methodology as adopted by [59] and [63].

390 391 392 3.2.1. Identifying the Critical/Uncertain Barriers

393 The authors conducted a thorough review of the literature, which identified 50 common
 394 barriers that have been consistently highlighted as critical inhibitors of investments in RE. These
 395 barriers were drawn across the sphere of politics, environment, social, economic and technology.
 396 After conducting preliminary interviews with the experts, 25 were retained as the most prominent
 397 ones.

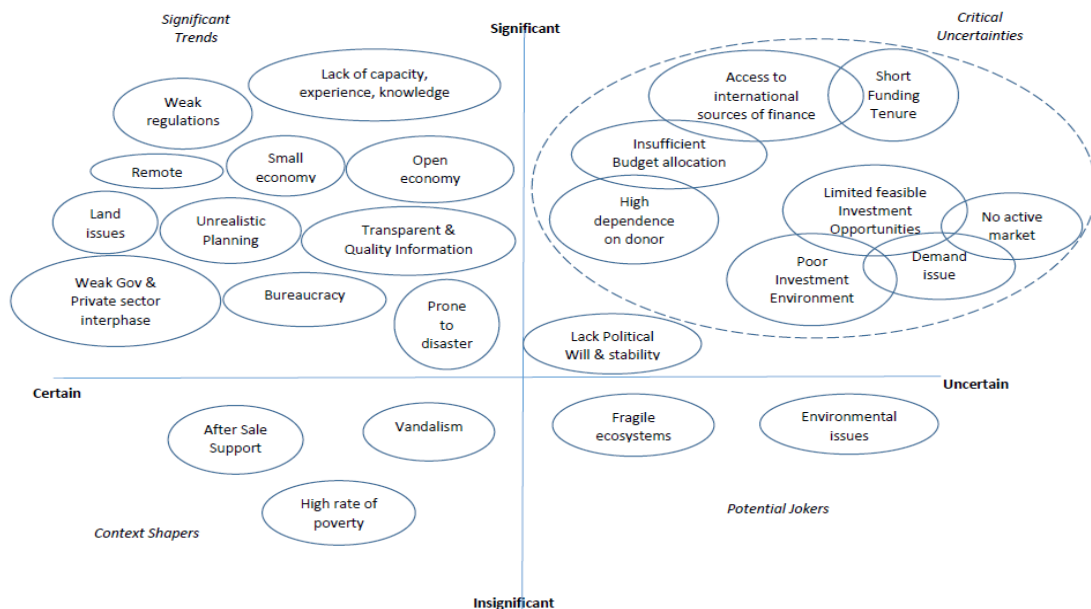
398 A Likert scale was then developed where experts ranked the level of significance and uncertainty
 399 of the barriers identified from the range of zero (0) to five (5) . Barriers that are highly significant and
 400 uncertain are those that are unpredictable in nature and particularly important for Fiji. Barriers that
 401 fall inside the ‘significant’ and the ‘certain’ quadrant are classified as significant trends and these are
 402 the predetermined barriers whose influence are more predictable and are expected to have a
 403 significant impact on the topic [59]. [59] cautioned that barriers classified as significant trends should
 404 not be dismissed and must also be monitored. Those barriers that falls in the ‘low significant’ and
 405 ‘certain’ quadrant are characterized as context shapers meaning that they are relatively certain, but
 406 tend to have an impact on the broader environment [59], and those barriers that fall in the ‘uncertainty’
 407 and ‘low significant quadrant’ are classified as potential jokers meaning that these are issues that are
 408 highly uncertain, but are not expected to have much impact on the topic [59]. The average scores were
 409 used to standardize differing scores across the different barriers.

410

411 3.2.2 Plotting the Barriers

412 The results of the Likert survey were then plotted onto axes of ‘significance’ and ‘uncertainty’
 413 (Figure 1). As the barriers were plotted to their respective axes, experts where given a chance to view
 414 the graph and see where the barriers fall with respect to their significance and certainty level. This
 415 stage is critical as it distinguishes predetermined barriers (predictable) from those that are critical and
 416 uncertain.

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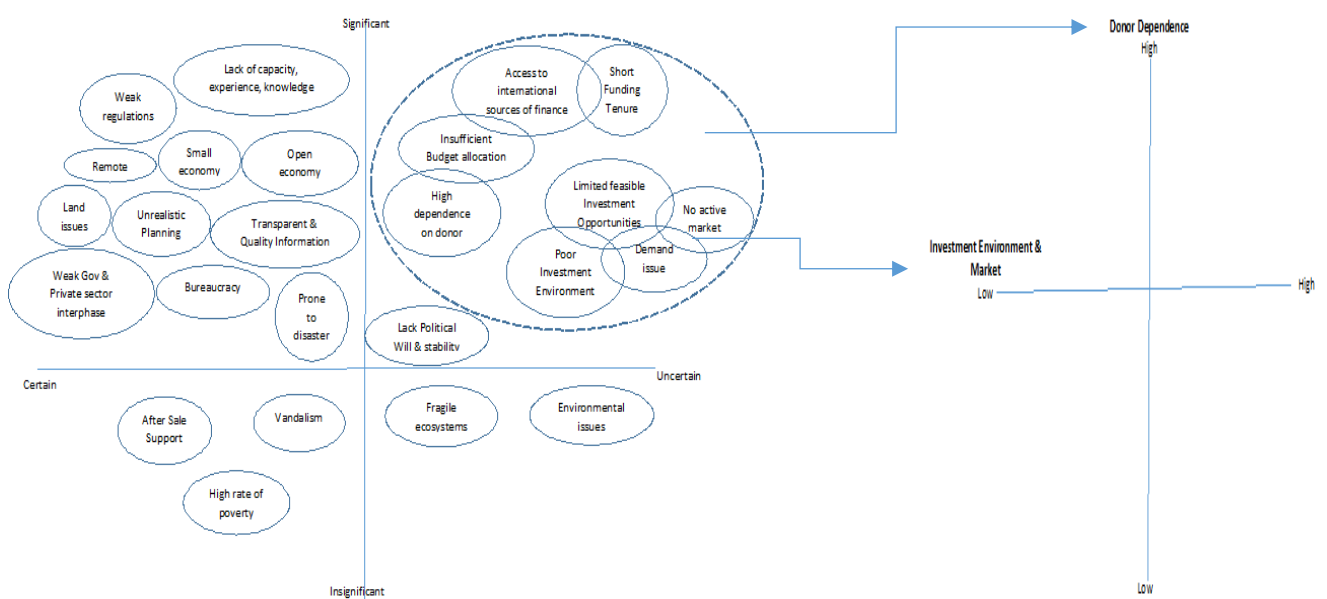
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421

Figure 1. Barriers to RE Investments on axes of Significance and Uncertainty

422 3.2.3. Creating new emerging axes

423 This step primarily focuses on barriers that fall in the high significant and uncertain quadrant.
 424 These barriers were then iteratively clustered together to form new axes of polarity around which the
 425 scenario will be developed. The emergent clusters, which provided the most logical consistency, were
 426 Donor Dependence and Investment Environment & Market. Only one barrier -lack of political will
 427 and stability, was not analyzed because it is an issue outside the control of the internal RE sector and
 428 is a fundamental prerequisite to any future progress in RE. The two emergent cluster areas were then
 429 extended into axes spanning low to high Donor Dependence and low to high quality of Investment
 430 Environment & Market (Figure 2).



431

432

433 **Figure 2.** Creating new axes of polarity from the most critical uncertainties barriers of mobilizing resources.

434

435 3.2.4. Developing the scenarios

436 Detailed scenarios were then developed based on the two new axes (Figure 3). Following the
 437 method of [59] and [63], 4 scenarios were developed from the four quadrants of the emergent axes,
 438 each reflecting a different combination of donor dependence and investment environment.

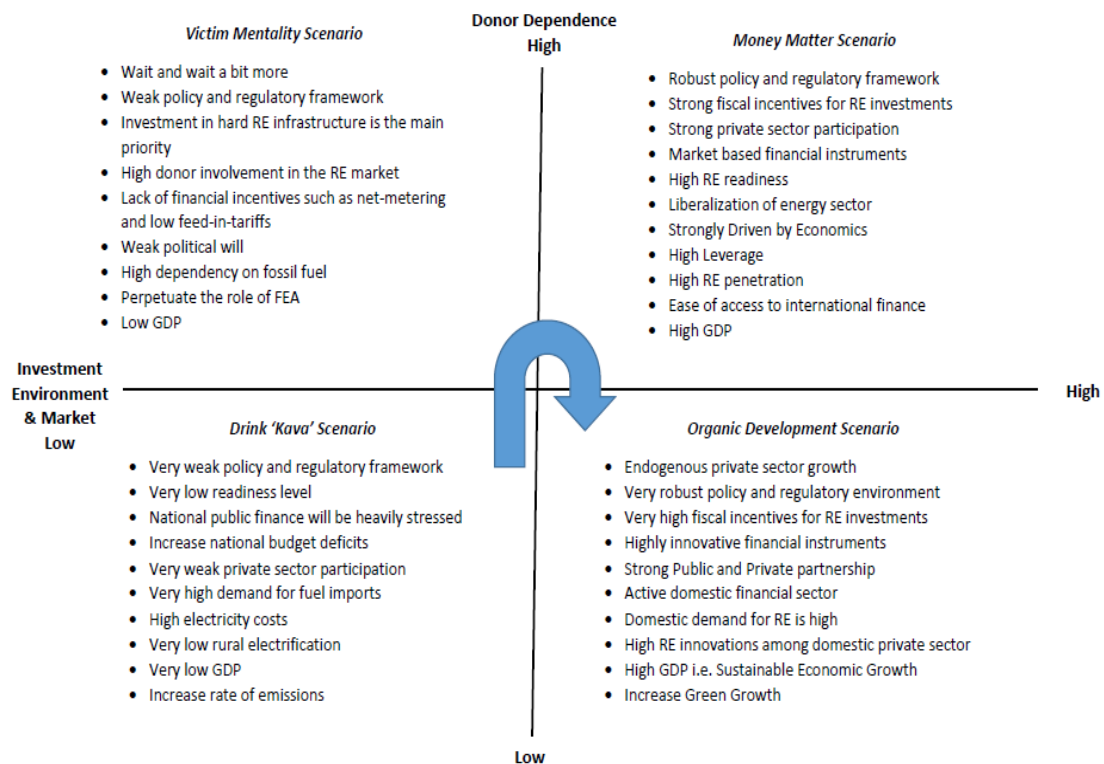


Figure 3. The four possible future scenarios regarding the resourcing of Fiji's NDC.

3.2.4.1 Overview of the Future Scenarios

The scenario's name "drink kava scenario" is derived from a social and leisure situation common in the Fijian culture and in most PSIDS, where a group of people will idly sit and drink kava— a narcotic sedative drink made from the crushed roots of a native shrub just to pass time. It is closely associated with a typical Fijian 'care free attitude' in relation to how they view uncertainty. This future scenario posits a situation where the availability of financial resources will be very limited due to decreasing support from donors and the domestic private sector. The burden of financing the NDC will ultimately fall on the GoF, and given the past trend of the GoF spending priorities, competing social and economic priorities like education, health and infrastructure are more likely to supersede that of its commitments to the NDC. Under the drink kava scenario, the likelihood of Fiji achieving its energy target is very slim.

The victim mentality scenario presents a future situation that to a larger extent mirrors the current RE investment climate in Fiji. As per this scenario, there is both a general lack of appetite from the domestic private sector and the GoF to commit significant resources for investment in RE, shifting such investment responsibilities instead to donors. The unique and special circumstances of PSIDS as well as their 'moral privilege' as being low emission contributors, and yet the front line victims of climate change are the main drivers for such posture. Emotional diplomacy- the strategic deployment of emotional behavior by state actors to shape the perception of others [64], will play a pervasive role in soliciting external public climate finance towards the implementation of the NDC, and there is an expectation that Fiji will exploit their moral standing in the climate change domain as well as their extreme vulnerability to convince donors to accelerate and upscale their investments in RE.

465 The money matters scenario represents a future situation where Fiji's private sector can
466 effectively catalyze RE investments from external sources. A vibrant and robust 'RE investment
467 environment' is essential for such a scenario to eventuate, and will be the main funding target of
468 external public finance. The money matter scenario exemplifies a future where the domestic private
469 sector are 'comfortable' with investment in RE; i.e. most investment barriers are eliminated, and there
470 is a high degree of certainty about the fiscal viability of RE as an investment option.

471 The organic development scenario depicts a future of where there is a very high degree of
472 domestic private sector involvement in RE investment. This scenario represents a situation where a
473 RE-based market actually exists in Fiji. The organic development scenario also represents a more
474 advanced level of RE investment environment where the domestic private sector is empowered to
475 drive the market for RE production and consumption. It also underscores a future where more of the
476 RE value chain is driven by the domestic private sector. In this future scenario, the aim is more than
477 just finding the right RE fit for Fiji, but where the domestic private sector is able to manufacture RE
478 technologies and subsequently generate more green jobs in Fiji. It is important to note that in the
479 context of Fiji, a good example of an industry that has managed to achieve this level of endogenous
480 private sector growth is the tourism sector. Apart from foreign investors, domestic private sector
481 investments in Fiji continues to play a dominant role in growing tourism to be Fiji's highest revenue
482 generating sector.

483 At a glance, the scenario analysis presents the 4 future scenarios as separate and independent
484 on the basis of the 'quadrant' assumptions that they fall in. However, when closely examined the 4
485 future scenario suggests a possible transition pathway that Fiji could pursue to endogenously grow
486 domestic private sector investment in RE (Figure 3, see Blue arrow).

487 3.2.5 Scenario validation

489 Once the scenarios were developed, they were circulated again to the group of experts for
490 reactions and comments. This step is critical as it ensures that the scenarios being presented gain
491 sufficient level of acceptance from the expert community for the purpose of initiating a strategic
492 conversation amongst the key stakeholders on how Fiji's NDC could be sustainably resourced. The
493 buy-in from key stakeholders provides assurance that the results presented in this study can
494 contribute to the overall discussion on how Fiji could successfully achieve its energy target.

495 4. Discussion

497 The outcome of the scenario analysis (i.e. Figure 3) only outlines a broader vision and the
498 transition stages (future scenarios) that Fiji might go through in order to endogenously grow its
499 domestic private sector. Missing however, from this broader picture are the resourcing 'specs' in
500 terms of what needs to be targeted to ensure that Fiji progresses between the future scenarios, and
501 achieve the desired future where the domestic private sector drives RE investments. Based on the
502 scenario results (Figure 3), this study proposes a Resource Mobilization Framework (Figure 4) which
503 traces what the funding /resourcing priorities should be in order for Fiji to reach the desired RE
504 investment future being envisioned.

505 The study's framework strongly argues the need for donors and the GoF to re-orient their
506 current funding priorities and strategies for the NDC. More importantly, the specific resourcing
507 priorities (which are elaborate more in the subsequent sections) must be approached with a long-
508 term perspective. Illustrating this resourcing pathway is critical to both the GoF and its donors
509 because it highlights the areas where they need to channel and concentrate their public climate
510 finance in order to propel the Fijian private sector towards a future where it can create and sustain
511 the market for RE.

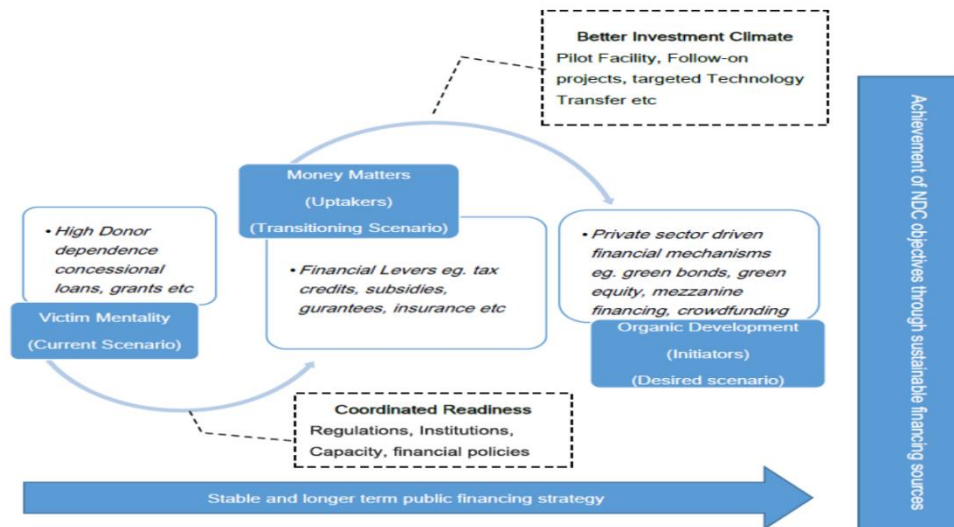


Figure 4. Proposed Fiji's NDC Resource Mobilization Framework for Endogenous Domestic Private Sector Growth in the RE Sector.

As per the proposed Resource Mobilization Framework, the desired future RE investment scenario that Fiji should aspire to is the organic development scenario. The organic development scenario is directly align with the 2014 Fiji's Green Growth Framework and the 2017 National Development Plan which have acknowledged the need for more domestic private sector participation in contributing to Fiji's sustainable development pathway. Expansion of the domestic private sector especially in the energy sector tends to create innovative green employment opportunities, build capacity for expansions into other green areas and can also provide co-benefits across the spectrum of the Sustainable Development Goals (SDGs) such as poverty reduction, health and wellbeing, education, economic growth etc. More importantly the organic development scenario will directly contribute to the achievement of SDGs 7 and 13 which revolve around the aim of affordable and clean energy and climate actions. Achieving this future RE investment state will require finance to be channeled in a targeted manner, and with a long term perspective of strengthening specific areas in the RE investment environment.

The study's Framework suggests that Fiji's current NDC resourcing strategy is synonymous with the victim mentality scenario, where the emphasis of financing largely rests with donors and the priority is the immediate implementation of concrete RE infrastructures. While this scenario might be effective when narrowly viewed within the context of reducing concrete emissions rate, this is not a sustainable resourcing model and can also be detrimental to the overall achievement of the NDC objectives because it hinders the RE penetration rate in Fiji. Currently the investment strategy being pursued by the donors and GoF places too much emphasis on the need for external public finance to be channeled towards hard RE projects such as the installation of wind farms, hydro powers and solar farms etc. This strategy tends to crowd-out the domestic private sector investments in RE.

To break from the victim mentality scenario, the GoF and donors must undertake concerted efforts to channel their resources towards the money matters scenario where the underlying crux is the internal mobilization of domestic private finance. Readiness is the critical link between these two scenarios, and thus, should be the main target of funding. Within the context of this study, readiness is specially understood as the creation of the investment environment that will attract and stimulate

545 domestic private sector investments, rather than the narrow definition advanced by the GCF and the
546 Adaptation Fund, which are the two major multilateral climate funds of the UNFCCC that tend to
547 emphasis the direct access of climate finance from specific sources. To attract private finance in the
548 energy sector, donors and the GoF should re-orient the funding priorities from investment in
549 technically establishing RE projects to supporting and strengthening initiatives that remove barriers
550 for domestic private investments in the energy sector.

551 The enhancement of the energy sector governance arrangements through the
552 strengthening of the regulatory/policy frameworks, institutional capabilities, capacity building and
553 financial policies are readiness activities that are critical in removing investment barriers in the
554 energy sector. Efforts to strengthen Fiji's RE investment environment have been actively pursued by
555 the government. [42] has argued that Fiji's current approach in strengthening its RE investment
556 environment specifically the regulatory reform carried out in the energy sector serves as an ideal
557 model for PSIDS because it has been domestically driven rather than from donor pressure. As a
558 consequence of the energy reforms being largely domestic in nature, Fiji has been able to make
559 significant gains in strengthening its RE investment environment through the establishment of an
560 effective independent regulator that has managed to increase electricity tariffs, opening the
561 opportunity for domestic private sector investment to flow [42]. Thus, the current efforts being
562 pursued by the GoF and its donors to 'ready' the RE investment environment for domestic private
563 investments signals that the shift from the victim mentality scenario towards that of a money matter
564 scenario is currently underway and is being pursued to a certain extent.

565 However, the continuous lack of domestic private sector investment in RE despite Fiji's
566 'advanced' readiness progress indicates that there are still major gaps on how the current readiness
567 approach is being pursued by donors and the GoF. [22] argued that the major reason why RE
568 continues to fail to become a viable investment option in Fiji is because donors prefer to fund RE
569 technical initiatives on the short-term, rather than providing stable funding for domestic private
570 sector development in RE. While [20] have observed that donors in the Pacific are slowly moving
571 towards program-based RE assistance and away from the project-based modality, [58] found that
572 investment in the 'hardware' component' (i.e. equipment, infrastructure and distribution) still
573 accounts for the bulk of finance of such programs. The continuous emphasis on investment in hard
574 RE projects rather than the strengthening of the domestic private sector role, tend to negate the gains
575 made in readying Fiji's RE investment environment because it crowds out the domestic private sector
576 from the RE 'investment space'.

577 The crowding out effect argued above is best reflected in the high level of uncertainty and
578 perception of risks that Fiji's domestic private sector associate with RE investments. Such an
579 unfavorable outlook of RE investments, despite the market maturity of some RE technologies, is
580 specifically common among domestic financial institutions. The domestic financial institutions in Fiji
581 is made up of commercial banks, pension funds, credit institutions, and insurance companies. The
582 high liquidity of Fiji's domestic financial system indicates the potentially large pool of domestic
583 capital that could be channeled towards RE investments. Thus, there is a need to extend Fiji's current
584 readiness from just focusing on the reforms of the energy sector to also considering the strengthening
585 the role of domestic financial institutions in RE investments. Efforts to strengthen the participation of
586 Fiji's financial institutions in RE investments have largely been adhoc and relatively limited to short
587 term workshops.

588 There is also a need for donors to support more long-term programs that specifically
589 target the domestic financial institutions' role in RE investments. The Sustainable Energy Financing
590 Project (SEFP) which is supported by the World Bank in partnership with the Australia & New
591 Zealand Banking Group (ANZ) and the FDB, and designed to increase the uptake of RE in Fiji by

592 guaranteeing 50% of participating banks' RE related lending through the World Bank's risk-
593 mitigation facility, provides the ideal example of such program. Apart from reducing the risks of
594 financial institutions in RE investments, the SEFP program also strengthens institutional capacity
595 through communication and technical assistance such as the training of loan officers [21]. The SEFP
596 is a 10 year program closing in 2018, and so far 69 loans (i.e. 44 business, 2 communities and 23
597 individuals) have been approved [65]. The lessons that will be learned from the SEFP are invaluable,
598 and should be used by donors as the basis of mobilizing resources to support and design similar
599 initiatives that will target the remaining domestic private sector participants who did not benefit from
600 the SEFP.

601 Therefore, the readiness approach in Fiji must not only focus on attracting domestic
602 private investments, it must also involve long term support for initiatives that strengthen the
603 domestic private sector's capacity and experience in the RE sector. In other words, Fiji's readiness
604 initiatives must not only attract but should also empower the domestic private sector to invest in RE.
605 For donors this would suggest that there is a need to provide stable and long term funding to
606 initiatives that allow the domestic private sector to better absorb financial and technical risks
607 associated with RE investments [16]. Examples of readiness initiatives that allow the domestic private
608 sector to gain first-hand experience with RE range from sustained financing of demonstration projects
609 to financial schemes such as partial guarantees for RE lending (like that of the SEFP), concessional
610 credit lines and staff secondment with international institutions such as the International Finance
611 Corporation. These initiatives have been proven to be successful with the domestic private sector of
612 other developing countries [16].

613 While being 'ready' is important, it is just a transition state towards unlocking the full
614 potential of Fiji's domestic private finance in RE. Readiness as envisioned in the money matter
615 scenario represents a future where Fiji's domestic private sector has become comfortable and
616 confident with the idea of RE as a mainstream investment option, and are more willing to mobilize
617 finance towards the uptake in RE.

618 However, for private finance to become a sustainable source of RE investments, the
619 domestic private sector should be transformed from being mere 'up-takers' to 'initiators' of RE
620 technologies. In other words, the private sector must play a dominant role in RE development in Fiji,
621 and this process must be 'organically' driven (i.e. organic development scenario). Attaining the
622 desired future scenario will therefore require a much better, more stable, and well-managed
623 investment climate. Facilitating such an enhanced level of investment environment will require a
624 significant up-scaling on the current level of investments directed towards strengthening the
625 domestic private sector. For donors, the underlying message is that they will need to pursue a long
626 term view of channeling resources beyond just readying the domestic private sector to catalyze public
627 finance, towards empowering the domestic private sector to be 'drivers of RE investments' (i.e.
628 inward investments to create an RE market).

629 Innovation is a critical ingredient for endogenous domestic private sector growth. While
630 there are realistic limitations on the ability of Fiji's private sector to be serious innovators in terms of
631 RE technologies due to their small economies, the right amount of support could potentially lead to
632 developing new financing modalities and financial packages designed to support sustainable RE
633 development. A very good example of such financial innovation in PSIDS is the Secured Transaction
634 Framework, a financing mechanism that makes it easier for lenders to accept movable assets such as
635 vehicles, inventory, account receivables and even crops as collateral for loans [66]. To date more than
636 50,000 new loans under this scheme have been granted by financial institutions [66] and this could
637 be easily translated into investments for RE.

638 Pilot RE projects have also been argued to be an essential enabler for innovation in the
639 domestic private sector [21]. Pilot projects when successful not only enhance market familiarity with
640 new technologies, but also advance RE towards commercialization (i.e. up-scaling). While the success
641 of pilot RE projects in Fiji has been a mixed bag [67], it has also been observed that there is a lack of
642 uptake in cases where RE projects have been successful [68]. The lack of RE technology adoption by
643 the domestic private sector despite cases of success can be attributed to the adhoc nature of how
644 follow-up projects are being resourced. Financing of successful pilot projects in Fiji are largely ‘once
645 off’ in nature, with little commitments from donors to channel long term resources towards
646 replicating such success in other local communities. The channeling of resources towards follow-up
647 projects is a critical initiative in the process of creating a much better RE investment environment as
648 it not only contributes to the growth of RE investments by making it an attractive investment option
649 for the domestic private sector, it also promotes the endogenous growth of RE through the generation
650 of social and financial benefits for communities, creating demand for RE in the process.

651 Long term resources should therefore be channeled towards strengthening the capacity of
652 the domestic private sector to replicate successful pilot RE projects because it is essential in the
653 development of the domestic RE market (i.e. it facilitate will facilitate both the supply as well as the
654 demand of the RE technologies).

655 Targeted technology transfer is also a critical instigator of endogenously growing the
656 domestic private sector because it promotes innovation in the domestic environment. The main issues
657 that Fiji’s donors need to focus on within the context of technology transfer is the need to support the
658 domestic private sector’s ability to understand which RE technologies can be effectively used as well
659 as the coordination with suppliers of RE technologies who are able to provide after-sale support and
660 maintain quality assurance. In fact, [69] argued that initiatives that strengthen targeted technology
661 transfers in developing countries can lead to the development of new business areas that also involve
662 the introduction of innovative technologies that are relevant to the local context. Donors are therefore
663 reminded that RE in Fiji should not be treated as mere equipment to be sold without facilitating a
664 robust “after sales mechanism” as this is a very critical success factor for RE acceptance from the
665 domestic private sector.

666 In addition, the focus on a targeted approach to technology transfer as the strategy for
667 promoting endogenous domestic private sector growth, is also very relevant to the concept of the
668 proposed Pacific NDC Hub that is currently in the pipeline. Targeted technology transfer can
669 accelerate the adoption of RE in Fiji, however, the general lack of technical knowledge in the country
670 will mean that external experts will need to be recruited as a short term strategy to provide technical
671 support as Fiji builds its own capacity. The proposed NDC Hub provides the ideal opportunity where
672 Fiji and PSIDS can consolidate their technical know-how (i.e. local and international) and act as
673 clearing house for their RE technical issues. [53] have also argued that the ability to locally create
674 knowledge on RE technologies is essential in promoting a ‘paradigm shift’ in the investment behavior
675 for domestic private sectors; shifting away from assistance base toward self-sustaining large scale
676 deployment of RE in-country.

677 The resourcing framework advanced by this study complements Fiji’s NDC
678 Implementation Roadmap. While Fiji’s NDC Implementation Roadmap clearly indicates that it will
679 actively extend and explore new and significant financial instruments to bridge the financing gap,
680 this study adds a critical resourcing dimension by highlighting possible initiatives that will promote
681 inward investments necessary for the domestic private sector’s endogenous growth in the energy
682 sector. It is only when the domestic private sector has endogenously gained the depth, exposure and
683 confidence in RE they will mobilize and unlock the full potential of their investments. Such
684 confidence will not only be manifest in the new RE technologies that will be introduced in the market,

685 but also in the willingness to adopt the innovative financial instruments that are currently earmarked
686 for implementation in Fiji's NDC Implementation Roadmap. The domestic private sector needs to
687 drive these innovative financial mechanisms to transform the electricity sector in Fiji, and also to
688 ensure a sustainable resourcing pathway for Fiji's transition to a low carbon economy in the long run.

689 Finally, this study's NDC Resource Mobilization Framework, while depicted in a sequential
690 manner, does not necessary mean that it should be pursued that way. In fact, the Framework can be
691 pursued in a complementary manner. While Fiji has adopted innovative financial instruments that
692 create the picture of Fiji leap-frogging scenarios (e.g. the issuing of a sovereign Green Bond in 2017),
693 the underlying emphasis here is that as long as the domestic private sector in Fiji is not the one driving
694 RE investments, attempts to incentivize them to participate in RE investments will still have limited
695 effects. The GoF and donors must focus on empowering the domestic private sector beyond just
696 adopting RE, and towards a future where they initiate investments in RE.

697 698 **5. Conclusion**

699 Fiji's NDC has outlined an ambitious target to transform its energy sector by 2030. While
700 many have hailed such ambition as courageous in light of Fiji's circumstances and historical
701 contributions to climate change, the resourcing of such initiatives is a cause of concern. To implement
702 its NDC, Fiji requires investments worth USD 2.97 billion of which 54% is conditional on Fiji receiving
703 significant means of implementation and support. Considering the major climate finance windfall
704 and the high degree of uncertainty of climate finance availability that currently exists in the
705 international climate finance architecture, the billion-dollar question therefore relates to how Fiji
706 would attract sustainable funding to implement its NDC. With private finance having been identified
707 as the recourse for such a shortfall, to fully unlock its potential, the GoF and its donors need to
708 strategically channel limited public finance in a sustained manner that will mobilize domestic private
709 finance in the long run.

710 Despite Fiji's donors consistently prioritizing investments in RE infrastructures, there are
711 indications that they are starting to move towards funding incentives designed to attract domestic
712 private sector investments in RE. Donors are now supporting the strengthening of the investment
713 environment by helping developing countries like Fiji implement an array of readiness initiatives.
714 While readiness is critical in removing investment barriers in RE, it is not sufficient to facilitate long
715 term domestic private sector investments in RE. Readiness initiatives are mainly designed to enable
716 domestic private sector to adopt RE technologies. For the domestic private sector to be agents of
717 achieving the envisioned change of the NDC, they must become RE 'initiators'. Initiators require
718 innovations, and for the domestic private sectors to assume this status, they must be allowed to
719 endogenously grow, and develop Fiji's RE market.

720 Using the scenario analysis technique, this paper formulated a Resource Mobilization
721 Framework, which outlined important initiatives that donors and the GoF should target in order to
722 endogenously grow the private sector. Sustained financing for follow-on projects from successful
723 pilot projects, and targeted technology transfers are the two main initiatives that are critical to the
724 growth of the domestic private sector. This study argues that donors and the GoF should significantly
725 re-orient their NDC funding priorities, and commit long-term resources towards these two initiatives
726 to transform the role of the domestic private sectors as drivers of RE technologies in Fiji.

727 In the absence of a refocus on priorities on how Fiji's NDC is to be resourced, there is a risk
728 that not only will the energy targets be missed, but that the overall sustainable development path
729 currently being pursued might be unattainable. Leveraging the full potential of domestic private
730 investment is critical in accelerating and sustaining climate change efforts in the long run, and
731 provides many co-benefits in terms of "green" jobs and securing wellbeing. Without genuine efforts

732 to channel external public climate finance towards endogenously growing the domestic private sector,
 733 the NDC runs the risk of joining a growing list of “feel good” international initiatives that have bear
 734 very little real benefits to local vulnerable communities.

735

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 738 this study.

739

740 Appendix A

Nomenclature

ADB: Asia Development Bank

ANZ: Australia & New Zealand Banking Group

BAU: Business As Usual

COP: Conference of the Parties

DPCC: Development Partners in Climate Change

FDB: Fiji Development Bank

FEA: Fiji Electricity Authority

GCF: Green Climate Fund

GIZ: German Corporation for International Cooperation

GDP: Gross Domestic Product

GHG: Greenhouse Gas

GoF: Government of Fiji

IPP: Independent Power Producer

NDC: Nationally Determined Contribution

PSIDS: Pacific Small Island Developing States

RE: Renewable Energy

SEFP: Sustainable Energy Financing Project

SE4LL: Sustainable Energy for All

SIDS: Small Island Developing States

SDGs: Sustainable Development Goals

UNDP: United Nation Development Programme

UNFCCC: United Nation Framework Convention on Climate Change

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