

Background paper on the modalities to support activities to enable Private sector involvement in the LDCs and SIDS

(Prepared by the Secretariat and provided as input for PSAG discussion at Copenhagen meeting, 6-7 December 2017)

I. Introduction

1. At its seventeenth meeting, the Green Climate Fund's Board has requested the Private Sector Advisory Group (PSAG) to provide recommendations on: Modalities to support activities enabling private sector involvement in the least developed countries (LDCs) and small island developing states (SIDS) and opportunities to engage the private sector, including local actors, in adaptation action at the national, regional and international levels (Decision B.15/03).
2. This background paper is provided to support the discussions of PSAG in fulfilling this mandate. It takes into consideration and builds upon the analysis and recommendations presented to the Board in its seventeenth meeting, paper GCF/B.17/03, "Analysis of barriers to crowding-in and maximizing the engagement of the private sector, including Private Sector Advisory Group recommendations". It is acknowledged that barriers to private sector engagement and investment in climate mitigation and adaptation present a double challenge in the context of LDCs and SIDS; thus, require strategic approach for additional investment and innovation in terms of modalities and business models to achieve effective and efficient interventions for the benefit of nations and their local communities in LDCs and SIDS.

II. Proposed Approach

3. Given the wide range and diversity of LDCs and SIDS countries in terms of climate vulnerabilities, economic conditions and growth, and depth of capital markets, the GCF's Secretariat has undertaken a detailed analysis to aid the Private Sector Advisory Group in its considerations. This paper sets out both analysis and some modalities that could be considered by PSAG as potential recommendations to the Board. The paper proposes a three-phase approach in its investigation and analysis to construct a proposal that uses a bottom-top approach, demand-driven modalities, and most importantly a country-led approach that presents countries' aspirations.
 - (a) The first phase undertakes scoping and analysis of economic and financial indicators and climate change conditions in LDCs and SIDS. This work is derived primarily from: (a) rigorous country analysis by the Secretariat, of individual SIDS & LDCs (Annex II: Country Analysis), (b) an on-going private sector focused Country Survey with the National Designated Authorities (NDAs) and Focal Points (FP) also carried by the Secretariat to further understand the specific needs and particularities of each country; this is being supported by joint analytical work within the various GCF country teams and experts (Annex III: Summary Country Survey), and (c) a series of GCF organized Structured Dialogues that took place in Asia, the Pacific region, and the Caribbean region;¹

¹ Two regional Structured Dialogues are planned in Africa (date TBD) and Latin America (Nov. 2017).

- (b) The second phase carries analysis of the outcome of the first phase and constructs a framework for PSAG's deliberation. This framework maps countries under shared climate characteristic and common economic and financial themes with potential mitigation and adaptation interventions that could potentially address the specific risks and barriers of each country. It is worth noting that this framework builds on previous PSAG input and recommendations made and presented in the paper GCF/B.17/03, referred to in paragraph 2 above; and
- (c) In the third phase, PSAG members, including two board representatives from LDC (Mr. Evans Davie Njewa) and SIDS (Mr. Ronald Jumeau) countries, would use the above analysis and framework as basis for their deliberation to produce optimum recommendations for the GCF Board. As part of PSAG's on-going exchange and consultations, the Government of Denmark has proposed holding a meeting in Copenhagen for PSAG members to carry an in-depth and strategic consultation on this paper and other relevant private sector items.
4. Derived from analysis and consultations per (i) and (ii) above, the Secretariat has developed a few concrete modalities to support kick off the discussion by PSAG members, which could be considered among other options. Out of five modalities, three proposed modalities target enabling private sector investment in LDCs and SIDS in general, and engagement of the private sector in adaptation on the national, regional and international level in particular. Two proposed modalities target investment by the private sector in adaptation and mitigation at once.
5. These five financial modalities and engagements are being presented for discussion by PSAG with the aim of addressing barriers to private investment and engagement in climate adaptation and mitigation in LDCs and SIDS. The modalities presented are based upon suggestions from the SIDS and LDCs themselves (expressed within the Country Survey), and upon ideas that have previously been suggested by PSAG. The investment thesis and rationale behind each modality are elaborated under "Section V – Recommendations for Consideration by the Private Sector Advisory Group" for increased investment flow in climate mitigation and adaptation finance in LDCs and SIDS. Subject to discussion by PSAG, Section V will be updated to reflect its final recommendations.

III. Characteristics of LDCs and SIDS: Economic and financial Indicators, and climate change risks and vulnerabilities

LDCs – Relevant Characteristics

6. LDCs are countries with the lowest indicators of socioeconomic development, and the lowest Human Development Index ratings of all countries in the world². As of May 2016, the UN categorizes 48 countries as LDCs. For example, LDCs lack access to electricity, with only 21 per cent electrification rates and about 77 per cent of people lacking access to electricity overall. Over 66 per cent of LDCs are landlocked,³ which results in cost barriers to trade due to high cost of in-land transportation and other economic implications. (Annex IV: LDCs)
7. GDP per capita in LDCs ranges between USD 286 and USD 8,333. There are 29 LDCs with a GDP per capita of less than USD 1,000. Out of the 48 LDCs, 29 are low-income countries, 12 are lower-middle-income countries, and three are upper-middle-income countries⁴ (Figure 1).

² Source: UNCRAD 2016.

³ Source: UNCTAD 2016.

⁴ Four low income countries have no data: Afghanistan, Angola, Benin, and Bangladesh.

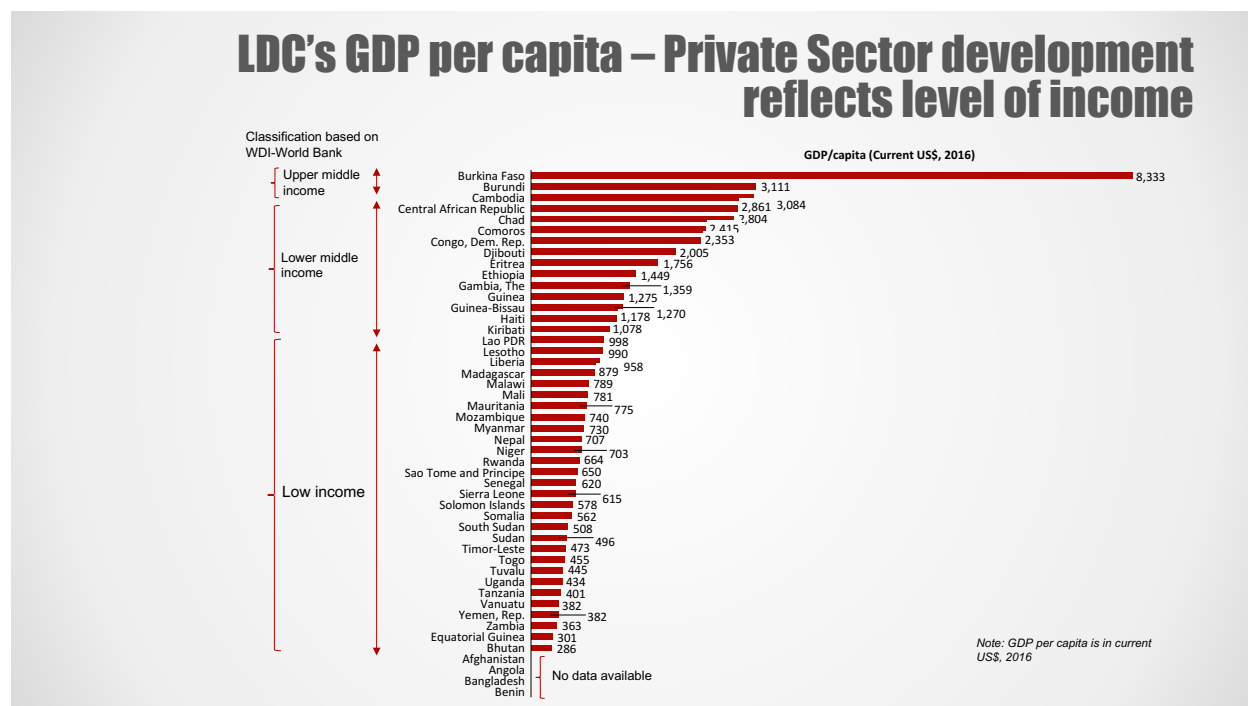


Figure 1: LDC's GDP per capita – Private sector development reflects level of income

Source: World Bank, World Development Indicators (2016)

8. Out of the 48 LDCs, only four countries rank among the top 50 per cent in terms of the ease of “Doing Business” Index. The remaining 44 LDCs rank between 100 and 189. Due to weak policies and institutions, these countries also have lower debt-carrying capacities and lack access to an adequate level of financing. Coupled with high political risk and the unavailability of well-developed markets, investment in LDCs is typically much riskier. Compared to the world average (132 per cent) in terms of domestic credit to private sector as a percentage of GDP, more than half of LDCs range from 4 per cent to 27 per cent, and the highest in Nepal stands at 81 per cent (corresponding to 39 per cent less than the world average) (Figure 2).

9. In the majority of LDCs, the underdeveloped capital markets and the lack of a financial system reflects on the range of options in terms of financial instruments and products offered locally. This is combined with a lack of appropriate and clear banking regulations and adequate institutional arrangements to support the development of climate mitigation and adaptation projects and programs on a national level. This has practical implications on the appetite of the private sector (project developers, investors and financiers) to invest in LDCs.

10. High political risk is a further obstacle towards the implementation of climate projects. Some LDCs are fragile states and/or affected by a conflict or post-conflict status, including South Sudan, Somalia, Central African Republic, and Yemen, which results in high rates of displacement of people across war zones and creates further vulnerabilities.

All the LDCs lack access to adequate financing

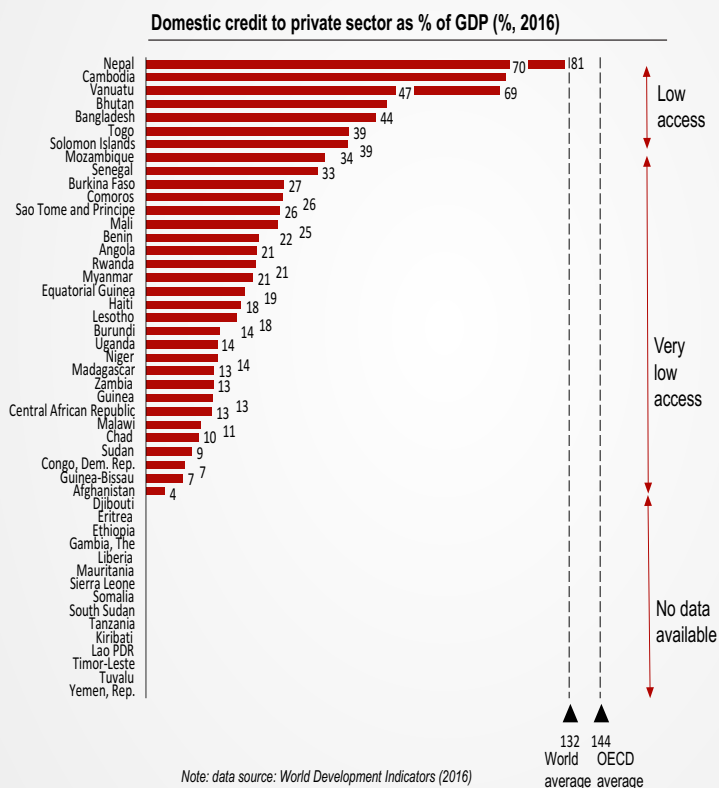


Figure 2: All the LDCs lack access to adequate financing

Source: World Bank, World Development Indicators (2016)

11. The primary contributors to GDP in LDCs countries are commodities and the agricultural sector. Remittance is another common feature among SIDS. For certain LDCs, remittance is a key contributor to GDP and local communities are dependent on remittances for survival. For example, Haiti, Nepal, and Liberia's remittance contribution to GDP amounts to between 28 per cent and 32 per cent, followed by seven other LDCs with remittance of between 10 per cent and 28 per cent of GDP (Figure 3).

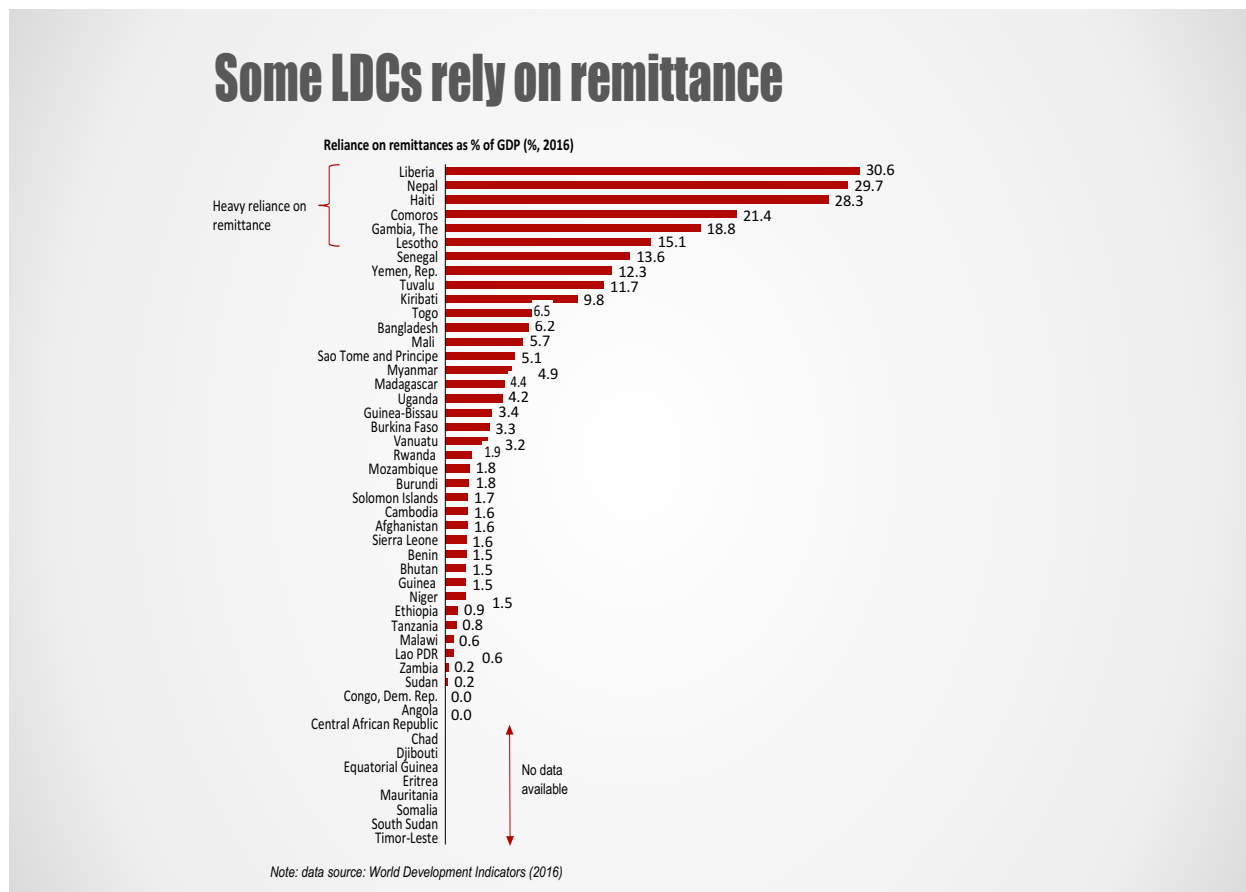


Figure 3: Some LDCs rely on remittance

Source: World Bank, World Development Indicators (2016)

12. Some LDCs rely heavily on certain commodities (basic materials and oil & gas), and their economy lacks diversification as well as being heavily exposed to commodity price fluctuation. This presents a barrier but also an opportunity. On one hand, commodity dependent industries tend to consume a lot of energy and tap into fossil fuel sources, due to their availability and cheap prices. On the other hand, the cost of renewable energy technologies has been reduced significantly over the past decade; therefore, their competitiveness and operational cost will present an incentive to countries where energy access is very low and there is significant demand to fill (Figure 4).

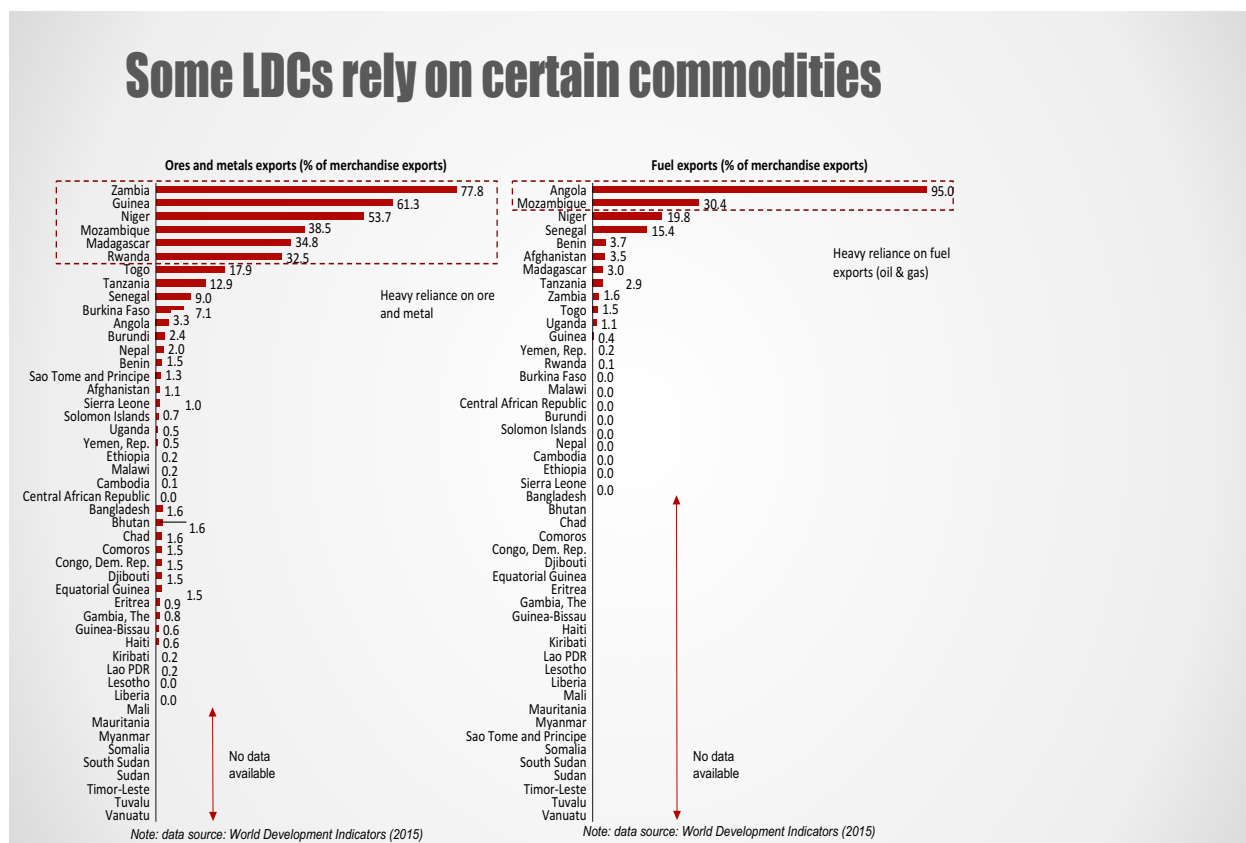


Figure 4: Some LDCs rely on certain commodities

Source: World Bank, World Development Indicators (2016)

Agriculture in LDCs

13. Climate change increases extreme weather events in LDCs (extreme temperature, floods and droughts) and unpredictable changes in weather patterns that affect agriculture. Extreme weather events in LDCs increased fivefold from the period 1970-79 to 2000-10, resulting in over USD14 billion losses.⁵

14. As a result, many LDCs suffer from reduced agricultural productivity, production stability and incomes in areas with already high level of food insecurity. Climate change impacts combined with ineffective management and operations with implications for the various segments of the agriculture sector including cropland, livestock, forests and fisheries. Out of the 48 LDCs, 25 countries have an agriculture sector contributing between 20 per cent and 62 per cent to their national GDP (Figure 5).

⁵ UNCTAD 2016, Sustainable agriculture and food security in LDCs.

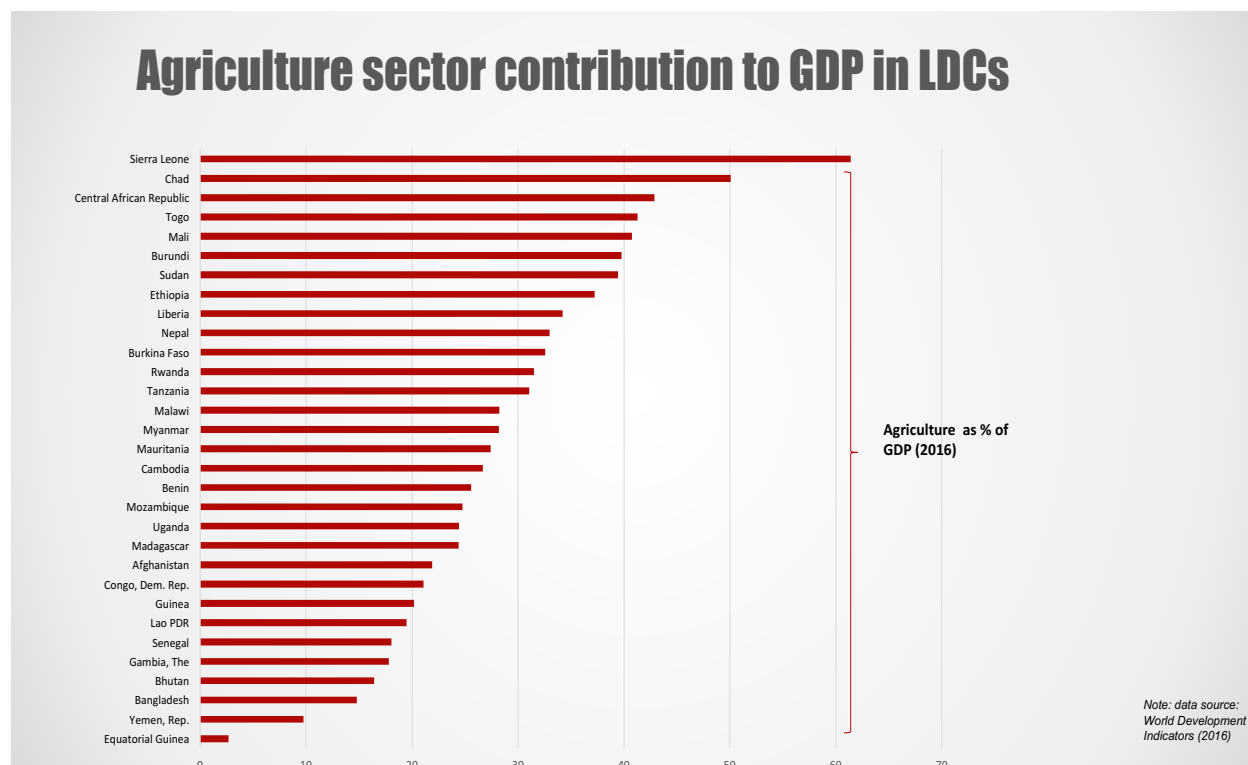


Figure 5: Agriculture sector contribution to GDP in LDCs

Source: World Bank's World Development Indicators (2016)

SIDS – Relevant Characteristics:

15. SIDS are located in some of the most disaster-prone regions in the world and represent two-thirds of countries with the highest relative annual losses due to disasters. Natural disasters and climate variability severely impact major economic sectors in SIDS, hinder economic growth and affect the most vulnerable populations.⁶ The changing frequencies and intensities of weather extremes has also impact on health (e.g. malaria becomes prevalent in high altitude areas) and crop patterns. Furthermore, SIDS are particularly vulnerable to rising sea level and urgently need investment in infrastructure for adaptation and other climate resilience measures.

16. While several market-driven financing mechanisms have become available globally, they are not equally and easily accessible to all SIDS, and concessional finance from the international community remains a key source of financing to foster climate and disaster resilient development.

17. There are 40 SIDS countries with a wide range of economic indicators, private sector development, financial system maturity, and climate change risks and vulnerabilities. Ten SIDS are also classified as LDCs, namely: Comoros, Guinea-Bissau, Haiti, Kiribati, São Tomé and Príncipe, Solomon Islands, Timor-Leste, Tuvalu, and Vanuatu (Annex D: SIDS countries).

⁶ UNDP & UN-OHRLLS, (2015), Financing for Development and Small Island Developing States: A Snapshot and Ways Forward, UNDP & UN-OHRLLS Discussion Paper.

18. GDP per capita in SIDS countries in 2015 ranged between USD 620 to USD 52,961. 24 countries have a GDP per capita of less than USD10,000, and 6 countries have a GDP per capita of less than USD 2,000. The majority of SIDS are middle-income countries (27 MICs), with ten high-income countries, and three low-income countries.⁷ (Figure 6)

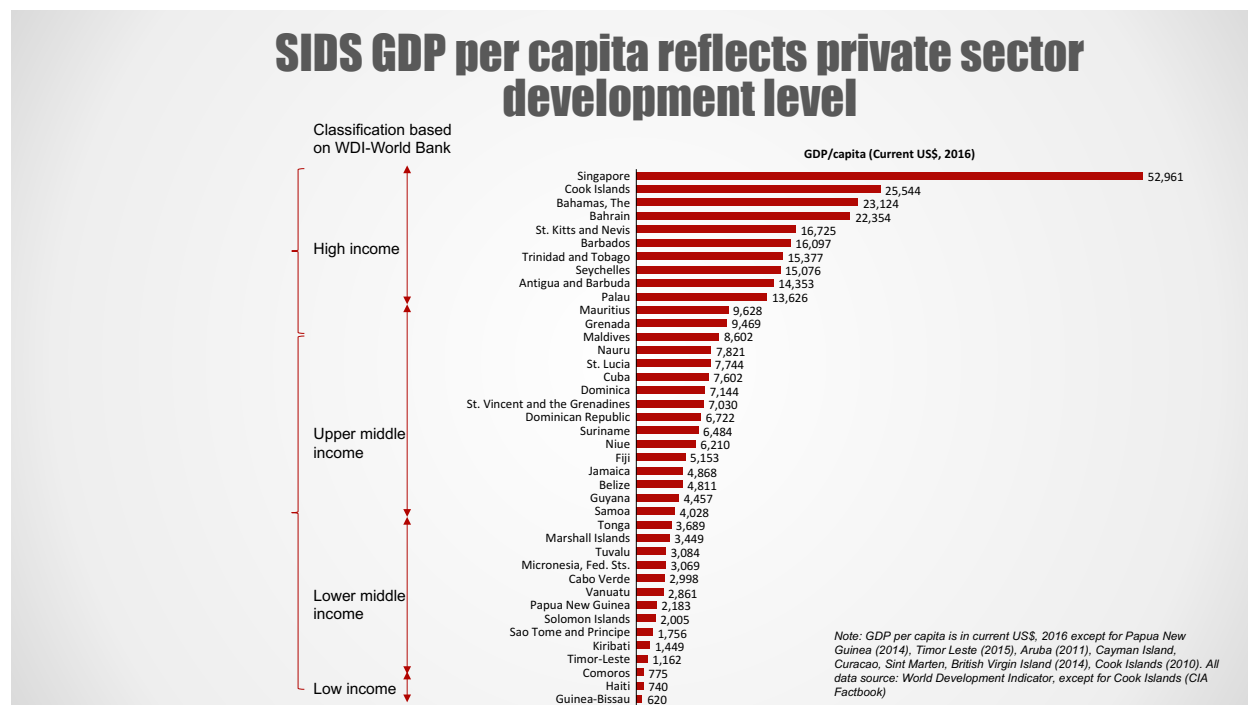


Figure 6: SIDS GDP per capita reflects private sector development level

Source: World Bank – World Development Indicators 2016

19. SIDS are heavily dependent on imported fossil fuels for domestic energy, including electricity production, household needs and transport systems. Most SIDS allocate more than 30 per cent of their foreign exchange reserves each year to cover the cost of importing fossil fuels.⁸

20. Out of the 40 countries, only Singapore is highly ranked⁹ in the World Bank Index for ease of “Doing Business”, where it is placed second position. Eight other SIDS are ranked in the top 100. The remaining 35 SIDS are ranked between 100 and 181. Low levels of domestic credit to the private sector as a percentage of national GDP is also another indication of the existing barriers in terms of access to finance in general, and the low baseline of private sector development and financial markets infrastructure (Figure 7).

⁷ Based on the World Bank’s World Development Indicators, the Analytical Classification based on GDP per capita is as follows: Low income countries (\leq USD 1,005), lower middle-income countries (USD 1,006 – USD 3,955), upper middle-income countries (USD 3,956 – USD 12,235), high-income countries ($>$ USD 12,235).

⁸ an assessment carried out by the UN Conference on Trade and Development.

⁹ Doing Business Index: One being the highest and best ranking (1=Most business-friendly regulations).

21. In the majority of SIDS, capital markets are nascent, credit and equity markets are shallow, and liquidity is thin. Appropriate and transparent capital market infrastructure, clear banking regulations, clear foreign investment and repatriation laws, adequate institutional arrangements, and efficient treasury support together can benefit the development of climate mitigation and adaptation projects and programs on a national level. Conversely, a lack of developed capital market reflects on the range of options in terms of financial instruments and products offered locally.

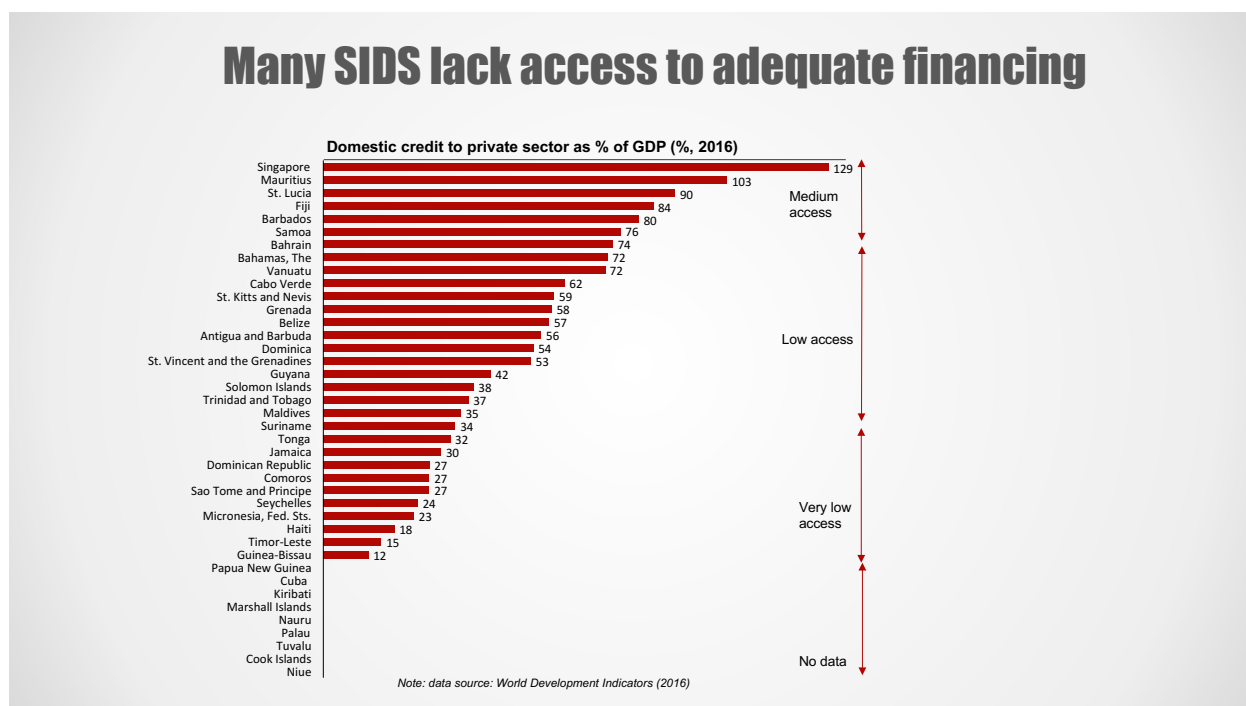


Figure 7: Many SIDS lack access to adequate financing

Source: World Bank – World Development Indicators 2016

22. Tourism and agriculture are among the major economic drivers of GDP growth in SIDS countries. Also, remittance is a major source of financial flows into the country and key contributor to national GDP in many SIDS. Remittance constitutes between 10 per cent to 30 per cent of GDP of 25 per cent of SIDS countries.

Tourism in SIDS

23. The tourism sector is a major contributor to 60 per cent of SIDS countries (26 SIDS). 79 per cent of GDP in the Maldives is contributed by the tourism sector, followed by 15 countries with a contribution ranging between 25 per cent and 60 per cent of GDP, and 13 countries with a contribution ranging between 3 per cent and 22 per cent of GDP (Figure 8).

24. The tourism sector often receives governmental financial support due to its assumed benefits, such as generating employment, fostering development, generating tax revenues, and justifying the value of protecting natural resources. Also, tourism's contribution to domestic revenue is considered as crucial for public investment capacity including in climate action. However, climate change is projected to impair

this same sector and existing development challenges, such as fresh water supply and infrastructure resilience to storms, indicating the need for the tourism industry to adapt alongside other key sectors.¹⁰ In fact, in many SIDS countries, tourism is a principal driver of the economy and of infrastructure development, and tourism is often perceived as a key development option for SIDS, especially when exports face significant constraints due to high transportation costs, market entry barriers, and unfavorable trade agreements.¹¹

25. SIDS are particularly vulnerable to climate change and particularly to impacts such as sea-level rise, changing frequencies and intensities of weather extremes (with major impact on crop and consequently food security), coastal flooding and erosion, and ocean acidification. Consequently, tourism in SIDS is threatened by climate change impacts, which will likely incur high costs for climate change adaptation.

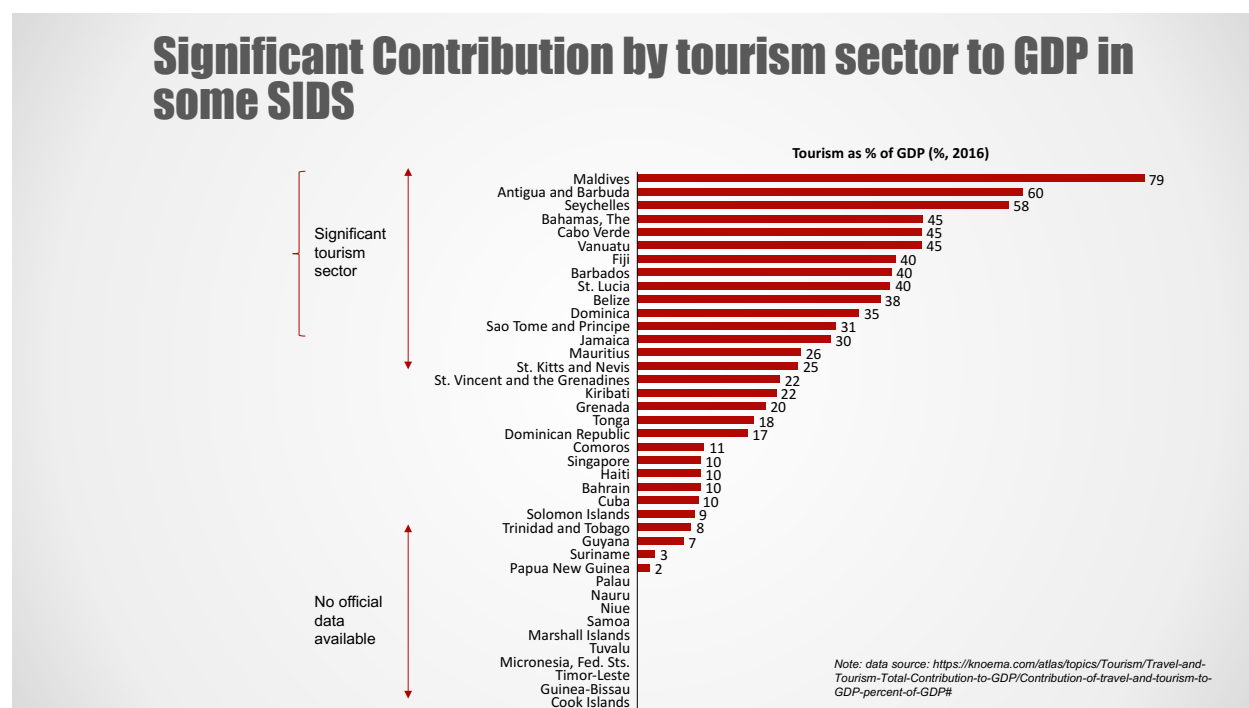


Figure 8: Significant contribution by tourism sector to GDP in some SIDS

Source: KNOEMA, World Data Atlas (2016)¹²

Agriculture in SIDS

26. As demonstrated in Figure 4, the agriculture sector plays a key role in the development of local economy in SIDS countries. In 11 SIDS, the agricultural sector's contribution to the economy ranges between 20 per cent and 52 per cent of national GDP. The agriculture sector in SIDS countries is mostly

10 Simpson, M.C., Gössling, S., Scott, D., Hall, C.M. and Gladin, E. (2008) Climate Change Adaptation and Mitigation in the Tourism Sector: Frameworks, Tools and Practices. UNEP, University of Oxford, UNWTO, WMO: Paris, France.

11 Tourism Industry Financing of Climate Change Adaptation: Exploring the Potential in Small Island Developing States, Hess, Janto S. and Kelman, Ilan, Institute for Risk and Disaster Reduction at University College London.

12 KNOEMA – World Data Atlas (2016) (<https://knoema.com/atlas/topics/Tourism/Travel-and-Tourism-Total-Contribution-to-GDP/Contribution-of-travel-and-tourism-to-GDP-percent-of-GDP#>).

composed of micro and small to medium size enterprises. It is marked by inefficiencies in its supply chains, which results in significant profitability reduction and weak cost efficiency. Access to local financing is a major barrier for agricultural businesses, and lack of knowledge and capacity to implement improvements in supply chains is another barrier (Figure 9).

27. Climate change impacts, including land sliding, frequent flooding, and water scarcity have a major impact on agriculture in SIDS countries. Therefore, for sustainable agriculture, long-term climate adaptation measures and financing are key for the livelihood of communities.

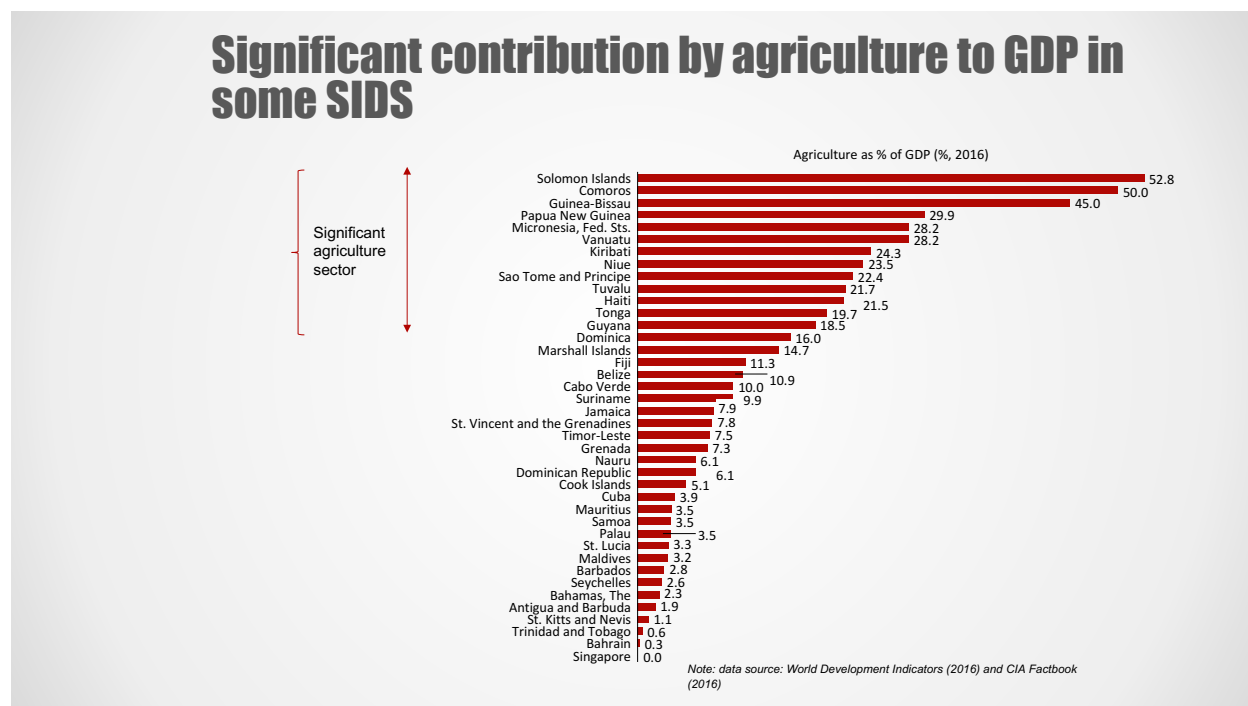


Figure 9: Significant contribution by agriculture to GDP in some SIDS

Source: World Bank's World Development Indicators (2016)

IV. Proposed Framework for Potential Modalities

28. Given the wide range of diversity of LDC and SIDS countries and variances at hand, and in order to propose modalities that can be tailored and used to the benefits of the largest number of countries, the following two tables present a framework that maps countries under shared climate characteristic and common economic and financial themes with potential mitigation and adaptation interventions that could potentially address the specific risks and barriers of each country, while exploiting economic sectors' potential and contributing to overall development objectives climate change targets. It also captures recommendations made by PSAG in paper GCF/B.17/03, and presented in paragraph 32 below.

29. To note, the following tables have been developed by the Secretariat to facilitate and kickoff of dialogue and consultation by PSAG, and are to be considered among other options, which will result from a comprehensive discussion among PSAG members in light of the provided analysis and depth of experience of its members.

30. Also, by modalities, this paper refers to: (i) technical assistance products that can help specific sectors and industries overcome barriers, and (ii) financial instruments and vehicles that can mitigate risks and mobilize private sector funding into adaptation and mitigation projects.

Table 1: Proposed LDCs Framework for potential modalities

LDCs: Shared characteristics & potential modalities

Shared Characteristics	Countries	Potential Modalities
Lack of financial depth / financial service access	<ul style="list-style-type: none"> All LDC 	<ul style="list-style-type: none"> Early stage financing, focusing on: <ul style="list-style-type: none"> Renewable energy Implementation of new technology Insurance / reinsurance Endowment for adaptation fund
High political risk		
Low adoption of technology		
Low access to energy		
Reliance on remittance	<ul style="list-style-type: none"> Liberia, Nepal, Haiti, Senegal, Kiribati, Somalia 	<ul style="list-style-type: none"> Diaspora fund, Endowment fund for adaptation, insurance/reinsurance
Reliance on subsistence agriculture	<ul style="list-style-type: none"> Burundi, Chad, Mali, Sierra Leone 	<ul style="list-style-type: none"> Climate-smart agriculture solution, supply chain credit lines
Fragile states: in conflict states	<ul style="list-style-type: none"> DR Congo, Burundi, Afghanistan, Chad, Central African Republic 	<ul style="list-style-type: none"> Framework that includes technical assistance, endowment fund for adaptation
Fragile states: post conflict states	<ul style="list-style-type: none"> Somalia, Sierra Leone, Cambodia, Eritrea, Haiti, Liberia 	
High dependence on certain commodities	<ul style="list-style-type: none"> Equatorial Guinea, Zambia, Angola, DR Congo, Laos 	<ul style="list-style-type: none"> Early stage financing to diversification, insurance/reinsurance
Landlocked countries	<ul style="list-style-type: none"> Rwanda, Central African Republic, Uganda, Niger, Chad, Burkina Faso, Zambia, Burundi, Ethiopia, Mali, Zimbabwe, Malawi, Afghanistan, Nepal, Laos 	<ul style="list-style-type: none"> Smart sustainable transportation, energy efficiency building/smart city, early stage financing focus on renewable energy

Table 2: Proposed SIDS Framework for potential modalities

SIDS: Shared characteristics & potential modalities

Shared Characteristics	Countries	Potential Modalities
High variance on income	<ul style="list-style-type: none"> SIDS have high variance of income (high income: Singapore, Bahamas, Barbados, low income: Kiribati, Papua New Guinea, Solomon Island, Vanuatu) 	<ul style="list-style-type: none"> Engage local financial institutions for mid-higher income countries Focus more on low income/developing countries, with modalities such as early stage financing, insurance/reinsurance, endowment fund for adaptation
Reliance on tourism	<ul style="list-style-type: none"> Fiji, Vanuatu, Bahamas, Belize 	<ul style="list-style-type: none"> Adaptation - coastal areas - endowment for adaptation, sustainable tourism
Reliance on agriculture / fishing	<ul style="list-style-type: none"> Solomon Island, Vanuatu, Micronesia 	<ul style="list-style-type: none"> Climate-smart agriculture solution, coastal adaptation program
Very vulnerable - existential threat	<ul style="list-style-type: none"> Atoll islands (Tuvalu, Marshall Island, Maldives, Kiribati) 	<ul style="list-style-type: none"> Adaptation - coastal areas - endowment for adaptation, water management
Very vulnerable - prone to disaster	<ul style="list-style-type: none"> Marshall Island, Samoa, Fiji 	<ul style="list-style-type: none"> Disaster reduction fund, smart city, smart transportation,
Reliance on outside donors	<ul style="list-style-type: none"> Niue, Marshall Islands 	<ul style="list-style-type: none"> Early stage financing, insurance/reinsurance
High dependence to fossil fuel import	<ul style="list-style-type: none"> Most pacific and caribbean SIDS with population < 2 mn people 	<ul style="list-style-type: none"> Early stage financing focusing on renewable energy, insurance/reinsurance
Reliance on remittance	<ul style="list-style-type: none"> Tonga, Haiti, Samoa 	<ul style="list-style-type: none"> Diaspora fund, Endowment fund for adaptation, insurance/reinsurance
Tiny islands with very small population	<ul style="list-style-type: none"> Most SIDS, except Singapore, PNG, Dominican republic, Haiti, Cuba which have population > 5 million people 	<ul style="list-style-type: none"> Early stage financing, insurance/reinsurance, endowment fund for adaptation, smart transportation,

V. Recommendations for consideration by the Private Sector Advisory Group for increased investment flow in climate mitigation and adaptation finance in LDCs and SIDS, and engagement with the private sector in adaptation action at the national, regional and international levels

31. This section of the paper outlines five potential suggestions for consideration by PSAG, including the rationale behind each modality, benefiting sectors, the barriers to be addressed, and their potential impact. They are derived from Tables 1 and 2 above, which reflect to the extent possible a synthesis of the analysis presented in Sections I to IV above.

32. In addition, these recommendations build on prior analysis presented to the GCF Board in paper, GCF/B.17/03, “Analysis of barriers to crowding-in and maximizing the engagement of the private sector, including Private Sector Advisory Group recommendations”, in which barriers were presented under five themes: (i) Policy and regulatory barriers, (ii) access to climate finance and local market barriers, (iii) affordability and technology barriers, (iv) knowledge and education barriers, and (v) region and country-related barriers and risks. The PSAG recommendations within that paper included the specific modalities set out below, which are recalled for their relevance to LDCs and SIDS:

33. Under “Access to Climate Finance and Local Market Barriers”:

- (a) Public-private initiatives that can develop innovative solutions to persistent investment barriers, including in energy efficiency, supply chains risk management, and waste to energy;
- (b) Local currency hedging solutions, including blended finance solutions to help address foreign exchange risk;
- (c) Financial structures and business models that favor the low carbon economy through creation of innovative and responsive public-private instruments that incentivize de-risking investments, such as guarantee products, including risk sharing facilities which allow scale up of RE/EE investment in private sector operations; and
- (d) Insurance products in offsetting risks associated with climate resilience and adaptation and in some segments of renewable energy supply gap.

34. Under “Knowledge and Education Barriers”:

- (a) To support private sector investment in energy efficiency, it is suggested that the GCF support countries to set up and adopt a reporting/monitoring system of energy consumption on the local businesses and industrial operations to provide a base on quantitative assessment of the energy use and cost. This first step could be followed by providing financial support to: (i) set up private public partnerships whereby experts from developed or developing countries can provide technical assistance and build local capacity of local industries and assist in a pragmatic shift, and (ii) provide funding instruments for local businesses to implement necessary capital expenditures and investment in energy efficient operations.
- (b) A Climate resilience targeted capacity building and awareness program supported by the GCF can help support countries to overcome barriers to private investment in climate resilience and adaptation resulting from the knowledge gap: lack of knowledge production, inadequate integration of knowledge, and limited transfer and uptake. GCF could also assist regions and countries, which lack a systematic identification and analysis of the above barriers.

5.1 Supply chain greening finance - Financial modality for adaptation

Rationale

35. The primary drivers of economic activities in the majority of LDCs and SIDS countries are focused in light manufacturing and/or services sectors. Manufacturing sectors and agricultural sectors include agriculture and agribusinesses, garment and textile manufacturing, pharmaceutical, etc. and the service sector include primarily tourism and in certain cases, financial services, which are starting to develop in certain SIDS countries. The majority of businesses in these countries are microenterprises, and small-to-medium size enterprises with some exceptions.

36. In addition to the need for green infrastructure in many of these countries, there is an urgent need to create climate resilience and adaptation to counter the long-term impact of climate change which will impact local resources, whether water, raw materials/commodities, or energy. Effective climate-smart practices already exist and could be implemented in SIDS and LDCs' agricultural systems and other light manufacturing sectors.

Proposed Financial Modality

37. It is proposed to provide loans to local microfinance institutions, which will provide credit lines to private sector micro and small-and- medium size enterprises with funding dedicated to improving the sustainability and efficiencies, and resource maximization of supply chains of these small businesses. This is particularly relevant for small farmers in SIDS and LDCs who often operate outside of the formal financial system, since they have a lack of capacity to provide collaterals to local banks to obtain loans. Credit lines offered at concessional terms would enable them to undertake basic investments in installing water management systems, purchase planting materials, etc. The tourism sector could also benefit from such a product in procuring solar panels, water treatment technologies, and investing in measures to protect their assets.

38. Technical assistance: A capacity building component is proposed alongside the loans to local banks to build capacity of their staff, undertake technical audits and assessment of supply chains of local businesses and provide estimates of cost reductions as a result of introduced efficiencies.

39. Barriers to address

(a) Access to finance:

- (i) Barriers to greening supply chains are created by the lack of appropriate financial instruments in local markets due to a shallow banking system and lack of scale in terms of project pipelines that justifies creation of a new business line by local banks to service a sizeable market demand;
- (ii) Given the scarcity of local financing, businesses are focused on sales growth rather than on investment in improving supply chains efficiencies and sustainability; and
- (iii) Lack of developed capital market reflects on the range of options in terms of financial instruments and products offered locally.

(b) Unsupportive business environment for Micro and SMEs: In LDCs and SIDS, Micro and SMEs receive little support from the local banks, insurance companies, regulators, etc.. This creates an unconducive environment for small business to invest in greening their businesses.

(c) Knowledge gap: Although improving supply chain efficiencies usually has a direct impact on profitability of a business, securing local financing for improvements is more difficult as quantifying accurately the benefits of such investments is not clear either to the businesses or to their lenders/financial institutions.

40. Countries most likely to benefit: All SIDS and LDCs where there are significant sector activities in agriculture and agribusiness, tourism, garment and textile, fisheries

41. Target industries and sectors: Agribusiness, agriculture, garment, textile, pharmaceutical, tourism
42. Potential impact: The proposed financing could trigger transformation across entire sectors and industries, resulting in minimizing long-term risk of climate change, reduction of GHG emissions, efficient use of water, natural resources, and raw materials, and direct long-term positive impact on food security and biodiversity.

5.2 Endowment Fund for Private Adaptation – Financial Modality for Adaptation

Rationale

43. UNEP’s 2016 Adaptation Gap Report confirms that the costs of adaptation which are currently estimated at USD 100 billion a year, are likely to increase up to USD 300 billion by 2030, and up to USD 500 billion by 2050.¹³ Against this backdrop, the Gap Report finds that total bilateral and multilateral funding for climate change adaptation in developing countries account for USD 22.5 billion – this is about 20 per cent of the current estimate. There is a significant funding gap and additional sources of climate finance for adaptation are urgently needed.
44. The private sector is engaging in adaptation when there is a desire to protect their assets and livelihoods from climate change and is willing, if finances are available, to spend money on goods and services that provide this protection. Most private sector action on climate change has gone to “climate-proofing” operations. Companies are relocating buildings to low-risk areas, purchasing weather insurance, and reducing water and energy usage—which are all good practices that protect them against climate hazards.
45. In some instances, private sector investment may help vulnerable populations, as is the case when corporations climate-proof their supply chains. For global companies, suppliers can be small-holder farmers, miners, or artisans in developing countries. These suppliers can build their adaptive capacity when corporations make their own supply chains more resilient, such as by giving farmers access to drought-resistant seeds.

Proposed Financial Modality

46. It is proposed that an endowment targeting USD 1 billion be created, seeded with initial capital from GCF for up to 20 per cent, or USD 200 million. The endowment will raise additional capital among private sector adaptation-friendly investors, corporates, family offices, impact investors and philanthropic investors. A professional fund manager will be hired to manage and expand the endowment’s capitalization. The endowment will be invested in strong quality commercial paper that will generate income. The net income (net of management fees) will then be invested in adaptation projects in SIDS and LDCs – most of which are in nature small to medium size. The returns on the investments will be reinvested in the endowment.
47. Barriers to address
 - (a) Difficulties in identifying and mobilizing private capital and institutional Investors that would like a modest return and principal return but want to create a positive climate impact and do not have duration limitations;
 - (b) Investing in small and medium sized private sector adaptation projects in LDCs and SIDS is not usually a destination of institutional capital;

¹³ Adaptation Gap Report, 2016. UNEP. <http://www.unep.org/adaptationgapreport/2016>

- (c) Supporting PPP that are unable to raise the private element of the capitalization;
 - (d) Lack of positive demonstration effects that adaptation investments are viable and attractive investments for private sector investors, in a context where there is a perception that investing in adaptation related projects is not lucrative for private sector actors.
48. Countries most likely to benefit: All SIDS located in the Caribbean and Pacific and African LDCs.
49. Target industries and sectors: Mainly sectors that are important to the livelihood of the SIDS and LDCs, such as: i) Infrastructure: Ports, roads, airports, ii) Ecosystems, iii) Health, iv) Services endangered communities, v) Fisheries, vi) Agribusiness, vii) Tourism, viii) Export, and ix) Mining.
50. Potential impact: Very positive impact on the livelihood of communities. Positive impact on marine environments.

5.3 Local Currency Lending – Financial Modality for Mitigation and Adaptation

Rationale

51. Local currency lending is key for the commercial and financial viability of climate related projects in developing countries in general and LDCs and SIDS in particular given that they are subject to high currency fluctuation and unstable economic conditions. Most LDCs and SIDS do not have a swap market, bond market, or appropriate financial mechanism and rules allowing the use of local currency risk hedging instruments.
52. Currency fluctuation impacts businesses in cases of imported technology and equipment, foreign currency loans, or export of energy to another country where the proceeds of payments are in hard currency. As revenues are expected to be in local currency, a developer's balance sheet is exposed to a foreign exchange risk. Within the available schemes of international concessional public financing, funding flows are disbursed in USD or Euro, which presents a bottleneck particularly for LDCs and SIDS with high currency fluctuations. The question that remains is who bears the currency risk: the end recipient of funding, the implementing agency/entity, or the source of the concessional funds?

Proposed Financial Modality

53. To increase local currency intermediation and to support the development of climate mitigation and adaptation related investment by the private sector in LDCs and SIDS, it is proposed to provide local currency loans by procuring local currency funding or hedging, by entering into currency swaps with third party providers, such as the Currency Exchange Fund (TCX). TCX is a currency risk hedging dedicated firm that was initially sponsored and capitalized with investments from the major development banks, (such as EBRD, FMO, and IFC) in response to the high cost of local currency debt and currency fluctuation risks in developing countries.
54. Given the differential between funding/hedging in foreign currency and local currencies in emerging markets is very high, interest rates do not appear viable for small and medium-sized enterprises. Therefore, to reduce interest rates on local currency loans, it is proposed that the GCF enter into a risk-sharing arrangement, which allows for affordable interest rates. A USD 100 million local currency facility could be structured as a pilot in the Caribbean, to be expanded further based on market appetite and demand by private sector project developers in other SIDS.
55. Barriers to address

- (a) Nonexistence of SWAP or Bond market in most LDCs and SIDS to allow local currency hedging and appropriate pricing;
- (b) Prohibitive interest rates levels for lending/hedging in local currency
- 56. Countries most likely to benefit: Middle income countries among SIDS.
- 57. Target industries and sectors: Project developers of renewable energy projects and financial institutions looking at borrowing in local currency to fund renewable energy and energy efficiency projects locally.
- 58. Potential impact:
 - (a) Mitigated foreign currency risk and interest rate exposure for borrowers whose revenues are denominated in local currency;
 - (b) Improved creditworthiness of climate related projects which solely generate local currency income by avoiding foreign exchange risk;
 - (c) Accelerated and increased access to climate finance by local project developers and micro finance institutions;
 - (d) Direct short-term liquidity back into the real economy;
 - (e) Extended maturity of local currency loans available in the market; and
 - (f) Introduced innovative techniques that help foster the overall development of the market.

5.4 Catalyzing Early-Stage Capital to Confront Climate Change (Debt or Equity) – Financial Modality for Adaptation and Mitigation

Rationale

59. In developed countries, angel investors play an important role in financing the early-stage of climate-related companies. This is a high-risk stage typically between the R&D and proof of concept stages. Angels generally like to see a proof of concept before they invest, and their financing is what takes that concept to the next level where it can attract formal venture capital. In the developing world, however, angel networks are not fully developed and mature. Often new companies that are trying to establish their operations or launching new ideas and services cannot raise this initial capital and hence fail although their ideas could have been workable. Local banks may lend limited amounts of capital if there is collateral. Some multilateral banks operating in the private sector may consider investing in selected companies but often their lending is US dollar based and their ability to invest in equity tied to stringent requirements.

60. A new model to raise early-stage capital is crowdfunding. Crowdfunding allows a wide range of investors (who are not necessarily formally connected) to take part in a project through smaller individual investments. While crowdfunding is starting to be exported to the developing world, substantial restrictions still exist in smaller countries about on-line crowdfunding portals or offering an equity stake in the company on-line.

61. The financial challenge remains that most local companies trying to participate in mitigation and adaptation in the developing world cannot secure funding at this pre-bankable stage, therefore cannot become operational.

Proposed Financial Modality

62. GCF has an opportunity to address a barrier to company creation, product innovation and the introduction of environmental services. Through the support of concessional long-term debt, long-termed lines of credit and its equity program, GCF is able to act through regional accredited entities by strengthening their capacity to invest in mitigation and adaption regional projects, programs and start-ups. GCF intervention will also seek the mobilization of local and regional financial intermediaries (including financial services providers such as cooperatives and trades' credit unions) and multilateral institutions.

63. Barriers to address

- (a) Enabling local and regional Accredited Entities to be active in the funding of start-ups, innovation and new services;
- (b) Crowding-in local private capital that are shy about investing in mitigation and adaption projects and programs;
- (c) Investing in small and medium sized private sector companies that are active in the climate finance space;
- (d) Positive demonstration effect that adaptation investments are viable and attractive investments for private sector investors.

64. Countries most likely to benefit: LDC and SIDS that have a modestly developed financial market but need a good local demonstration effect to spur investment in local mitigation and adaptation projects.

65. Target industries and sector: Mainly sectors that are important to the livelihood of the SIDS and LDCs, such as:

- (a) Insurance;
- (b) Financial services to strengthen changes in crops, livestock and aquaculture
- (c) Ecosystems;
- (d) Health; and
- (e) Fisheries.

66. Potential climate impact

- (a) Reduced emissions and implementation of climate-smart solutions; and
- (b) Promote climate adaptation solutions contributing to enhance long-term climate resilience.

5.5 Insurance and Re-insurance – Financial Modality for Adaptation and Mitigation

Rationale

67. Climate insurance products are offered to protect communities and companies against natural catastrophes such as severe storms, extreme temperatures, droughts, floods, wildfires, volcanic activities, landslides, and tsunamis. Data from the EM-DAT Database show that over 7,000 natural disasters occurred worldwide in the last 20 years (1995-2015), affecting a total of 4.3 billion people, with damages estimated at USD 2.3 trillion.

68. In the developed world, for example, effective and affordable climate insurance has evolved to include insurance against crop loss. Crop insurance is the primary risk management tool farmers use to financially recover from natural disasters and volatile market fluctuations. It can be used to pay their bankers, fertilizer suppliers, equipment providers and landlords, purchase their production inputs for the next season, and give them the confidence to make long term investments that will increase their production efficiency.

69. Without effective and affordable insurance, catastrophic losses destroy livelihoods, communities and make countries unstable. Large, unpredictable, and costly disasters are inevitable – but global reinsurance provides a mechanism to compensate insured parties for their losses, using the premiums they and others have paid beforehand under an agreed contract. Global reinsurers are able to offer this service to insurers because they pool their risks and capital globally and thus gain the benefits of diversification.

Proposed Financial Modality

70. The SIDS and LDCs face a higher propensity for climate disasters, and therefore insurance premiums are higher. Often they are unaffordable. GCF has an opportunity to make insurance/and re-insurance premiums more affordable by creating risk sharing facilities with both insurance and re-insurance companies. Effectively diversifying the pool of contracts, lowering the risk and allowing insurance/re-insurance to absorb more shocks and sustain long-term investment.

71. What is needed is a two-stage approach. The first stage is to identify and track climate risk via a public database. The second stage is to create a private sector risk-sharing facility with insurance and reinsurance, based upon the identified risks.

72. Barriers to address: The insurance and re-insurance sectors play a very important role in allowing risk transfer. However, many studies show that global warming has increased the severity and frequency of natural disasters. Hence it is necessary to build innovative solutions to improve global climate-risk resilience. ClimateWise, a network of 29 leading insurance industry organizations formed in 2008, recommend the insurers to support “green bonds, resilience impact bonds and investments in resilience-enhancing infrastructure”.

- (a) Close the climate protection gap (insurance penetration in the developing market versus the need of growing exposure to climate risk);
- (b) Protect vulnerable societies from the threats of climate change; and
- (c) Reduce the economic impact of natural catastrophes that has dramatically increased in the last 20 years.¹⁴

¹⁴ ClimateWise, Re/insurance & ILS can help close climate risk protection gap, 2016, <http://www.artemis.bm/blog/2016/12/16/reinsurance-ils-can-help-close-climate-risk-protection-gap/>.

73. Countries most likely to benefit: Developing countries in general, but especially small islands at sea level as well agriculture and feedstock-based economies.

74. Target industries and sector:

- (a) Agriculture;
- (b) Livestock;
- (c) Logistics;
- (d) Tourism; and
- (e) Urban basic services (recently urbanized areas that faces unplanned and informal settlements).

75. Potential climate impact: Insurance and reinsurance products are key to offset financial risks associated with climate change. The financial viability of businesses and the sustainability of their underlying assets are key to the survival of industries, businesses, and the livelihood of communities.

Annex II - Country Analysis

Annex III - Summary Country Survey

Annex IV - List of UN Least Developed Countries (“LDCs”)

1	Afghanistan	25	Malawi
2	Angola	26	Mali
3	Bangladesh	27	Mauritania
4	Benin	28	Mozambique
5	Bhutan	29	Myanmar
6	Burkina Faso	30	Nepal
7	Burundi	31	Niger
8	Cambodia	32	Rwanda
9	Central African Republic	33	Sao Tome and Principe
10	Chad	34	Senegal
11	Comoros	35	Sierra Leone
12	Democratic Republic of the Congo	36	Solomon Islands
13	Djibouti	37	Somalia
14	Eritrea	38	South Sudan
15	Ethiopia	39	Sudan
16	Gambia	40	Timor-Leste
17	Guinea	41	Togo
18	Guinea-Bissau	42	Tuvalu
19	Haiti	43	Uganda
20	Kiribati	44	United Republic of Tanzania
21	Lao People’s Democratic Republic	45	Vanuatu
22	Lesotho	46	Yemen
23	Liberia	47	Zambia
24	Madagascar		



Annex D: List of Small Islands Developing States (SIDS)¹⁵

UN Members (38)			
1	Antigua and Barbuda	21	Mauritius
2	Bahamas	22	Nauru
3	Bahrain	23	Palau
4	Barbados	24	Papua New Guinea
5	Belize	25	Samoa
6	Cabo Verde	26	São Tomé and Príncipe *
7	Comoros *	27	Singapore
8	Cuba	28	St. Kitts and Nevis
9	Dominica	29	St. Lucia
10	Dominican Republic	30	St. Vincent and the Grenadines
11	Fiji	31	Seychelles
12	Grenada	32	Solomon Islands *
13	Guinea-Bissau *	33	Suriname
14	Guyana	34	Timor-Leste *
15	Haiti *	35	Tonga
16	Jamaica	36	Trinidad and Tobago
17	Kiribati *	37	Tuvalu *
18	Maldives	38	Vanuatu *
19	Marshall Islands		
20	Federated States of Micronesia		

¹⁵ Source: List of the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.

(*): Also Least Developed Countries.



Non-UN Members/Associate Members of the Regional Commissions (2)			
1	Niue	2	Cook Islands
