SMALL STATES: VULNERABILITY AND CONCESSIONAL FINANCE

Technical Note

The World Bank

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Contents

ANNEXES

CHARTS

FIGURES

TABLES

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
CAT-DDO	Catastrophe Deferred Drawdown Option
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDB	Caribbean Development Bank
CRI	Climate Risk Index
CRW	Crisis Response Window
DAC	Development Assistance Committee
DSF	Debt Sustainability Framework
EVI	Economic Vulnerability Index
GDP	Gross Domestic Product
GNI	Gross National Income
HAI	Human Assets Index
HDI	Human Development Index
HIC	High Income Country
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IMF	International Monetary Fund
LDC	Least Developed Country
LIC	Low Income Country
MDB	Multilateral Development Bank
MIC	Middle Income Country
MTR	Mid-term Review
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PBA	Performance Based Allocation
PCRAFI	Pacific Catastrophe Risk Assessment and Financing Initiative
PPG	Public and Publicly Guaranteed Debt
PPP	Purchasing Power Parity
PSW	Private Sector Window
SSF	Small States Forum
UNCDP	United Nations Committee for Development Policy
UNDP	United Nations Development Program
WB	World Bank
WBG	World Bank Group
WDI	World Development Indicators
WEO	World Economic Outlook
WRI	WorldRiskIndex

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1. INTRODUCTION

1. The purpose of this technical note is to inform Management on issues of vulnerability and concessional finance in small states. Specifically, it aims to inform the discussion around calls made by members of the Small States Forum (SSF) to include vulnerability as a criterion for accessing concessional resources.

2. In the Roadmap for the World Bank Group (WBG) Engagement in Small States[1] launched in 2017, OPCS committed to explore the merits of including vulnerability as a criterion for concessional financing. This work envisaged mapping available vulnerability metrics and working to define a vulnerability index, if deemed appropriate.

3. A Bank-wide review of a Concept Note held in June 2017 highlighted the technical/contestability challenges of developing and operationalizing a vulnerability index, further noting that a single metric for all countries may lead to perverse outcomes, i.e. small states may come out as less vulnerable than larger states. To better understand the issue at hand, the team was advised to examine different categories of small states, including their degree of vulnerability and access to concessional finance.

4. In line with this overall guidance, this note examines (i) the diversity of the small states' client segment; (ii) the degree of vulnerability of small states based on commonly used metrics and the relationship between such metrics and concessional finance; and (iii) recent trends in official development assistance (ODA), including from IDA.

5. The analysis covers in principle all 50 members of the SSF, which includes 42 countries classified as small states under the World Bank's operational definition (i. e. countries with a population of 1.5 million or less).[2] For consistency, "small states" in this note refers to countries conforming to the World Bank's definition and "other SSF countries" refers to those SSF members with a population above 1.5 million. [3]

2. DIVERSITY ACROSS MEMBERS OF THE SSF

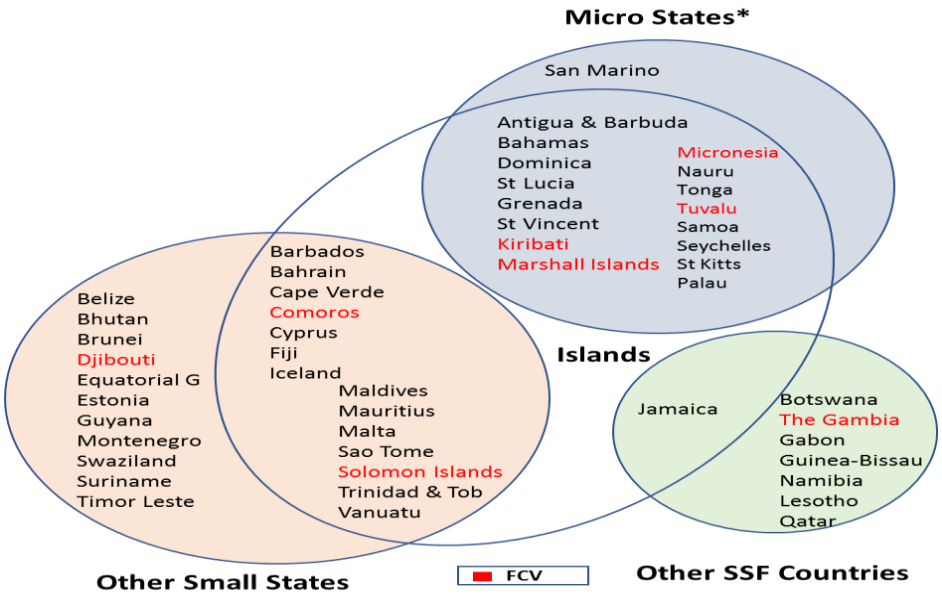
6. **While small size is a common feature shared by SSF members, the group is very heterogeneous.** This heterogeneity is reflected across several dimensions, including population levels, geography and other features that result in a wide spectrum of development challenges and outcomes.

7. **Population**. The SSF comprises 50 members with a total population of about 40 million (0.5 percent of the world's population). While the defining feature of these countries is having a small population, there is a significant variation in population levels (Figure 1). The SSF is made up of 42 small states and 8 other SSF countries[4], accounting for 54 percent and 46 percent of the

[1] World Bank (2017a).
[2] World Bank (2017b), Financial Terms and Conditions of Bank Financing.
[3] The IMF, the Commonwealth Secretariat, and the Asian Development Bank (ADB) also define small state as a country with a population of 1.5 million or less. Small states account for a quarter of all developing countries.
[4] Other SSF members include: Botswana, Gabon, The Gambia, Guinea Bissau, Jamaica, Lesotho, Namibia, Qatar.

group's population, respectively. Over 40 percent of small states (18) are micro states (i.e. with a population of less than 200,000). The SSF group includes the smallest countries in the world, Tuvalu and Nauru (with 11,097 and 13,049 inhabitants, respectively) and Jamaica (with 2.9 million inhabitants, i.e. 260 times the size of Tuvalu). See Annex 1.

Figure 1. SSF Members by Population Size and Geography



Source: World Bank, WDI

*Micro States are defined as countries having less than 200,000 inhabitants.

8. **Geographic characteristics**. SSF countries are distributed across all regions and most are island countries (around two thirds). The remaining one third includes five land-locked countries (Bhutan, Botswana, Lesotho, San Marino, and Swaziland).

9. **Remoteness**.[5] Several SSF countries, particularly islands, are among the most remote in terms of distance to the nearest international markets (e.g., Pacific islands – Figure 2). A few of them, however, are closer to markets than most countries around the world (e.g., Cyprus).

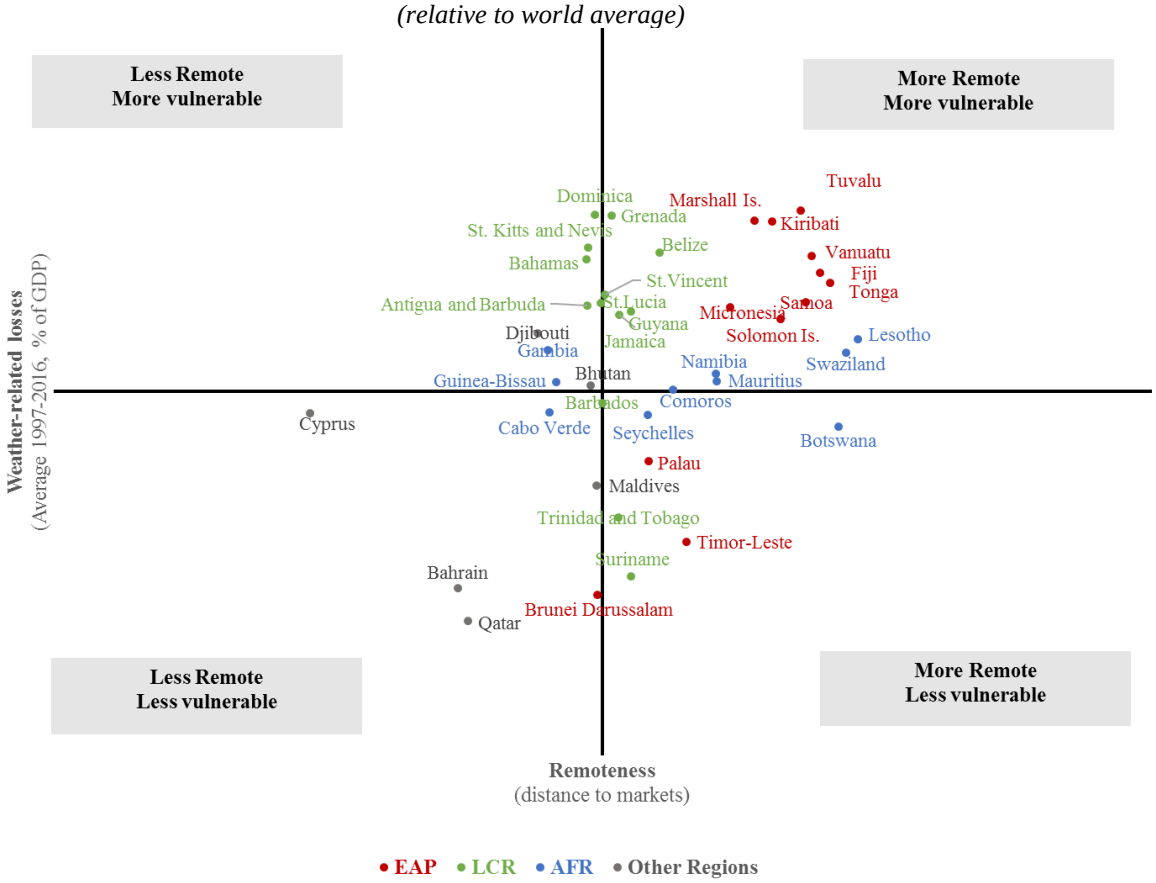
10. **Land area**. A number of countries have a very small land area (e.g., Nauru has 20 square kilometers, roughly one-tenth the area of Washington DC). Non-island countries tend to have larger land areas. As an illustration, Namibia and Botswana each have 4.5 and 3.1 times the area of all small island countries combined, respectively.

11. **Fragmentation and dispersion**. Some countries are constituted by several islands dispersed over a broad ocean area (e.g., Kiribati has an area of 810 square kilometers distributed in 35 atolls/islands spread over 3.6 million square kilometers of ocean – about 40 percent the United States area). Non-island countries, with a few exceptions, are not geographically fragmented.

[5] Remoteness is defined as the trade-weighted average distance to the nearest trading partners with a cumulative world trade share of 50 percent.

12. **Vulnerability to natural disasters and climate change.** Generally, SSF countries are disproportionately vulnerable to a range of natural disasters, partly because many are located in natural disaster-prone areas. Yet some SSF countries are less vulnerable to natural disasters[6] than others (see Figure 2). Similarly, one-third of small states countries are highly or extremely vulnerable to the impact of climate change while others are much less vulnerable. [7]

Figure 2. SSF Remoteness and Climate Vulnerability
(relative to world average)



Notes and sources. Indicators of Remoteness and Weather-related losses were standardized to address scale issues. Remoteness: United Nations Committee for Development Policy Secretariat. Triennial review dataset 2000 - 2015. Weather-related losses: Global Climate Risk Index

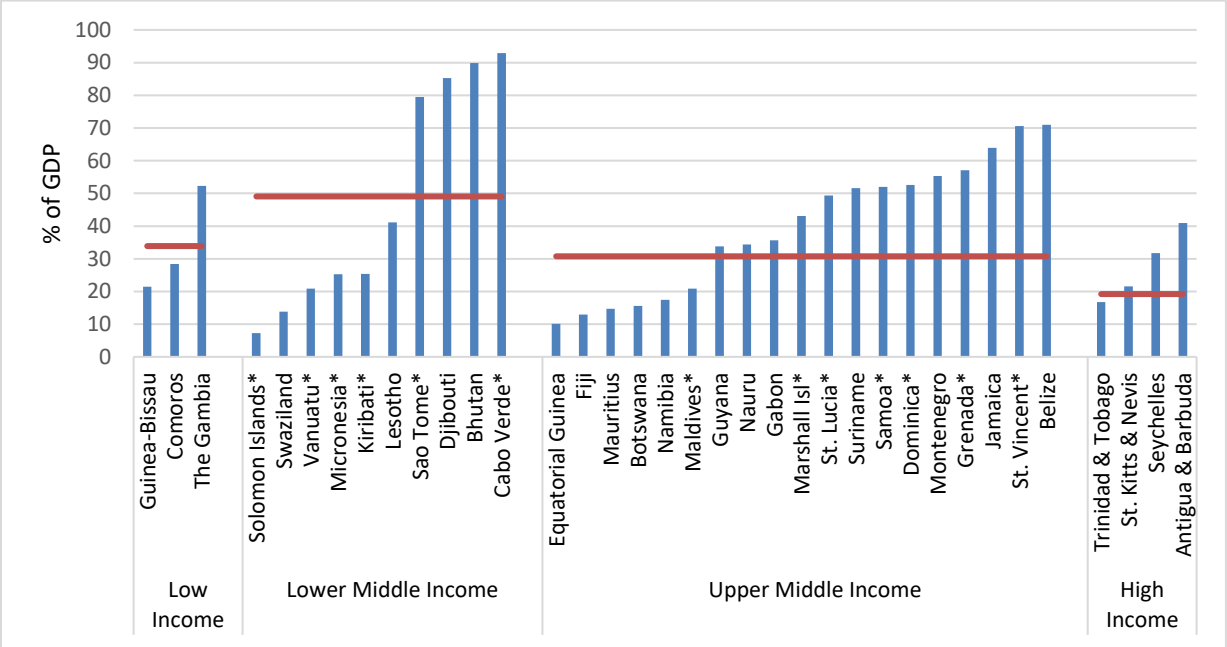
13. **Size and other features noted above inhibit SSF countries from generating scale and agglomeration economies and this has been well documented.**[8] This results in special development challenges that, while common across the group, exhibit significant variation at the country level. SSF countries tend to have: high transportation costs; narrow production bases, which are typically commodity-oriented (e.g., oil in Trinidad and Tobago, copra in Kiribati) or service-oriented (e.g., tourism in the Caribbean and some Pacific islands); highly specialized export structures in terms of products and destinations; and a high degree of trade and financial openness. Combined with smallness, these characteristics have contributed to several common

[6] Measured by weather-related losses in percent of GDP.
[7] See IMF (2016).
[8] For recent analysis, see World Bank (2016), IMF (2018).

development challenges, including: high growth volatility, high relative costs of natural disasters, and fiscal management issues associated with low revenue generation and a lack of scale economies in public service provision.

14. **Significant growth volatility, relatively slower growth and weak fiscal management have contributed to a sizeable debt accumulation in many SSF countries.** Reflecting in part debt relief and restructurings, the average public and publicly guaranteed (PPG) external debt for SSF countries decreased from 49 to 41 percent of GDP between 2006 and 2016. Despite this, debt levels for SSF countries are on average about 7-13 percentage points higher than other developing countries. This broad trend notwithstanding, there is considerable diversity in debt burdens (Figure 3). The 2016 ratio of PPG external debt-to-GDP ranges from 7 percent in Solomon Islands to 93 percent in Cabo Verde.

Figure 3. SSF Public and Publicly Guaranteed External Debt, 2016



Source: IMF, WEO

15. **While economic size has development implications, it does not necessarily translate into low incomes or levels of development, although there is high variation across SSF members (see Annex 1).**

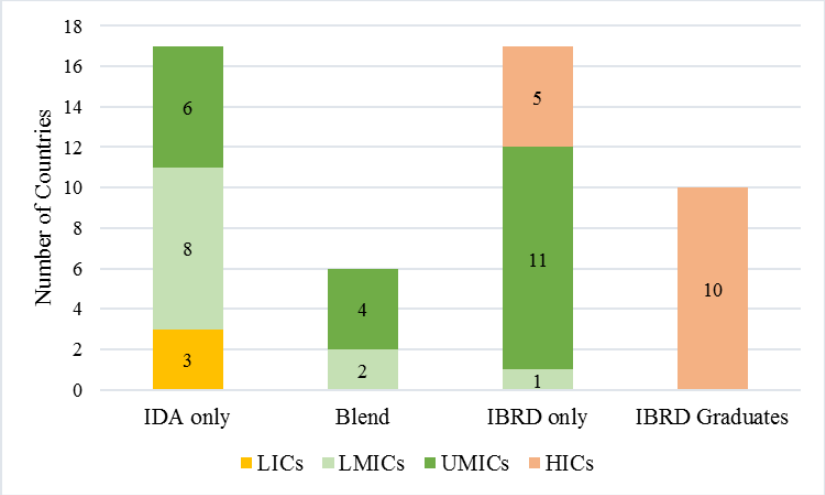
- Most SSF members are middle-income countries (MICs) or high-income countries (HICs)— and only three are low income countries (LICs).[9]
- GNI per capita ranges from US$440 (the Gambia) to US$75,660 (Qatar) while some countries post a GNI per capita above US$50,000 (Iceland, San Marino).
- The group includes very poor and fragile countries like Comoros, the Gambia, Guinea-Bissau and advanced economies like Cyprus, Iceland, Malta, Estonia, and San Marino.

[9] The World Bank classifies countries into four categories based on their GNI per capita (Atlas Methodology). For fiscal year 2017, the income level for each category is as follows: LICS (= or less than US$1,055); Lower MICs (=US$1,056 to US$3,955); Upper MICs (=US$3,956 to US$12,235); HICs (= or higher than US$12,236).

16. **By World Bank borrowing status, the SSF group includes countries across the IDA/IBRD spectrum, as shown in Figure 4.**

- There are 23 IDA-eligible countries (including 6 Blends) with access to concessional resources. Included in this category are 20 MICs and 9 countries classified as fragile under the latest harmonized list.[10]
- In addition, there are 17 IBRD-only countries (consisting of 12 MICs and 5 HICs) and 10 IBRD graduates (all HICs).[11]

Figure 4. SSF Countries by Income Category and World Bank Lending Status



Source: World Bank, WDI

17. **The rest of the analysis focuses on the 40 SSF members eligible to borrow from the World Bank**, i.e. excluding IBRD graduates. It includes 33 small states and 7 other SSF members.

3. VULNERABILITY AND CONCESSIONAL FINANCE

18. **It is broadly accepted that GNI per capita does not fully capture a country's level of development**. Nonetheless, GNI per capita has proven to be a useful and easily available indicator that is closely correlated with other non-monetary measures of development such as life expectancy at birth, mortality rates of children, and school enrollment rates. The World Bank uses this indicator to classify countries along income groupings and as part of the criteria (along with creditworthiness) for providing concessional resources (both eligibility and allocation).

19. **It has been further argued that GNI per capita is not by itself an adequate measure of development for small states, which are disproportionally vulnerable to shocks**.[12] Because of their size, small states are generally more vulnerable to exogenous shocks than larger economies even when they have achieved higher income levels. In this context, calls have been made to develop a vulnerability index that could be used to supplement GNI per capita in assessing small states' development needs, including their concessional financing needs.

[10] Comoros, Djibouti, the Gambia, Guinea-Bissau, Kiribati, Marshall Islands, Micronesia, Solomon Islands, Tuvalu.
[11] Brunei, Bahamas, Barbados, Bahrain, Qatar, Cyprus, Estonia, Iceland, Malta, San Marino. See Annex 1.
[12] Calls to construct a vulnerability index for small states go back to the 1980s.

20. **The concept of vulnerability can encompass different dimensions.** A concept often referenced in the literature is that of "structural vulnerability", defined as the risk that a country's development will be hampered by natural or external shocks. The terms of vulnerability and risk are often used interchangeably to denote a degree of exposure to exogenous events, as distinct from "resilience" which refers to the policy-induced ability of a country to recover from or adjust to adverse exogenous shocks. Arguably, a robust concept of vulnerability should encompass both "exposure" and "resilience" dimensions.[13] In practice, vulnerability metrics may focus on one dimension or both depending on the underlying conceptual framework and/ or data availability considerations.

A. Vulnerability Metrics

21. **Over the past couple of decades, the international community has attempted to develop several measures of vulnerability that are relevant for small states.[14]** Annex 2 provides an overview of vulnerability metrics, including some of the shortcomings associated with their formulation and application (e.g. conceptual framework, unclear rationale for components' weights, data lags, periodicity, coverage, etc.). For the most part, existing vulnerability indices are used for ranking or classification purposes and not for resource allocation. They are global in scope and are not applicable specifically to small states. Below is a brief description of some metrics that are relevant for small states.

22. **Economic Vulnerability.** Since the mid- 1990s, the United Nations (UN) system and the Commonwealth Secretariat have commissioned experts to develop measures of structural vulnerability to economic and environmental shocks. A well-known and commonly used index is the Economic Vulnerability Index (EVI) developed in 2000 by the UN Committee for Development Policy (UNCDP) in collaboration with FERDI (Foundation for International Studies).[15]

- **EVI:** This index covers 145 developing countries and is used as one of the criteria to identify Least Developed Countries (LDCs) which are then eligible to receive preferential trade or aid treatment. [16] It is composed of two sub-indices: (i) The Exposure Index, which factors population size, remoteness, export concentration, share of agriculture in GDP, share of population living in low elevated coastal zones; and (ii) The Shock Index which quantifies instability of exports of goods and services, victims of natural disasters, and instability of agricultural production. Higher scores signify greater vulnerability. The index is not available for Montenegro. Critics note that by including population size as a component, the EVI assumes ex-ante what it tries to prove, i.e. that countries with smaller population are more vulnerable [17].

[13] Briguglio et al (2009), Briguglio (2014) distinguish between economic resilience, which is policy-induced, and economic vulnerability, which is due to inherent features of the economy.
[14] Briguglio from the University of Malta pioneered work on an economic vulnerability index in the early 1990s.
[15] Briguglio (2014) presents a literature review of various economic vulnerability indices developed in past decades, including his own EVI commissioned by the Commonwealth Secretariat. Except for the UN's EVI, none of the indices reviewed have been operationalized.
[16] Other elements of the LDC criteria include the Human Assets Index (HAI) and GNI per capita.
[17] For further criticism see Briguglio (2014).

23. **Human development.** Human development indicators can provide a measure of a country's resilience or ability to cope with shocks. Two metrics were considered: (i) the Human Assets Index (HAI), used by the UNCDP; and (ii) the Human Development Index (HDI) used by UNDP. Because of significant HAI data gaps[18], the analysis in this area is limited to the HDI.

- **HDI**: This index is used by UNDP to rank 188 developed and developing countries along four tiers of human development: Very High, High, Medium, and Low. It is a composite statistic of three dimensions: health (life expectancy), education (schooling years, expected schooling years), and living standard (GNI per capita in PPP terms). Higher scores mean higher human development. The HDI is not available for the Marshall Islands, Tuvalu, Nauru, and San Marino.

24. **Climate/disaster risk.** There are also metrics designed to capture climate and disaster risk which would be relevant for small states. Two such indices are: (i) the Global Climate Risk Index (CRI) developed by Germanwatch;[19] and (ii) the WorldRisk Index (WRI) calculated by the UN Institute for Environmental and Social Security.[20]

- **CRI:** It ranks 182 developed and developing countries most affected by weather events (storms, floods, heat waves), but it does not capture sea-level rise or earthquakes. The index indicates a level of future exposure to extreme weather events based on past weather-related losses (i.e. number of deaths and economic losses in absolute and relative terms). Lower scores indicate greater risk. Due to data constraints, the index is not available for Sao Tome and Principe, Equatorial Guinea, Nauru, and Timor Leste.

- **WRI:** It calculates disaster risk for 171 developed and developing countries which are classified into five categories of risk: Very High, High, Medium, Low, and Vey Low. The index is based on four components: (i) exposure to natural hazards (earthquakes, hurricanes, flooding, drought, sea-level rise); (ii) vulnerability as dependent on infrastructure, nutrition, living conditions, (iii) coping capacities as per governance, disaster preparedness, health care; (iv) adapting capacities. The index captures both exposure and resilience (linked to human and physical assets, policy, and institutions), and thereby is more robust in its formulation than the CRI, but it is also more complex and challenging from the point of view of data collection. Lower ratings signify lower risk and vice-versa. Scores are not available for 15 SSF members.

B. Vulnerability of Small States

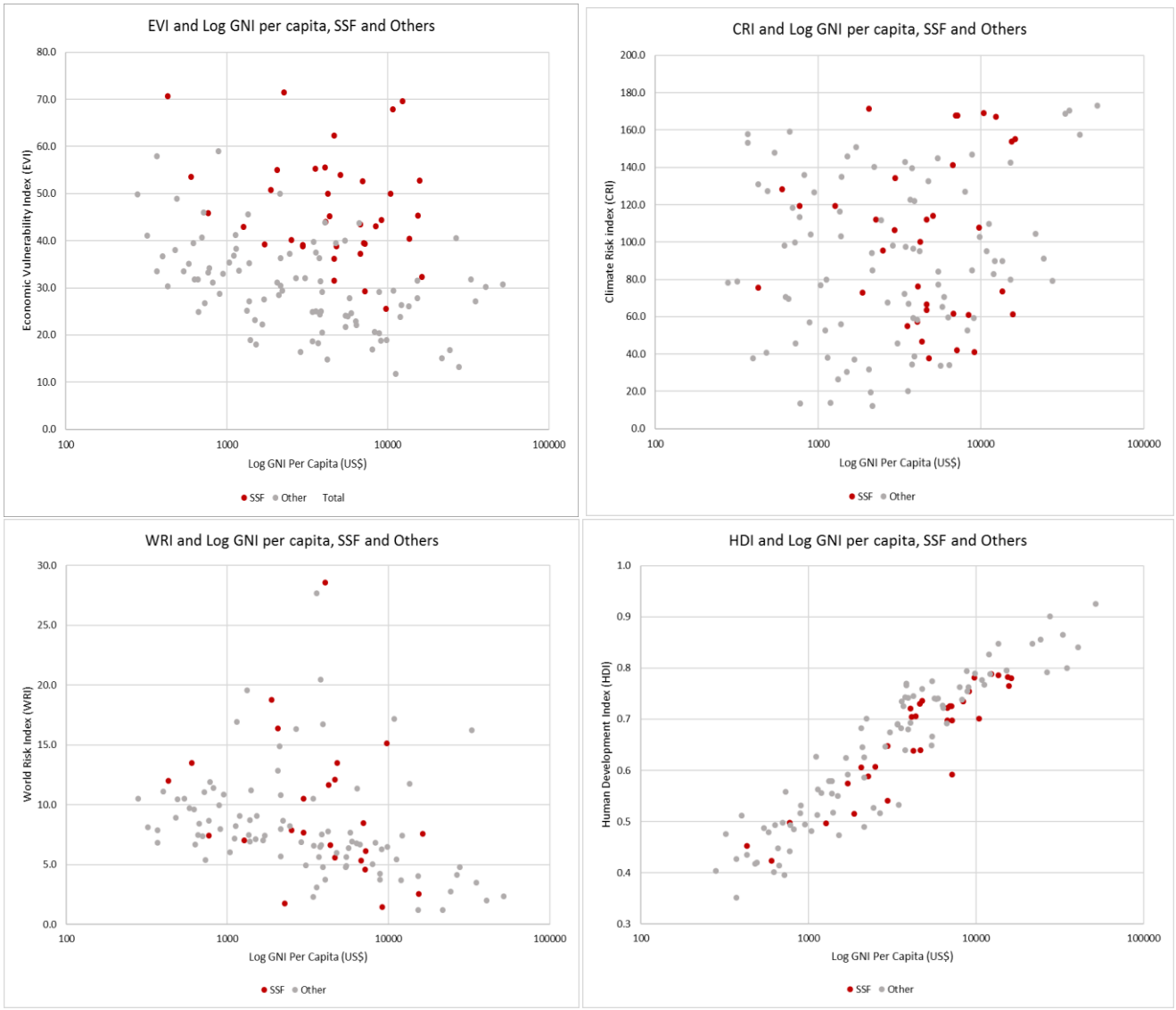
25. **Vulnerability is an issue for a broad spectrum of countries, not only small states**. Chart 1 shows various vulnerability indices and GNI per capita for SSF countries and other countries. While SSF countries generally tend to be more vulnerable than larger countries under the various indices, there is a significant overlap in vulnerability between the two groups. This is

[18] Two sets of HAI datasets are currently available: HAI from Official Sources (HAI FOS, 2013 Update), and HAI with Filled Gaps (HAI WFG, 2013 Update). The HAI FOS covers only 18 SSF countries with several missing observations. HAI WFG, extends the country-year coverage but uses econometric tools to generate missing data.
[19] See Germanwatch (2018).
[20] See Bundis Entwicklung Hilft (2017).

an interesting finding particularly in the case of EVI, which per design renders countries with smaller population as more vulnerable.

26. **Moreover, SSF countries are not always more vulnerable than larger economies**. For example, SSF members are not amongst the most vulnerable to extreme weather events, as measured by the CRI. The world's top ten vulnerable countries over the period are: Honduras, Haiti, Myanmar, Nicaragua, Philippines, Bangladesh, Pakistan, Vietnam, Thailand, and Dominican Republic, most of which are in Asia. Fiji ranks 13 and Grenada 20.

Chart 1. Comparison of Vulnerability between SSF and Other Countries



27. **The ranking of vulnerability for SSF members varies depending on the metric used and can be inconsistent across metrics. Below are some observations:**

- As per the latest EVI scores published by the UN in 2015 (see Figure 5), the most vulnerable countries among SSF members are Kiribati, the Gambia, Palau, Nauru, and

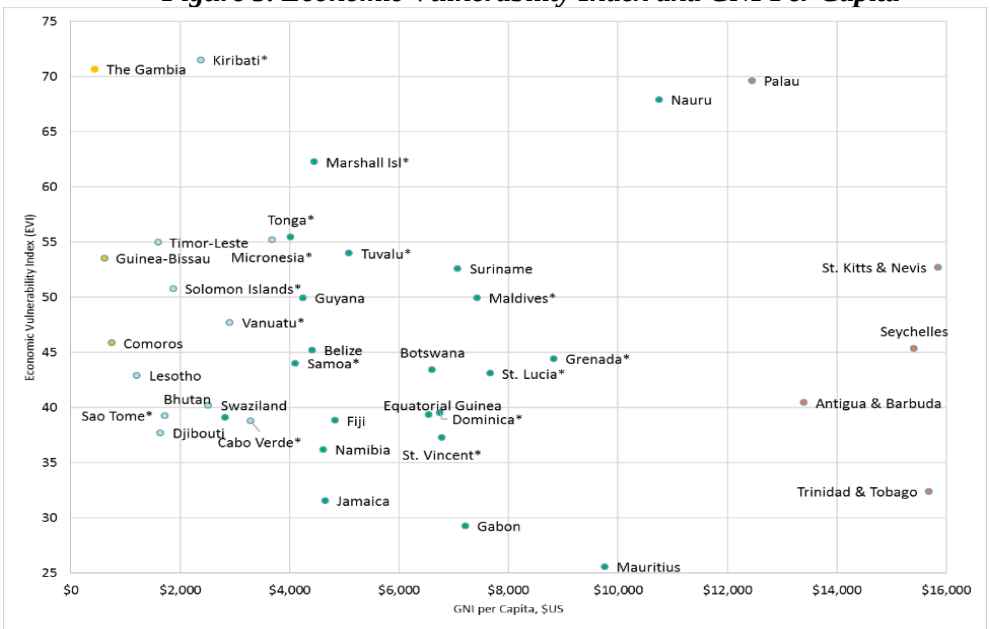
Marshall Islands. These are also the most vulnerable of the 145 developing countries covered by the index and, except for Nauru and Palau, are also classified as fragile states. The least vulnerable among SSF members are Mauritius, Gabon, Jamaica, Trinidad and Tobago, and Namibia, with scores below the EVI threshold for inclusion in the LDC category (set at 36).

- According to the latest CRI scores for the period of 1997-2016 (see Figure 7), the most vulnerable SSF countries are Fiji, Dominica, Grenada, Belize, and Micronesia. The least vulnerable are Maldives, Gabon, Suriname, Palau, Seychelles, Trinidad and Tobago, and Botswana.
- Out of 33 SSF countries covered by the WRI, 17 are ranked as Very High or High risk. Included in this list is Fiji, but also Mauritius and Trinidad and Tobago (which are among the least vulnerable under the CRI). Countries classified as Low or Very Low risk include Namibia, Botswana, Equatorial Guinea, Seychelles (consistent with the CRI scores), but also Grenada and Kiribati (which under the WRI are imputed as having low exposure to natural hazards).
- Under the HDI, countries with low ratings include LICs such as Guinea Bissau, the Gambia, and Comoros as well as lower MICs such as Lesotho, Djibouti and Solomon Islands. Upper MICs and HICs have higher HDI scores.

C. Vulnerability and Income Level

28. **As shown in Figure 5, there is a negative albeit weak correlation between the EVI and GNI per capita for SSF members**.[21] A negative sign indicates that higher economic vulnerability is associated with lower income levels and vice-versa. There are significant outliers such as Nauru and Palau, which display high EVI scores despite having higher income levels (likely reflecting the population size and remoteness components of the EVI).

Figure 5. Economic Vulnerability Index and GNI Per Capita

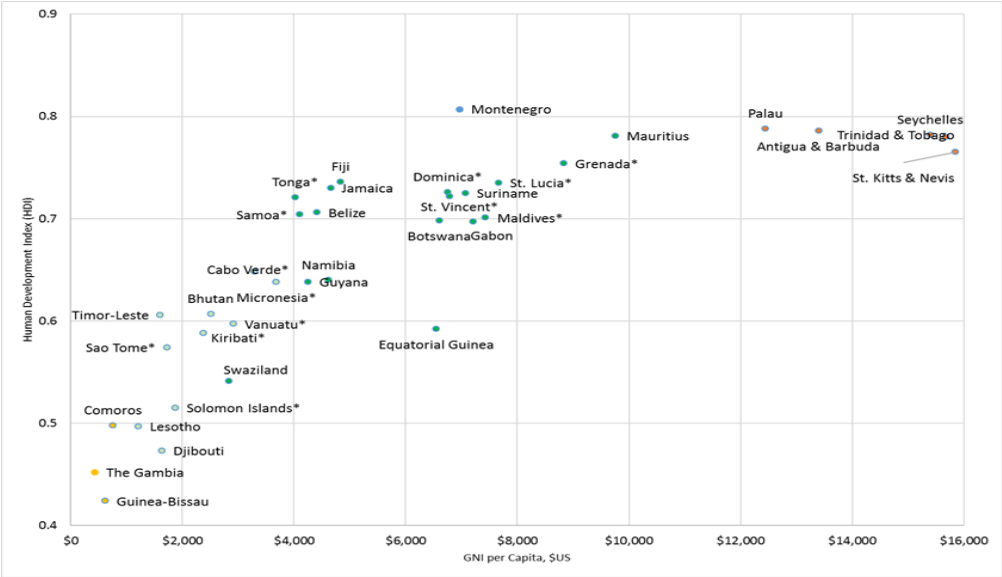


Source: UNCDP, WDI

[21] EVI*GNI per capita: correlation coefficient (-0.1031), significant at 54 percent.

29. **The HDI is highly correlated with GNI per capita.**[22] This can be expected because GNI per capita is one of the components of the HDI and therefore is biased in this respect.

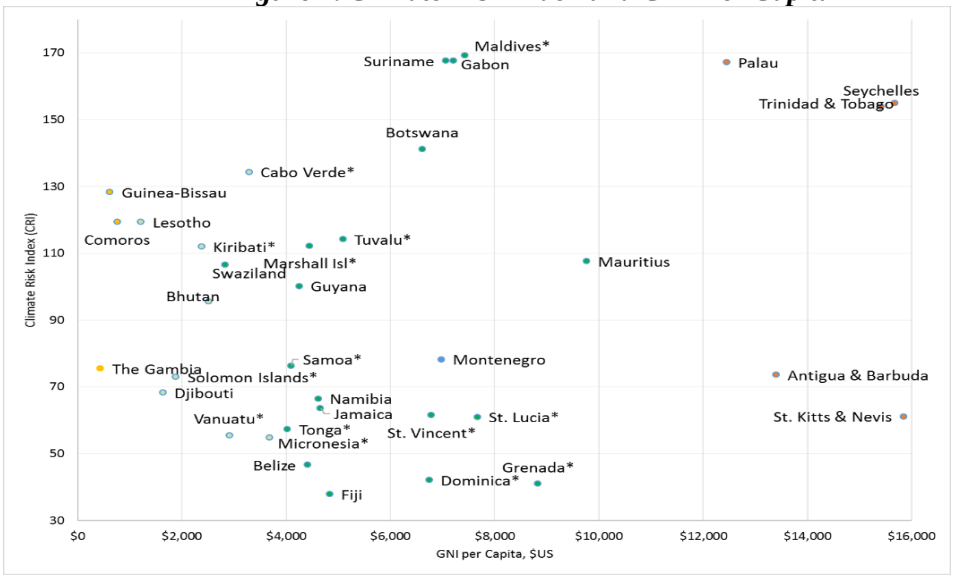
Figure 6. Human Development Index and GNI Per Capita



Source: UNDP, WDI

30. **A positive and somewhat significant correlation is found between the CRI and income level**[23]**.** Given that lower CRI scores mean lower vulnerability and vice-versa, this seems a plausible result.

Figure 7. Climate Risk Index and GNI Per Capita

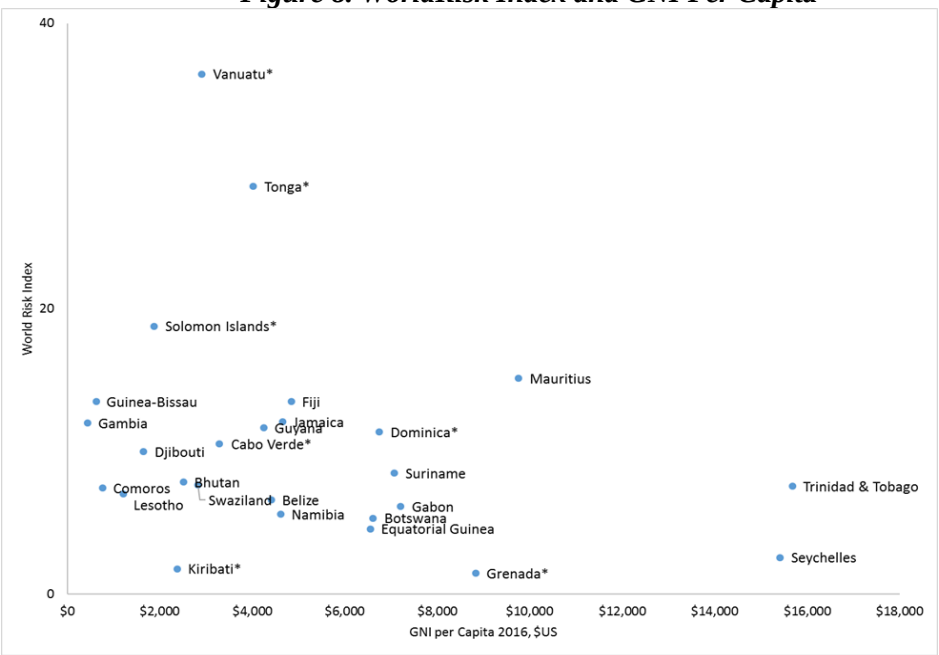


Source: Global Climate Risk Index, 2018, WDI

[22] HDI* GNI per capita: correlation coefficient (0.7052), significant at 1 percent.
[23] CRI*GNI per capita: correlation coefficient (0.2206), significant at 20 percent.

31. **A negative correlation is observed between the WRI and income level.**[24] Such relationship may reflect the fact that the WRI captures resilience aspects while GNI per capita can also be considered a measure of resilience.

Figure 8. WorldRisk Index and GNI Per Capita



Source: World Risk Report, 2017; WDI

32. **The above analysis finds there is some link between vulnerability metrics and GNI per capita in SSF countries.** The correlation coefficients between GNI per capita and all metrics considered have the expected sign and are somewhat significant in the case of the CRI and the WRI. Per design, the HDI is strongly correlated with the GNI per capita. These findings suggest that GNI per capita is to some extent correlated with vulnerability.[25]

D. Vulnerability and Concessional Finance

33. **In principle, vulnerability metrics could inform decisions related to access and/or allocation of concessional resources.** In practice, existing vulnerability indices are primarily used for classification or ranking purposes and not for resource allocation.[26] In recent replenishments, IDA explored the possibility of using vulnerability metrics as part of the criteria for allocating concessional resources (along with the PBA), with mixed results. On balance, the assessment was that introducing vulnerability indicators presented significant challenges, notably data constraints and lack of consensus on trade-offs, and the approach was ruled out after a long period of research.[27]

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[24] WRI*GNI per capita: correlation coefficient (-0.2696), significant at 20 percent.

[25] Briguglio (2009) regresses GDP per capita (G) against an economic vulnerability index (V) and a resilience index (R) and finds it is positively correlated with R and negatively correlated with V, although the coefficient and significance for R is higher.

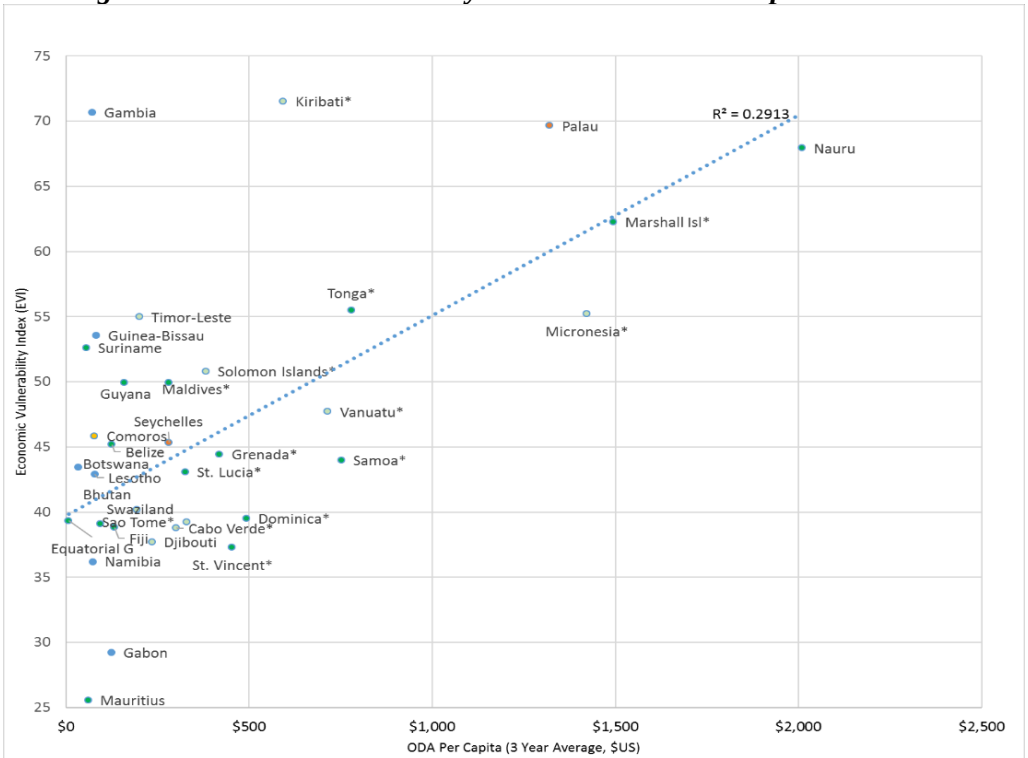
[26] It appears that the Caribbean Development Bank (CDB) uses a vulnerability index as part of its allocation formula to provide concessional resources from the Special Development Fund (SDF).

[27] See IDA (2010) and Annex 3.

34. **Nonetheless, IDA and other development partners have a long history of using vulnerability considerations as part of the rationale for granting access to concessional resources to small states**. For example, under IDA's Small Island Economy Exception, introduced in 1985, several small states currently are eligible to receive IDA resources even though they have reached middle-income status (see section 4).

35. **This section examines the extent to which vulnerability is captured by current concessional finance allocation frameworks.** To this end, it looks at the relationship between some vulnerability indices and average per-capita ODA commitments (as a proxy for country allocations, for which data are not available). It is noted that while ODA commitments can be expected to be closely linked to allocations, they depend on other factors such as country demand and absorptive capacity, and therefore are not the same as allocation.

Figure 9. Economic Vulnerability Index and ODA Per Capita Commitments



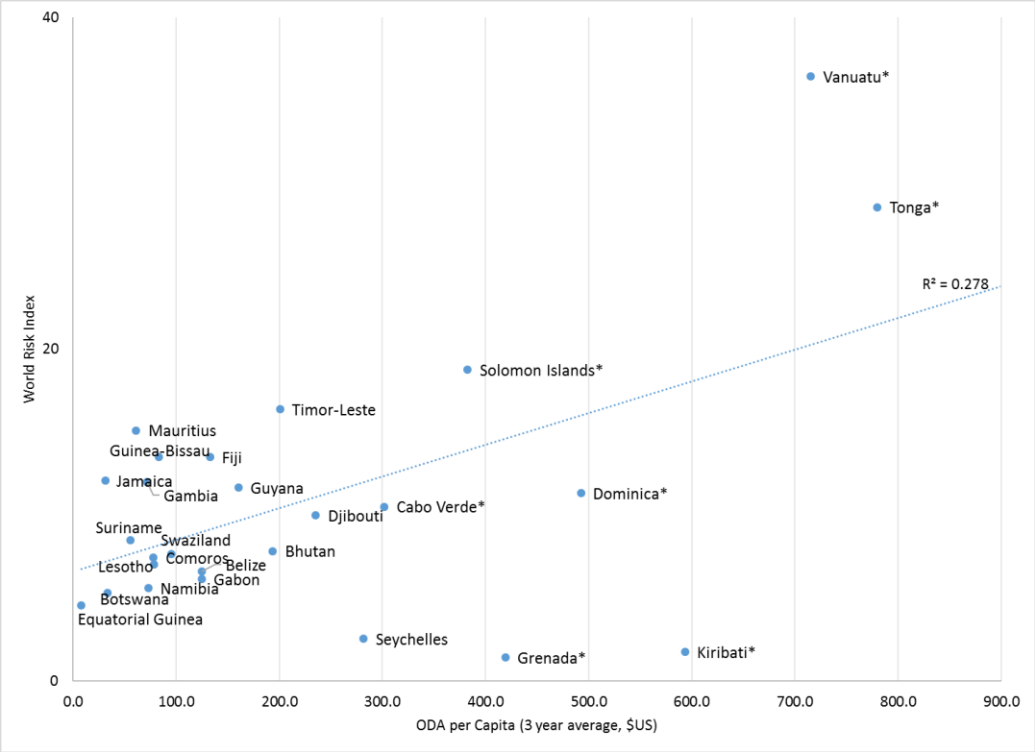
Source: UNCDP, WDI

36. **Overall, a positive correlation is observed between economic vulnerability (measured by the EVI) and ODA.** More vulnerable SSF countries receive higher levels of per-capita ODA and vice-versa. The correlation is strong,[28] although there are notable outliers such as the Gambia and Kiribati, which receive less ODA than would be expected relative to their EVI scores. As noted earlier, these countries have the highest EVI scores in the world and are fragile states likely with low absorptive capacity. Figure 9 excludes Tuvalu, which is a significant outlier receiving the highest per-capita (US$4,646) with a mid-range EVI score.

[28] EVI*ODA per capita: correlation coefficient (0.5397), significant at 1 percent.

37. **There is also a positive correlation between disaster risk (measured by the WRI) and ODA**.[29] [30] As shown in Figure 10, countries with higher WRI scores tend to receive higher ODA and vice-versa. Small states receiving higher ODA than expected from their WRI score include the Seychelles, Grenada and Kiribati. Given that the WRI includes policy/institutional components, it likely captures performance as per the Country Policy and Institutional Assessment (CPIA) indicator used by the World Bank and other multilateral Development Banks (MDBs) to allocate concessional resources.

Figure 10. WorldRisk Index and ODA Per Capita Commitments



Source: World Risk Report, WDI

38. **The analysis above shows that the EVI and the WRI are strongly correlated with ODA per capita commitments.** This would suggest that, by these metrics, vulnerability is captured by current allocation frameworks for concessional finance. Not surprisingly, however, there is significant variation around the predicted ODA per capita volumes based on vulnerability alone, which reflects the fact that other factors play a role in ODA allocation decisions.

[29] WRI*ODA per capita: correlation coefficient (0.5272), significant at 1 percent.

[30] Note that no correlation is found between the CRI and ODA per capita commitments, which may reflect the fact that the CRI captures only exposure to weather events.

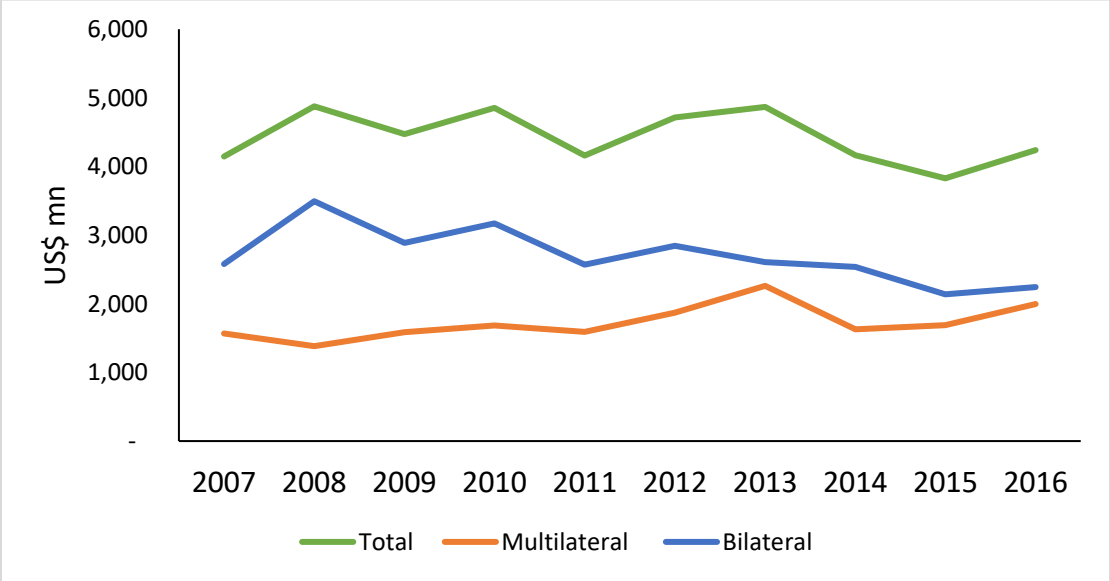
4. CONCESSIONAL FINANCING FOR SMALL STATES

39. **This section examines recent trends in official development assistance (ODA) and other forms of financing for SSF members.** Specifically, it examines ODA commitments and World Bank financing to SSF countries, including from IDA and IBRD.

A. Trends in ODA

40. **On a commitment basis, total ODA to SSF members has fluctuated between 2007 and 2016, averaging US$4.4 billion a year.** On balance, total ODA commitments stagnated over the period, with an upward trend in multilateral ODA offset by a decline in bilateral ODA. As a result, the share of multilateral ODA in total ODA increased to 47 percent in 2016 (from 35 percent a decade earlier). ODA to SSF members represented a small share of total ODA directed to developing countries, less than 3 percent on average over the period.

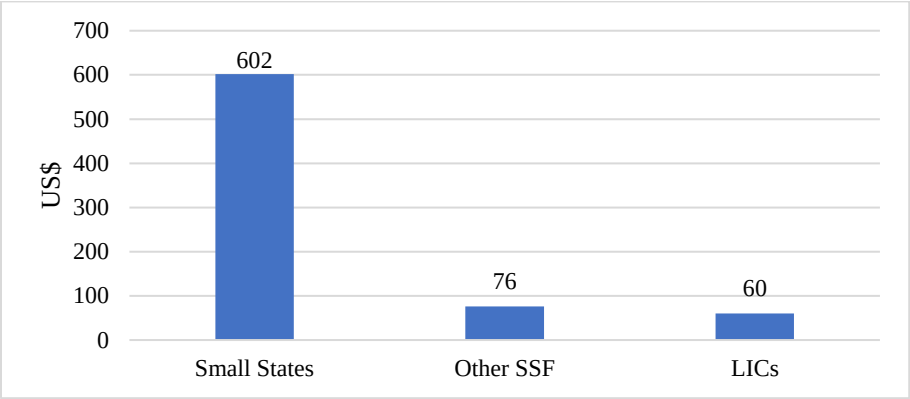
Figure 11. Total ODA Commitments to SSF Countries



Source: OECD-DAC

41. **Annual ODA per capita commitments to small states averaged US$602 over the 2014-16 period, which is ten times higher than the average for LICs (US$60).** For other SSF members the average was US$76, well below the average for small states, but still above the LIC average. However, there is great variability across SSF countries. By far the biggest recipient are Tuvalu and Nauru (both the smallest countries), with an annual per capita average of US$4,646 and US$2,010 respectively over the period. Excluding Tuvalu and Nauru, the average for small states was US$414, or seven-times higher than the LIC average.

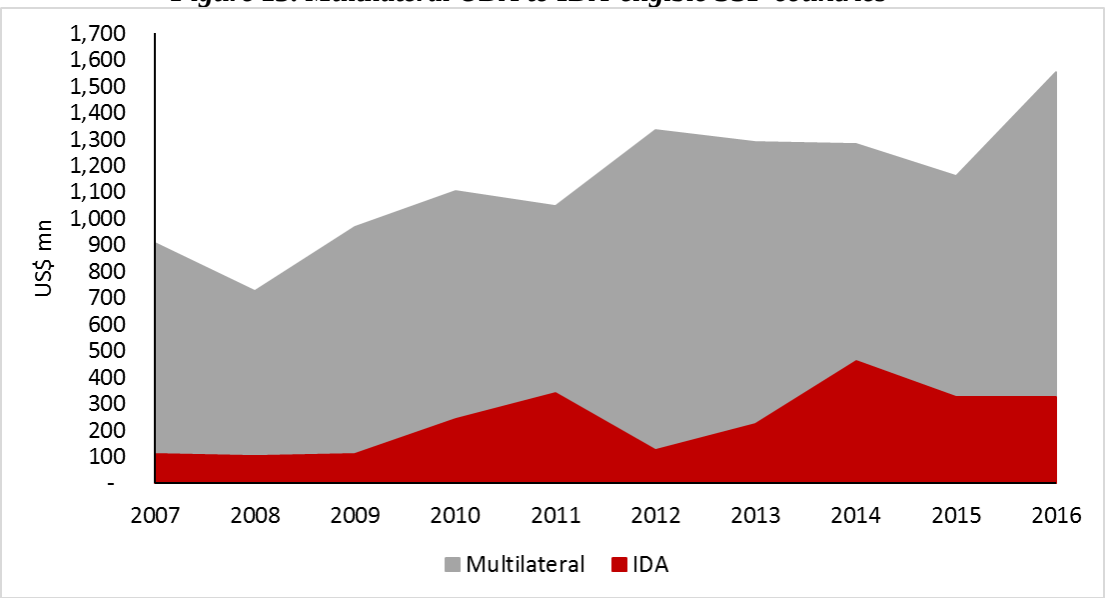
Figure 12. ODA Per Capita Commitments to SSF and LICs, 2014-16



Source: OECD-DAC, WDI

42. **IDA has been leading the increase in multilateral ODA to SSF members, both in nominal and relative terms**. Annual IDA commitments to IDA-eligible SSF members have more than tripled from an average of US$108 million in 2007-10 to US$371 million in 2014-16. IDA's share of multilateral ODA to SSF members increased from 12 percent to 28 percent, respectively.

Figure 13. Multilateral ODA to IDA-eligible SSF countries



Source: OECD DAC

B. IDA's Exceptional Treatment of Small States

43. **Many upper-middle and lower middle-income small states are eligible for concessional IDA resources.**[31] Of the 23 IDA-eligible SSF members, 3 are LICs and 20 are MICs (including 10 upper-MICs). By population size, 20 are small states and 3 are other SSF members (i.e. the Gambia, Guinea Bissau, Lesotho). As detailed below, decisions (including exceptions)

[31] IDA-eligible countries are often incorrectly equated to LICs only.

on IDA eligibility, resource allocation, and financing terms have been highly favorable to several SSF members.

IDA eligibility

44. **IDA country eligibility is based on both relative poverty and lack of creditworthiness**. Relative poverty is measured in terms of a country's GNI per capita compared to an established threshold –known as the IDA operational cutoff (currently at US$1,145). Countries may retain IDA-eligibility even when they become creditworthy if they are still poor (e.g. India until IDA 16), or when they become richer but still have marginal or no creditworthiness. Indeed, based on creditworthiness considerations and policies targeted to address small states' special needs, several small states are IDA-eligible even though their per capita incomes are above the IDA operational cutoff. In all, IDA-eligible SSF members include 17 countries with IDA-only status (of which 9 countries are fragile states) and 6 Blend countries.

Exceptional Eligibility: The "Small Island Economy Exception"

45. **In 1985, the Board approved the Small Island Economy Exception to allow small island economies access to concessional IDA resources even if their per capita income exceeds IDA's operational cut-off.**[32] The Exception was introduced in recognition of small islands' special characteristics (of size, remoteness, etc.) resulting in similar challenges to those faced by low-income countries (LICs), namely: vulnerability to external economic shocks (linked to high trade dependency), high per-capita costs of infrastructure and industry investments, weak institutional capacity, limited skills, and lack of creditworthiness. In 1985, six small island economies[33] that were due to graduate from IDA were granted the Exception. At the time, it was envisaged that the Exception could also be applied to other small island economies if they found themselves in similar circumstances. It was also envisaged that each application of the Exception would be evaluated on a case-by-case basis.

46. **In recent cases, the rationale for granting the Exception has included considerations of vulnerability to climate and natural disasters.**[34] In addition to vulnerability to economic shocks (linked to size and trade dependency) which underpins the 1985 policy, more recent assessments have also considered vulnerability to natural disasters and climate change as part of the rationale for granting the exception. For example, this was the case when the Marshall Islands, the Federal States of Micronesia, and Tuvalu were granted the Exception in 2011.[35]

47. **Currently 15 middle-income small island states have access to IDA under the Exception, including 10 countries with IDA-only status [36] and five Blend countries**[37]. The

[32] See IDA (1985).
[33] St. Christopher and Nevis (now St. Kitts and Nevis), St. Vincent and the Grenadines, Dominica, St. Lucia, Grenada, and Tonga.
[34] After the first round of exceptions in 1985, subsequent exceptions were granted based on the policy.
[35] At the time, Tuvalu remained IDA-only, while the Federal States of Micronesia and Marshall Islands were reclassified from IBRD-only to IDA-only.
[36] Sao Tome and Principe, Solomon Islands, Vanuatu, Kiribati, Federal States of Micronesia, Samoa, Tonga, Marshall Islands, Tuvalu, Maldives.
[37] Cape Verde, Dominica, St. Lucia, Grenada, St. Vincent and the Grenadines.

majority of beneficiary countries are Micro States (i.e. with a population of less than 200,000 inhabitants) primarily in the Pacific and the Caribbean. Under the Exception, countries are eligible for IDA concessional credits on Small Economy Terms until they graduate to IBRD-only status.[38] Except for St. Kitts and Nevis (which was granted the Exception in 1985 and graduated to IBRD-only status in 1994), all island economies that were granted the Exception have remained IDA-eligible.

Table 1. List of IDA-eligible Small States under the Small Island Economy Exception

IDA-only			Blend		
Country	GNI per capita (US$)	Population (thousands)	Country	GNI per capita (US$)	Population (thousands)
Sao Tome	1,730	199,9	Cabo Verde	3,290	539,6
Solomon Isl	1,880	599,4	Dominica	6,750	74,1
Vanuatu	2,910	270,4	St. Lucia	7,670	178,0
Kiribati	2,380	114,4	Grenada	8,830	107,3
Micronesia	3,680	103,9	St. Vincent	6,790	109,6
Tonga	4,020	107,1			
Samoa	4,100	195,1			
Marshall Isl	4,450	53,1			
Tuvalu	5,090	11,1			
Maldives	7,430	417,5			

48. **The Small Island Economy Exception policy will be reviewed as part of the IDA18 Mid-term Review (MTR).** The review will aim to introduce criteria for both entry and exit. As such, it offers an opportunity to formalize the current practice of considering vulnerability to climate and natural disasters.

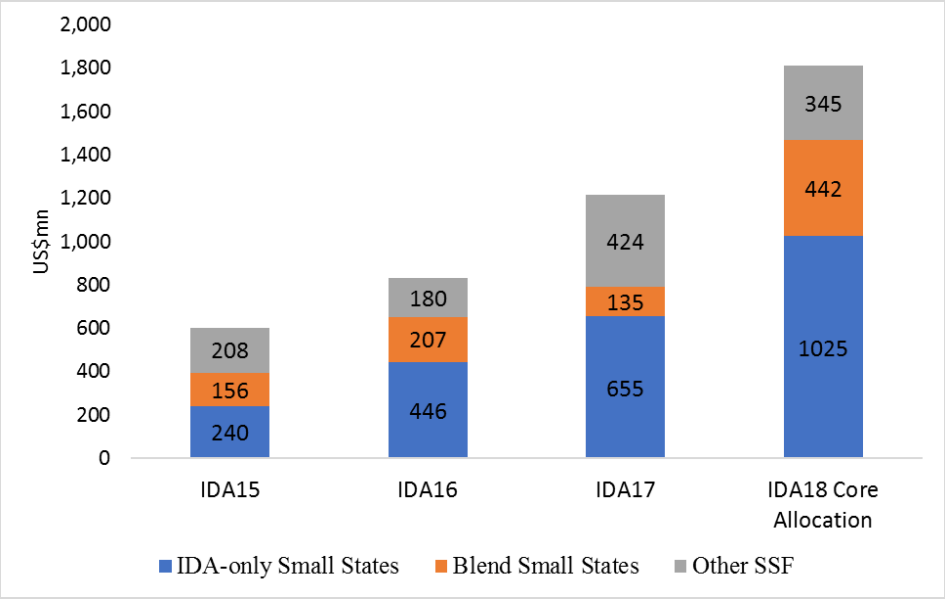
Allocation of IDA resources

49. **With a view to strengthening IDA's financial support to small economies, IDA's minimum base allocation has increased ten-fold since IDA15.** The amount of concessional resources available for IDA-eligible countries is governed by the Performance-Based Allocation (PBA) system[39] plus a fixed component referred to as the "minimum base allocation", deemed as the minimum amount necessary to maintain a program in a country. In order to enhance its financing of small states, IDA has increased the annual base allocation from SDR1.5 million in IDA15 to SDR3 million in IDA16, SDR4 million in IDA17, and SDR15 million in IDA18.

50. **As a result, IDA-eligible SSF members have benefitted from rising IDA financing volumes, including a massive scale up in IDA18**. Total IDA commitments to the 23 IDA-eligible SSF members increased from US$604 million in IDA15 to about US$2 billion in IDA17.[40] In IDA18, core allocations to IDA-eligible SSF members doubled to US$1.8 billion relative to IDA17. Several small states will see a tripling in core allocations, reflecting the tripling in the base allocation.

[38] IDA offers concessional credits on "Regular Terms", "Blend Terms," and "Small Economy Terms." For definitions and details of IDA financial terms and conditions see Bank Policy: Financial Terms and Conditions of Bank Financing.
[39] Annual Country allocation= Base allocation + PBA; where PBA= f [Country Performance Rating (CPR), Population, GNI per capita].
[40] IDA15-IDA17 refer to total commitments of core IDA plus windows and it is not comparable with IDA18 which refer to core IDA allocations only.

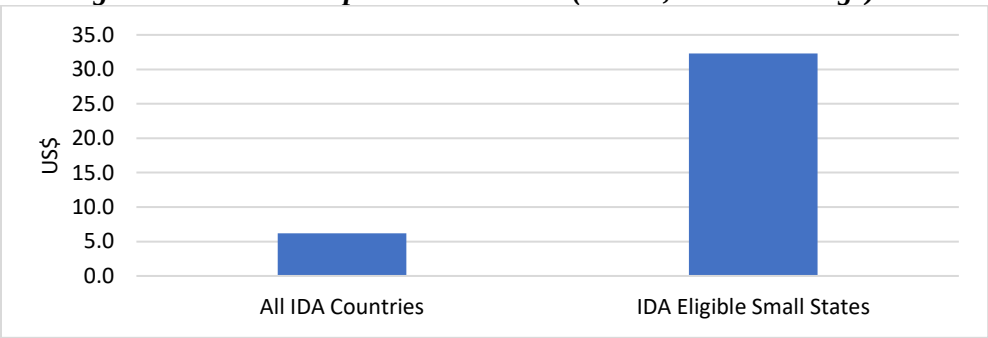
Figure 14. IDA15-17 Commitments and IDA18 Allocation to IDA-eligible SSF Countries



Source: World Bank

51. **In per capita terms, IDA's financial support to small states is five-times higher than to all IDA countries**. In IDA17, per-capita commitments to small states averaged US$32, compared to US$6 for all IDA countries.

Figure 15. IDA Per Capita Commitments (IDA17, annual average)



Source: World Bank

IDA Windows

52. **Crisis Response Window (CRW).** Since its introduction as a pilot in IDA15, the CRW has provided extraordinary resources to IDA-eligible small states to help respond to severe natural disasters such as tropical cyclones and floods. During IDA17, CRW resources directed to small states and other SSF members amounted to about US$239 million representing about 12.1 percent of their core allocations. In FY18, Dominica received US$50 million in CRW resources to help finance reconstruction from hurricane Maria, which resulted in damages estimated at 226 percent of GDP. Tonga also received US$20 million from the CRW following Cyclone Gita, which caused damages estimated at 38 percent of GDP.

Table 2. IDA CRW Commitments (US$ million)

Country		IDA15	IDA16	IDA17
IDA-only Small States	Bhutan	4	-	-
	Comoros	2	-	-
	Djibouti	3	13	-
	Guyana	2	-	-
	Maldives	2	-	-
	Samoa	20	20	-
	Sao Tome and Principe	1	-	-
	Solomon Islands	-	-	7
	Tonga	-	12	-
	Tuvalu	-	-	3
	Vanuatu	-	-	50
Blend Small States	St. Lucia	-	17	-
	St. Vincent and the Grenadines	-	19	-
Other SSF	Gambia, The	11	-	-
	Guinea-Bissau	19	-	-
	Lesotho	15	-	20
		78	**81**	**80**

Source: World Bank

53. **Regional Program.** Through the IDA regional program window**,** IDA-eligible small states have been able to access additional resources to fund regional projects, which are instrumental in bringing economies of scale and cost-efficiency. In IDA18, the financing terms of the regional IDA program have been harmonized with financing terms applicable to small states' core financing. In addition, the 20 percent cap on national IDA contributions was extended to all IDA-eligible small states.

54. **New Private Sector Window (PSW).** IFC has leveraged the new PSW introduced in IDA18, including to support housing finance in West Africa (benefitting Guinea-Bissau, a fragile state), risk-sharing in the Pacific and a private sector telecom operator in Comoros. Blend and Gap small states are not eligible for PSW resources, unless they are classified as fragile.

IDA Financing terms

55. **Most IDA-only SSF countries are eligible to receive grants based on their debt distress rating.** Debt distress ratings are determined based on the World Bank/IMF Debt Sustainability Framework (DSF) for LICs. If an IDA-only country is at high risk of debt distress it receives 100 percent of its financing in the form of grants, a moderate risk gets 50/50 in grants and credits, and 100 percent in credits if it has low risk.[41] Currently, except for three Gap countries (Bhutan, Djibouti and Guyana) all IDA-only SSF members are grant-eligible. As part of reforms aimed at improving the accuracy of the DSF relative to projected debt outcomes, the IMF and World Bank have developed a new LIC DSF to become effective in July 2018. Among other things, the new DSF expands the stress testing framework to more systematically assess key risk scenarios, such as the impact of natural disasters, and hence better capture the specific circumstances faced by small states.

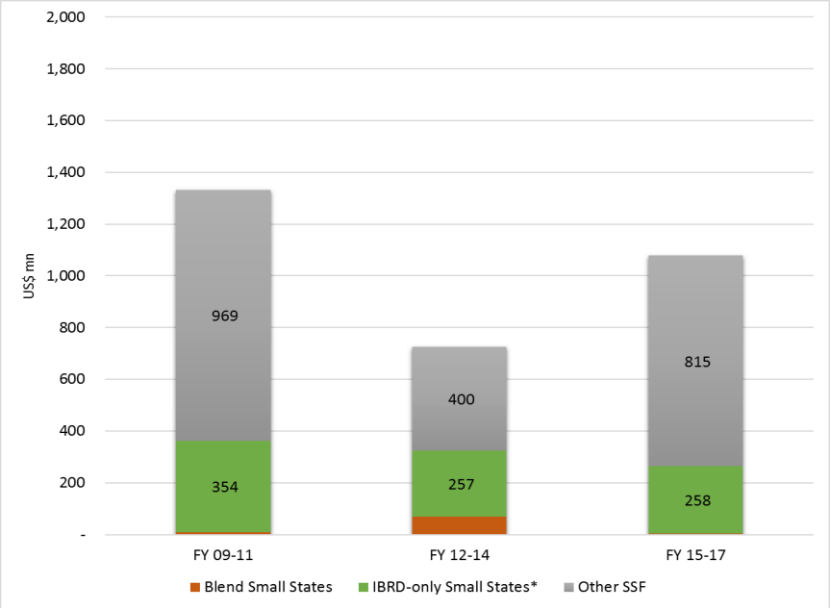
[41] However, Blend IDA-eligible small islands under the Small Island Exception are not eligible to receive grants.

56. **IDA's credit terms for eligible small states are the most concessional**. Since IDA17, IDA's small island economy terms are more concessional than regular IDA terms (including a 40-year repayment with 10-year grace compared to 38-year repayment with 6-year grace for regular IDA financing). In IDA 18, these terms have been extended to IDA-eligible small states that are not islands (i.e. Bhutan, Djibouti, Guyana, and Timor Leste). In all, IDA credits on small economy terms in FY18 have a grant element of 61 percent, which compares to a grant element of 53 percent for IDA credits on regular terms.

C. IBRD-only Small States

57. **There are 17 SSF IBRD-only countries, most of which are upper MICs (see Annex 1).** The group includes one lower MIC and 5 HICs.[42] Some 10 countries have per-capita incomes above the IBRD graduation threshold (currently at US$6,895). The group comprises 13 small states and 4 other SSF countries (i.e. with a population above 1.5 million).[43]

Figure 16. IBRD Lending Commitments, FY09-17



Source: World Bank

58. **The amount of IBRD financing available to IBRD countries depends, among other things, on IBRD's credit exposure limit and client demand.** The credit exposure limit is determined considering several factors (including capacity to pay, fiscal sustainability, etc.). Client demand depends on countries' ability to draw on their own resources and/or use alternative financing, as well as how much they value the Bank's technical support and expertise.

59. **In the past five years, IBRD financing has been concentrated in other SSF countries, which are also the larger ones**. In absolute terms, Jamaica and Gabon each accounted for over one third of the IBRD financing over the FY13-17 period, followed by Botswana with 10 percent.

[42] IBRD eligibility is determined by income level and creditworthiness.

[43] Namibia, Jamaica, Botswana, Gabon.

In per-capita terms, Seychelles has been the top IBRD borrower (US$70), followed by Gabon (US$43) and Jamaica (US$35).

Figure 17. IBRD Average Commitments to IBRD-only SSF countries, FY13-17

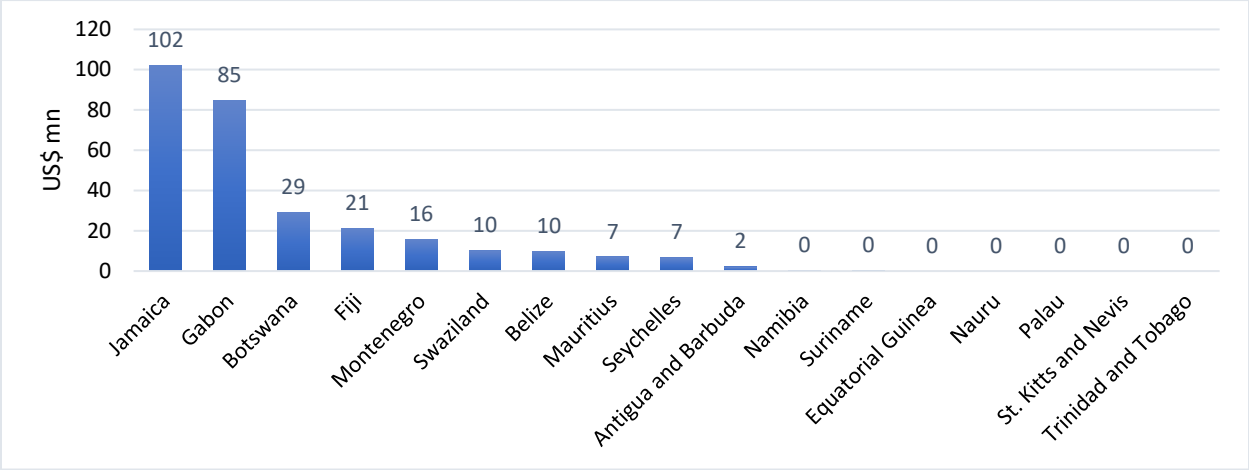
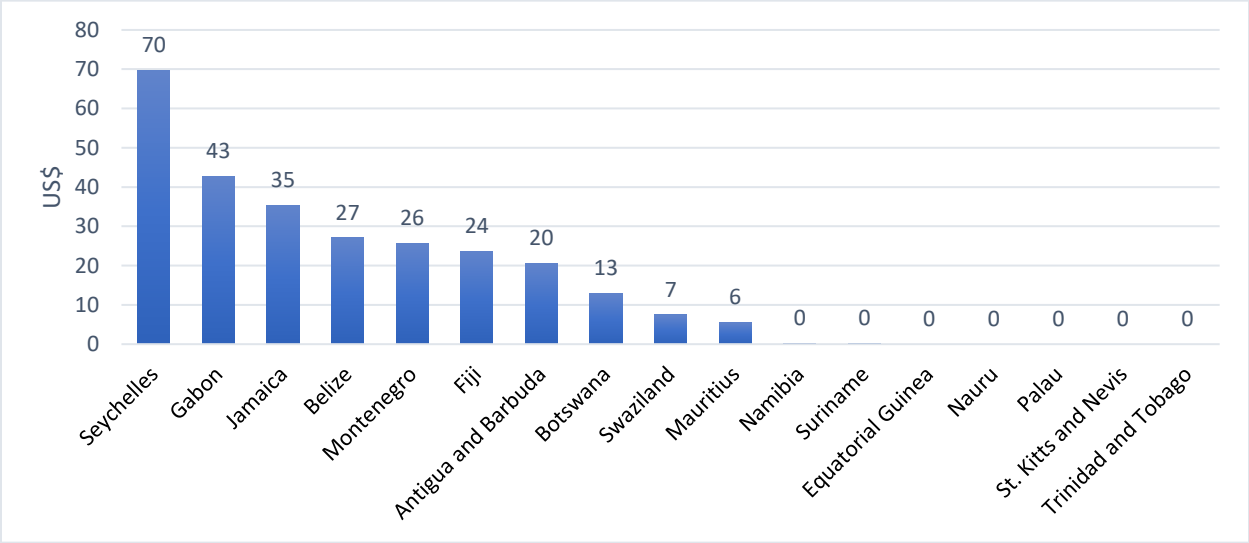


Figure 18. Average IBRD Per Capita Commitments to IBRD-only SSF countries, FY13-17



Source: World Bank

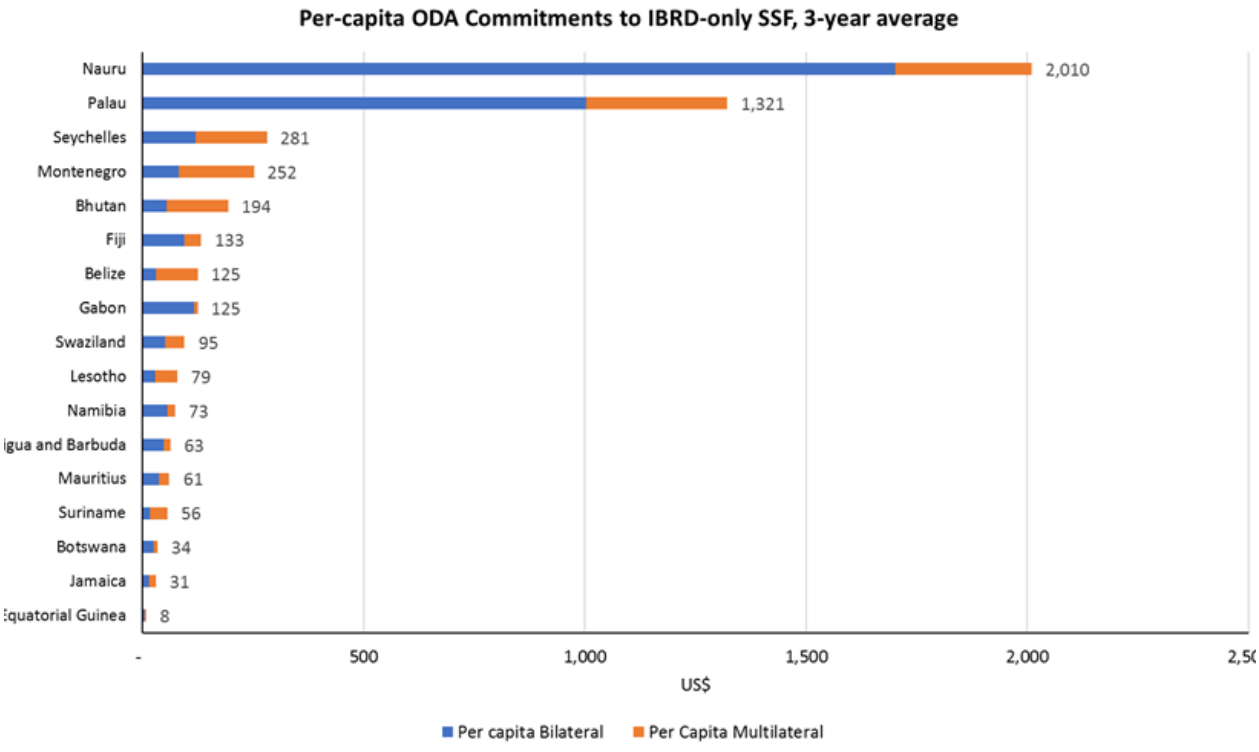
60. **Several BRD-only SSF members have little or no borrowing from IBRD.** These include:

- Nauru[44] and Palau, which are not considered creditworthy to borrow from IBRD (unless there is a security arrangement that provides sufficient credit enhancement).
- Resource-rich countries such as Namibia, Equatorial Guinea, and Trinidad and Tobago which have been able to rely more on their own resources, particularly in the commodity boon period, with some also having good access to international capital markets.
- Countries that have access to other financing sources (official or commercial) and/or may have reached the exposure limit with IBRD.

[44] Note that Nauru became an IBRD member in 2015.

61. **Some IBRD-only countries receive significant ODA resources in per capita terms**. Top recipients by far are Nauru (US$2,010) and Palau (US$1,321)—equivalent to 18.7 percent and 10.6 percent of their respective per-capita GNI. Other IBRD countries receiving considerable amounts of ODA in per-capita terms include Seychelles (US$281) and Montenegro (US$252).

Figure 19. ODA Per Capita Commitments, 3-year annual average



Source: OECD-DAC, Staff Estimates

62. **Several SSF members have access to capital markets, but most do not have investment grade ratings.** Countries with good standing in capital markets include Botswana, Mauritius and Trinidad and Tobago (medium grade investment ratings). However, most SSF countries have a non-investment grade rating.[45]

[45] These include Blend small states (Cape Verde, Grenada which are rated in default) and small states with IDA-only status (Lesotho, Maldives) which are not shown in Table 3.

Table 3. Credit Ratings of Sovereign Debt

	S&P	Moody's	Fitch	
Belize	B-			HS
Botswana	A-			UMG
Fiji	B+			HS
Gabon		B3	B	HS
Jamaica	B			HS
Lesotho			B+	HS
Maldives		B2	B+	HS
Mauritius		Baa1		LMG
Montenegro	B+			HS
Namibia		Ba1		NIG
Seychelles			BB-	NIG
St Vincent		B3		HS
Suriname				HS
Swaziland		B2		HS
Trinidad & Tobag	BBB+			LMG
Source: Trading Economics				
UMG=Upper medium grade		LMG=Lower medium grade		
HS=Highly speculative		NIG=Non-investment grade		

63. **On the supply side, IBRD financing volumes for small states may be constrained by IBRD's credit exposure limit.** Because of size and broader creditworthiness considerations, IBRD's credit exposure limit for smaller economies tends to be relatively small and some countries may be close to reaching the limit.[46] This could seriously constrain IBRD's ability to assist small states especially when they are hit by severe shocks. In some cases, much of a small state's IBRD borrowing room could be used-up to respond to such shocks. This is the case of Fiji. Soon after resuming IBRD borrowing in 2015,[47] Fiji was hit by category 5 Cyclone Winston in February 2016 causing losses estimated at US$1.3 billion (or 29 percent of GDP). Given limited access to alternative financing sources, Fiji had to use most of its remaining IBRD credit exposure limit to finance post-cyclone reconstruction, leaving little room to finance other development projects. Following this experience, Fiji has requested a review of its eligibility for IDA financing under the Small Island Economy Exception.[48]

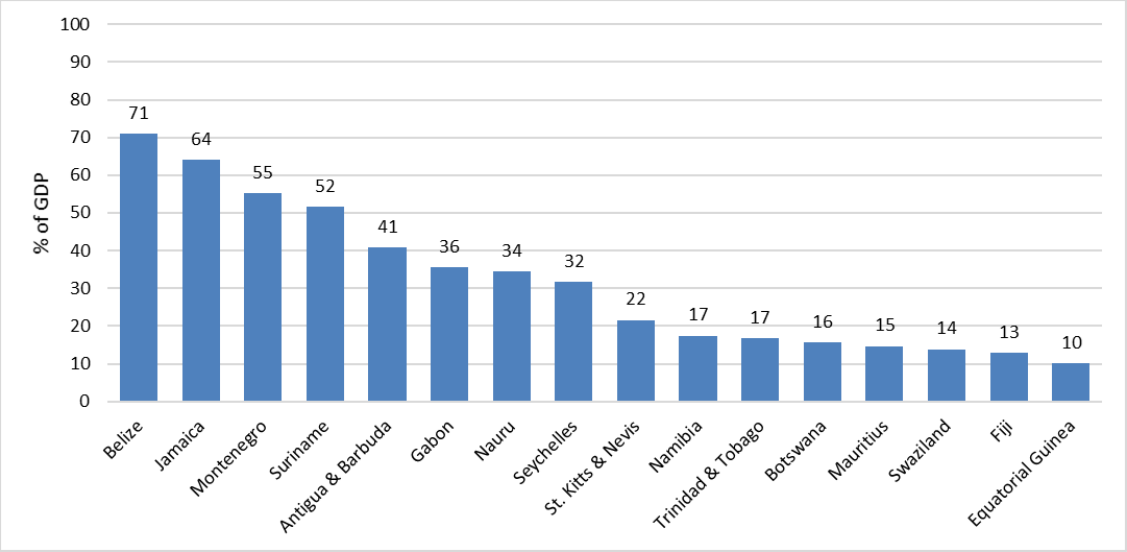
64. **On the demand side, clients may choose alternative financing sources with more favorable terms than those from IBRD**. The cost of borrowing is an important consideration, particularly for highly indebted countries (see Figure 20), and some countries may choose cheaper financing options when available. For example, the Caribbean Development Bank (CDB) is able to mix grant money with its loans to bring pricing below IBRD terms. Beyond the cost of borrowing, small states clients may choose alternative financing sources because of other considerations, including strength of the partnership.

[46] Small states such as Fiji, Montenegro and Suriname may be approaching IBRD credit exposure limit, and Jamaica among other SSF members.

[47] Due to a series of military coups IBRD lending was suspended in 1992 and resumed in 20015 after a democratically elected government took office.

[48] The issue of Fiji's eligibility to the Exception did not emerge earlier partly because the World Bank had no lending program with Fiji during 1992-2015. Fiji's case rests on the following considerations: it is a small island (with a population of less than 1.5 million) and a GNI per capita of US$4,840, which is below that of many small islands with IDA-only and Blend status currently benefitting from the Exception. In addition, Fiji has all the economic characteristics of small island economies that motivated the Exception.

Figure 20. Public and Publicly Guaranteed External Debt, 2016



Source: IMF, WEO

Crisis Response Financing

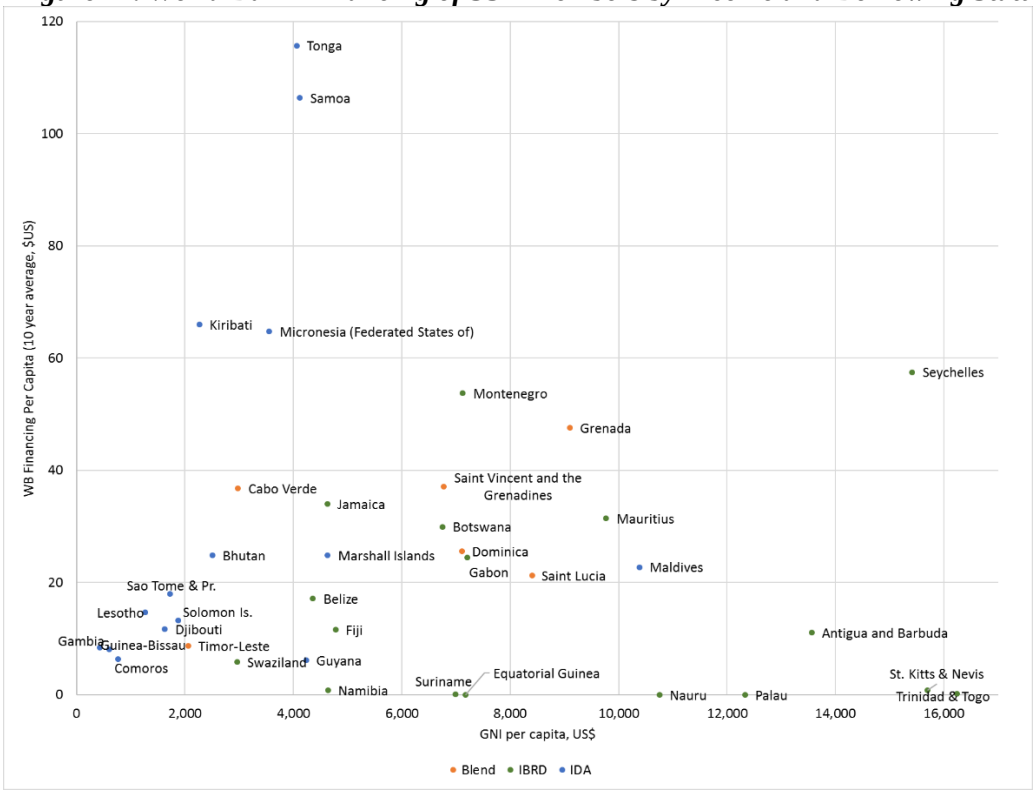
65. **More broadly, IBRD-only countries have limited access to crisis response financing, which is particularly important for disaster-prone small states.** Unlike IDA's Crisis Response Window (CRW), IBRD does not have a dedicated financing mechanism to provide additional resources in response to economic shocks or natural disasters. Countries can use Catastrophe Deferred Drawdown Options (CAT-DDOs), but uptake has been low possibly because the amounts are counted against their exposure limit.[49] IBRD-only small islands (and some IBRD graduates) are part of regional disaster risk pools, such as the Caribbean Catastrophe Risk Insurance Facility Insurance (CCRIF)[50] and the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI)[51], established with Bank support. These schemes provide financing for immediate post-disaster relief,[52] although the payouts are typically modest relative to the magnitude of losses and the amount of resources available from the CRW to IDA-eligible small states.

[49] Only Seychelles has used a CAT-DDO for natural disaster preparedness. As of IDA18, IDA-eligible countries can use the CAT-DDO instrument with the commitment amount counting against 50 percent of core allocation.
[50] The CCRIF is the first multi-country catastrophe pooling risk mechanism established in 2007. Members include: Antigua and Barbuda, Belize, Barbados, Bermuda, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, St Kitts and Nevis, St Vincent and Grenadines, Trinidad and Tobago, Turks and Caicos Islands.
[51] The PCRIF was established in 2016 and covers earthquakes, cyclones and tsunamis. Members include: Cook Islands, Marshall Islands, Samoa, Tonga, and Vanuatu.
[52] Payouts are made within 14 days after an event.

D. Overall World Bank Financing to SSF Countries

66. **In part due to differences in access to IDA and IBRD, there is a significant variation in the level of overall World Bank financing to SSF countries.** Among SSF members with World Bank commitments during the FY06-17 period, about half have benefited from an average yearly support ranging from US$10 to US$90 in per capita terms. Significant outliers (such as Tuvalu) are explained by the combination of very low populations and the minimum base allocation as well as additional crisis response support under IDA or a low (or non-existent) level of Bank lending engagement during the period of analysis (such as Nauru, Palau, Trinidad and Tobago). Within the mid-range of yearly commitments, relatively wealthier countries seem to have benefited from higher levels of per-capita financial support, in particular some blend countries, which -on average- had much higher per-capita support than poorer IDA-only and IBRD-only countries.

Figure 21. World Bank Financing of SSF Members by Income and Borrowing Status



Source: World Bank

5. CONCLUSION

67. **Small states are very heterogenous.** There is a high variation across small states on several dimensions, including population size, income levels, access to concessional finance and other sources of finance, and degree of vulnerability as measured by different indicators. Such heterogeneity has important implications. First, a "one size fits all" approach would not be helpful in addressing small states' specific needs. Second, the heterogeneity of small states cannot be captured by a single metric.

68. **Existing vulnerability metrics show mixed results.** While small states are generally more vulnerable than larger countries under various metrics, there are several larger countries which are as vulnerable (or even more) than small states**.** Vulnerability rankings vary and can be inconsistent across metrics. Beyond the technical challenges associated with developing a vulnerability index, it is unlikely that a new index would show that all small states are more vulnerable and therefore more deserving of concessional resources.

69. **Nonetheless, the vulnerability of small states is captured in current concessional finance allocation frameworks.** This is suggested by the strong and positive correlation observed between ODA commitments to SSF countries and some vulnerability metrics such as the EVI and the WRI. The more vulnerable countries tend to receive more ODA. Nevertheless, there are a few outliers.

70. **On average, per-capita ODA commitments to small states amounted to US$602 over the past three years, or 10-times higher than those to LICs (US$60).** There is high variation across small states, with some countries receiving substantial amounts and others below the LIC average. Multilateral ODA to small states has increased over the past decade both in absolute terms and relative to bilateral ODA, with IDA playing a leading role.

71. **Vulnerability considerations have long been embedded in IDA's concessional financing framework for small states.** In recognition of their vulnerability due to small size and often geographical isolation, IDA has given special treatment to small states in terms of eligibility, allocation, and financing terms, as follows:

- **Eligibility.** Primarily through the Small Island Economy Exception, but also based on creditworthiness considerations, most World Bank members classified as middle-income small states are eligible for IDA's concessional resources (20 out of 28).
- **Allocation.** Concessional resources for IDA-eligible SSF countries have increased exponentially since IDA 15, reflecting a 10-fold increase in the minimum base allocation. In addition, these countries have access to IDAs' dedicated windows, such as the CRW, the Regional Program, and the new Private Sector Window.[53]
- **Financing terms.** Most IDA-only SSF countries receive either 100 percent or 50 percent in grants and credit terms for IDA-eligible small states are the most favorable. The new LIC DSF, which factors in vulnerability to natural disasters, will help better calibrate debt distress ratings and access to grants for IDA-only small states.

72. **The situation varies across IBRD-only SSF members.** Some of these countries are resource-rich (Equatorial Guinea, Botswana, Namibia), or have good access to capital markets (Mauritius, Botswana, Namibia) or receive significant bilateral ODA volumes (Nauru, Palau). Yet, there are issues that merit further attention:

- Fiji's eligibility for IDA under the Small Island Economy Exception warrants consideration.
- Nauru and Palau are not creditworthy to borrow from IBRD, thereby limiting Bank engagement.

[53] Note that Blend and Gap countries are not eligible to access the PSW unless they are classified as fragile.

- Some countries may have limited headroom to borrow from IBRD or may be too highly indebted to afford IBRD terms.

73. **A cross-cutting issue for IBRD-only SSF countries is limited access to crisis/disaster response financing.** In this context, the low uptake of CAT-DDOs among IBRD-only SSF members warrants further analysis. Disaster risk insurance pools have provided helpful cash relief following natural disasters, but available resources through these mechanisms are modest relative to the magnitude of the losses when disasters are severe.

74. **Solutions to these issues may be considered under IDA, IBRD and/or trust funds.**

- Within IDA, the planned review of the Small Island Economy Exception Policy at the IDA18 MTR aims to introduce criteria for both entry and exit, and is an opportunity to formalize the current practice of considering vulnerability to climate change and natural disasters. The MTR would also be an opportunity to consider eligibility to the PSW which currently is not available to Blend and Gap small states that are not fragile.
- On the IBRD side, proposed measures to increase the lending headroom for small states (by doubling the base allocation) and to wave increases in the maturity premium, will be helpful for IBRD-only states close to reaching the credit exposure limit and/or highly indebted.
- More broadly, it would be important to explore options for IBRD-only small states to access disaster response financing and/or to buydown IBRD terms.

75. **In sum, developing a new vulnerability index to access concessional resources would be impractical and not necessarily beneficial for all small states.** There is already a policy framework whereby IDA provides substantial concessional resources to most World Bank middle-income small states, which has been endorsed by IDA Deputies in the context of IDA's replenishment cycles. It is therefore recommended that the Bank's efforts focus on addressing identified issues, as appropriate, under the governance of IDA, IBRD, and/or trust funds.

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Annex 1. Members of Small States Forum by Income, Population and WB Borrowing Status, 2016

IDA-only			Blend			IBRD-only		
Country	GNI per capita	Population	Country	GNI per capita	Populatio n	Country	GNI per capita	Population
The Gambia	$440	2,038,501				Swaziland	$2,830	1,343,098
Guinea B	$620	1,815,698				Belize	$4,410	366,954
Comoros	$760	795,601				Namibia	$4,620	2,479,713
Lesotho	$1,210	2,203,821				Jamaica	$4,660	2,893,416
Djibouti	$1,640	942,333				Fiji	$4,840	898,760
Sao Tome*	$1,730	199,910				Equatorial G	$6,550	1,221,000
Solomon Is*	$1,880	599,419				Botswana	$6,610	2,250,000
Bhutan	$2,510	797,765				Montenegro	$6,970	622,781
Vanuatu*	$2,910	270,402				Suriname	$7,070	558,368
Kiribati*	$2,380	114,395	Timor-Leste	$1,600	1,268,671	Gabon	$7,210	1,979, 786
Micronesia*	$3,680	104,937	Cabo Verde*	$3,290	539,560	Mauritius	$9,760	1,263,473
Tonga*	$4,020	107,122	Dominica*	$6,750	74, 071	Nauru	$10,750	13,049
Samoa*	$4,100	195,125	St. Lucia*	$7,670	178,015	Palau	$12,450	21,503
Guyana	$4,250	773,303	Grenada*	$8,830	107,317	Antigua & B	$13,400	100,963
Marshall Is*	$4,450	53,066	St. Vincent*	$6,790	109,643	Seychelles	$15,410	94,677
Tuvalu*	$5,090	11,097				Trinidad & T	$15,680	1,364,962
Maldives*	$7,430	417,492				St Kits & N	$15,850	54,821

*Countries benefitting from preferential access to IDA under the IDA's Small Island Exception

IBRD Graduates		
Country	GNI Per capita (US$)	Population
Barbados	$14,830	284,996
Estonia	$17,750	1,316,481
Bahamas	$21,020	21,020
Bahrain	$22,740	1,425,171
Cyprus	$23,680	1,170,125
Malta	$24,140	436,947
Brunei	$38,520	251,514
San Marino	$51,810	33,203
Iceland	$56,990	334,252
Qatar	$75,660	2,569,804

2017 World Bank Country Classification based on GNI Per Capita (Atlas methodology)

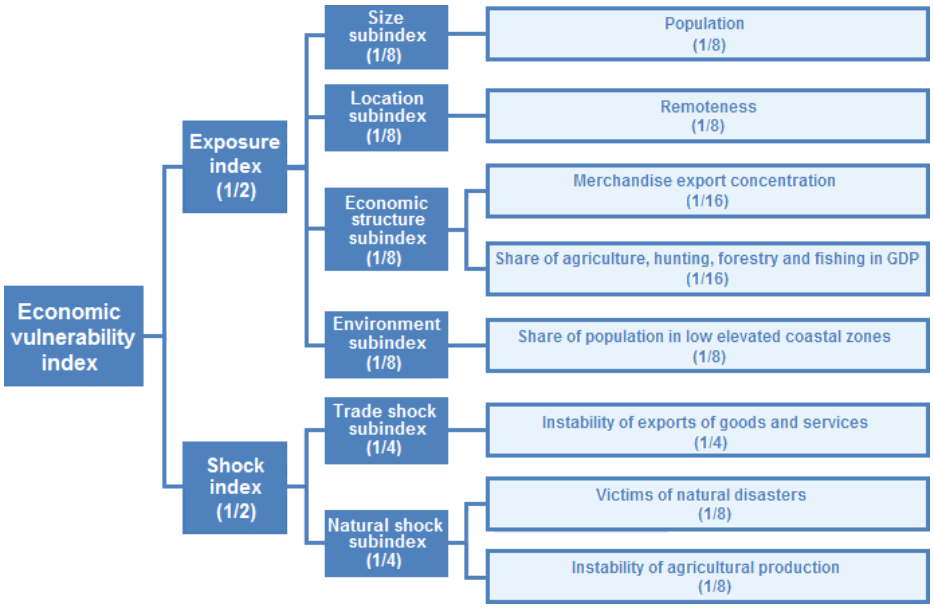
LIC	LMIC	UMIC	HIC
<$1,055	=$1,056-$3,955	=$3,956-$12,235	>$12,236

Annex 2. Vulnerability Metrics

76. Over the past couple of decades, several attempts have been made to develop metrics of vulnerability and resilience to shocks. Vulnerability metrics can focus on structural aspects that render households or countries more prone to exogenous shocks (exposure) and/or resilience features (i.e. policy-induced ability to respond to such shocks). While theoretically it would be more appropriate to combine both exposure and resilience aspects into a given metric, complexity considerations and data challenges have led to simpler albeit less robust choices. The section below describes some of the most commonly known metrics.

The UN's Economic Vulnerability Index (EVI)

77. This EVI, set up by the UN's Committee for Development Policy (CDP) in collaboration with Ferdi[54], was introduced in 2000 as one of the criteria for the identification of least-developed countries (LDCs) that are eligible to receive some preferential trade or aid treatment. The EVI, in addition to income per capita and the human assets index (HAI), is one of three complementary criteria that a country must meet to be designated as an LDC. EVI scores are published for 145 developing countries where countries are ranked as the least vulnerable (rank 1) to most vulnerable (rank 145).



78. The EVI is a measure of structural economic vulnerability that captures only the exposure components of vulnerability. Since 2015, the CDP has used absolute thresholds for the EVI to determine inclusion and graduation eligibility. The inclusion threshold has been set at 36 and the graduation threshold at 32. The EVI is a composite index of eight indicators, grouped into various sub-indices. A higher EVI represents higher economic vulnerability.

[54] Patrick Guillaumont from FERDI (Foundation for International Studies) contributed to the design of the UN's EVI and the HAI as measures of structural vulnerability. Guillaumont is an active proponent of using these metrics as criteria for aid allocation in lieu of the PBA, an approach considered in IDA 16-17 replenishments but ruled out due to lack of consensus on data and trade-offs (see Annex 3).

79. This index has been criticized on several grounds: (i) the exposure component relating to the size of the country (measured by population) assumes beforehand what it tries to prove (i.e. smaller population means higher vulnerability); (ii) structural variables related to export concentration leave out services trade, which is important for small states; (iii) the EVI does not distinguish between the causes of vulnerability (exposure to shocks) and the manifestations of same (export instability).[55] In addition, the rationale of the relative weights is unclear and concerns about data availability weaken the applicability of the metrics.

The Commonwealth Economic Vulnerability Index (EVI)

80. Since the mid-1990s, the Commonwealth Secretariat has commissioned international experts to develop a vulnerability index. The latest version was published in 2014 by the University of Malta as part of a vulnerability/resilience framework, which combines an Economic Vulnerability Index (EVI) and an Economic Resilience Index (ERI).[56]

81. This EVI includes four equally weighted components (25 percent each): Trade Dependence Index, Export Concentration Index, Dependence on Strategic Imports Index, and Disaster Proneness Index. This is complemented with an ERI grouped into three equally weighted components: Macroeconomic Stability Index, Market Flexibility Index, and the Political, Social and Enviro-Governance Index. For both the vulnerability and resilience indices, the total score is the simple average of the different components, and vulnerability is the risk of being hurt by an external economic shock minus resilience. On this basis, countries are classified into six categories: High Vulnerability-Low Resilience, High Vulnerability-Moderate Resilience, High Vulnerability-High Resilience, Low-Vulnerability- Low Resilience, Low Vulnerability-Moderate Resilience, Low Vulnerability-High Resilience. This framework has not been operationalized.

Other Economic Vulnerability Indices

82. The United Nations Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (**UN-OHRLLS**) adapts the UN-EVI to create a Weighted EVI to capture the interactions and interdependence between selected UN-EVI indicators.

83. In 2000, the **Caribbean Development Bank (CDB)** developed an economic vulnerability index[57], which factors six dimensions: Peripherality/Accessibility, Dependence on Energy Imports, Export Concentration, Reliance on External Finance, Susceptibility to Natural Disasters, and Convergence of Export Destination. It uses proxies to measure each dimension. For instance, freight and insurance costs as a percentage of total import costs is a proxy for peripherality; net imports of energy as a percentage of total energy consumption is a proxy for energy dependence; the percentage of total export receipts accounted for by the major export and the top three exports is a proxy for export concentration; and the ratio of overseas development assistance disbursement to gross fixed capital formation is a proxy for reliance on external finance. For this approach, too, there are issues with data availability, weighting, and aggregation and coverage. The CDB uses

[55] See Briguglio (2014).
[56] This work is reflected in Briguglio (2014).
[57] Crowards (2000).

the vulnerability index as part of the allocation formula for member Caribbean States eligible to receive concessional resources from the Special Development Fund (SDF).

Human Assets Index (HAI)

84. The HAI was developed by the UNCDP and it is one of the indicators used to classify LDCs. The index has significant data constraints. Two sets of HAI datasets are currently available: HAI from Official Sources (HAI FOS, 2013 Update), and HAI with Filled Gaps (HAI WFG, 2013 Update). The HAI FOS covers only 18 SSF countries with several missing observations. HAI WFG extends the country-year coverage but uses econometric tools to "impute" missing data.

Human Development Index (HDI)

85. The HDI developed by the United Nations Development Program (UNDP is used to rank countries by levels of human development. It aims to go beyond income to provide a broader look at a country's well-being. Its components – health, education, and standard of living—are intended to capture the essential dimensions of the quality of human life or human development. The HDI ranks 188 developed and developing countries into 4 quintiles: Very High, High, Medium, and Low.

86. The HDI is a composite index of three dimensions: health (life expectancy at birth), education (mean years of schooling, expected years of schooling), and living standard (GNI per capita in PPP terms). Given the latter component, the HDI is positively correlated with per-capita income and hence does not provide an alternative measure of structural vulnerability. The HDI is a geometric mean of the three sub-indices. Higher scores mean higher human development. HDI is not available for the Marshall Islands, Tuvalu, Nauru and San Marino. The UNDP has a Multi-Dimensional Poverty Index that identifies overlapping deprivations across the same three HDI dimensions and is also broadly correlated with income poverty. Neither UNDP measure is specific to small states.

87. The HDI has been criticized on the following grounds: its exclusive focus on national performance and ranking, lack of rationale for weighing the components equally, measurement error of the underlying statistics, and on the UNDP's changes in formula which can lead to severe misclassification in the categorization of 'low', 'medium', 'high' or 'very high'.[58]

The Global Climate Change Risk Index (CRI)

88. The CRI ranks 182 developed and developing countries most affected by weather events based on 4 indicators: (i) number of deaths; (ii) number of deaths per 100,000 inhabitants; (iii) sum of losses in US$ in purchasing power parity (PPP); and (iv) losses per unit of Gross Domestic Product (GDP). This ranking represents the most affected countries. In each of the four categories, ranking is used as a normalization technique. Each country's index score is derived from a country's average ranking in all four indicators according to the following weights: death toll, 1/6; deaths per 100 000 inhabitants, 1/3; absolute losses in PPP, 1/6; losses per GDP unit, 1/3.

[58] See Wolff, Hendrik; Chong, Howard; Auffhammer, Maximilian (2011). "Classification, Detection and Consequences of Data Error: Evidence from the Human Development Index". *Economic Journal*. **121** (553): 843–870.

89. Because it summarizes the extreme events during a period of 20 years, the index can be considered a good measure of exposure to natural hazards. However, the CRI suffers from one important limitation due to data sources. Since it relies essentially on the MunichRE NatCatservice database, the index is affected by the limitations of such a database, which is biased by construction towards the more developed countries for two reasons. Firstly, the database is mainly constructed with insurances' reports on losses. These reports exist where the insurance offices are located; therefore an underrepresentation of developing countries is likely. Secondly, the component on monetary losses is biased toward countries where infrastructure is more important and costly. Thirdly, the concepts and terminology used are not clearly defined and there are some inconsistencies between CRI and the international scientific community outcomes on climate change[59].

The WorldRisk Index (WRI)

90. The WorldRiskIndex calculates the risk of 171 countries based on four components: (i) exposure to natural hazards (earthquakes, flooding, drought, sea-level rise); (ii) vulnerability as dependent on infrastructure, nutrition, living conditions, (iii) coping capacities as per governance, disaster preparedness, health care; (iv) adapting capacities. The index was calculated by the UN Institute for Environmental and Social Security. The WRI classifies countries in five categories of risk: Very High, High, Medium, Low, and Very Low. Scores are not available for 15 SSF members.

WorldRiskIndex for SSF Countries, mean 2012-2016					
Very High	High	Medium	Low	Very Low	N/A
Vanuatu	Djibouti	Lesotho	Namibia	Cyprus	Antigua & B
Tonga	Suriname	Belize	Bahamas	Seychelles	Dominica
Solomon Isl	Bhutan	Gabon	Botswana	Estonia	Fed. Micronesia
Timor Leste	Swaziland		Eq. Guinea	Kiribati	Maldives
Brunei Daruss	Comoros			Iceland	Marshall Islands
Mauritius	Trinidad & Tob			Grenada	Montenegro
Fiji				Barbados	Nauru
Guinea Bissau				Malta	Palau
Jamaica				Qatar	St Lucia
Gambia					Samoa
Guyana					San Marino
Cape Verde					Sao Tome and P
					St Kitts & N
					St Vincent
					Tuvalu

Source: World Risk Report: Analysis and Prospects 2017, commissioned by Bündnis Entwicklung Hilft and presented at the COP 23 Climate Conference in Bonn.

Climate Change Vulnerability Index

91. The Climate Change Vulnerability Index (CCVI), released by global risks advisory firm Maplecroft, enables organizations to identify areas of risk within their operations, supply chains and investments. It evaluates 42 social, economic and environmental factors to assess national vulnerabilities across three core areas. These include: exposure to climate-related natural disasters

[59] A. Miola and C. Simonet: Concepts and Metrics for Climate Change and Development- Towards and Index for Climate Resilience Development, 2014, European Commission.

and sea-level rise; human sensitivity, in terms of population patterns, development, natural resources, agricultural dependency and conflicts; and thirdly, the index assesses future vulnerability by considering the adaptive capacity of a country's government and infrastructure to combat climate change.

92. The index rates 16 countries as 'extreme risk,' including nations that represent new Asian economic power and possess significant forecasted growth. Bangladesh (1), India (2), Philippines (6), Vietnam (13) and Pakistan (16) all feature in the highest risk category and are of particular importance as they are major contributors to the ongoing global economic recovery. However, over the next 30 years, their vulnerability to climate change will rise due to increases in air temperature, precipitation and humidity. This means organizations with operations or assets in these countries will become more exposed to associated risks, such as climate-related natural disasters, resource security and conflict. Understanding climate vulnerability will help companies make their investments more resilient to unexpected change.

93. Other countries featuring in the 'extreme risk' category include: Madagascar (3), Nepal (4), Mozambique (5), Haiti (7), Afghanistan (8), Zimbabwe (9), Myanmar (10), Ethiopia (11), Cambodia (12), Thailand (14) and Malawi (15). According to Maplecroft, the countries with the most risk are characterized by high levels of poverty, dense populations, exposure to climate-related events; and their reliance on flood and drought-prone agricultural land. Africa features strongly in this group, with the continent home to 12 out of the 25 countries most at risk.

Annex 3. Including Vulnerability in IDA Allocation Formula: Implications and Key Conclusions[60]

94. **In IDA 16, Management considered an allocation approach that would link IDA's allocations to a country's structural vulnerability.** Specifically, the proposal involved replacing the current country performance rating (CPR) by a weighted average of (i) CPR, (ii) a structural Economic Vulnerability Index (EVI) and (iii) a Human Assets Index (HAI). The EVI and HAI are compiled by the UN for the purposes of identifying least developed countries. Proponents of this approach argued that the introduction of these indices could provide a simplified and uniform allocation formula that could accommodate the heterogeneity of IDA-countries and eliminate the need for exceptions. The remainder of this section summarizes the key conclusions of this exercise.

Four alterative formulations of a modified Country Performance Rating (CPR) were considered:

	Functional Form	**Simulation**
Modified CPR_1	= 0.75 CPR+ 0.25 EVI	Simulation 1, S1
Modified CPR_2	= 0.50 CPR+ 0.50 EVI	Simulation 2, S2
Modified CPR_3	= 0.33CPR + 0.33 EVI + 0.33 HAI	Simulation 3, S3
Modified CPR_4	0.33CPR + 0.33 EVI + 0.33 HAI plus reduce the population exponent from 1 to 0.5	Simulation 4, S4

95. **Redistribution implications and trade-offs.** *By performance quintile*, the introduction of vulnerability would reduce the performance orientation of the current PBA system. As the weight on vulnerability increases in the PBA formula, the per capita allocation to countries in the lower performance quintiles increases relative to the present system. *By country groupings*, under S1-S2**,** India would receive a much higher allocation (nearly two to three times its current allocation) while most post-conflict and re-engaging countries would receive less than their current allocation. Only under S3, where the weight on vulnerability is significantly increased to two-thirds (and that of the CPIA kept at one-third), would these countries receive allocations comparable to their current levels.[61] Depending on the specification of the revised allocation formula, this approach showed a significant impact on allocations to FCCs as a group. However, the impact at the country level is mixed. Some FCCs could experience significant allocation increases, while others (including countries that currently have small allocations) would experience significant allocation reductions. Specifically, post-conflict and re-engaging countries as well as some small islands would be affected by the removal of the exceptions to the current allocation formula.[62] *By region*, Sub -Saharan Africa's allocation share is reduced under S1 (relative to the current case) but

[60] See IDA (2010).

[61] Even under S3, however, three countries would receive less than their current allocation (Côte d'Ivoire, -SDR34 million; Liberia, -SDR8 million and Republic of Congo, -SDR6 million relative to their actual FY09 allocation).

[62] While the proponents of this approach seek the removal of exceptions, they do not argue for removing the caps on allocations to populous blend countries, as this would shift significant resources to India and Pakistan to the detriment of other countries, including FCCs.

steadily increased in all other scenarios; while South Asia's increases in S1 but steadily declines in other scenarios. The share of East Asia and Pacific declines under all simulations, and the picture for the other regions is much more mixed.

96. **Implementation issues.** *First*, the vulnerability data are available every 3-4 years, which would limit variations in allocations within those years (except due to changes in CPIA). In addition, the UN official data do not cover all IDA-eligible countries (Armenia, Azerbaijan, Bosnia-Herzegovina, Georgia, Kosovo, Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan). *Second*, the data have significant time lags (3 to 5 years),[63] which makes the allocation process backward looking. *Finally*, the vulnerability data exhibit significant fluctuations over time. EVI data from the two most recent rounds–2006 and 2009–vary from a decrease of 30 percent (Afghanistan) to an increase of 58 percent (Bosnia-Herzegovina).[64] Such fluctuations would cause significant allocation volatility and undermine predictability.

97. **Additional Issues.** The inclusion of structural vulnerability in the allocation formula would create allocation premia for some categories for countries. Specifically:

- per the design of the indices, less populous countries are considered more vulnerable and would be deemed to receive a higher allocation--thus creating an allocation premium for less populous countries.
- remoteness is defined as the minimum average distance for a given country to reach a "significant fraction" of the world markets (arbitrarily set at 50 percent).[65] Unless there is a drastic change in the economic importance of world markets, the indicator will show little change over time--thus introducing rigidity in the allocation system.
- the share of the population in low elevated coastal zones is also an indicator that may not change significantly over time.

98. **Finally, the inclusion of structural vulnerability in the allocation formula would result in double counting of some variables**. For example, population is one of the variables used to construct the EVI, but is also one of the variables in the current allocation framework. Also, it could be argued that the structural vulnerabilities are already captured in the current allocation framework through the impact of such factors in the GNI per-capita.

[63] The 2009 HAI, for example, was based on the 2003-05 undernourishment data from FAO, with about four years of lag which did not capture the 2008 food crisis.

[64] In addition, some changes—such as significant decreases in vulnerability in Georgia (-17 percent), Guinea (-13 percent), Ethiopia (-12 percent) and increases in Azerbaijan (44 percent), Angola (32 percent), and Bolivia (23 percent)—may be difficult to reconcile with actual country circumstances on the ground.

[65] As a side note, the only criterion used to define remoteness is geographical distance without any reference to transport connectivity or trade costs, perhaps a more relevant criterion. In addition, this criterion does not consider that a country may be favored by having a big market as a neighbor, e.g., Botswana. In addition, landlocked countries are penalized with low scores in the EVI. Yet being a landlocked low-income country is a great disadvantage as it is widely recognized.