

**SDF 8/5-NM-2 Rev. 3**

**CARIBBEAN DEVELOPMENT BANK**



**SPECIAL DEVELOPMENT FUND (UNIFIED)**

**REVISION OF SELECTED ASPECTS OF THE CARIBBEAN DEVELOPMENT BANK'S  
RESOURCE ALLOCATION SYSTEM - 2012**

**REVISED MARCH 2013**

## **CURRENCY EQUIVALENT**

Dollars (\$) throughout refer to United States Dollars (USD) unless otherwise specified

## **ABBREVIATIONS**

BMCs	-	Borrowing Member Countries
BNTF	-	Basic Needs Trust Fund
BOD	-	Board of Directors
CDB	-	Caribbean Development Bank
GDP/pc	-	Gross Domestic Product Per Capita
IDA	-	International Development Association
IDB	-	Inter-American Development Bank
MDBs	-	Multilateral Development Banks
mn	-	million
OCR	-	Ordinary Capital Resources
OECS	-	Organisation of Eastern Caribbean States
RAS	-	Resource Allocation System
SDF	-	Special Development Fund
SDF 7	-	Special Development Fund (Seventh Cycle)
SDF 8	-	Special Development Fund (Eighth Cycle)
UN	-	United Nations

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**REVISION OF SELECTED ASPECTS OF THE CARIBBEAN DEVELOPMENT BANK'S  
RESOURCE ALLOCATION SYSTEM - 2012**

**1. THE PURPOSE OF THIS PAPER**

1.01 The Caribbean Development Bank (CDB) allocates its single largest source of concessional resources, the Special Development Fund (Unified), among member countries in two ways - first by having rules for country eligibility and second according to a performance-based allocation formula that measures country need and country performance. The objective is to strengthen development results by targeting needs, placing resources where they are likely to be effective, and giving member countries an incentive to perform well.

1.02 CDB's Resource Allocation System (RAS) faces complex challenges in the changing economic and social environment in the Caribbean. Some issues are longstanding. These include responding to vulnerability, reaching persistent pockets of poverty, and improving the degree to which variables in the allocation formula are good measures of country needs and performance. This paper presents the results of a review of the RAS that was conducted to strengthen its poverty focus and make it a more effective tool for poverty reduction.

**2. THE PERFORMANCE-BASED RESOURCE ALLOCATION FORMULA**

2.01 The allocation formula of the SDF, as shown below, is multiplicative. It contains three factors to reflect country need (population, per capita income in current prices, and vulnerability) and two factors to reflect country performance (a policy-and-institutional performance score and a portfolio performance score). Each member country receives an allocation in proportion to its allocation score.

$$\begin{aligned} \text{Allocation score} &= (\text{country need}) \times (\text{country performance}) \\ &= (\log\text{POP} \times \text{GNPpc}^{-0.9} \times \text{VUL}^{2.0}) \times (0.7\text{PRES} + 0.3\text{PORT})^{2.0} \end{aligned}$$

Where:

*logPOP = the logarithm of population*

*GNPpc = gross national product per capita-current prices*

*VUL = country vulnerability (according to CDB's index of member country vulnerability)*

*PRES = country performance on policy and institutions (similar to the World Bank CPIA)*

*PORT = performance of the country's portfolio of CDB loans, as measured by the Project Performance Index (PPI)*

2.02 Factors in the formula have two kinds of "weights". First, the two component factors in "country performance" (PRES and PORT) have arithmetic weights (70% and 30%, respectively). Second, three factors are raised to a power (exponent). In general, the larger the absolute value of the exponent, the greater the weight of this factor in the formula.

2.03 CDB gives greatest weight to country performance and country vulnerability. Average per-capita income receives a lesser, but still substantial, weight. Population does not have an exponent, but rather appears in the formula in logarithmic form. The effect of this is to change the exponential distribution of population data into a linear form. This does not greatly affect the countries with relatively small populations but it strongly moderates the influence of "population" for the largest member countries.

### **3. SDF COUNTRY GROUPS**

3.01 In 2010, CDB reviewed the basis for defining country groups, and terms and conditions of financing for each group, and presented the results to Contributors at the 27<sup>th</sup> Annual Meeting of Contributors (May 18, 2010). In 2011, CDB tabled several relevant papers, including “*Review of the Special Development Fund (Unified) Country Classification and Terms of Lending for Country Groups and Management’s Response Thereto*”. This paper (BD 39/11 and SDF 7/28-AM-5) was considered by the Board of Directors (BOD) on May 23, 2011 and the country groups and terms of lending, to be applied from SDF 8, were approved at the 28<sup>th</sup> Annual Meeting of Contributors on May 24, 2011.

3.02 Subsequently, a paper on “*Implementation of the Revised Country Classification and the Terms of Lending for Country Groups of the Special Development Fund (Unified)*” (BD 112/11 and SDF 8/1-PM-4) was approved by the BOD and Contributors in December 2011. This paper used a three-year rolling average (2007-2009) of the United Nations’ (UN) per capita Gross Domestic Product (GDP) (at constant 2005 prices)<sup>1/</sup> to classify Borrowing Member Countries (BMCs) into their respective country groups and resulted in a change in grouping for Barbados and Antigua and Barbuda.

3.03 In September 2012, the country groupings were further updated using the three-year rolling average for 2008-2010 (Paper entitled “*Revision of Selected Rules for Country Access to SDF Resources*” - SDF 8/4-NM-8, which was circulated for comment and subsequently withdrawn) which resulted in Guyana being re-classified as a Group 2 country. Accordingly, the country groups and associated terms of lending which will apply, effective SDF 8, are shown in Appendix 1.

### **4. POVERTY AND VULNERABILITY**

4.01 The CDB paper entitled “*The Strategic Focus of SDF 8: Building our Resilience*” (Paper BD 29/12) noted that, by developed country standards, national poverty rates are extremely high in most Caribbean countries, with rates of up to 40% in Group 2 countries and in some cases close to or above 20% in Group 1, and within most individual countries there are large pockets of extreme poverty. In Group 3, of course Haiti is a special case where three quarters of the population are below the poverty line and more than half are indigent. There are scale and incentive problems as well. As a practical matter, a small country may find it difficult to address poverty because it does not have the critical mass to mount significant anti-poverty programmes. Poverty has been made more intractable by the recent slowing of economic growth, the worsening terms of trade for some major exports, especially in the Organisation of Eastern Caribbean States (OECS) countries, the impact of natural disasters, and the erosion of public expenditures essential for access to social services such as education, health and sanitation that are important to the poor, especially in countries in fiscal crisis.

4.02 The poverty rates derived from the Country Poverty Assessments have been applied to the reported population statistics for 2011 to assess the number of poor and indigent persons in each BMC. This data is presented in Appendix 2. Under the SDF 7 rules of CDB’s Resource Allocation Formula (RAS), Group 1 countries will have no SDF allocation, despite having poverty rates over 15% on average and despite including very small island states which are highly vulnerable to economic shocks and natural disasters.

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<sup>1/</sup> The base year for the GDP constant dollar calculations has been updated to 2005 prices from the 1990 prices which were used in the Consultant’s report

## **5. LIMITATIONS OF THE RAS**

5.01 CDB's RAS for SDF funds has certain limitations.

- Many poor people will not be reached by SDF 8 because they live in countries that are in Group 1 and these countries have no SDF allocation, despite a 15.8% poverty rate. Although in principle they remain eligible for SDF loans under certain limited conditions they do not actually receive an allocation that they can draw upon. Using "per capita income" as the sole criterion for SDF eligibility has the benefit of simplicity but also the weakness that it excludes a significant number of poor people from SDF help.
- Small countries, even when eligible, may have two other difficulties. First, their governments may not have the 'critical mass' of funds and administrative capabilities needed to operate anti-poverty programmes; and, second, if they receive a very small allocation of SDF funds then it may be too small to fund even one project efficiently.
- The allocation formula is an imperfect reflection of poverty and needs (no direct measure of the numbers of poor people) and of country performance (the limitations of the "portfolio performance" variable have been noted in earlier reports). Although the 'poverty variables' (POP and GDP/pc) generally worked well in SDF 7, there were some cases where they produced anomalous results. For example, CDB rated Jamaica slightly better on country performance (PRES) than Guyana, and Jamaica has 1.6 times as many poor people as Guyana, but, nevertheless, Jamaica received only 60% of Guyana's allocation. Of course, it's not quite that simple. Guyana did better than Jamaica on its 'portfolio performance' with CDB. However, the main reason why Guyana received a larger allocation was that Guyana's per capita income at the time of the allocation was only \$1,502 compared with Jamaica's \$3,796. So there were good reasons for the relative allocations. Nevertheless, it is striking that Jamaica received a much lower SDF allocation despite the fact that it had many more poor people.

## **6. OPTIONS FOR IMPROVING THE RAS**

6.01 This section considers what options there are to respond to the limitations of the RAS. An earlier paper, entitled "*Revision of Selected Rules for Country Access to SDF Resources (SDF 8/4-NM-8,*) which was circulated for comment in October 2012 and subsequently withdrawn, described a wider set of possible approaches to the allocation question. The present paper, guided by preliminary comments by Contributors, considers two options for the RAS in SDF 8 which were identified for further consideration as follows:

- (a) Option 1, as shown in Appendix 3 Page 1, assumes no change to the SDF 7 allocation formula for SDF 8, with adjustments for the following:
  - BMCs would be regrouped for SDF 8 allocation purposes in accordance with BD112/11 "*Implementation of the Revised Country Classification and the Terms of Lending for Country Groups of the Special Development Fund (Unified)*", as amended by further updating in September 2012;

- The SDF budget set asides would be at levels discussed in the Contributors' Meeting in October 2012, i.e. \$208 mn for country loan allocations, \$104 mn in grant set asides and \$46 mn in other loans; and
  - GDP/Capita, Population and Project Portfolio indices as at 2011; or
- (b) Option 2, as shown in Appendix 3 Page 2, adds the variable "POOR" (number of poor people in the country - see Appendix 2) to the SDF 7 allocation formula, with an appropriate weight.
- The Allocation formula revised to reflect the POOR variable would therefore be:

$$\text{Allocation score} = (\text{country need}) \times (\text{country performance}) \\ = (\log\text{POP} \times \text{POOR}^{0.1} \times \text{GNPpc}^{-0.9} \times \text{VUL}^{2.0}) \times (0.7\text{PRES} + 0.3\text{PORT})^{2.0}$$

Where:

*logPOP* = the logarithm of population

*POOR* = the number of poor people in the country

*GNPpc* = gross national product per capita (current prices)

*VUL* = country vulnerability (according to CDB's index of member country vulnerability)

*PRES* = country performance on policy and institutions (similar to the World Bank CPIA)

*PORT* = performance of the country's portfolio of CDB loans as measured by the Project Performance Index (PPI)

6.02 The addition of the POOR variable had the following effects on the allocation outcomes:

- The poverty relevance of the allocation formula was greatly improved because "need" was now measured more directly.
- There was a large improvement in equity in the sense that the dispersal of data for "allocations per poor person", measured by the standard deviation of the data, was reduced by about one-third by the addition of the POOR variable to the formula, that is, a poor person had a greater benefit from the SDF wherever he or she lives in the BMCs if POOR is included in the allocation formula.
- No country received an allocation above 15% of the expected SDF 8 budget and no country received an allocation below \$6 million (mn) (with the allowable exception of Montserrat at \$4.5 mn).

### **Small State Preference**

6.03 Other things being equal, CDB is enjoined by its mandate to consider the interests of its smaller BMCs. Both of the alternative allocation formulas considered does this in several important ways. First, the population variable (POP) enters into the formula in logarithmic form, which greatly compresses the range of values. This, in turn, reduces the allocations that would otherwise go to the larger BMCs.

6.04 Second, the smaller states are treated the same as the larger states in regard to most variables in the allocation formula – average income, vulnerability and two performance variables (PPI and PRES). The fact that the allocation formula is multiplicative (rather than additive as is the case with some other

systems) means a well-performing small state can obtain an allocation that is much larger than its size would otherwise warrant.

6.05 Putting aside Montserrat as a special case (although if one included it then the point would be reinforced), one finds a strong negative correlation in SDF 7 and in both alternative SDF 8 proposals between the size of the BMC and its “allocation per poor person” - that is, the smaller BMCs do better than the larger states in both the allocation models considered below.

6.06 To compare the two SDF 8 scenarios ... in Option 1, allocations per poor person vary from lowest \$74 (Jamaica) to highest \$5,496 (Montserrat) and, the next highest, \$1,077 (Dominica) and the correlation coefficient between country size and allocation per poor person is -0.33. In Option 2, “allocations per poor person” vary from a low of \$88 (Jamaica) to a high of \$3,736 (Montserrat) and, the next highest, \$933 (Dominica) and the correlation between “allocation per poor person” and population is -0.36, that is, in both cases, small BMCs receive better allocations than their population would predict because of the way the allocation formula is constructed.

6.07 Small BMCs might be further advantaged if the maximum allocation per country were capped or if there was a high minimum allocation, in addition to the factors favouring small BMCs discussed above. However, neither model shows a convincing case for maximums or minimums. In no case does a country’s allocation exceed 15% of expected SDF 8 resources and in no case (with the marginal exception of Montserrat in one option) does a country’s allocation fall below the \$6 mn that is sometimes taken as a reasonable rule-of-thumb efficient minimum.

## **7. WAIVERS AND EXCEPTIONS**

7.01 In Paper BD 112/11 “*Implementation of the Revised Country Classification and the Terms of Lending for Country Groups of the Special Development Fund (Unified)*,” it was recommended that exceptions and waivers remain an integral part of the classification system because they provided the Bank with the flexibility to quickly respond to exogenous shocks in BMCs.

7.02 It is proposed to continue to examine the need for more favourable terms and conditions for beneficiary countries on a case by case basis and to approach the Board for its consideration of such favourable terms as the circumstances demand.

## **8. RECOMMENDATION**

8.01 The comparison between the two options, on balance, favours Option 2 (the SDF 7 allocation formula including the POOR variable, with no fixed minimum or maximum allocations) as providing an enhanced better poverty focus for the RAS. Therefore, it is recommended that the RAS be applied in accordance with Option 2, inclusive of the POOR variable, for SDF 8.



**APPENDIX 1****SDF 8 COUNTRY GROUPS**

<b>Group 1</b> <b>GDP/pc above \$10,000**</b> <b>(OCR mainly)</b>	<b>Group 2</b> <b>GDP/pc \$2,001-\$10,000**</b> <b>(SDF-OCR Blend)</b>	<b>Group 3</b> <b>GDP/pc below \$2,000**</b> <b>(SDF-mainly)</b>
Anguilla Bahamas, The British Virgin Islands Cayman Islands Trinidad and Tobago Turks and Caicos Islands Barbados Antigua and Barbuda	Belize Dominica Grenada Guyana Jamaica Montserrat St. Kitts and Nevis St. Lucia St. Vincent and the Grenadines	Haiti
<b>Terms of Lending (SDF)</b>		
Interest rate– 2.5% Max. Grace Period – 5 years Max. Overall Maturity– 20 years	Interest rate– 2.5% Max. Grace Period– 5 years Max. Overall Maturity– 25 years	Interest rate– 2.0% Max. Grace Period– 10 years Max. Overall Maturity– 30 years

\*\* The three-year rolling average for 2008-2010 using the United Nations' (UN) per capita Gross Domestic Product (GDP) (at constant 2005 prices)  
- see details in Appendix 3

**APPENDIX 2**

**POVERTY IN CDB'S BMCS**

Country and Group	Degree of Poverty						
	Poverty Rate Year	% Poor Population	% Indigent Population	Gini Coefficient	Population 2011*	Number of Poor	Number Indigent
<b>Group 1</b>							
Anguilla	2009	5.8	0.0	0.39	16,800	974	0
Antigua and Barbuda	2006	18.0	3.7	0.48	92,500	16,650	3,423
Bahamas, The	2001	9.3	n.a.	n.a.	354,000	32,922	n.a.
Barbados	2010	19.3	9.1	0.47	276,300	53,326	25,143
British Virgin Islands	2002	22.0	0.5	0.23	29,500	6,490	148
Cayman Islands	2008	1.9	0.0	0.40	55,300	1,051	0
Trinidad and Tobago	2007	17.0	n.a.	n.a.	1,325,400	225,318	n.a.
Turks and Caicos Islands	1999	26.0	3.2	0.37	31,600	8,216	1,011
<b>Sub-Total</b>		15.8			2,181,400	344,947	29,725
<b>Group 2</b>							
Belize	2009	41.3	15.8	0.42	313,000	129,269	49,454
Dominica	2009	28.8	3.1	0.44	71,300	20,534	2,110
Grenada	2008	37.7	2.4	0.37	112,900	42,563	2,710
Guyana	2006	36.1	18.6	n.a.	780,000	281,580	n.a.
Jamaica	2010	17.6	n.a.	n.a.	2,705,800	476,221	n.a.
Montserrat	2009	36.0	3.0	0.39	5,000	1,800	150
St. Kitts and Nevis	2008	21.8	1.0	0.38	54,400	11,859	544
St. Lucia	2006	29.0	1.6	0.42	177,200	51,388	2,835
St. Vincent and the Grenadines	2009	30.2	2.9	0.40	102,400	30,925	2,970
<b>Sub-Total</b>		24.2			4,322,000	1,046,140	60,873
<b>Group 3</b>							
Haiti	2001	76.0	56.0	n.a.	9,719,932	7,387,148	5,443,162
<b>Total Groups 2 &amp; 3</b>					<b>6,503,400</b>	<b>1,391,087</b>	<b>90,597</b>

\* Sources of POP statistics: Eastern Caribbean Central Bank for the OECS countries and National Statistical Offices for other BMCs

**PRO FORMA SDF 8 ALLOCATIONS MATRICES**

**Option 1: SDF 8 Indicative Country Allocations**

**(No change to SDF 7 formula variables, GDP/PPI and POP at 2011 and no min or max allocation)**

**Model 1: SDF8 Indicative Country Allocations (No change to formula variables, GDP/PPI and POP at 2011 and no min or max allocation)**

	GDP/Capita	GDP/cap	POP	VUL	PPI	PRES	Allocation	SDF8	SDF8	Allocation	SDF7	SDF7		
	Constant prices	2011	2011		2011	Mar-10	Number	\$millions	%	per poor person	\$millions	%	Parameters:	
	(See note 1)	(See note 2)											SDF8Funds	\$358,000
<b>Group 1:</b>	<b>above \$10,000</b>													
Anguilla	54,617	17,573	16,800	4.00	6.7	3.40	0.197	R	R		4,925	1.4%	<b>Portfolio &amp; Pol/Inst Weights</b>	
Antigua and Barbuda	40,925	13,321	92,500	3.45	5.3	2.90	0.150	R	R		3,515	1.0%	<b>Multipiers</b>	
Bahamas	22,616	21,999	354,000	3.30	5.8	3.60	0.135	R	R		R	R	[1] PPI	0.3
Barbados	14,045	16,825	276,300	2.75	5.2	3.80	0.115	R	R		-	-	[2] PRES	0.7
British Virgin Islands	11,379	31,705	29,500	3.65	5.3	3.40	0.083	R	R		R	R		
Cayman Islands	13,946	47,270	55,300	3.15	5.9	3.80	0.057	R	R		R	R		
Trinidad and Tobago	26,253	17,231	1,325,400	1.75	5.3	3.90	0.054	R	R		-	-		
Turks and Caicos	14,294	24,397	31,600	3.00	5.4	3.00	0.063	R	R		1,855	0.5%		
<b>Group 2:</b>	<b>\$2,001-\$10,000</b>													
Belize	4,048	4,642	313,000	3.35	6.0	3.60	0.577	31,279	8.7%	241.97	17,652	4.9%	<b>Allocation weights</b>	
Dominica	6,346	6,764	71,300	3.55	6.0	3.60	0.408	22,105	6.2%	1,076.52	14,203	3.9%	<b>Exponents</b>	
Grenada	6,555	6,941	112,900	3.10	5.8	3.20	0.268	14,554	4.1%	341.94	7,972	2.2%	GDP/capita	-0.9
Guyana	2,073	3,307	780,000	2.95	6.1	3.50	0.639	34,635	9.7%	123.00	36,371	10.1%	POP [Log]	1
Jamaica	4,124	4,972	2,705,800	3.35	6.2	3.60	0.652	35,377	9.9%	74.29	22,041	6.1%	Performance	2
Montserrat	7,644	12,400	5,000	4.30	4.5	3.20	0.182	9,894	2.8%	5,496.42	2,251	0.6%	Vulnerability	2
St. Kitts and Nevis	8,986	13,032	54,400	3.45	5.6	3.20	0.171	9,296	2.6%	783.90	5,445	1.5%		
St. Lucia	5,113	6,939	177,200	3.80	6.1	3.70	0.517	28,023	7.8%	545.32	16,294	4.5%	<b>Country Loans Allocated</b>	
St. Vincent/Grenadines	5,668	6,719	102,400	3.50	6.4	3.50	0.421	22,836	6.4%	738.45	12,923	3.6%	\$208,000	million
<b>Country Loans Allocated</b>			<b>6,503,400</b>					<b>208,000</b>	<b>58.1%</b>		<b>145,447</b>	<b>40.3%</b>		
<b>Set-Asides</b>														
<b>Group 3:</b>	<b>below \$2,000</b>													
Haiti (grants)	412			3.20	-		fixed	50,000	14.0%		46,000	12.7%		
Loans for Natural Disaster Mitigation & Rehab							fixed	36,000	10.1%		30,000	8.3%		
Loans for Disaster & Fiscal Distress							fixed	-	-		47,000	13.0%		
Loans for New BMC								10,000	2.8%		-	-		
<b>Other Grants</b>														
Disaster Response							fixed	5,000	1.4%		6,100	1.7%		
Regional Integration and RPGs							fixed	10,000	2.8%		10,000	2.8%		
development effectiveness							fixed	-	0.0%		5,000	1.4%		
Gender Equality							fixed	-	0.0%		4,000	1.1%		
Citizen Security							fixed	4,000	1.1%		-	-		
Environment & Climate Change							fixed	5,000	1.4%		4,000	1.1%		
BNTF							fixed	10,000	2.8%		46,000	12.7%		
GRANT TA							fixed	20,000	5.6%		17,500	4.8%		
							<b>GRAND TOTAL</b>	<b>358,000</b>	<b>100%</b>		<b>361,047</b>	<b>100%</b>		
Note 1 - the 3-year rolling average (2008-2010) of the United Nations' (UN) per capita Gross Domestic Product (GDP) (at constant 2005 prices) used for classifying BMCs into country groups														
Note 2: the Resource allocation formula requires GDP / per capita at current prices														
											1604.14			
											(0.32147)			

