



**GLOBAL ENVIRONMENT FACILITY**  
INVESTING IN OUR PLANET



**WORLD BANK GROUP**  
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**REVISED STAR SIMULATIONS**  
**(PREPARED BY THE GEF SECRETARIAT)**

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## **REVISED STAR SIMULATIONS**

### **Introduction**

1. This document outlines the Secretariat's proposal for the GEF-8 STAR model and presents the latest simulations across financing scenarios<sup>1</sup> for key country groups.<sup>2</sup> Based on the ongoing replenishment discussions to date, the GEF-8 STAR Model has been up-dated to propose (i) full flexibility, (ii) increasing floors for SIDS and LDCs, (iii) the introduction of a Vulnerability Index into the STAR model comprising of both economic and environmental sub-indicators, and (iv) the introduction of a competitive space for a selected group of countries focused on the thematic area of policy coherence.

### **Moving to Full Flexibility**

2. GEF-8 STAR model proposes that recipient countries have full flexibility to program resources across the three STAR focal areas. Integration is one of the comparative advantages of the GEF, and limited flexibility can constrain countries from maximizing their contributions to global environmental benefits. Full flexibility will enable countries to pursue integration without constraint and allow funding to target maximum impact, while maintain the traditional system of predictable and transparent resource allocations to recipient countries. Given the full flexibility proposal, the Secretariat will also expand its use of the Rio Marker methodology, expanding from monitoring the share of climate-related financing to include biodiversity-related and land degradation-related financing.

3. In GEF-8, the Secretariat will monitor the use of Rio Markers and the relevant shares of financing directly and indirectly related to these thematic areas. The Secretariat will also track the utilization of STAR resources to maintain portfolio-level targets on focal-area financing and monitor results met over the GEF-8 replenishment period, and report on progress towards those targets with each work program of the GEF-8 cycle through the semi-annual Corporate Scorecard. The Secretariat will organize a mid-term review to review and report on the experience of GEF-8 approvals under full flexibility, and to identify potential measures if portfolio-level focal area financing is not progressing to meet the agreed targets.

### **Introducing a Vulnerability Dimension**

4. The GEF-8 STAR Model proposes to harmonize the SIDS floors with the LDC floors, and to increase this newly defined SIDS/LDCs floor. The proposed increase assumes a larger GEF-8 replenishment relative to GEF-7 and ultimate value will depend on the financing scenario being considered.

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<sup>1</sup> GEF/R.08/21, *Revised Programming Scenarios and Global Environmental Benefits Targets*

<sup>2</sup> These simulations are labelled as "preliminary" as the Secretariat will continue to undertake quality checks on the model and its data.

5. Furthermore, an overarching Vulnerability Index comprising of both economic and environmental sub-indicators is introduced into the GEF-8 STAR allocation formula. This will replace the GDP Index, which was previously the model’s measure of vulnerability.

6. The Human Development Index (HDI)<sup>3</sup> is the proxy of economic vulnerability. It is based on but goes beyond national income measures, and takes into consideration other aspects of human development. It has three dimensions (health, education, and standard of living – national income) with four indicators (life expectancy at birth, expected years of schooling, mean years of schooling, and Gross National Income per capita). Annually produced by UNDP since 1990, the latest data for the GEF-8 STAR model is available as of 2019 and covers 189 countries.

7. The Economic and Environmental Vulnerability Index (EVI)<sup>4</sup> is proposed as a proxy for environmental vulnerability, measuring country vulnerability to both economic and environmental shocks.<sup>5</sup> Among all the indices related to vulnerability, EVI is the one with the longest history, widely adopted as the vulnerability criteria by other international development organizations. For example, EVI is used in the Asian Development Bank resource allocation framework to develop a supplementary allocation for grant-eligible SIDS.<sup>6</sup> This index is also used as one of the criteria to identify LDCs by the United Nations Department of Economic and Social Affairs (UNDESA).<sup>7</sup> Many institutions, with specific goals in mind, include variables in their own indices based on the EVI. For example, the United Nations Development Programme (UNDP) developed a new vulnerability index based on EVI’s eight indicators, and additional three indicators from the World Development Indicators.<sup>8</sup> The United Nations Conference on Trade and Development (UNCTAD) envisions developing a new vulnerability index broadening the scope of the EVI.<sup>9</sup> Updated every three years and developed by UN Committee for Development Policy (UNCDP), this Index covers 145 developing countries and has data updated every three years from 1990 to 2021. The data as of 2021 is used in the GEF-8 STAR model.

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<sup>3</sup> <http://hdr.undp.org/en/content/human-development-index-hdi>

<sup>4</sup> <https://www.un.org/ldcportal/content/handbook-ldc-category-2021-edition>

<sup>5</sup> Some indices of environmental vulnerability, such as the EVI, also contain a component called “economic vulnerability” – however this component refers to economic vulnerability resulting from environmental dependence or economic risks to environmental shocks, therefore not overlapping with the general measures of income or development discussed above.

<sup>6</sup> *Update on ADF 13 Resource Allocation Framework*, <https://www.adb.org/sites/default/files/institutional-document/614446/adf13-2020-resource-allocation-framework-update.pdf>

<sup>7</sup> *Handbook on the Least Developed Country Category*, [file:///C:/Users/wb419104/OneDrive%20-%20WBG/Desktop/Ldc handbook 2021 web%20\(1\).pdf](file:///C:/Users/wb419104/OneDrive%20-%20WBG/Desktop/Ldc%20handbook%202021%20web%20(1).pdf)

<sup>8</sup> *Towards a Multidimensional Vulnerability Index*, <https://www.undp.org/publications/towards-multidimensional-vulnerability-index>

<sup>9</sup> *Multidimensional Vulnerability Index: Potential Development and Uses*, [https://sdgs.un.org/sites/default/files/2021-11/multidimensional\\_vulnerability\\_indices\\_0.pdf](https://sdgs.un.org/sites/default/files/2021-11/multidimensional_vulnerability_indices_0.pdf)

## Creating a Competitive Space

8. As one of its core principles, the STAR allocation system should continue to adequately serve all recipient countries, catering appropriately to different needs, capabilities, and contexts that evolve over time. A continued point of discussion is the share of resources that flows to countries with higher capacities. To this end, the GEF-8 STAR Model proposes to introduce a competitive space for a selected cohort of countries. In principle, it is proposed that this element be targeted to the top 5 STAR recipient countries, with 10% of their individual STAR allocations put into a competitive pool. It should be noted that this criterion may be slightly modified once the GEF-8 STAR allocations are finalized, to ensure that no lower-income or vulnerable countries are inadvertently included.

9. It is proposed that this potential competitive window in the GEF-8 STAR be used for a series of projects that directly target domestic policy coherence in the selected group of high-impact countries. Recent global conversations increasingly highlight the policy coherence agenda.<sup>10</sup> This agenda refers to the elimination of contradictory national policies that, if left unchecked, may either stall needed progress or themselves lead to further environmental decline. This is a critical dimension of domestic resource mobilization towards closing the nature financing gap between the funding provided and the funding needed to achieve critical environmental goals, as well as in increasing the impact of nature funding flows. Policy coherence is therefore an essential component of maximizing the benefits of GEF investments, and in the sustainability of those benefits.

10. Introducing a policy coherence index into the STAR formula was not feasible at this time. However, the creation of this competitive space for policy coherence with a series of strategic pilot investments could create opportunities for leadership, policy change and learning in the high-impact, high-income recipient countries; in these large GEF programming portfolios, policy coherence can be particularly impactful on global environmental benefits.<sup>11</sup> Full details of this competition will be articulated in an operational note of the GEF-8 STAR Policy. This will be discussed at the 62nd Council in June 2022.

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<sup>10</sup> GEF/R.08/11, *GEF-8 Strategic Positioning Framework*, [https://www.thegef.org/sites/default/files/documents/2022-01/GEF\\_R.08\\_11\\_GEF-8\\_Strategic\\_Positioning\\_Framework.pdf](https://www.thegef.org/sites/default/files/documents/2022-01/GEF_R.08_11_GEF-8_Strategic_Positioning_Framework.pdf)

<sup>11</sup> Indicators such as the Environmental Sustainability Gap may be of future use in articulating this space.

## Proposed Model Parameters and Preliminary Results

11. Based on the latest programming scenarios and continued detailed analyses to ensure balance across a range of needs, the Secretariat presents revised STAR simulations according to the following parameters in Table 1 below. The proposed formulation is based on detailed analyses to ensure balance across a range of needs, with changes to allocations resulting from a number of factors that are both exogenous and endogenous to the model. The STAR model is an interlinked and complex system with a variety of parameters and levers. Exogenous parameters include data updates and aggregate focal area allocations - in the absence of any other changes, the extensive data updates described above that were undertaken for the existing indices and sub-indices relative to GEF-7 will on their own cause changes, while the focal area amounts of the GEF-8 replenishment will ultimately determine the aggregate amounts that are used by the model to simulate the respective country allocations. In terms of parameters that are endogenous to the STAR model, the respective floors and ceilings (their magnitudes, absolute values, and disaggregation across focal areas), and all of the STAR indices (their construction and respective weights at all levels) will impact the distribution of resources across country groups and countries.

**Table 1: Proposed GEF-8 STAR Parameters**

|  | GEF-7  | GEF-8, 5Bn Scenario                               | GEF-8, 5.8Bn Scenario                             | GEF-8, 6.5Bn Scenario                             |
|--|--|---|---|---|
| Weights for Existing Indices                         | Existing   | Same as GEF-7                                     | Same as GEF-7                                     | Same as GEF-7                                     |
| Aggregate SIDS/LDCs floors                           | \$6 Mn   | \$7 Mn  | \$8 Mn  | \$8 Mn  |
| Aggregate Non-SIDS/LDCs floors                       | \$4 Mn   | \$4 Mn  | \$5 Mn  | \$5.5 Mn  |
| Focal Area Ceilings (Original Ceiling calculation)   | 10% of STAR focal area allocations plus set-asides | 6% of STAR focal area allocations plus set-asides | 6% of STAR focal area allocations plus set-asides | 6% of STAR focal area allocations plus set-asides |
| Weight for the Vulnerability Index                   | N/A  | 0.6   | 0.6   | 0.6   |
| Weight for the Vulnerability Sub-indices (HDI & EVI) | N/A  | 50% and 50%                                       | 50% and 50%                                       | 50% and 50%                                       |

In summary:

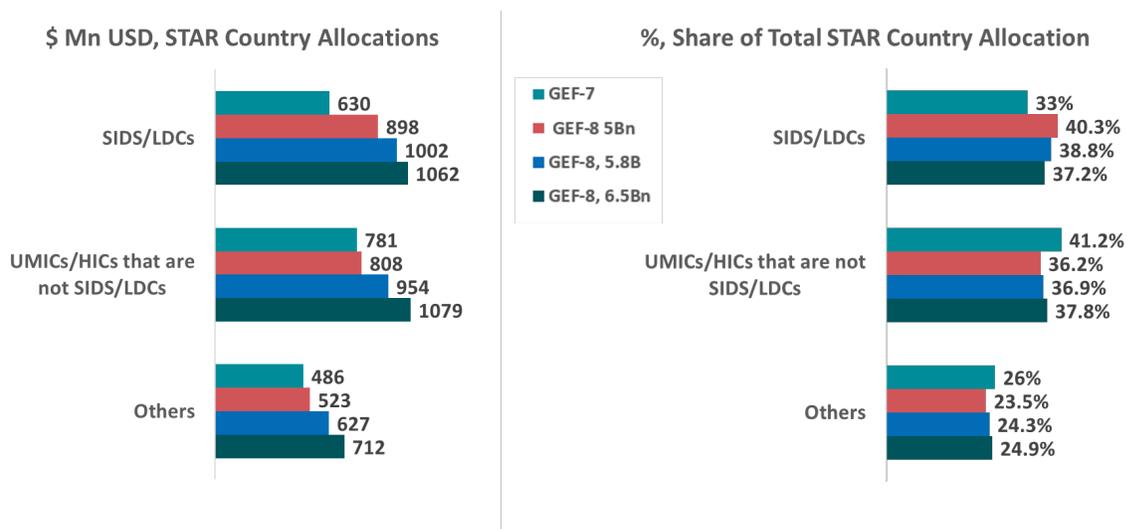
- The STAR focal area allocations used for the simulations are based on the \$5Bn, \$5.8Bn and \$6.5Bn financial scenarios presented to the interim replenishment meeting<sup>12</sup> (the STAR focal area allocations remain the same between the \$6.5Bn and the \$7Bn financial scenarios and therefore an additional simulation for this scenario is not necessary),
- All weights for existing indices remain the same as GEF-7,

<sup>12</sup> GEF/R.08/21, *Revised Programming Scenarios and Global Environmental Benefits Targets*

- The focal area ceilings are lowered from 9% to 6%,
- The aggregate non-SIDS/non-LDC floors remain the same as GEF-7 for the \$5Bn scenario - \$4Mn
- The aggregate non-SIDS/non-LDC floors are increasingly raised across the higher scenarios, as follows:
  - Raised to \$5Mn in the \$5.8Bn Scenario
  - Raised to \$5.5Mn in the \$6.5Bn scenario
- The SIDS/LDCs floors are harmonized, resulting in two categories of floors: “SIDS/LDCs”, and “non-SIDS/LDCs”,
- The aggregate SIDS/LDCs floors are increasingly raised across both scenarios, as follows:
  - Raised to \$7Mn in the \$5Bn Scenario
  - Raised to \$8Mn in the \$5.8Bn Scenario and \$6.5 Scenario
- The GDP Index is now replaced by the Vulnerability Index (VI), with the income dimension now captured in one of the sub-indices of the HDI
- The Vulnerability Index is comprised of the HDI and the EVI, which are equally weighted,
- The Vulnerability Index is weighted to 0.6 across all scenarios

12. Along the lines of the approach adopted for the GEF-7 replenishment, these results are analyzed across the following three mutually exclusive groups of countries: (i) SIDS/LDCs: (76 countries), (ii) Upper Middle-Income Countries (UMICs) and High-Income Countries (HICs) that are not SIDS or LDCs (39 countries), and (iii) Low-Income Countries and Lower Middle-Income Countries that are not SIDS or LDCs, also called “Others” (29 countries).

**Figure 1: GEF-8 STAR Simulations**



13. Key observations of preliminary simulations across the specified country groups relative to GEF-7 are as follows:

- All three country groups will experience increasing aggregate amounts (depending on the financial scenario, this impact will vary in both magnitude and direction for the specific countries within these groups),
- SIDS/LDCs will receive a greater percentage of resources,
- UMICs and HICs (that are not SIDS or LDCs) will experience a reduction in the percentage of resources,
- The “Other” countries will experience a marginal reduction in the percentage of resources.

### **Next Steps**

14. In line with the practice adopted for past replenishments, the GEF-8 STAR Policy will be presented for decision at the 62nd Council meeting in June 2022, and individual country allocations will be published on 1 July 2022. The STAR Policy will reflect replenishment discussions and guidance on the GEF-8 model parameters, contain operational guidelines, and also include an operational note on the rollout of the competitive window.