



# A regional framework for a Debt Swap Mechanism and key performance indicators for climate action/SDGs progress in the Arab region



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**Economic and Social Commission for Western Asia**

# A regional framework for a Debt Swap Mechanism and key performance indicators for climate action/SDGs progress in the Arab region



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# Key messages

- *Debt Swaps can achieve transformational impact when they are tied to policy action at the macro level, thus contributing to an enabling environment that will enhance sustainability outcomes for the country.*
- 
- *Key performance indicators need to be carefully selected to capture the defined goals of the Debt Swap Mechanism. They should also be attributable to national policy action.*
- 
- *Key performance indicators need to allow for regular monitoring, reporting and verification.*
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# Introduction

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In December 2020, the United Nations Economic and Social Commission for Western Asia (ESCWA) launched a Climate/SDGs Debt Swap Initiative in the Arab region. The initiative is establishing a Debt Swap Mechanism and Donor Nexus to support member states that are facing challenges of climate finance, high debt burdens, and fiscal pressures that are exacerbated by the adverse impact of COVID-19.

The study aims to develop a regional framework for a Debt Swap Mechanism and standardised key performance indicators (KPIs) for climate action/SDGs progress in the Arab region. The study argues that debt swaps should not only free financial resources by providing relief on debt service payments and thereby enable governments to scale up investment in sustainability-enhancing projects. They should also contribute to improved framework conditions and raise policy ambition. To make sure that ESCWA's Debt Swap Mechanism has transformational impact, it will be hence important to look beyond conventional approaches to debt-for-climate/nature/development swaps. This study therefore suggests not only linking the Debt Swap Mechanism to projects that would be funded through debt service reduction, but also tying it to policy action at the macro level that would contribute to an enabling environment, thus enhancing sustainability outcomes for the country. In other words, the Debt Swap Mechanism would be linked to KPIs at both project and policy levels.

KPIs need to be chosen carefully and capture the defined goals of the Debt Swap Mechanism. They also need to be attributable to national policy action. KPIs need to be tailored to the specific goals and be as concrete and operational as possible. Importantly, KPIs need to enable a regular monitoring, reporting and verification process in order to provide a reliable basis for assessing the success of the envisaged Debt Swap Mechanism during and after its implementation. To this end, KPIs need to be available relatively easily, at reasonable cost and at regular frequency.

The study is structured as follows: Section 2 provides some background on debt sustainability, environmental change and the SDG attainment gap in the Arab region. Section 3 discusses how debt swaps can be used to achieve transformational change and puts forward a framework for achieving transformational impact. Section 4 reviews selection criteria for KPIs of nature/climate action and progress in achieving the SDGs. Section 5 considers high-level goals and KPIs for establishing ESCWA's envisaged Debt Swap Mechanism, while briefly discussing relevant metrics. Section 6 then illustrates the proposed framework for the case of Jordan. Section 7 summarises the main points and concludes with recommendations for the design of ESCWA's envisaged Debt Swap Mechanism.



# 1. Background: Debt sustainability, environmental change, and the SDG attainment gap in the Arab region

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Several Arab states face severe challenges regarding the public debt sustainability (annex 1). While debt problems have been building up over the recent decade, the Covid-19 crisis has worsened public finances and further undermined debt sustainability at a time when large-scale investment is needed in climate action and the attainment of the SDGs. While this goes beyond the scope of this study, it is important to flag that any sort of Debt Swap Mechanism should be based on a thorough analysis of debt sustainability. The debt sustainability frameworks (DSAs) currently used by the IMF and the World Bank are not fit for purpose as they do not include climate or other sustainability risks, nor do they account for crucial investment needs for climate adaptation or achieving the SDGs (Volz and Ahmed, 2020). DSAs need to be grounded on realistic assumptions and account for climate-related physical and transition risks, other nature risks, and crucial spending needs to scale-up investment in climate resilience, the transition to a green economy, and the 2030 Agenda (Kraemer and Volz, 2021).

According to data from the *Sustainable Development Report 2021* (Sachs and others, 2021),<sup>1</sup> most Arab countries face considerable challenges in achieving the goals set out in the 2030 Agenda (table 1, figures 1-3). Literally, all ESCWA member States face significant or major challenges in achieving SDG2 (zero hunger), SDG5 (gender equality), SDG6 (clean water and sanitation) and SDG14 (life below water). Almost all ESCWA member States face significant or major challenges in achieving SDG11 (sustainable cities and communities, 95 per cent), SDG15 (life on land, 95 per cent), SDG16 (peace, justice and strong institutions, 95 per cent), SDG8 (decent work and economic growth, 89 per cent), SDG9 (industry, innovation and infrastructure, 89 per cent), SDG3 (good health and well-being, 84 per cent). Moreover, 58 and 47 per cent of ESCWA member States face serious challenges in reducing inequalities (SDG10) and climate action (SDG13) respectively. Concerted efforts to achieve the SDGs within this decade are needed.

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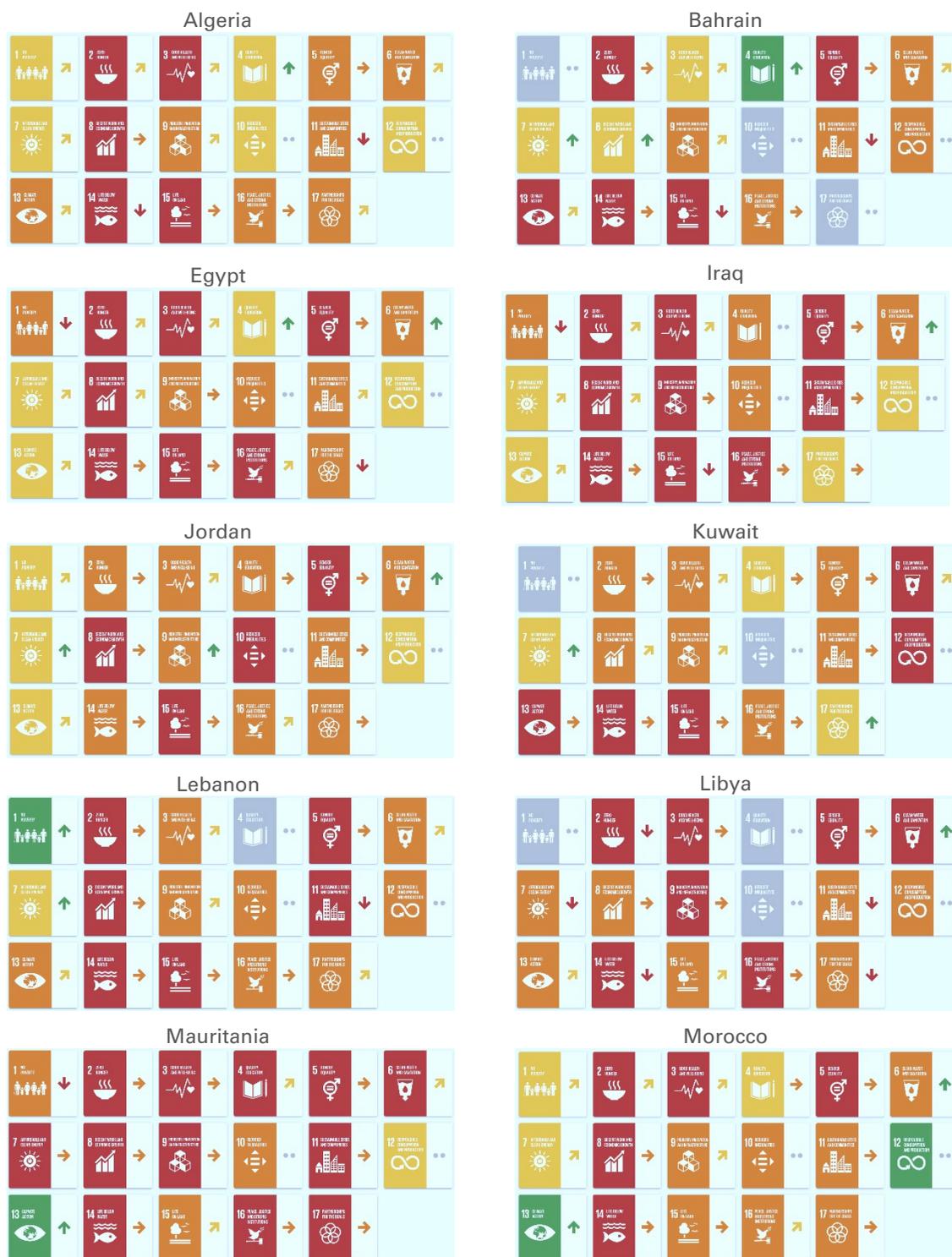
<sup>1</sup> See also the analysis presented in the Arab Region SDG Index and Dashboards Report 2019 (Luomi and others, 2019) and the Arab Sustainable Development Report 2020 (ESCWA, 2020a).

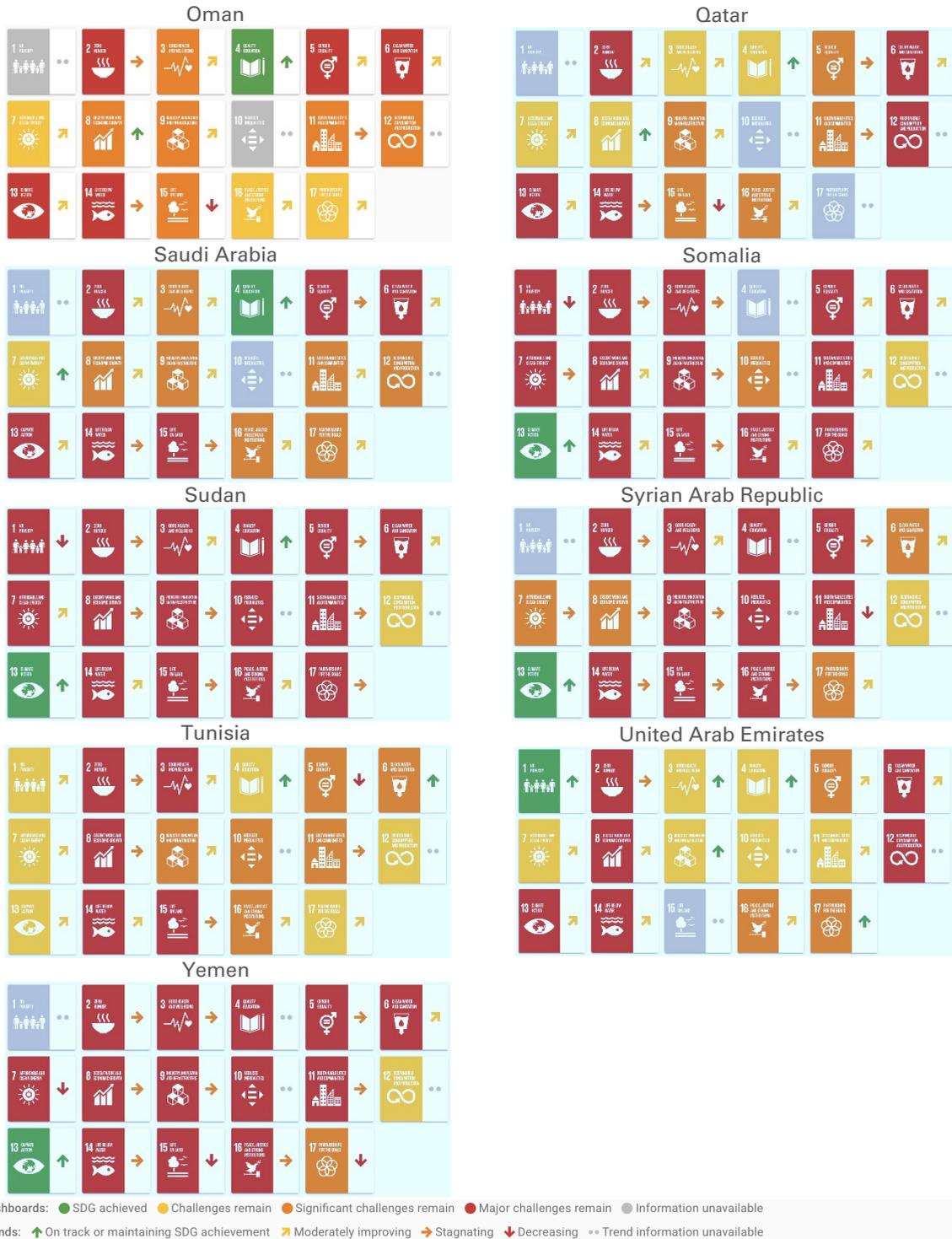
Table 1. SDG achievement, GDP per capita and the Human Development Index in ESCWA member States

Country	2021 SDG rank (out of 193)	2021 SDG score	2019 Arab SDG Index score	Arab SDG Index rank	GDP per capita (PPP) 2021, USD	Human Development Index score 2019
Tunisia	60	71.44	65.33	4	10,590	0.740
Algeria	66	70.86	66.69	1	11,430	0.748
Morocco	69	70.53	65.77	3	8,030	0.686
United Arab Emirates	71	70.17	66.17	2	59,840	0.890
Jordan	72	70.14	65.28	5	10,590	0.729
Oman	73	70.13	62.84	7	30,400	0.813
Egypt	82	68.65	61.59	8	13,080	0.707
Lebanon	93	66.84	63.09	6	n/a	0.744
Qatar	94	66.73	60.57	10	97,260	0.848
Saudi Arabia	98	66.30	59.72	12	48,100	0.854
Bahrain	100	66.06	59.82	11	50,280	0.852
Iraq	105	63.82	55.49	13	10,040	0.674
Kuwait	113	62.54	61.08	9	41,510	0.806
Syrian Arab Republic	127	58.01	51.86	17	n/a	0.567
Mauritania	133	55.51	52.75	15	5,990	0.546
Yemen	145	52.86	46.89	20	1,920	0.470
Sudan	157	49.48	52.11	16	4,080	0.510
Somalia	162	45.61	43.41	21	941	n/a
Libya	n/a	n/a	53.9	14	13,720	0.724
The State of Palestine	n/a	n/a	n/a	n/a	5,660	0.708

**Source:** Compiled with data from Sachs and others, 2021, Luomi and others, 2019, UNDP, 2020 and IMF World Economic Outlook, April, 2021.

Figure 1. Progress and trends on achieving the SDGs





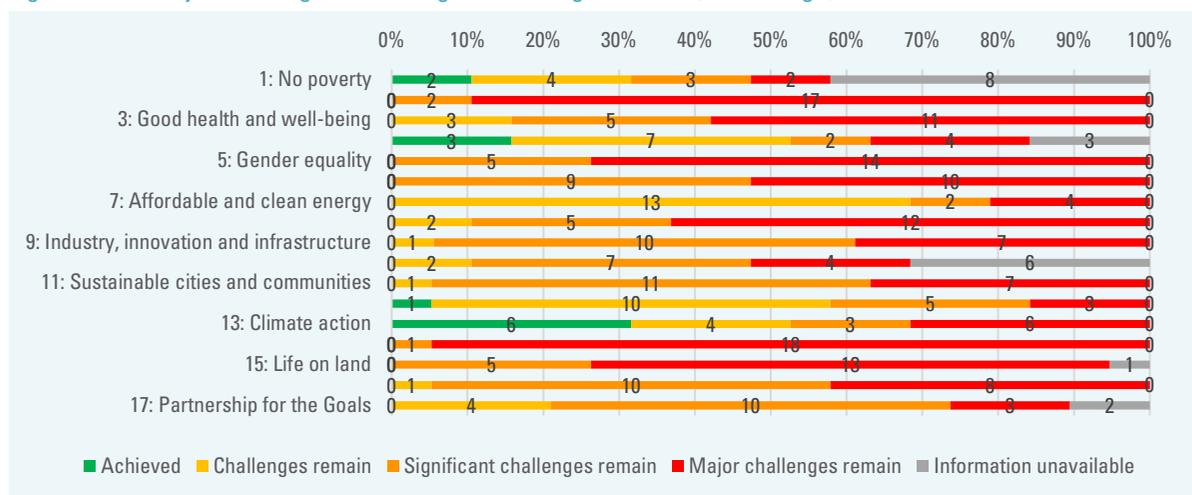
**Source:** Compiled by author with data from Sachs and others, 2021 and SDG Index & Dashboards. November 2021 (<https://dashboards.sdgindex.org/profiles>).

**Note:** Data for the State of Palestine is not available.

While the impact cannot be fully assessed yet, evidence to date suggests that the Covid-19 pandemic has halted or reversed progress in sustainable development in “a number of areas,

undermining decades of development efforts” (UN ECOSOC 2021, p. 2). The achievement of the SDGs development is also threatened by climate change and a deterioration of natural assets.

**Figure 2. Number of ESCWA member States that have achieved SDGs and the challenges as well as the significant or major challenges remaining in achieving the SDGs (Percentage)**



**Source:** Compiled by author with data from Sachs and others, 2021 and SDG Index & Dashboards, November 2021 (<https://dashboards.sdgindex.org/profiles>).

**Note:** Data for the State of Palestine is not available.

**Figure 3. Percentage of ESCWA member States with major or significant challenges remaining in achieving SDGs (Percentage)**



**Source:** Compiled by author with data from Sachs and others, 2021 and SDG Index & Dashboards, November 2021 (<https://dashboards.sdgindex.org/profiles>).

**Note:** Percentage of countries for which data is available. Data for the State of Palestine is not available.

The Arab region is one of the regions worst affected by global climate change, threatening human health and livelihoods and putting additional pressure on freshwater and food security (ESCWA and others, 2017a, 2017b; Twining-Ward and others 2017).<sup>2</sup> Moreover, ecosystems and biodiversity are “under exceptional threat in the Arab region due to rapid economic development, population growth, and climate change” (UNEP 2015, p. 2).<sup>3</sup> Figure 4 shows that the ecological footprint – a metric that measures the ecological assets that a country’s population requires to produce the natural resources it consumes – exceeds the biocapacity – a measure of the productivity of a country’s ecological assets – in 16 out of 19 ESCWA member States (data for the State of Palestine is not available).<sup>4</sup> This is also reflected in the poor performance of ESCWA member States in SDG14 (life below water) and SDG15 (life on land). The depletion of a country’s natural habitat is undermining a country’s future prosperity and development.

As mentioned above, nearly half of the ESCWA member States are seriously lagging behind in terms of climate action (SDG13). It should be pointed out, however, that 11 out of 20 ESCWA member States have CO<sub>2</sub> emissions per capita that are below the global average of 4.5 metric tons per capita, and 15 are below the OECD average of 8.8 metric tons per capita (table 2).

Still, there is ample room for emissions reduction by switching to renewable energy. Currently, the region’s energy is sourced primarily from fossil fuels, with 75 per cent of ESCWA member States deriving 90 per cent or more of their energy from fossil fuels (figure 5). Investments in renewable energy would not only reduce emissions, but could also help to “ensure access to affordable, reliable, sustainable and modern energy for all” (SDG7), a major challenge for a third of ESCWA member States.

Climate change and nature loss are not only undermining development, but also undermining debt sustainability. Research has shown that climate change can amplify sovereign risk, worsen sovereign credit ratings, and undermine debt sustainability.<sup>5</sup> Furthermore, nature and biodiversity risks are increasingly recognized as potentially material risks to financial and macroeconomic stability, with potentially grave implications for the sustainability of public finances, debt sustainability and sovereign credit ratings (Kraemer and Volz, 2021; Agarwala and others, 2021).

While the 2020s were meant to be the decade of action to achieve the Paris climate targets and the 2030 Agenda, the achievement of these goals is severely threatened by the debt

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2 For an assessment of vulnerabilities to climate change across the Arab region, see ESCWA and others, 2017a, 2017b.

3 See also Soultan and others, 2019.

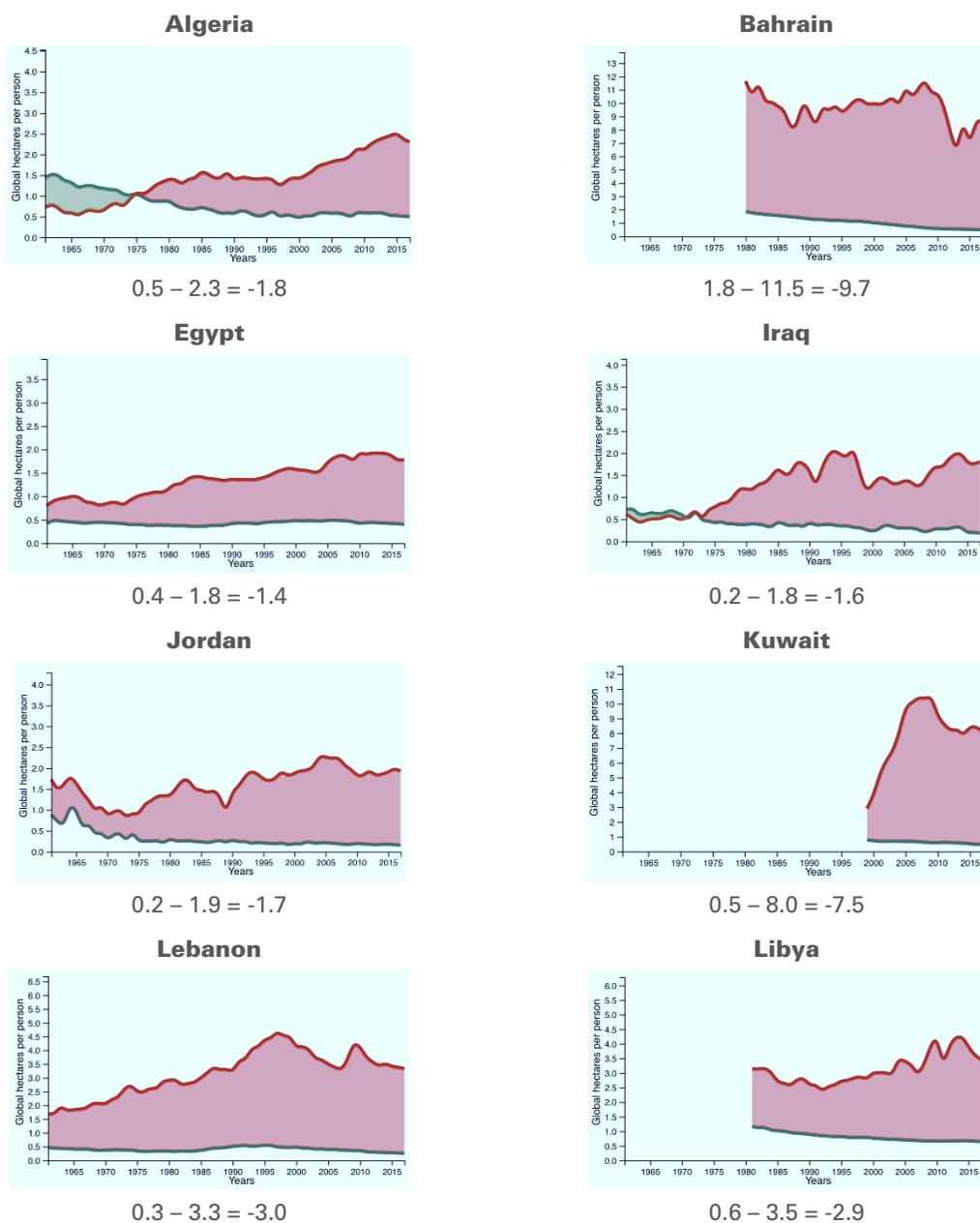
4 The Global Footprint Network, 2021 defines the ecological footprint as adding up “all the productive areas for which a population, a person or a product competes” and measuring “the ecological assets that a given population or product requires to produce the natural resources it consumes (including plant-based food and fiber products, livestock and fish products, timber and other forest products, space for urban infrastructure) and to absorb its waste, especially carbon emissions.” The ecological footprint tracks the use of productive surface areas, including cropland, grazing land, fishing grounds, built-up land, forest area, and carbon demand on land. A country’s biocapacity is defined as “the productivity of its ecological assets (including cropland, grazing land, forest land, fishing grounds, and built-up land). These areas, especially if left unharvested, can also serve to absorb the waste we generate, especially our carbon emissions from burning fossil fuel” (Global Footprint Network 2021).

5 See Buhr and others, 2018, Volz and others, 2020, Cevik and others, 2020, and Klusak and others, 2021.

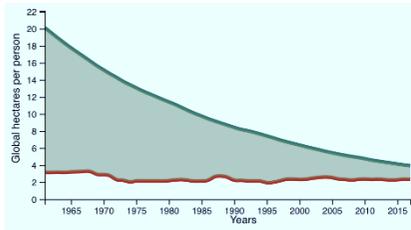
sustainability problems facing many developing and emerging countries both in the Arab region and globally. It is hence necessary to consider how debt problems can be tackled to allow for

crucial investment in green and inclusive recoveries that will help achieve both short-term needs and longer-term development and sustainability targets.

Figure 4. The ecological footprint and biocapacity per person of ESCWA member States (in gha), 1961-2017

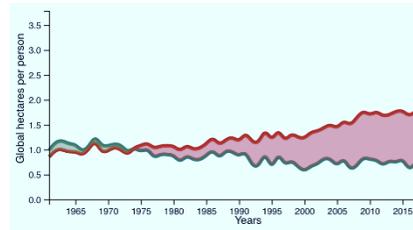


**Mauritania**



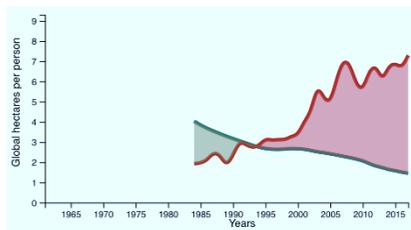
$3.9 - 2.3 = 1.6$

**Morocco**



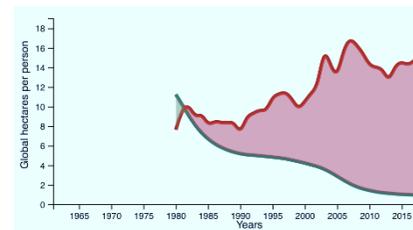
$0.7 - 1.8 = -1.1$

**Oman**



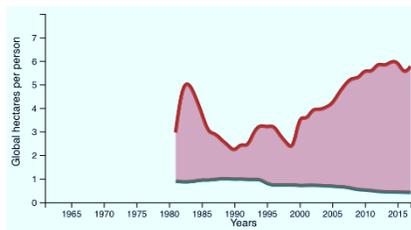
$1.5 - 7.3 = -5.8$

**Qatar**



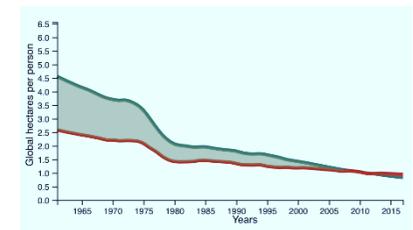
$1.0 - 14.7 = -13.7$

**Saudi Arabia**



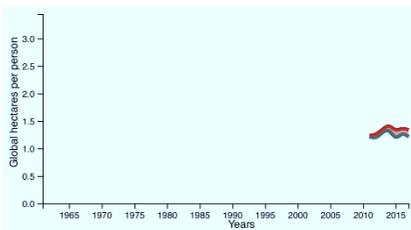
$0.4 - 5.8 = -5.4$

**Somalia**



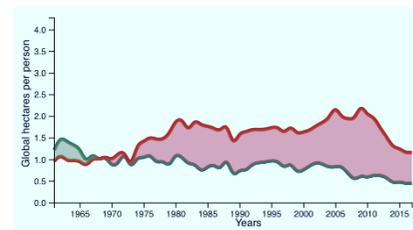
$0.8 - 1.0 = -0.2$

**Sudan**

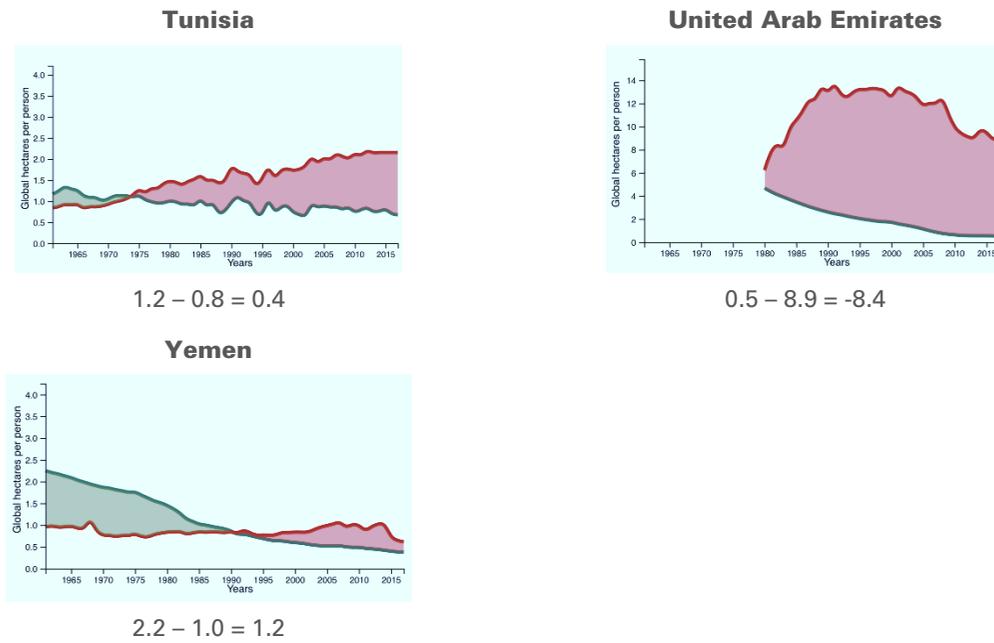


$1.2 - 1.3 = -0.1$

**Syrian Arab Republic**



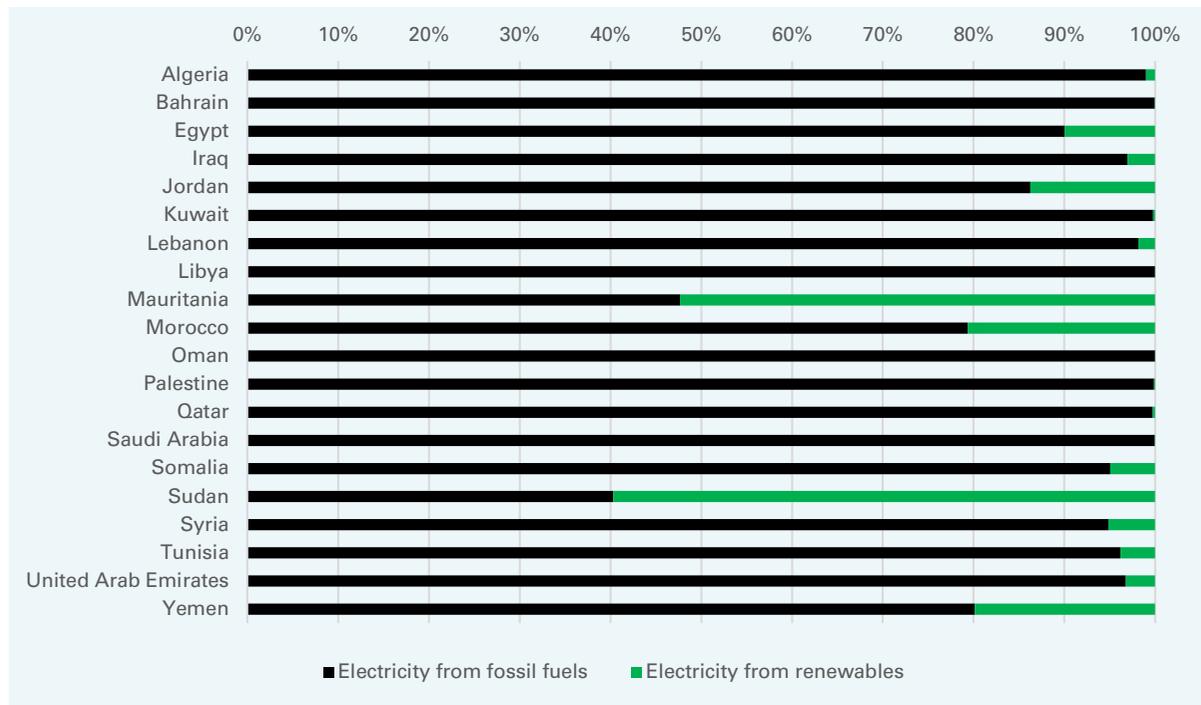
$0.4 - 1.2 = -0.08$



**Source:** Compiled by author with data from National Footprint and Biocapacity Accounts, 2021 edition.

**Note:** The equations below the chart calculate a country's biocapacity reserve for the year 2017. They depict the following: Biocapacity per person – ecological footprint per person = biocapacity reserve (+)/deficit (-).

Figure 5. Share of electrical energy from fossil fuels and renewables (Percentage)



**Source:** Compiled by author with data from BP Statistical Review of World Energy, 2021.

**Note:** Data are for either 2019 or 2020. None of the countries uses nuclear energy.

Table 2. CO2 emissions of ESCWA member States, 2018

	CO2 emissions (metric tons)	Percentage of global total	CO2 emissions (metric tons per capita)
Saudi Arabia	638.12	1.350	15.3
Egypt	329.4	0.697	2.5
United Arab Emirates	263.24	0.557	20.8
Algeria	219.11	0.464	3.6
Iraq	216.19	0.457	4.9
Sudan	130.64	0.276	0.5
Kuwait	112.97	0.239	21.6
Libya	103.04	0.218	8.8
Qatar	99.83	0.211	32.4
Morocco	92.35	0.195	1.9
Oman	82.32	0.174	15.2
Bahrain	48.95	0.104	19.6
Syrian Arab Republic	46.32	0.098	1.6
Somalia	44.32	0.094	0.0
Tunisia	37.31	0.079	2.6
Jordan	35.81	0.076	2.5
Lebanon	34.28	0.073	4.0
Yemen	21.76	0.046	0.3
Mauritania	12.99	0.028	0.9
ESCWA countries	2,568.95	5.438	

**Source:** Compiled by author with data from World Development Indicators, October 2021.

## 2. Achieving transformational impact through debt swaps

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Debt-for-development or -nature swaps have been proposed as means of achieving two goals: (i) lowering the debt and debt service burden of governments, while (ii) enabling social or environmental impact. The experiences with conventional debt-for-development or -nature swaps and comparable debt mechanisms such as debt-for-education swaps have been somewhat mixed (Cassimon and others 2009, 2011; Ruiz 2007; Caliarì 2020).<sup>6</sup> A major problem of conventional debt swaps is that they tend to involve small volumes, which stands in contrast to the relatively high transaction costs involved in negotiating, implementing and monitoring such arrangements. As put by Cassimon and others (2009: 10), “[d]ebt swaps are deemed too small, in comparison with the overall debt burden of countries suffering from debt overhang, to make a real dent.” In a recent overview of debt swap arrangements, Caliarì (2020: 13) highlighted that “[t]here is general agreement that swaps carried out so far have been for amounts too small to provide any meaningful relief to the respective debtors”. Moreover, a widely raised concern is that debt swaps – while having perhaps positive impact at a project level – have had little to no systemic or transformational impact.

Given the relatively high transaction costs associated with debt swaps and lack of transformational impact that would support sustainable development, there has been relatively little appetite on the side of debtor countries for negotiating new, conventional debt swap arrangements. To make sure that ESCWA’s Debt Swap Mechanism can achieve transformational impact and spark the interest of relevant creditor governments, it will be hence important to look beyond traditional approaches to debt-for-climate/nature/development swaps. An approach to do so is depicted in figure 6. In this approach, the debt swap arrangement would not only relate to projects that would be funded through the reduction in debt service. It would also be tied to policy action at the macro level, thus contributing to an enabling environment that will enhance sustainability outcomes for the country. In other words, debt swaps would be linked to KPIs at both the project and policy levels.

A first step involves the selection of the main goals of the debt swap arrangement. While these should broadly support three overarching goals – advancing progress in the SDGs, enhancing climate mitigation and adaptation, and contributing to greater debt

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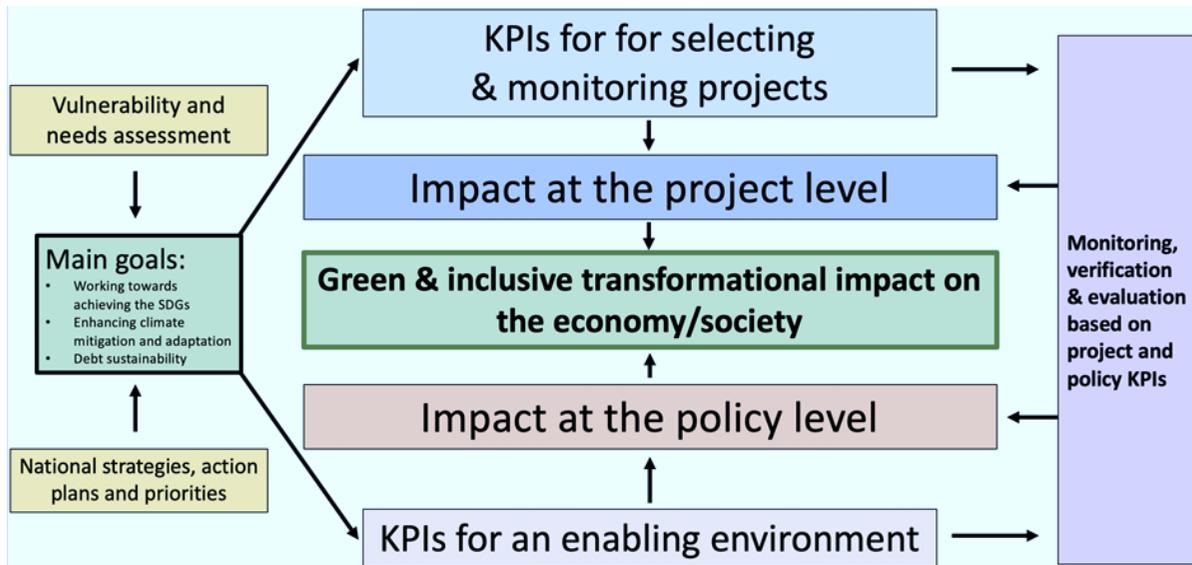
<sup>6</sup> Examining past debt-for-... swaps, Cassimon and others (2011: 93) identify five shortcomings typically associated with such arrangements, namely “that they often fail to deliver additional resources to the debtor country and/or debtor government budget; often fail to deliver more resources for conservation/ climate purposes; often have a negligible effect on overall debt burdens (and, as such, do not generate more ‘indirect’ benefits); and are often in conflict with principles of alignment with government policy and alignment with government systems”.

sustainability – they should reflect the national context and policy priorities. The process of defining the main goals of the debt swap arrangement should be informed by a comprehensive vulnerability and needs assessment, which identifies major vulnerabilities and development needs, and by existing national strategies, action plans, and priorities. The vulnerability assessment should systematically review vulnerabilities of social, economic and fiscal sustainability to climate and environmental change, and be informed by multi-sectoral scenario analysis (Volz and others, 2020). The needs assessment should be based on an analysis of the SDG attainment gap. Formulating the main goals of the debt swap arrangement should also relate as closely as possible to existing national priorities, commitments, and programs of work, as put

down in Nationally Determined Contributions (NDC) action plans, national adaptation plans (NAPs), national action plans for green growth, and other national economic and social development plans (Steele and others, 2021).

Once the main goals have been defined, they need to be translated into KPIs that will aid both the selection and the monitoring of projects and policy actions. KPIs provide the basis for regular monitoring, reporting and verification (MRV) to ensure that the declared goals of the envisaged Debt Swap Mechanism are achieved and that the debt swap will have discernible impact at both the project and policy levels. Together, these should have transformational impact on the economy and society. The criteria for selecting KPIs will be discussed in greater detail in the following section.

Figure 6. Achieving transformational impact



Source: Author’s illustration.

### 3. Selection criteria for key performance indicators of nature/climate action and SDG progress

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Linking debt swaps to nature/climate action and/or SDG progress requires a careful selection of KPIs that reflect political preferences and ambitions and align well with the specific country context. The KPIs should incentivize the achievement of ambitious sustainability performance objectives with a specific focus on the SDGs and climate-related and environmental objectives. A regional KPI framework will have to be broad enough to reflect regional commonalities while at the same time accounting for disparities between countries and providing room for the specificities of individual countries in the region.

As pointed out by Singh and Vieweg (2015: 3), “performance indicators [should] help policymakers and stakeholders observe progress, trends, and short-term and long-term effects related to policies, and provide

information to support decision-making.” KPIs can play several important roles, such as supporting policies design and implementation, facilitating the evaluation of goals achievement, strengthening accountability, and, last but not least, communicating policy impact (Singh and Vieweg, 2015). Table 3 summarizes the functions that KPIs can assume.

KPIs can relate to both policy implementation (i.e., capture whether actions have been implemented as agreed) or policy effects (table 4). Policy implementation indicators comprise input indicators and activity indicators, while policy effects indicators relate to intermediate effects, medium-term effects, and long-term, transformational effects. The latter refers to changes in prevailing structures and development models that result from the policies that are being implemented.

Table 3. Functions of KPIs

Support the design of policies	Information already being collected to support existing performance indicators for various policies can assist with understanding past trends and the current situation. Such information can help future policy design and can be used to establish more credible baselines and projected effects. The set of indicators used to establish this ex-ante evaluation provides a good starting point for defining performance indicators for the policy implementation phase.
Enhance policy implementation	Using key performance indicators can provide information to support ongoing policy evaluation and give timely feedback to improve the implementation of policies. For example, the use of indicators can help identify implementation barriers, thereby leading to necessary policy modifications and targeted solutions.
Evaluate goal achievement	Performance indicators related to the effects of a policy provide feedback on whether policy objectives are being met. Depending on the timeframe over which they are tracked, indicators can help assess both short-term results and long-term impacts. Data collected throughout the policy implementation period can provide input to further analysis of factors that contribute to policy effectiveness and the potential for transformation. Results from such analysis can in turn positively influence the design of new policies.
Promote accountability	The use of performance indicators can bring transparency and accountability to the policy implementation process. Monitoring progress shows how resources are being spent and whether the implementation process is on track.
Communicate the policy impact	Using performance indicators helps with reporting and communicating the impact of policies to stakeholders, such as groups targeted by policies, donor agencies, and relevant government and international agencies. Reporting can take the form of periodic policy assessments, annual progress reports, input to national communications under the United Nations Framework Convention on Climate Change, donor reports, and so on. Tracking performance indicators over a longer period of time can demonstrate whether the policies have led to sustainable, transformational, and lasting effects. The use of indicators can also help build support, and assessments can be used to justify additional resources needed for policy implementation.

**Source:** Compiled from Singh and Vieweg (2015: 3-4).

Table 4. Types of KPIs

Policy implementation indicators		Policy effects indicators		
Inputs	Activities	Intermediate effects	Medium-term effects	Long-term transformation effects
Finance Human and organizational resources Other inputs	Licensing, permitting, and procurement Compliance and enforcement Other policy activities	Behavioral changes Technological changes Process changes	Changes in environmental, economic or social conditions	Transformational/systemic change observed and tracked at the sector or economy level, and over a long period of time

**Source:** Compiled by author drawing from Barua and others, 2014 and Singh and Vieweg, 2015.

Table 5 provides an overview of criteria that should be considered for the selection of KPIs. It builds on a “Framework for Selecting Key Performance Indicators for Sovereign Sustainability-Linked Bonds” (Flugge and others, 2021) that was recently developed by the World Bank to encourage a more widespread use of performance-linked sovereign debt instruments.<sup>7</sup> As in the case of debt-for-nature/climate/sustainability swaps, the financial flows of sustainability-linked bonds are tied to the achievement of predetermined sustainability performance objectives. Given that the World Bank aims to establish this as a “[u]niversally accepted framework [...] that use[s] KPIs to determine sustainability performance” (Flugge and others, 2021: 8), it would be sensible for ESCWA’s Climate/SDGs Debt Swap Initiative and Debt Swap Mechanism to broadly align with this framework.

Steele and others (2021) recommend a number of measures that should be considered when formulating KPIs. First, they highlight that KPIs should not be regarded as

mere reporting requirements but rather be embedded “in systems that will drive actions for climate and nature” (Steele and others, 2021: 7). Second, they suggest that the reporting burden on national structures should be kept to a minimum while being sufficient for international donor requirements. Third, they emphasize the importance of engaging relevant government stakeholders in the process of developing KPIs. And fourth and finally, they underscore the need for building in mechanisms for long-term learning from the data that is collected for the purpose of MRV.

When formulating KPIs, special consideration needs to be given to how the statistics can be gathered, and to what extent national authorities will need international support. Attention should be given to possibilities of using geospatial data, big data, artificial intelligence, mobile platforms and blockchain technology to automate MRV processes and make them as timely, transparent and reliable as possible.

7 The World Bank’s framework builds on Singh and Vieweg, 2015.

Table 5. Criteria for selecting KPIs

Criteria	Description
Policy relevant	KPIs reflect political preferences and ambitions and are in line with relevant national and sectoral development plans, climate and green growth strategies/plans, as well as internationally agreed goals (e.g. the 2030 Agenda, commitments under the UNFCCC and Paris Agreement, Aichi Biodiversity Targets).
Address key vulnerabilities and needs	KPIs should relate to key vulnerability and needs assessment informing the main goals.
Unambiguous	KPIs are unambiguous and specific.
Available	KPIs are available at a reasonable cost or publicly available.
Attributable	KPIs are plausibly associated with sovereign interventions (e.g. national-level investment, national laws, and national regulations).
Frequent / recent	Data are reported sufficiently frequently for meaningful change to be tracked (i.e. at least once a year) so KPIs can be adequately linked with financial incentives to promote sustainable performance.
Regular	Data are provided in sequence with equal intervals between them over a considerably long period of time.
Comparable across countries	The underlying data used for compiling KPIs are available, consistent and comparable across countries (e.g. reported using the same methods).

**Source:** Compiled by author drawing from Singh and Vieweg, 2015 and Flugge and others (2021, table 2).

## 4. Selecting high-level goals and KPIs for ESCWA's Debt Swap Mechanism and identifying relevant metrics

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As discussed in Section 2, the three overarching goals of the Debt Swap Mechanism – advancing progress in the SDGs, enhancing climate mitigation and adaptation, and contributing to greater debt sustainability – should be operationalized through a comprehensive vulnerability and needs assessment and a review of existing national strategies, action plans, and priorities. The latter should include a comprehensive review of government documents and other sources. Annex 2 provides an overview of sources that should inform the formulation of the goals.

As proposed in Section 2 and illustrated in figure 6, ESCWA's Debt Swap Mechanism should involve KPIs both at the project level and the policy level in order to aim for a maximum transformational impact. Advancing progress in the SDGs and enhancing climate mitigation and adaptation can relate to actions both at the project and policy levels, while improving debt sustainability will be best achieved through actions at the policy level.

A comprehensive vulnerability and needs assessment of Arab countries is beyond the scope of this study. However, the review of the SDG attainment gap and environmental

vulnerabilities in Section 1 already provides a good starting point to define the main goals of the Debt Swap Mechanism. Priority areas should include SDG2 (zero hunger), SDG3 (good health and well-being), SDG5 (gender equality), SDG6 (clean water and sanitation), SDG8 (decent work and economic growth), SDG9 (industry, innovation and infrastructure), SDG10 (reduced inequalities), SDG11 (sustainable cities and communities), SDG13 (climate action), SDG14 (life below water), SDG15 (life on land), and SDG16 (peace, justice and strong institutions). Eligible projects should demonstrate potential to positively impact one or several of these SDGs. At the macro policy level, measures should be devised to either enhance climate and sustainability frameworks, or contribute to climate-proofing public finances and public debt management. KPIs need to be selected appropriately. The suggested high-level goals and KPIs for the Debt Swap Mechanism are illustrated in figure 7.

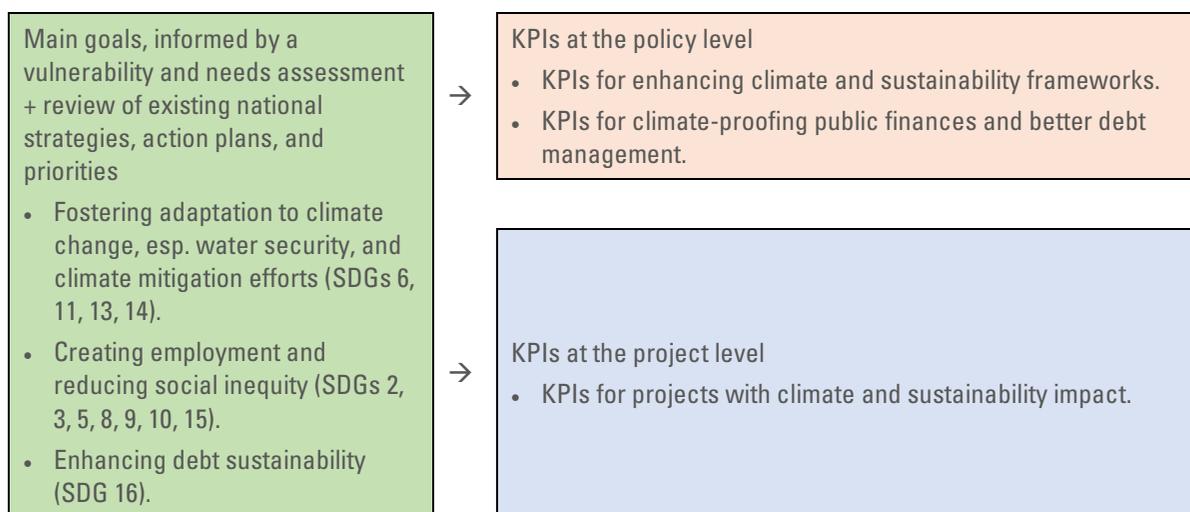
The KPIs with the envisaged impacts of the selected projects and policy interventions can be also summarized in a matrix. The matrix in table 6 shows the different objectives/impacts associated with each project or policy intervention, with KPIs relating either to

climate action (adaptation or mitigation) or the SDGs.<sup>8</sup>

Several studies have recently discussed relevant metrics and data sources. Based on the KPI selection framework discussed above, the World Bank has conducted a preliminary assessment of the robustness of potential

indicators, which is shown in Annex 3. Other recent studies, including Steele and others (2021), Singh and Widge (2021) and Patel and others (2021), consider a broad range of data sources that could be used for the selection of KPIs. ESCWA can build on these studies for the selection of KPIs on both the project and policy levels.

Figure 7. High-level goals and KPIs for the Debt Swap Mechanism



Source: Author’s description.

Table 6. KPIs and the impact on climate action and the SDGs

Project / policy intervention	Climate action		SDGs	
	Adaptation	Mitigation	SDG target/goal	SDG indicator
Project 1	...	...	...	...
Project 2	...	...	...	...
...	...	...	...	...
Policy intervention 1	...	...	...	...
Policy intervention 2	...	...	...	...
...	...	...	...	...

Source: Author’s description.

Note: The table is for the purpose of illustration.

8 On SDG targets and indicators, see UN, 2021.

## 5. Illustration: Applying the proposed framework to Jordan

To move from the general to the specific, the following seeks to apply the proposed framework to the case of Jordan. It should be emphasized that this is a very preliminary analysis and that more exchange with the Jordanian authorities is needed to align the framework with national policy priorities.

The National Climate Change Adaptation Plan of Jordan 2021 provides an overview of vulnerabilities facing Jordan across different areas, including agriculture, water, urban systems, biodiversity and ecosystems, coastal areas, the health sector and the socio-economic sector (MOE Jordan, 2021a). It puts forward adaptation programs and measures for

these sectors. These vulnerabilities are also reflected in the Green Growth National Action Plan 2021-2025 (GG-NAP), launched by the Jordanian government in 2020. The GG-NAP lays out Jordan's climate and sustainable development ambitions. The main objectives of the GG-NAP are presented in table 7. The GG-NAP mainstreams green growth, climate change and sustainable development objectives into Jordan's national planning system and strategic sectoral frameworks. Sector-level action plans have been developed for six sectors – agriculture, energy, tourism, transport, waste and water – operationalizing green growth concepts into sectoral objectives and actions.

**Table 7. National objectives of the Green Growth National Action Plan 2021-2025**

Enhanced natural capital	Ensures natural resources are protected, restored and valued as enablers of sustainable, resilient growth
Sustainable economic growth	Economic development by greening key service sectors and investment in low-carbon, climate resilient infrastructure
Social development and poverty reduction	Ensures access to opportunity for all, including women, youth and vulnerable groups, by creating jobs and increasing access to public services
Resource efficiency	Reduces the wastefulness of various economic activities through investment in innovation and circular economy approaches
Climate change adaptation and mitigation	Supports resilience to climate change impacts and reduction of greenhouse gas emissions to achieve international targets

**Source:** MOE Jordan, 2020.

The updated submission of Jordan's 1<sup>st</sup> Nationally Determined Contribution (NDC) from October 2021 (MOE Jordan, 2021b), which is in line with the GG-NAP, provides a further important reference for applying ESCWA's Debt Swap Mechanism to Jordan. The updated NDC submission, which refers to relevant national strategies and plans, highlights several priority sectors, namely energy, water, agriculture, transport, industry and waste.

In the energy sector, Jordan is heavily dependent on the import of fossil fuel, with energy imports accounting for 93 per cent of total consumed energy, worth the equivalent of ca. 8 per cent of GDP (MOE Jordan, 2021b). The National Energy Sector Strategy (2020-2030) sets the goal of "increas[ing] self-sufficiency through utilization of domestic natural and renewable sources, to reduce the energy consumption by improving the energy efficiency measures in different sectors, and to reduce the carbon dioxide emissions by 10 per cent by the year 2030" (MOE Jordan, 2021b: 8). Increasing renewable energy generation and enhancing energy efficiency would hence be a key goal for the Debt Swap Mechanism.

The water sector is another priority sector for the Jordanian government, reflecting the severe water scarcity problems facing the country, which climate models predict to worsen further. Jordan's National Water Strategy (2016-2025) highlights necessary "provisions for climate change, water-energy-food nexus, sustainability of overexploited groundwater resources, the adoption of new technologies including decentralized wastewater management, and reuse of treated wastewater, as well as commercialization and consolidation of wastewater services and increasing private sector participation" (MOE Jordan, 2021b: 9). The National Water Strategy is reinforced by the

National Water Master Plan, the government's main planning instrument for the sustainable use and protection of groundwater resources. Given the crucial importance of water security for virtually all other sectors, safeguarding clean water supply should be a priority goal of the Debt Swap Mechanism.

In the agricultural sector, the National Strategy for Agricultural Development (2016-2025) sets out the overall goal of "a sustainable development of agricultural resources that will preserve the country's animal and plant biodiversity, favor an investment environment in the sector and create a close link between production and market demand" (MOE Jordan, 2021b: 9-10). Importantly, fostering sustainable agricultural development is also aimed at strengthening food security and reducing rural-urban migration pressures. In line with this, Jordan's National Food Security Strategy seeks to establish "more efficient inclusive resilient and sustainable Agri-food systems for better production, better environment, and better life" (MOE Jordan, 2021b: 9-10). The National Food Security Strategy and the associated Action Plan also play a central role in Jordan's quest to achieve SDG2 on zero hunger.

In the transport and logistics services sector, which is the second largest GHG emitter after the energy sector (with emissions accounting for 28 per cent of Jordan's total GHG emissions in 2016), the Jordanian government is currently updating its Long-term National Transport Strategy (2016-2030) and aligning it with other sectoral strategies, including those for energy and the environment (MOE Jordan, 2021b). According to the updated NDC submission, the new National Transport Strategy will promote "the use of the intelligent transport systems, the Bus Rapid [sic] Transit (BRT), the railway project

as well as promoting the investment environment to increase the competitiveness” (MOE Jordan, 2021b: 10).

For the industry sector, which accounts for 10 per cent of Jordan’s total emissions, the updated NDC submission highlights greater resource efficiency and more sustainable production processes as goals. In the face of challenges regarding the availability and costs of energy and water, these are hoped to lead to a reduction in the consumption of and cost for energy, water and other resources, as well as a reduction of GHG emissions. Fostering resource efficiency in manufacturing and circular economy approaches could also enhance industrial competitiveness and employment and would be appropriate goals for the Debt Swap Mechanism.

Last but not least, the updated NDC submission flags the ambitions laid out in the National Solid Waste Management Strategy (2015-2034) and

the associated action plan to transform solid waste management through a “Three-Rs” approach (“Reduce-Reuse-Recycle”) (MOE Jordan, 2021b). The strategy includes short-, mid- and long-term targets for waste treatment.

These six priority areas emphasized in Jordan’s updated NDC submission correspond strongly to the high-level goals proposed in the previous section.

In a preliminary climate change project mapping (Griswold, 2021), ESCWA has identified projects that would meet relevant objectives of the draft NDC update, the NDC Action Plan, the GG-NAP and other strategy documents produced by the Jordanian government (table 8). While the selection of eligible projects is beyond the scope of this study, the following will illustrate how KPIs could be chosen for achieving the proposed high-level goals for the Debt Swap Mechanism for the case of Jordan.

**Table 8. Summary of ESCWA’s project mapping**

	Number of Outputs / Projects	Outputs/ Projects with Climate Objective	Outputs/ Projects with Budget Estimate	Projects that Match an NDC Action Plan Objective	Total Cost (Million JOD)	Total Cost (Million USD)	Total Cost for Activities with Climate Objectives (Million JOD):
<b>Draft NDC Update</b>	66	66	31 <i>(Mitigation Actions Only)</i>	57	JOD 3,392	\$ 4,782	JOD 3,392
<b>NDC Action Plan</b>	217	217	125	N/A	JOD 2,266	\$ 3,195	JOD 2,266
<b>Priority NDC Actions</b>	35	35	30 (remaining 5 already funded)	32*	JOD 971	\$ 1,369	JOD 971
<b>GG-NAPs</b>	84	54	84	24	JOD 1,294	\$ 1,822	JOD 706
<b>Water Sector Rapid Assessment</b>	25	Mainstreaming Planned	11	5**	JOD 1,891	\$ 2,666	TBD

\* All projects should be in Action Plan, this may be due to revised names \*\*Other projects may be related but exact match is not clear

Exchange Rate: 1 JOD = 1.41 USD  
1 JOD = 1.19 EUR

**Source:** Griswold, 2021.

Figure 8 translates some of the high-level goals from the proposed Debt Swap Mechanism framework summarized in figure 7 into operational goals and KPIs. Note that the concrete goals need to be formulated by the Jordanian government in consultation with creditor governments, and that the goals, the selected projects and the KPIs presented in figure 8 are purely for illustrative purposes. In this example, the overall goal is enhancing the supply of freshwater. KPIs were selected at both the policy and project levels. The KPIs at the project level are associated with the Aqaba-

Amman Water Desalination and Conveyance (AAWDC) project, which is listed as a key investment priority in Jordan's National Water Master Plan. This project could be complemented by further water projects. Importantly, the KPIs in this example would need to be further refined to make them as concrete and operational as possible. The KPIs need to be tailored to the specific goals, based on the criteria set out in table 5. Table 9 summarizes the KPIs and the envisaged impacts for this freshwater example, relating them to climate mitigation and adaptation goals and SDG goals/targets.

Figure 8. Enhancing the supply of freshwater: Illustrative goals and KPIs

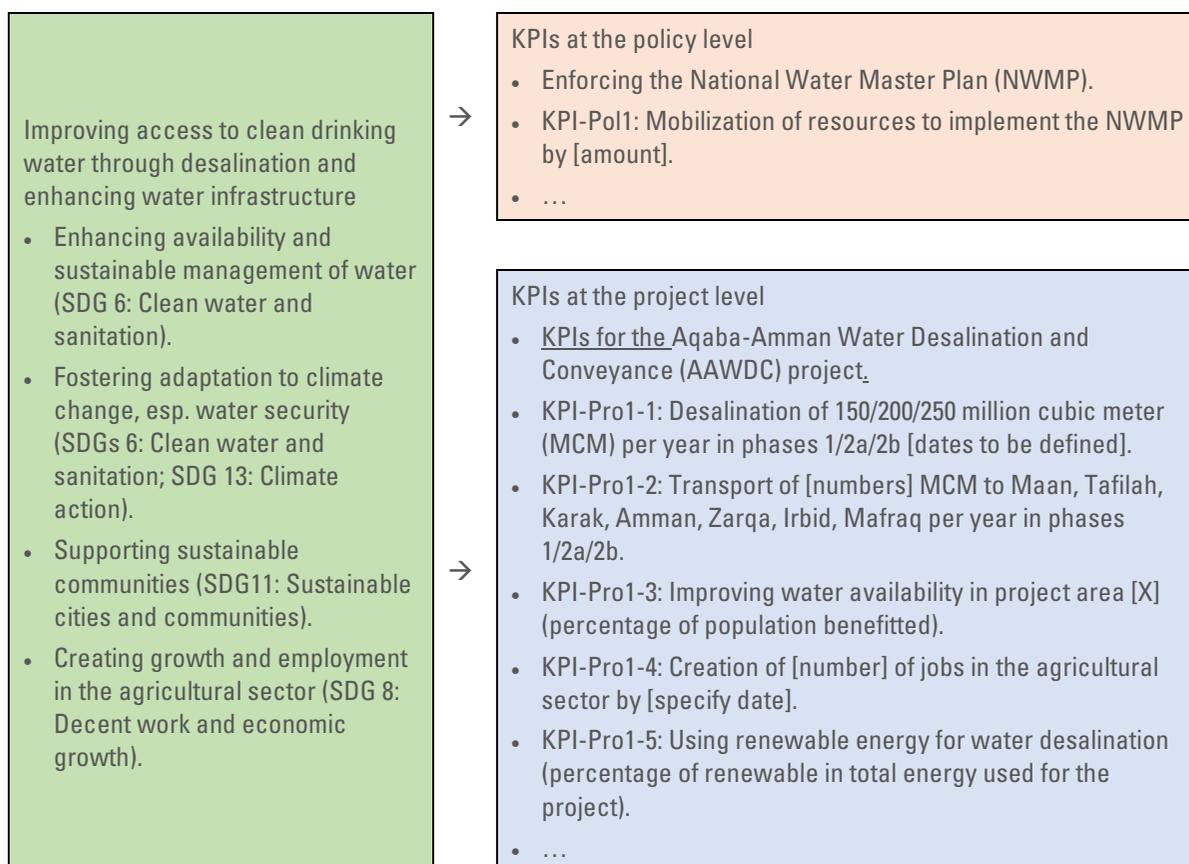
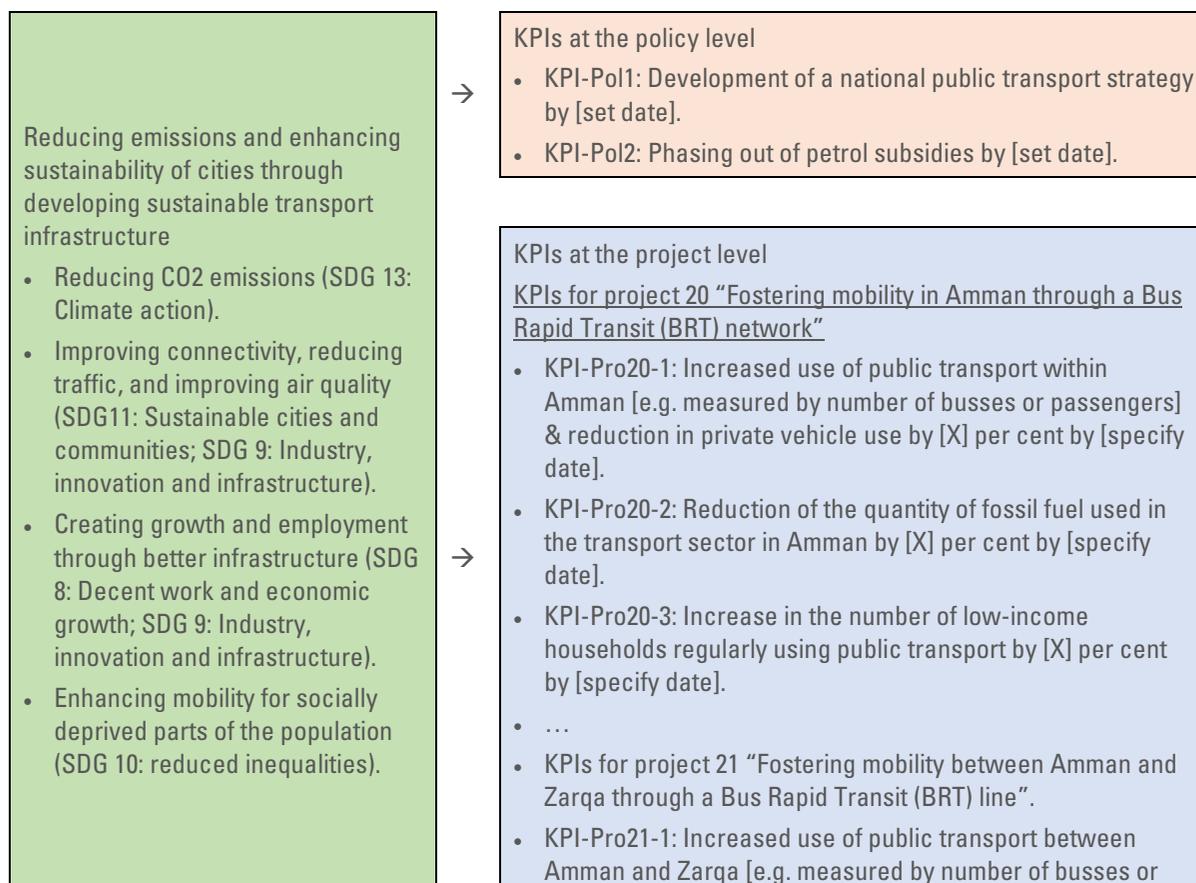


Table 9. Enhancing the supply of freshwater: Illustrative KPIs and impacts

Project / policy intervention	Climate action		SDGs	
	Adaptation	Mitigation	SDG target/goal	SDG indicator / (Specific KPIs from the project or policy intervention relating to SDG targets/goals)
Pol1: Enforcing the National Water Master Plan	KPI-Pol1: Mobilization of resources to implement the NWMP by [specify date] ...	...	SDG 6/ Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity ...	6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources ...
Pro1: Aqaba-Amman Water Desalination and Conveyance (AAWDC) project	KPI-Pro1-1: Desalination of 150/200/250 million cubic meter (MCM) per year in phases 1/2a/2b [dates to be defined] KPI-Pro1-2: Transport of [numbers] MCM to Maan, Tafilah, Karak, Amman, Zarqa, Irbid, Mafraq per year in phases 1/2a/2b KPI-Pro1-3: Improving water availability in project area [X] (Percentage	KPI-Pro1-5: Using renewable energy for water desalination (percentage of renewable in total energy used for the project)	SDG 6/ Target 6.4 SDG 7/ Target 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix SDG 13/ Target 13.2 Integrate climate change measures into national policies, strategies and planning <i>Other goals indirectly affected:</i> SDG 2/ Target 2.3 By 2030, double the agricultural productivity and incomes of small-	6.4.2 7.2.1 Renewable energy share in the total final energy consumption 13.2.2 Total greenhouse gas emissions per year 2.3.2 Average income of small-scale food producers (...) 2.4.1 Proportion of agricultural (...) sustainable agriculture KPI-Pro1-4: Creation of [number] jobs in the agricultural

Project / policy intervention	Climate action		SDGs	
	Adaptation	Mitigation	SDG target/goal	SDG indicator / (Specific KPIs from the project or policy intervention relating to SDG targets/goals)
	population benefitted) ...		scale food producers (...) SDG Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices (...)	sector by [specify date]

Figure 9. Reducing emissions and enhancing sustainability of cities through developing sustainable transport infrastructure: Illustrative goals and KPIs



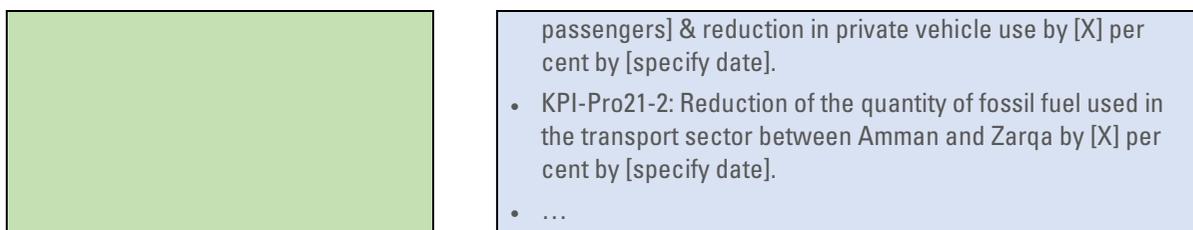
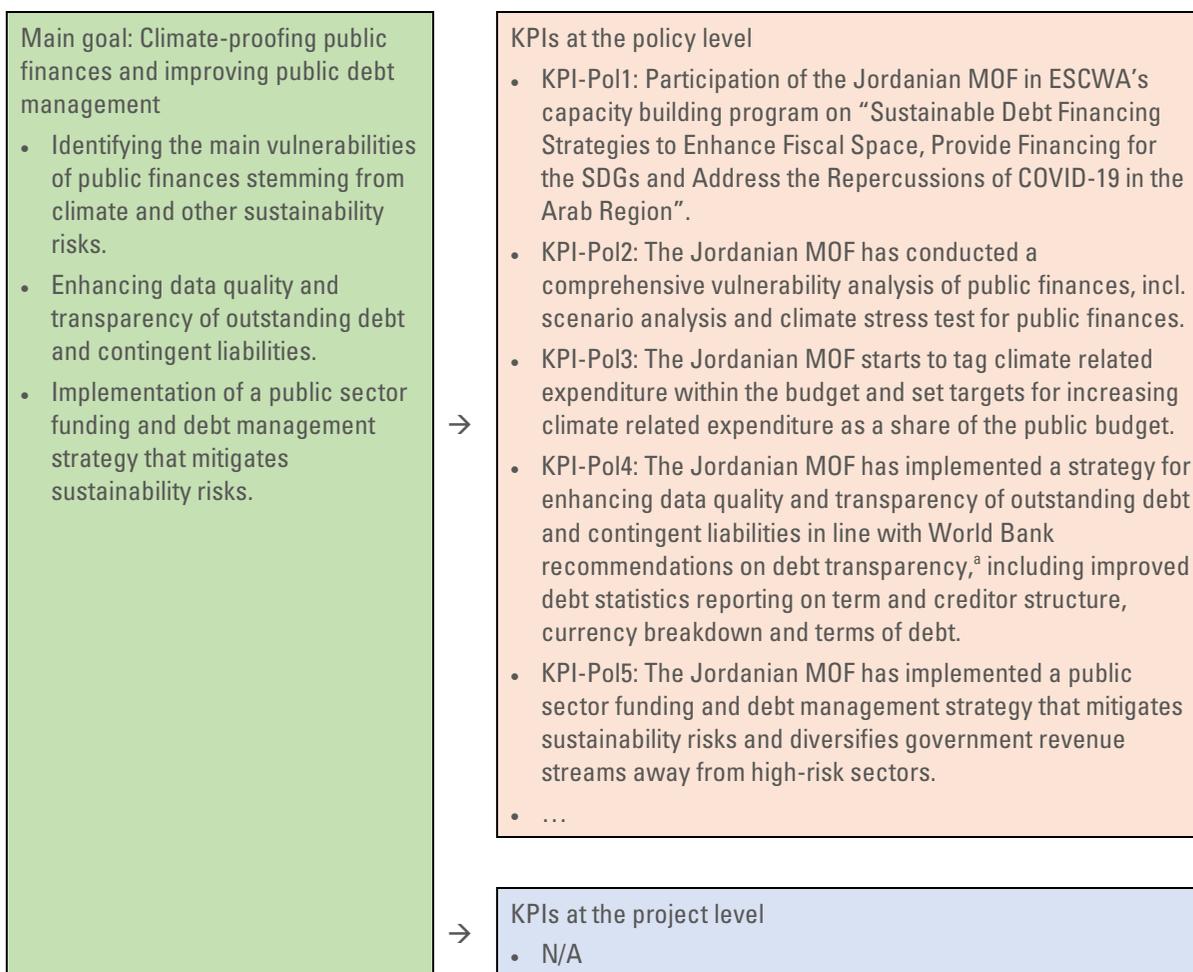


Figure 10. Climate-proofing public finances and improving public debt management: Illustrative goals and KPIs



<sup>a</sup> See Rivetti, 2021.

A second example is provided in figure 9, where the goal was set to be “Reducing emissions and enhancing sustainability of cities through developing sustainable transport infrastructure”, and several sub-goals have been identified. Subsequently, KPIs were selected at both the policy and project levels. The KPIs at the project level are associated with two projects, one of which (“Fostering mobility in Amman through a Bus Rapid Transit (BRT) network”) was mentioned in ESCWA’s preliminary climate change project mapping (Griswold 2021). Again, the KPIs would need to be further refined to make them as concrete and operational as possible.

Last but not least, figure 10 illustrates goals and KPIs of another important goal

of the proposed Debt Swap Mechanism framework: Climate-proofing public finances and improving public debt management. The left box breaks down the overall goal into several sub-goals, including conducting a comprehensive vulnerability analysis of public finances; enhancing data quality and transparency of outstanding debt and contingent liabilities; and implementation of a public sector funding and debt management strategy that mitigates sustainability risks. The upper box on the right side seeks to translate these goals into concrete KPIs. For this goal, no project has been identified that would be directly funded through the Debt Swap Mechanism. KPIs are hence only set at the policy level.

## 6. Recommendations

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High debt service burdens constrain the ability of many ESCWA member States to respond adequately to the Covid-19 crisis and invest in crucial areas of sustainable development. The achievement of the 2030 Agenda, already lagging behind, is threatened. Against this backdrop, ESCWA's Climate/SDGs Debt Swap Initiative can provide an important impetus to enabling the financing of projects and the formulation of policies that will have transformational impact. To ensure that ESCWA's Debt Swap Mechanism can achieve transformational impact and spark the interest of relevant creditor governments, this study argues that it is necessary to look beyond traditional approaches to debt-for-climate/nature/development swaps. This study proposes a pioneering approach based on key performance indicators (KPIs) where the debt swap arrangement would not only relate to projects funded through debt service reduction, but would also be tied to policy action at the macro level that would contribute to an enabling environment that will enhance sustainability outcomes for the country in question. In effect, debt swaps would be linked to KPIs at both the project and policy levels toward accelerating nature/climate action and SDGs progress.

Based on a review of the SDG attainment gap, this study suggests that ESCWA's Debt Swap Mechanism should focus on the following

priority areas: SDG2 (zero hunger), SDG3 (good health and well-being), SDG5 (gender equality), SDG6 (clean water and sanitation), SDG8 (decent work and economic growth), SDG9 (industry, innovation and infrastructure), SDG10 (reduced inequalities), SDG11 (sustainable cities and communities), SDG13 (climate action), SDG14 (life below water), SDG15 (life on land), and SDG16 (peace, justice and strong institutions). The number of priority areas could be reduced for individual countries, allowing a focus on national context and priorities. Projects eligible for the Debt Swap Mechanism should demonstrate potential to positively impact one or several of these SDGs. At the macro policy level, measures should be devised to either enhance climate and sustainability frameworks, or contribute to climate-proofing public finances and public debt management.

KPIs need to be selected carefully in such a way that captures the defined goals of the Debt Swap Mechanism. Moreover, they must be attributable to national policy action, be tailored to the specific goals and be as concrete and operational as possible. Above all, KPIs need to allow for regular monitoring, reporting and verification so that they provide a reliable basis for the envisaged Debt Swap Mechanism during and after its implementation. To this end, they need to be available relatively easily, at a reasonable cost and regular frequency.



## Annex 1. Public debt sustainability risk score of selected ESCWA member States

Rank (out of 101 developing and emerging economies)	Country	Public Debt Sustainability Risk Score (0= high risk; 100 = low risk)	Total public debt (percentage of GDP) max (2020;2021)	Covid-19 debt shock (increase in public debt-to-GDP ratio) 2020	Foreign exchange-denominated public debt (percentage of total public debt) 2020	Maturing public debt (percentage of GDP) 2021-2022	Fiscal balance (percentage of GDP) 2021-2022	Interest payments (percentage of fiscal revenues) 2021	Effective interest rate (interest payments in percentage of public debt at the end of previous year) 2021	Interest rate-growth differential (percentage) 2016-2020
1	Lebanon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Bahrain	10.5	0.0	0.0	0.0	0.0	0.0	0.0	47.5	36.9
5	Egypt	14.1	13.1	67.3	32.5	0.0	0.0	0.0	0.0	0.0
9	Tunisia	16.9	18.1	15.6	0.0	0.0	14.3	43.4	44.2	0.0
11	Jordan	20.3	9.2	29.8	0.0	25.0	0.0	21.1	37.3	40.1
21	Oman	33.3	8.6	0.0	0.0	63.8	0.0	85.6	72.3	36.3
39	Morocco	43.0	31.0	23.9	84.6	49.3	0.0	56.4	53.5	45.4
48	Yemen	46.7	14.2	55.8	50.2	100.0	0.0	53.0	100.0	0.0
52	Qatar	49.7	40.3	36.7	0.0	62.6	100.0	84.2	66.1	7.8
61	Sudan	53.7	0.0	0.0	98.8	100.0	31.1	100.0	100.0	0.0

Rank (out of 101 developing and emerging economies)	Country	Public Debt Sustainability Risk Score (0= high risk; 100 = low risk)	Total public debt (percentage of GDP) max (2020;2021)	Covid-19 debt shock (increase in public debt-to-GDP ratio) 2020	Foreign exchange-denominated public debt (percentage of total public debt) 2020	Maturing public debt (percentage of GDP) 2021-2022	Fiscal balance (percentage of GDP) 2021-2022	Interest payments (percentage of fiscal revenues) 2021	Effective interest rate (interest payments in percentage of public debt at the end of previous year) 2021	Interest rate-growth differential (percentage) 2016-2020
69	Algeria	61.1	46.9	21.9	100.0	87.3	0.0	100.0	100.0	32.6
70	United Arab Emirates	61.2	53.2	50.8	0.0	94.1	53.5	100.0	85.5	52.8
75	Iran	62.4	73.4	100.0	100.0	100.0	0.0	0.0	25.9	100.0
87	Saudi Arabia	68.1	92.8	35.7	21.9	90.5	4.3	100.0	99.5	100.0
89	Kuwait	68.9	100.0	100.0	0.0	50.8	0.0	100.0	100.0	100.0

**Source:** Compiled with data from Allianz Research, 2021.

## Annex 2. Major sources for existing national policy commitments

The following is a non-exhaustive list of desk-based sources to review national priorities on development, climate, and nature, and for understanding the national position on debt.

However, information collected from these sources should be discussed with national actors to verify and develop a greater understanding of the current context and priorities.

### Government announcements in national and international forums

- COVID recovery plans
- Announcements in climate and nature forums

### Government documents – national strategies, plans, visions, acts

- Overall planning and budgeting documents
  - Five-year plans
  - National development plans
  - Annual budgets
  - SDG strategies
  - Debt position/history
- Climate
  - Nationally Determined Contributions (NDC) and NDC updates
  - National Adaptation Plans (NAPs) and National Adaptation Plans of Action (NAPAs)
  - National communications to the UNFCCC
  - Climate risk and vulnerability studies
  - Green Climate Fund country programming draft documents
- Biodiversity
  - National Biodiversity Strategy and Action Plan (NBSAP)
  - Fisheries & marine plans, strategies, protected areas strategies
- Economic sectoral plans
  - Agriculture strategies
  - Fisheries masterplans

### Existing programs, projects and international financing for climate and nature in country

- Climate funds update (<https://climatefundsupdate.org/data-dashboard/>)
- OECD database ([https://public.tableau.com/views/Climate-relateddevelopmentfinance-RP/CRDF-Recipient?:embed=y&:display\\_count=no&:showVizHome=no%20#3](https://public.tableau.com/views/Climate-relateddevelopmentfinance-RP/CRDF-Recipient?:embed=y&:display_count=no&:showVizHome=no%20#3))

### Creditworthiness and governance

- Public Expenditure and Financial Accountability (PEFA) assessments (<https://www.pefa.org/assessments>)
- Track record with existing funding

**Source:** Adapted from Steele and others, 2021, annex 2.

## Annex 3. The World Bank's preliminary assessment of the robustness of potential indicators

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (percentage)	Publicly available and produced by FAO	Level of water stress depends on non-policy factors (e.g., climate change/ natural disasters)	Most recent data point is from 2018	Data is only produced from 2000 onwards	Most countries are covered
Adjusted savings: natural resources depletion (percentage of GNI)	Publicly available and produced by World Bank	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., economic activity)	Most recent data point is from 2019	Data is produced from 1990 onwards	Most countries are covered
Adjusted savings: net forest depletion (percentage of GNI)	Publicly available and produced by World Bank	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., economic activity)	Most recent data point is from 2020	Data is produced from 1990 onwards	Most countries are covered
Total natural resources rents (percentage of GDP)	Publicly available and produced by World Bank	Regulation will have a direct and significant impact, but outcome may	Most recent data point is from 2019	Data is produced from 1970 onwards	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
		also depend on other factors (e.g., economic activity)			
Proportion of population with access to electricity, by urban/rural (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., population growth)	Most recent data point is from 2019	Data is produced from 2000 onwards	Most countries are covered
Proportion of population with primary reliance on clean fuels and technology (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., population growth)	Most recent data point is from 2019	Data is produced from 2000 onwards	Most countries are covered
Renewable energy share in the total final energy consumption (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., economic activity)	Most recent data point is from 2018	Data is produced from 2000 onwards	Most countries are covered
Energy intensity level of primary energy (megajoules per constant 2017 purchasing power parity GDP)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., economic activity)	Most recent datapoint is from 2018	Data is produced from 2000 onwards	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Installed renewable electricity-generating capacity (watts per capita)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent datapoint is from 2019	Data is produced from 2000 onwards	Most countries are covered
PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)	Publicly available and produced by the World Bank	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g., economic activity)	Most recent data point is from 2017	Data is produced from 1990 onwards	Most countries are covered
PM2.5 air pollution, population exposed to levels exceeding WHO guideline value (percentage of total)	Publicly available and produced by the World Bank	Regulation will have a direct and significant impact on the outcome, but outcome may also depend on other factors (e.g., economic activity)	Most recent data point is from 2017	Data is produced from 1990 onwards	Most countries are covered
Adjusted net savings, including particulate emission damage (percentage of GNI)	Publicly available and produced by the World Bank	Regulation will have a direct and significant impact on the outcome, but outcome may also depend on other factors (e.g., economic activity)	Most recent data point is from 2019	Data is produced from 1990 onwards	Most countries are covered
Electricity production from coal sources (percentage of total)	Publicly available and produced by the IEA	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2017	Data is produced from 1990 onwards	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Energy imports, net (percentage of energy use)	Publicly available and produced by the IEA	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity). Indicator may not reflect sustainability interventions.	Most recent data point is from 2018	Data is produced from 1990 onwards	Most countries are covered
Energy use (kg of oil equivalent per capita)	Publicly available and produced by the IEA	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2018	Data is produced from 1990 onwards	Most countries are covered
Fossil fuel energy consumption (percentage of total)	Publicly available and produced by the IEA	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2018	Data is produced from 1990 onwards	Most countries are covered
Renewable electricity output (percentage of total electricity output)	Publicly available and produced by the IEA	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2018	Data is produced from 1990 onwards	Most countries are covered
Country has adaptation communications (Yes/No)	Publicly available and produced by countries via UNFCCC	Sovereign governments will have a direct and significant impact on the outcome	Depends on when countries produce their adaptation communications	A one-off binary assessment	Depends on whether the country has produced an adaptation communication

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Country has an adaptation plan (Yes/No)	Publicly available and produced by countries via UNFCCC	Sovereign governments will have a direct and significant impact on the outcome	Depends on when countries produce their National Adaptation Plan	A one-off binary assessment	Depends on whether the country has produced a National Adaptation Plan
Country has a nationally determined contribution (Yes/No)	Publicly available and produced by countries via UNFCCC	Sovereign governments will have a direct and significant impact on the outcome	Depends on when countries produce their NDCs	A one-off binary assessment	Depends on whether the country has produced an NDC
Party has a net-zero emission target	No official centralized system for documenting targets, but Climate Watch voluntary takes stock of this information	Sovereign governments will have a direct and significant impact on the outcome	Depends on when countries produce their net zero targets	A one-off binary assessment	Depends on whether the country has produced a net zero target
Party has an economy-wide target in a national law or policy	No official centralized system for documenting targets, but Climate Watch voluntary takes stock of this information	Sovereign governments will have a direct and significant impact on the outcome	Depends on when countries produce their national law/policy	A one-off binary assessment	Depends on whether the country has produced a national law/policy
Party intends to enhance ambition or action in their NDCs	No official centralized system for documenting targets, but Climate Watch voluntary takes stock of this information	"Intention" to enhance ambition or action in NDC may be subject to change. Does not reflect actual intervention	Depends on when countries announce their intention	A one-off binary assessment	Depends on whether the country has announced its intention

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Party has submitted long-term strategies	Publicly available and produced by countries via the UNFCCC	Sovereign governments will have a direct and significant impact on the outcome	Depends on when countries submit LTS	A one-off binary assessment	Depends on when the country submits the LTS
Total greenhouse gas emissions without LULUCF for Annex I Parties (Mt CO <sub>2</sub> equivalent)	Publicly available and produced by countries via the UNFCCC	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2019	Data is produced from 1990 onwards	Most countries are covered
Total greenhouse gas emissions without LULUCF for non-Annex I Parties (Mt CO <sub>2</sub> equivalent)	Publicly available and produced by countries via the UNFCCC	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2018	Data is produced from 2000 onwards	Most countries are covered. MRV may vary across countries depending on capacity levels
Total greenhouse gas emissions from LULUCF for Annex I Parties (Mt CO <sub>2</sub> equivalent)	Publicly available and produced by countries via the UNFCCC	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2019	Data is produced from 1990 onwards	Most countries are covered
Total greenhouse gas emissions from LULUCF for non-Annex I Parties (Mt CO <sub>2</sub> equivalent)	Publicly available and produced by countries via the UNFCCC	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2018	Data is produced from 2000 onwards	Most countries are covered. MRV may vary across countries depending on capacity levels

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Total greenhouse gas emissions per capita (Mt CO <sub>2</sub> equivalent per capita)	Publicly available and produced by countries via the UNFCCC	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2019	Data is produced from 1990 onwards	Most countries are covered. MRV may vary across countries depending on capacity levels
Total greenhouse gas emissions per gross domestic product (Mt CO <sub>2</sub> equivalent per GDP)	Publicly available and produced by countries via the UNFCCC	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2019	Data is produced from 1990 onwards	Most countries are covered. MRV may vary across countries depending on capacity levels
Average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2019	Data is produced from 2000 onwards	Most countries are covered
Forest area (thousands of hectares)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Forest area as a proportion of total land area (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered
Land area (thousands of hectares)	Publicly available and produced by the UN	Indicator may not reflect government intervention for sustainability	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered
Arable land (percentage of land area)	Publicly available and produced by World Bank	Indicator may not reflect government intervention for sustainability	Most recent data point is from 2018	Data is produced from 1961 onwards	Most countries are covered
Average proportion of Freshwater Key Biodiversity Areas (KBAs) covered by protected areas (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2019	Data is produced from 2000 onwards	Most countries are covered
Average proportion of Terrestrial Key Biodiversity Areas (KBAs) covered by protected areas (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2019	Data is produced from 2000 onwards	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Above-ground biomass stock in forest (tonnes per hectare)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. climate change)	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered
Forest area annual net change rate (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered
Forest area under an independently verified forest management certification scheme (thousands of hectares)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered
Proportion of forest area under a long-term management plan (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered
Proportion of forest area within legally established protected areas (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2020	Data is produced from 2000 onwards	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Average proportion of Mountain Key Biodiversity Areas (KBAs) covered by protected areas (percentage)	Publicly available and produced by the UN	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2019	Data is produced from 2000 onwards	Most countries are covered
Countries that established national targets in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020 in their National Biodiversity Strategy and Action Plans (1 = YES; 0 = NO)	Publicly available and produced by countries via the UN	Sovereign governments will have a direct and significant impact on the outcome	Depends on the country	A one-off binary assessment	Depends on the country
Countries with integrated biodiversity values into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting (1 = YES; 0 = NO)	Publicly available and produced by countries via the UN	Sovereign governments will have a direct and significant impact on the outcome	Depends on the country	A one-off binary assessment	Depends on the country

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
Proportion of fish stocks within biologically sustainable levels (not overexploited) (percentage)	Publicly available and produced by the FAO	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. economic activity)	Data is produced every 2 years. Most recent data point is from 2017	Data is produced from 1974	Methodology varies across countries which reduces comparability.
IUCN Red List Index	Publicly available and produced by NGO. Unclear whether it will be available permanently/for the foreseeable future	Regulation will have a direct and significant impact, but outcome may also depend on other factors (e.g. climate change)	Most recent data point is from 2021	Data is produced from 1993. Unclear whether data is comparable across different time periods as ranking methodology may change over time	Most countries are covered
RISE Score (2019)	Publicly available and will be available and continually updated by the World Bank	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2019. RISE data are available every 2 years. 2021 data will be available by July/September 2022	Data is produced from 2010 onwards RISE scores are always recalculated according to the most recent methodology, so it is comparable across years dating back to 2010	Most countries are covered

Potential indicator	Available	Attributable	Frequent/ Recent	Regular	Comparable across countries
CCPI Ranking (2021)	Publicly available and produced by NGO. Unclear whether it will be available permanently/ for the foreseeable future	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2020	Data is produced from X onwards. Unclear whether data is comparable across different time periods as ranking methodology may change over time	Most countries are covered
EPI Ranking (2020)	Publicly available and produced by academic institution. Unclear whether it will be available permanently/ for the foreseeable future	Regulation will have a direct and significant impact on the outcome	Most recent data point is from 2020	Data is produced from X onwards. Unclear whether data is comparable across different time periods as ranking methodology may change over time	Most countries are covered

**Source:** Flugge and others, 2021, table 3.



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High debt service burdens constrain the ability of many member States of the United Nations Economic and Social Commission for Western Asia (ESCWA) to respond adequately to the Covid-19 crisis and invest in crucial areas of sustainable development. To ensure that ESCWA's Climate/SDGs Debt Swap Mechanism can achieve transformational impact and spark the interest of relevant creditor governments, this study argues that it is necessary to look beyond traditional approaches to debt-for-climate/nature/development swaps. This study proposes a pioneering approach based on key performance indicators (KPIs) where the debt swap arrangement would not only relate to projects funded through debt service reduction, but would also be tied to policy action at the macro level that would contribute to an enabling environment that will enhance sustainability outcomes for the country in question. In effect, debt swaps would be linked to KPIs at both the project and policy levels toward accelerating nature/climate action and SDGs progress.

Projects eligible for the Debt Swap Mechanism should demonstrate potential to positively impact one or several of these SDGs. At the macro policy level, measures should be devised to either enhance climate and sustainability frameworks, or contribute to climate-proofing public finances and public debt management. KPIs need to be selected carefully in such a way that captures the defined goals of the Debt Swap Mechanism. Moreover, they must be attributable to national policy action, be tailored to the specific goals and be as concrete and operational as possible. Above all, KPIs need to allow for regular monitoring, reporting and verification so that they provide a reliable basis for the envisaged Debt Swap Mechanism during and after its implementation. To this end, they need to be available relatively easily, at a reasonable cost and regular frequency.

