



Jordan climate and nature financing analysis

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The Shaping Sustainable Markets Group works to make sure that local and global markets are fair and can help poor people and nature to thrive. Our research focuses on the mechanisms, structures and policies that lead to sustainable and inclusive economies. Our strength is in finding locally appropriate solutions to complex global and national problems.

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Jordan is highly vulnerable to climate change and nature degradation but has constraints on financing options. This toolkit reviews opportunities for expanding the sources of finance for climate and nature, including the use of key performance indicator-related innovative instruments, and it makes some initial suggestions for steps to promote this financing.

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Acronyms and abbreviations

CIP	Capital Investment Plan
EFF	Extended Financing Facility
ESG	Environmental, social and governance
GCF	Green Climate Fund
GDP	Gross domestic product
GEF	Global Environment Facility
IFC	International Finance Corporation
IMF	International Monetary Fund
JOD	Jordanian dinar
KPI	Key performance indicators
NDC	Nationally Determined Contribution
P4R	Payment for Results
PBB	Performance-based budget
PFM	Public financial management
SLB	Sustainability-linked bonds
SLM	Sustainable land management
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
WCB	Wildlife Conservation Bond

Summary

This note reviews the options for expanding the sources of finance for climate and nature and makes some initial suggestions for steps to promote this financing.

Background

Jordan is highly vulnerable to climate change and nature degradation but has constraints on financing options. Economic growth is projected to be modestly positive (at 2.4%) but the budget deficit is high (5.4% of gross domestic product (GDP)) and the high debt-to-GDP ratio (91.5%) means that government borrowing cannot be increased substantially without risking an increase in the interest rates on government debt. However, Jordan has a good reputation for fiscal sustainability and governance, which creates opportunities to explore innovative financing options for climate and nature.

Climate and nature financing gap

There is no existing analysis of current climate and nature financing, but a review of the 2021 budget suggests that public climate and nature expenditure in 2021 was 482 million Jordanian dinar (JOD) (US\$680 million). Water accounted for 58% of this. There is no analysis of private climate and nature expenditure, but the International Finance Corporation (IFC) reports spending an average of JOD71 million per year on climate and nature over the last ten years. Indicative estimates of climate and nature financing needs are based on: the Water Sector Capital Investment Plan (CIP); the work on costing the Nationally Determined Contribution (NDC); and indicative estimates of the costs of meeting the 30x30 biodiversity protection goal and of implementing the sustainable land management practices needed to halt land degradation. This analysis suggests that there is a current climate and nature annual financing gap of JOD1,095 million or 3.4% of GDP.

Key performance indicators

Climate and nature financing is increasingly linked to the use of key performance indicators (KPIs). This applies both to conventional programmes and new financing modalities (for example, in thematic use-of-proceeds bonds, sustainability-linked bonds, climate and nature performance bonds and debt-for-climate-and-nature swaps). Jordan is well-placed to exploit this potential because it has a well-developed system of KPIs, both in the budget and

in key strategy documents. There has also been detailed work on climate and nature KPIs as part of the Payment For Results (P4R) programme. This paper suggests a shortlist of 27 KPIs based on the following criteria: they are included in the budget and strategy documents; they are at a relative high level, whilst also being monitorable and changing from year to year; and they could relate to international conventions, facilitating access to international finance. A typical KPI instrument would be based on a selection of three or four of these KPIs.

Closing the climate and nature financing gap

The potential of conventional sources of finance (that is, increased domestic financing, improved effectiveness and increased foreign grants and programme loans) is initially small, but they could meet 29% of the gap after ten years of economic growth. The natural growth of private sector financing could meet 17% of the gap. The direct contribution of innovative sources of finance (for example, bonds and other debt instruments) is limited, because of the debt ceiling, but they could encourage public climate and nature financing to grow marginally faster than other sectors, which could meet 18% of the gap. Finally, the use of KPI-related innovative instruments could provide certainty to the private sector (that is, on commitment to policy and complementary public infrastructure), which could accelerate private investment and meet 9% of the gap. Thus, in the long term (for example, in ten years) about 72% of the gap could be covered. But the situation is much more serious in the short to medium term, and urgent grant support is required while new sources are becoming established.

Suggestions

To pursue the opportunities listed above, the government could create a working group building on existing climate and nature coordination bodies. This could encourage existing work on climate and nature financing (for example, for the NDC and biodiversity and land degradation) to explore all options, including the potential for accelerating private climate and nature finance. A green bond or KPI-linked bond could promote private investment by building certainty around commitments to policies and public infrastructure. This could also encourage donors to provide grants to fill the more serious short-term gap.

1 Introduction

Background

With the twin climate and nature emergencies, many developing countries need to mobilise significant financing over the next several years to enhance their resilience to climate change, reduce their emissions and conserve the ecosystem services provided by nature, which underpin their economic development prospects.

Yet tight fiscal space and costly access to capital markets can lead developing countries to undertake action on climate and nature on a very limited scale, endangering macro/fiscal financial stability, and ultimately, the sustainability of their growth and poverty-alleviation efforts.

Objective

The objective of this work is to conduct a preliminary assessment of the types of financing instruments that may be suited to the Jordanian context and that can help Jordan, over time, to reduce the gap between the financing needs for climate and nature action and the actual funding the country can leverage from development partners and capital markets. The long-term goal is also to contribute to tackling the current high costs of capital through instruments that will help boost Jordan's current credit ratings while supporting the improvement of the country's natural capital.

This work is NOT intended to deploy specific instruments. Instead, based on government guidance, this analysis can form the basis for later follow-on work aimed at structuring specific transactions on the financing instruments deemed most appropriate for Jordan.

2 Jordan context

2.1 Jordan's current financing situation

According to the most recent International Monetary Fund (IMF) forecast, in 2022, Jordan is expected to accumulate a budget deficit of 5.4% while its growth is projected to reach 2.4%. Due to the current balance of payment (–5.9%) and the high debt-to-GDP ratio (91.5%, surpassing the safety anchor of 55% set by the World Bank), the IMF assesses the country's debt sustainability risk as high, but sustainable. The institution justified this claim due to the fact that “authorities remain committed to the revised fiscal consolidation path under the program, and committed donor and planned market financing come through”. Such assessment is confirmed also by private credit rating agencies: Standard and Poor set its rating as B+ stable, while Fitch maintains it at BB– stable.

Despite this, the country's cost of debt spread remains relatively high, at 5.15% for 10-year bonds.

According to IMF figures, although the gross financing requirements are expected to go down in 2022 compared to the high 2020 and 2021 levels, they will remain high and will in large part come from public sources, grants and international financial institutions.

In 2021 and 2022, the net capital flows have been and are projected to remain negative. This tendency is leading to an increasing dependency on new public debt issuances, requiring the urgent intervention of capital markets to bridge this gap.

Measures taken by the government, notably agreements between the Ministry of Finance and the Royal Jordanian Bank to borrow up to JOD50 million backed by a government guarantee, are increasing the pressure on the debt stock. Additionally, despite a rather stable public debt structure (55% domestically owned and 45% externally owned), most externally owned debt is owned by multilateral and official bilateral creditors.

It should also be noted that, in the current debt stock accounting, non-traditional debt instruments are not taken into account. Among these, so-called comfort letters given out by the government to strategic companies or commercial banks commit the government to repay the owed amount over a period of five years in addition to an average interest of 4–5%. While the government does not consider these instruments as debt, they add pressure to the debt stock. In 2020, they amounted to 2.5% of the overall country's debt, and in 2021, the government added JOD100 million in such instruments.

While this outlook appears to be unfavourable for raising additional debt in the short run, innovative solutions linking the attainment of KPIs and natural capital restoration could allow Jordan to free fiscal space by bringing down the overall cost of capital through price competition and performance-based outcomes. In terms of natural capital, in fact, Jordan still scores only 132nd out of 180 ranked countries worldwide assessing the Natural Capital Index.¹ This leaves a lot of potential to use innovative debt instruments to finance the improvement of the current natural capital conditions.

Although its capacity to do so will also be determined by the evolution of the country's growth and governmental policies, Jordan's resolute governance and willingness to follow through with the measures of fiscal sustainability allows the maintenance of a certain level of borrowing space.

Moreover, the confidence that Jordan has among international borrowers, as well as the adequate capitalisation of commercial banks and a recent oversubscription of a domestic bond issuance, is encouraging the exploitation of such a situation. This outlook encourages the investigation of innovative forms of public financing and leveraging of both domestic and foreign private capital in order to compensate for the overall weakening macroeconomic outlook of the country and trigger a virtuous circle to consolidate the country's rating and the overall debt burden.

¹ Ghaith, B (2021) Jordan advances 23 positions on Natural Capital Index. *The Jordan Times*, <https://www.jordantimes.com/news/local/jordan-advances-23-positions-natural-capital-index>

Table 1. External financing requirements and sources, 2020–27, IMF Country Report No. 22/4

	2020	2021		2022		2023		2024	2025	2026	2027
		3RD REV	PROJ	3RD REV	PROJ	3RD REV	PROJ	PROJ	PROJ	PROJ	PROJ
(1) Gross financing requirements	5,912	6,348	6,013	5,283	6,247	4,797	5,796	4,299	5,096	6,030	5,027
Current account deficit (excluding grants)	3,974	5,811	5,465	3,815	4,778	3,011	3,992	3,541	3,324	3,057	3,443
<i>of which:</i> Energy imports	2,095	2,852	3,017	2,930	4,615	2,902	4,226	4,007	3,880	3,748	3,821
Amortization of public sector loans ^a	492	525	554	444	445	474	495	486	548	1,761	332
Amortization of sovereign bonds ^b	1,250	0	-6	1,000	1,000	0	0	0	1,000	1,000	1,000
GCC deposits at the CBJ	0	0	0	0	0	1,167	1,167	0	0	0	0
IMF repurchases	196	12	0	25	24	146	141	272	224	212	252
(2) Change in reserves (+ = increase)	1,110	141	2,387	685	-356	-91	-22	376	465	-497	169
(3) Gross financing sources	5,387	4,450	4,426	4,383	3,978	3,573	4,433	3,766	5,091	5,250	5,081
FDI, net	735	1,013	607	1,070	798	1,383	1,223	1,644	1,769	2,055	2,177
Public grants	1,465	1,411	1,484	1,593	1,546	1,350	1,576	1,403	1,253	1,231	915
Public sector borrowing (excluding official budget support) ^b	387	470	607	555	511	576	470	505	476	399	412
<i>of which:</i> Unidentified prospective financing ^b	1	0	96	0	0	0	0	0	0	0	0
Issuance of sovereign bonds ^c	1,750	0	0	1,500	1,000	0	500	0	1,000	1,000	1,000
GCC deposits at the CBJ	0	0	0	0	0	0	0	0	0	0	0
Non-resident purchases of local debt	-8	0	-198	0	0	0	0	0	0	0	0
CBJ other financing (net) ^d	-69	-100	-237	-50	-39	0	11	11	11	0	0
SDR allocation held at CBJ	0	469	472	0	0	0	0	0	0	0	1
Private capital flows, net ^e	1,128	1,186	2,164	-284	163	263	653	203	583	565	576
(4) Errors and omissions	-171	0	2,106	0	0	0	0	0	0	0	0
(1) + (2) – (3) – (4) Total financing needs	1,806	2,040	1,868	1,585	1,913	1,134	1,340	910	469	283	116
Official public external financing	1,805	2,040	1,868	1,585	1,913	1,134	1,340	910	469	283	117
Identified official budget support	1.115	1.490	1.325	1.190	1.364	934	1.238	783	469	283	117
EU and WB emergency pandemic support	149	32	32	125	0	0	0	0	0	0	1
IMF purchases, <i>of which</i>	690	550	542	396	549	200	102	127	0	0	0
RFI	401	0	0	0	0	0	0	0	0	0	0
EFF augmentation at 4th review	0	0	0	0	166	0	-92	29	0	0	0
Unidentified external financing	0	0	0	0	0	0	0	0	0	0	0
Memorandum items:											
Gross financing requirements (in percent of GDP)	26.9	27.8	26.4	22.0	25.9	18.9	22.7	15.9	17.8	19.9	15.7
Gross Usable Reserves	15,127	15,269	17,272	15,954	16,916	15,863	16,894	17,270	17,735	17,238	17,407
In percent of the IMF Reserve Adequacy Metric ^f	110	104	115	102	105	97	98	96	95	91	90
In months of next year's imports of GNFS	7.8	7.9	7.6	8.1	7.4	8	7.3	7.2	7.3	6.8	6.9
Sources: Jordanian authorities; and IMF staff estimates and projections.											
^a Includes project loans and Arab Monetary Fund and loans on the books of CBJ, and excludes IMF repurchases.											
^b Includes loans on CBJ books.											
^c Includes guaranteed and non-guaranteed bonds.											
^d Includes CBJ other accounts receivable/payable (net) minus deposit flows (net), excluding GCC deposits.											
^e Includes changes in commercial banks' NFA.											
^f The IMF reserve metric is calculated as a weighted sum of exports, broad money, short-term debt, and other portfolio liabilities											

Source: IMF (2022) Article IV Consultation and Fourth Review Under the Extended Arrangement Under the Extended Fund Facility, <https://www.imf.org/en/Publications/CR/Issues/2022/07/13/Jordan-2022-Article-IV-Consultation-and-Fourth-Review-Under-the-Extended-Arrangement-Under-520668>

Table 2. Jordan's 2022 macroeconomic and debt metrics overview

2022 growth	2.4%
Inflation	2.8%
Budget deficit	5.4%
Debt / GDP	91.5%
Domestic debt/total debt	54.2%
External debt/total debt	45.8%
BOP	-5.9%
Standard and Poor credit rating	B+ / stable
Ten-year government bond rate	5.15%

Sources: IMF², Reuters³, World Government Bonds⁴

2.2 Current financing instruments for climate and nature

In order to pursue the objectives of this note, it is useful to assess the existing financing for climate and nature in Jordan and then use this as a basis for considering future prospects and the extent to which these prospects meet the needs expressed in the NDC and other sources. There is no existing report on this, and the best evidence comes from the budget. An analysis of 504 activities and projects in nine budget heads (six ministries, two authorities and one public enterprise) suggests that the total expenditure on climate and nature was JOD482 million in the 2021 budget, of which JOD334 million was capital expenditure. Water accounted for JOD281 million of capital spending, and solar energy accounted for JOD28 million. Very small amounts were invested in biodiversity (JOD3 million) and reducing nature degradation (JOD5 million). There is no existing analysis of private sector expenditure on climate and nature.

2.3 Jordan's financing gap for climate and nature

This section summarises the approach used for, and the provisional findings of, the financing gap analysis. The analysis draws on estimates of new financing needs in the Water Sector CIP and the NDC. It is outside the scope of this note to assess the quality of the climate and nature strategies or the estimates of financing needs. It clarifies that the gap is an indicative, order of magnitude estimate intended to provide an idea of the size of the challenge. It serves as a motivator to explore innovative financing

solutions since the financing gap cannot be closed by using grant financing or fiscal resources alone.

- **Water.** The most comprehensive analysis of financing needs in the water sector is in the Water Sector CIP, which has total costs of JOD5,408 million over ten years. It is not clear whether this allows for inflation and GDP growth. Assuming the costs are divided equally across the ten years, the annual needs were 1.7% of GDP in 2021.
- **Other NDC sectors.** There is ongoing work on the financing needs of delivering the NDC. The August 2021 version of the NDC suggested that the average annual financing needs for all sectors other than water are JOD351 million (that is, 1.09% of GDP).
- **Biodiversity protection.** There is no estimate for the costs of biodiversity protection. The largest cost of protection is likely to be the payments for ecosystem services needed to compensate farmers for loss of income arising from management practices that reduce agricultural productivity in the short term. As an indicative estimate of this cost, it is assumed that the 30 x 30 biodiversity protection target is met, that this affects 30% of agricultural land, and that protection reduces the value added from that land by 20%. These assumptions suggest annual costs of 0.3% of GDP. There will also be costs involved in administering policies and enforcing protection; these have not been estimated.
- **Land degradation.** Stopping land degradation requires the introduction of sustainable land management (SLM) practices, which will improve productivity in the long term but involve reduced

² www.imf.org/en/Countries/JOR

³ Al-Khalidi (2022) Jordan to push ahead with IMF-backed reforms to spur growth -finance minister. Reuters. www.reuters.com/markets/rates-bonds/jordan-push-ahead-with-imf-backed-reforms-spur-growth-finance-minister-2022-02-14/

⁴ www.worldgovernmentbonds.com/country/jordan/

farm incomes in the short term. As an indicative estimate of the costs of SLM, it is assumed that land degradation could reduce agricultural GDP in the short term by 10%. There is some evidence from global reviews that SLM policies typically have benefit–cost ratios of at least 1.5. These assumptions suggest that the costs of the SLM practices required to achieve land degradation neutrality are about 0.33% of GDP.

All of these sources present additional financing needs beyond what is already being financed and are therefore estimates that contribute to the overall estimated financing gap. Based on the above indicative analysis, the total gap is JOD1,095 million or 3.4% of GDP in 2021. This annual requirement is likely to continue for at least ten years.

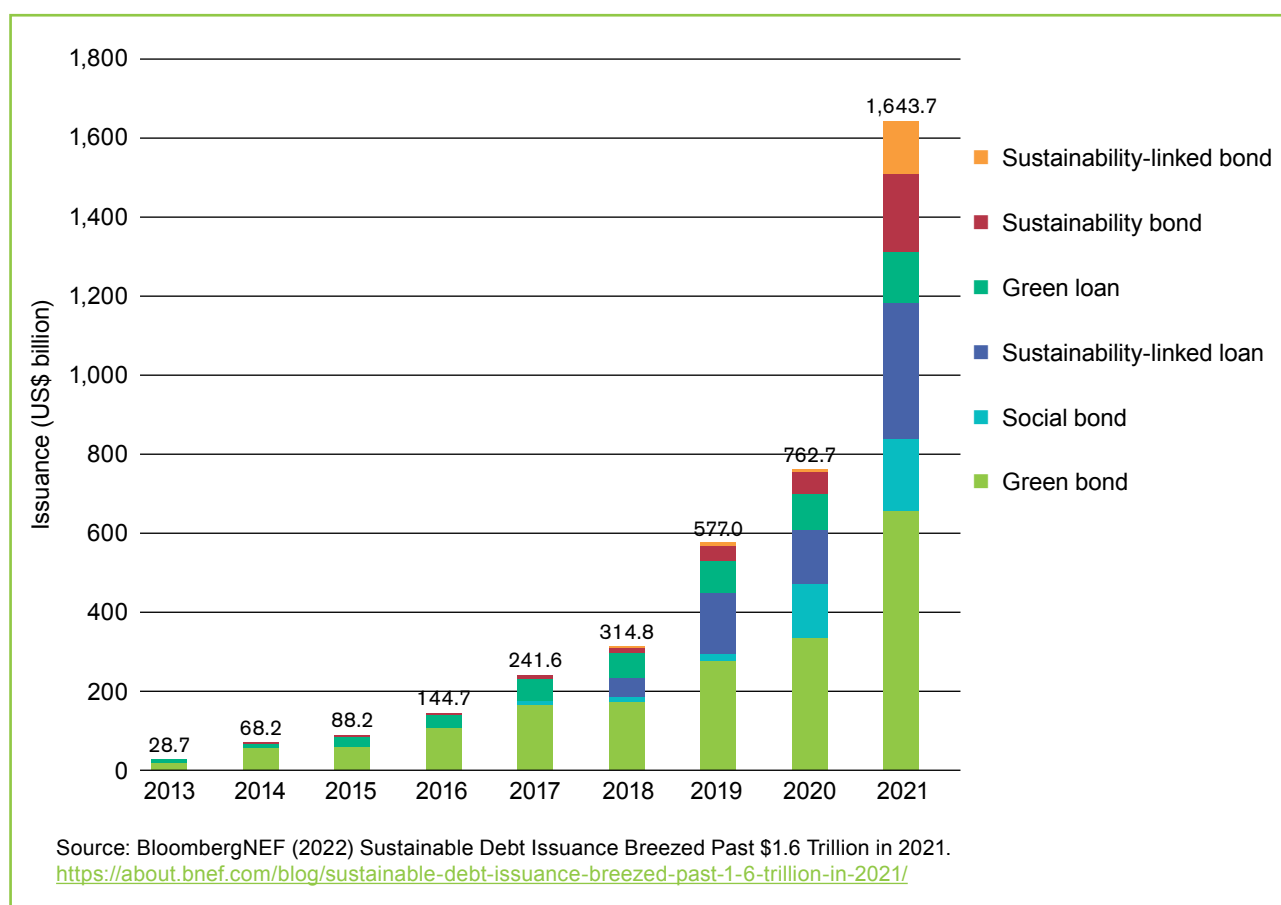
It is clear that closing this gap using grant funding alone is not possible, and a range of market-based instruments and opportunities to leverage external private finance must be explored and progressed, whilst simultaneously maintaining a focus on debt sustainability and the underlying cost of capital.

2.4 Possible KPIs for climate and nature action in Jordan

This section reviews some options for the sorts of KPIs that are likely to be useful in future climate and nature financing that is linked to KPIs. In recent decades, KPIs have been a central feature of moves towards performance-based budget (PBB) systems⁵ in both developed and developing countries. PBB systems, and associated KPIs, aim to strengthen the link between strategies/policies and public finance.

More recently, KPIs have started to be used by the private sector with a significant growth of environmental, social and governance (ESG)-focused investors, both at the retail and the institutional level. Increased awareness has grown around the issues of environmental and social sustainability, as well as risk hedging and growing issuance both at the sovereign and corporate levels. Between 2013 and 2021, the issuance of thematic bonds, which include sustainable and green debt, increased from US\$28 billion to US\$1.6 trillion. Although these thematic bonds do not directly have KPI-linked outcomes, they

Figure 1. Annual green and sustainable debt issuance, 2013–2021



5 PBB systems are sometimes referred to as results-based budgets (with the results measured in KPIs). They are also sometimes described as programme budgets, although this term has been used in different ways over the last 50 years and needs to be used with care.

share the appetite of capital markets for ESG and sustainability-related instruments, which can be easily transferred over sustainability-linked bonds and KPI-related instruments.

The possibility of attracting investors with clear and transparent objectives is cited among the most attractive features of thematic bonds, alongside the possibility of putting downward pressure on the cost of debt due to oversubscription and coupon amendments linked to the achievement of KPIs within sustainability-linked loans, bonds and innovative debt solutions.

A key part of the design and monitoring of several financial instruments, KPIs are becoming increasingly important in the sustainable finance realm due to their relevance to both issuers and investors. For issuers, the relatively new nature of KPI-related products allows them a certain flexibility in choosing the relevant objectives they want to achieve, and, more recently, the attainment of these KPIs is being positively linked to the cost of debt. The rising awareness demanded by both retail and institutional investors, as well as increasingly rigorous reporting standards for classifying an instrument as 'green' or 'sustainable', is likely to reward KPI-related instruments with sustained growth in investments.

Several instruments use KPIs within their overall structure and for reporting and monitoring purposes.

1. **Debt for climate and nature swaps** are linked to the reduction in debt stock or service for climate or nature conservation outcomes. Past swaps identified a project linked to a KPI framework, and the funds were used for nature and climate projects. Newer, upscaled approaches are now being piloted, which reduce transaction costs and relieve more debt with a comprehensive engagement by all creditors and payment of the debt relief through the budget, and link the relief to KPIs.
2. **Thematic (green, social and sustainability) use-of-proceeds bonds** include covenants tying the proceeds of a bond to the issuer's progress towards environmental or social goals. On top of all the requirements of a vanilla bond, they require annual monitoring, impact and allocation reporting. Such instruments tend to feature an overall premium, also called greenium, compared to traditional vanilla bonds, and their rigorous structure reassures investors on the effective deployment of capital.

3. **Sustainability-linked bonds (SLBs)** tie the financial performance of the bond to the achievement of pre-established, agreed-upon KPIs. A lack of progress towards achieving the KPI can result in a decrease or increase in the instrument's coupon. However, despite being issued in order to attain a specific KPI, these are general-purpose bonds, and therefore the collected funds are not strictly tied to the predetermined KPIs. SLBs are now predominantly used in the corporate space, but they are increasingly being explored by sovereign entities for their versatile nature and the capacity of the issuer to set suitable KPIs as well as to raise investors' interest.
4. **Structured bonds** are debt securities that feature individualised and flexible terms which are attractive alternatives to conventional debt securities. A notable example of a structured bond is the World Bank Wildlife Conservation Bond (WCB). Issued in March 2022, the WCB is a first of its kind outcome-based bond that channels private capital to finance conservation activities, and, together with financing from the Global Environment Facility (GEF), transfers project risk from donors to investors. The structure creates an opportunity for private investment in conservation, supported by sound quantifiable metrics and models.⁶

On top of traditional instruments already displaying a clear track record, a new innovative instrument whose feasibility is now being weighed by several countries could be considered. **Climate and nature performance bonds** tie coupon and principal adjustments to the delivery of measurable nature-based and climate outcomes and can be used for both new debt issuance and restructuring. Being general-purpose bonds, they are not tied to strict spending verifications. They allow for the simultaneous achievement of nature restoration and a debt cost adjustment, representing a very attractive instrument for developing economies rich in natural capital.

While most of the green 'thematic' debt instruments issued over recent years are non-KPI-based in terms of driving a change in coupon, there is a real appetite in the capital markets for ESG and sustainability-related instruments, which can be transferred to SLBs and KPI-related instruments. Although the market is still immature with only a few concrete examples (Chile⁷ and Uruguay⁸ so far), it is possible

6 World Bank (2022) Wildlife Conservation Bond mobilizes private capital to protect critically endangered rhinos. <https://thedocs.worldbank.org/en/doc/7039bd837e60e484fb3a93ea63951306-0340022022/original/CaseStudy-WildlifeConservationBond.pdf>

7 Chile Ministry of Finance. Sustainability-linked Bonds. <https://www.hacienda.cl/english/work-areas/international-finance/public-debt-office/esg-bonds/sustainability-linked-bonds>

8 Ministry of Economy and Finance of Uruguay. Uruguay's Sovereign Sustainability-Linked Bonds. <http://ssliburuguay.mef.gub.uy>

KPI-related/thematic bond instruments have the potential to bring down the cost of capital due to oversubscription/demand for these products in the market. As raised above, there is further potential to reduce the principal and overall debt coupon by attaching performance components to the instrument, which in the short term require the need for outcome payers.

Step-up coupons (where a coupon is increased as a result of failure to achieve a KPI), have been the most widespread typology within SLBs in the corporate market and in the very limited sovereign space at this stage.

In putting in place these kinds of instruments, close attention should be paid to implementing a well-structured monitoring, reporting and verification system to verify the attainment of the KPIs. When selecting the KPIs, the quality of the data must be assessed beforehand, assessing whether the data is easily available, attributable, recent, updated regularly and comparable across countries.

KPIs are included both in the Jordanian budget and in climate and nature strategy documents (that is, the NDC Action Plan, the National Biodiversity Strategy and Action Plan (NBSAP), the National Water Strategy and the Land Degradation Target Setting Programme). The KPIs are slightly different, but there

is reasonable consistency. This provides an excellent basis for innovative sources of finance that depend on KPIs and help to consolidate their central role in the budget.

Table 3 presents a shortlist of some of the most powerful KPIs that meet the following criteria:

- Already included in the budget and/or climate and nature strategies and plans
- Covering a large share of priority climate and nature expenditure
- Sufficiently low level to change from year to year as a direct result of public expenditure
- Sufficiently high level to reflect real benefits for people and ecosystems (although some of the benefits may happen in the short-to-medium term)
- Linked to international conventions (that is, the UN Framework Convention on Climate Change (UNFCCC), the UN Convention on Biological Diversity (UNCBD) and the UN Convention to Combat Desertification (UNCCD)), which could be useful in securing international finance.

Table 3 also highlights with light shading three KPIs that could be particularly useful for high-level KPI financing instruments.

Table 3. Shortlist of KPIs for the budget and strategies

KEY CLIMATE ACTIONS		KEY NATURE ACTIONS	
KPI	UNITS	KPI	UNITS
Actual/permitted water use	%	Vegetation cover in urban/rural areas	%
Enhanced mobility index	Index	Increase in forest/pasture planting	%
Increase use of public transport	%	Sustainable land management	Hectares
Non-motorised transport modal share	%	Sustainable forest management	Hectares
Roads with climate-resilient standards	%	Sustainable range management	Hectares
Waste to energy initiatives	%	Biodiversity plans	Hectares
Reduced waste	Tons	Land under protected status	Hectares
Water efficiency in residential use*	%	Marine area protected status	km ²
Water efficiency in irrigation*	%	Area under special conservation status	Hectares
Increased water storage*	MCM**	Species at risk (flora/fauna)	Number
Water productivity in agriculture	US\$/m ³	Ecotourist visitors	Number
Wastewater treatment and sanitation	Tons		
Wastewater used in agriculture	%		
Afforestation	Hectares		
Drought-resilient agripractices	Hectares		
Climate-sensitive disease treated	Cases		
Supporting institutions and studies			

* An indicator of % over-abstraction could cover all three water-related categories and features in budget and NWS

** Million Cubic Meters

3 Scope of financing option analysis

This section describes options that can help reduce the financing gap. Further analysis and technical discussion with government are required to refine the estimates of the potential volume of financing that each instrument could mobilise. The approach considers both public and private finance and the possible links between the two. Table 4 describes the advantages and challenges associated with each instrument. Depending on the outcome of discussions with government, it should be possible to map the comparative advantage of each source of finance for different financing needs. In very broad terms, instruments that are commonly used in private sector financing are likely to be important for energy and some aspects of water supply, provided either to fully private enterprises or parastatals. The prospects for this financing could be enhanced by public sector financing that contributes to policy certainty. There may also be scope for private financing in the agricultural sector. There are possibilities for innovative financing in other sectors of climate change adaptation and nature, but they are more challenging and mostly require complementary public financing for policy formation and measurement, reporting and verification. These instruments could be deployed using a phased approach.

3.1 Conventional public finance

Domestic revenue. The Extended Financing Facility (EFF) tables agreed between government and the IMF include projections with an average increase in central government revenue, excluding grants, of JOD402 million per year in real terms from financial years 2020 to 2026.⁹ The current share of climate and nature spending in total public spending is 4%,¹⁰ suggesting that new climate and nature spending from the growth in government revenue could reduce the climate and nature financing gap by JOD16 million in the first year. This is small, but, if the growth were maintained for ten years, it would be providing JOD160 million by the tenth year, which would be nearly 15% of the financing need. Funding in the budget has the advantage of being easy to manage with existing capacity and should contribute to strengthening the Public Financial Management (PFM) reforms, including the role of KPIs in the budget.

Effectiveness of climate and nature expenditure in the budget. The strengthening of PFM reforms, including the use of KPIs to reinforce results-based management, should contribute to an increase in effectiveness of climate and nature funding through the budget. The P4R programme is providing strong technical support to ensure this happens. Clear objectives and KPI targets help focus management and provide incentives and ensure that funds are allocated to the most effective programmes and activities within programmes. Climate and nature funding within the 2021 budget is JOD482 million, including JOD334 million of capital spending. There is no evidence on which to base an estimate of the increase in effectiveness, but a 10% improvement seems a reasonable objective, which would reduce the financing gap by JOD48 million, or about 4% of total needs. This is probably a one-off improvement, as there are limits to the improvements possible, but it should be sustained in future years.

Grants. In the EFF, total grants in 2021 are JOD836 million. We have not been able to find evidence on which to base an estimate of the climate and nature share of these grants. As an illustrative 'placeholder' estimate, we assume that the climate and nature share of grants is the same as for the budget as a whole (that is, 4%), which would give an indicative figure of JOD33 million for climate and nature grants. Given the priority associated with climate and nature, these are likely to increase (for example, the GEF is increasing by 30%). The scale of the increase is unclear, but grant funding for climate and nature could double in the longer term, especially in the light of new commitments to biodiversity arising from the UN CBD and UN CCD. This would contribute an additional JOD33 million or 3% of the total need. It can be challenging to align grants with the budget, and they are often used most effectively for supporting 'soft' activities (studies, information and so on) and piloting. The needs for supporting technical work are specific to each programme and need to be defined as part of detailed programme design. However, it may be possible to draw some broad principles for technical support needs by sector, once the scope of government interest is established.

Programme loans. There is no analysis of the scale of existing programme loans for climate and nature in Jordan. However, most of the loans disbursed in 2021 are presumably included in the 2021 budget,

⁹ This increase comes partly from the real increase in GDP itself and partly from an increase in revenue as a percentage of GDP.

¹⁰ In the long term, the climate and nature share in total expenditure is likely to increase as climate and nature issues become more urgent, but this is unlikely to happen in the medium term, given other priorities, including COVID-19 recovery.

Table 4. Overview of the climate and nature financing instruments

AREA/ INSTRUMENT	DESCRIPTION	OPTIONS TO INCLUDE KPIS	PROS	CONS/ CHALLENGES
Domestic public finance				
Public revenue	Money received by the government from tax and non-tax sources to use on government expenditures	Jordan uses programme-based budgeting, and KPIS for each programme are produced	Supports PFM reforms and results budgets, and consolidates capacity	Public budgets often stretched with multiple priorities and can shrink due to external shocks. Limits to revenue increases
Budget effectiveness	Streamlining the budget to ensure efficiencies in expenditure through PFM reforms	Some PFM reforms can include incentives linked to KPI use	Delivered by PFM reforms that include incentives in the budget	PFM reforms can be costly and challenging to implement, requiring strong enabling environments
External public finance				
Grants	Funds provided for a specific purpose linked to public benefit, and not required to be paid back	Focused on soft support for KPIS and performance	Does not add to debt burden	Increase in international climate and nature grants likely to be modest
Programme loans	Loans that provide public funding for an area or sector and policy reforms rather than for a specific project	Lending objectives could consist of high-level KPIS	New programme design (eg P4R) ensures consistency and complementarity with budget	New programme loans add to national debt and are therefore constrained by debt ceilings
Private finance				
Private sector international and Jordanian banks	Private sector investment in climate and nature priorities, by international investors and Jordanian banks	Private sector instruments can use KPIS	Leveraging private sector funding	Volume depends on policy certainty (and probably happens only after COVID-19 recovery)
Grants for bond principle	Foundations, philanthropic or other funders that provide grants to help reduce the bond principle, to support with restructuring efforts	Would work against the KPIS established in the bond/restructured bond	Potential if KPI bonds demonstrate reliability to budget support donors	Unproven
Government KPI bonds	Sovereign bonds based on a KPI framework	KPIS are included as key outcomes	General-purpose financing that supports public decision making and supports existing national climate and nature priorities	Interest concession very small Increase spending in budget at expense of other sectors so limited
Private investment accelerated by KPI bonds	Further private financing attracted as a result of KPI bonds issued, to provide additional support against national KPI climate and nature framework	Based on nationally identified climate and nature KPIS	Potential to leverage large volumes from the private sector	Unproven and only likely to materialise after at least five years when policy KPIS are demonstrated

Source: IIED and Bankers without Boundaries

as described above.¹¹ The ongoing P4R programme is not in the 2021 budget and has an average annual expenditure of JOD71 million over the five years from 2022 to 2026. This funding is a substantial additional contribution and meets 6.5% of the total climate and nature financing needs of JOD1,095 million. Given the interest amongst multilateral development banks in funding climate and nature programmes, it is possible that this could increase in the future. However, as Jordan is close to its debt ceiling, this would have to be at the expense of loans for other sectors, which would be politically challenging, and it is unlikely that programme loans could contribute much more than 6.5% of the gap.

There is growing experience in designing loans to support PFM reforms, including those related to KPIs and PBB, with the World Bank Program for Results being a good example of this experience. This should lead to some additional improvement in the effectiveness of programme loans, which will make a further contribution to reducing the financing gap.

Total public climate and nature finance. The combined potential contribution of the above sources of conventional public finance to meeting new climate and nature needs is thus likely to be very approximately more than JOD168 million in the first year, reducing the illustrative annual climate and nature financing gap by 15%, from JOD1,095 million to JOD927 million. However, the contribution will increase steadily as revenues grow, rising to JOD312 million (that is, 28% of needs) after ten years, assuming that climate and nature expenditure at least defends its current share of the budget.

3.2 Private climate and nature finance

There is little existing analysis of the extent of private investment in climate and nature in Jordan. The IFC estimated that, by 2018, its activities had supported over US\$1 billion of private investment in renewable energy.¹² If this had been spread over ten years and was sustained in the future, it would account for JOD71 million of climate and nature funding, or 6.5% of the total needs. There is no existing analysis of the potential for growth in private climate and nature finance in Jordan, but a first estimate can be obtained by assuming that current levels increase at the global

average rate of growth in private climate finance in the ten years before COVID-19 (that is, 10%), as recorded in the Climate Policy Initiative Global Climate Finance Landscape reports. Private climate and nature finance would then reach JOD184 million after ten years.

The rate of growth of private finance is likely to be strongly influenced by government commitments, as discussed in Box 1.

BOX 1. PRIORITIES FOR ACCELERATING PRIVATE FINANCE OF CLIMATE AND NATURE

Jordan has a comprehensive set of national and sector strategies, which provide a full description of a wide range of climate and nature policies, many of which contribute to an enabling environment that accelerates private climate and nature investment. There are, however, a number of policies that are particularly important for private investors, including the following:

- Policies that reduce the cost of borrowing (for example, through cheap loanable funds and loan guarantees or banking regulations)
- Pricing policies (for example, feed-in-tariffs, carbon pricing and direct subsidies) and payments for ecosystem services that improve the profitability of green products and services
- Investments in public infrastructure (for example, smart grids, charging networks and water metering) that allow private companies to distribute products and services
- Research and development (for example, on technologies and market systems) to improve the efficiency of private investment
- Long-term fiscal incentives¹³ in energy (such as VAT exemptions for inputs to renewables and changes in fuel taxation¹⁴), transport (such as reduced duty and subsidies for electric vehicles), cooking (such as VAT exemption for clean stoves)¹⁵ and biodiversity (such as tax breaks linked to conservation).

11 Existing loans include over US\$300 million from IFC for renewable energy, which is associated with over US\$1 billion of private investment. The Green Climate Fund (GCF) has also committed US\$99 million for seven projects, the disbursement status of which is unclear from the GCF website. Some of the GCF programmes are probably grants funds, especially those related to readiness.

12 <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=18285>

13 These will be covered in the planned National Policy Framework on Green Fiscal Incentives

14 IRENA (2022) Renewable Energy Market Analysis: Africa and its Regions. www.irena.org/publications/2022/Jan/Renewable-Energy-Market-Analysis-Africa

15 Mazza, F, Balm, A and Van Caenegern, H (2021) The Landscape of Climate Finance in Kenya. Climate Policy Initiative. <https://www.climatepolicyinitiative.org/publication/the-landscape-of-climate-finance-in-kenya/>

3.3 Innovative options for climate and nature finance

Interest rate concessions with green bonds.

Jordanian government bonds are typically valued at between JOD500 million and JOD1,000 million. Concessions typically reduce interest rate costs by 25 points, which is too small to be significant in the consideration of the climate and nature financing gap. Although the direct incentives from interest rate concessions are small, the indirect impact of commitments linked to bonds could be more significant, as discussed in the following paragraphs.

Grants for concessions on debt principle (outcome payment).

Whilst interest rate concessions are very small, there is a possibility in the medium to long term that donors who provide grants for budget support (for example, the EU or the UK) could be interested in strengthening KPI bonds by supporting concessions on principal repayment. Budget support donors have shown interest in supporting climate and nature sectors, but have not provided budget support to these sectors, largely because of concerns over KPIs. If KPI bonds proved the reliability of KPIs to measure the effectiveness of climate and nature spending, this could encourage donors to provide climate and nature budget support in the form of concessions on bond repayment. Typical budget support programmes provide US\$50 million over several years, which would make a small initial contribution to the gap (for example, JOD18 million per year, or 1.6% of total needs), but could provide opportunities for expansion if successful.

Government green bonds. Some additional climate and nature funding from green bonds is possible. However, the scope for this is limited because any increase in funding for climate and nature sectors will need to be offset by reductions in expenditure in other sectors. The potential will be determined by the budget process and the extent to which the current share of climate and nature expenditure in the total budget (that is, 4%) could be increased. The extent of any increase is a political decision, but, to illustrate the order of magnitude of this potential source of additional funding, if the climate and nature share in total funding increases from 4% to 5% of total expenditure, this would provide an additional JOD120 million, or 11% of total needs. If this grows in line with public expenditure (that is, at 3.9% a year), it will reach JOD175 million after ten years (that is, 16% of total climate and nature needs).

Impact of government KPI bonds on private investment. Policy uncertainty and public infrastructure are two of the key concerns for private climate and nature investment. If government KPI bonds used KPIs that delivered greater policy certainty and improved public infrastructure (see Box 1), this would lead to an acceleration in the growth of private investment, including through corporate KPI bonds. This seems like a natural evolution of bond markets, but will depend on successful public KPI bonds, which will probably take five to ten years to come to fruition. There is limited evidence of current levels of private investment in climate and nature, but evidence from IFC operations suggest it could be JOD71 million in the energy sector alone (see section 3.2 above). If private climate and nature investment across all sectors was JOD100 million and this grew at a rate that is 10% faster than in the past as a result of the policy certainty and infrastructure provided by KPI bonds, this would add JOD10 million of climate and nature financing in the first year, rising to JOD100 million after ten years.

3.4 Overall balance

Table 5 summarises the overall balance. In the short term, the funding gap will create serious constraints on Jordan's ability to respond to the challenges and opportunities posed by climate and nature, with only one-third of needs being met. The situation in the long term is more positive, with nearly two-thirds of needs being met. However, this depends on the following:

- The share of climate and nature expenditure in total expenditure is currently 4%. It is assumed that this share also applies to the projected real growth in total public expenditure.
- There is an underlying 'natural growth' in private sector funding for climate and nature in Jordan that follows the average global growth trends prior to the COVID-19 pandemic.
- Policy certainty and infrastructure provided by government strategies leads to a 10% acceleration in this natural growth, which is reinforced by government KPI bonds that include policy KPIs.

Unfortunately, the pace of climate change and nature degradation in Jordan means that Jordan cannot afford to wait for ten years to address the funding needs. Domestic financing options are limited and a major programme of international funding is required in the short to medium term, whilst a brighter longer-term prospect is sought.

Table 5. Potential revenues for climate and nature raised by different instruments

SOURCE OF FUNDING	JOD MILLION	
	Y1	Y10
Own revenue	16	160
Budget effectiveness	48	48
Grants	33	33
Programme loans	71	71
Private sector, natural growth	71	184
Grants for bond principle	18	18
Government KPI bonds	120	175
Private investment accelerated by KPI bonds	10	100
Total illustrative sources	387	789
Remaining gap	708	306

4 Conclusions and key messages

Jordan is highly vulnerable to climate change and nature degradation. This vulnerability will be reflected in substantially reduced economic growth, unless addressed. International evidence suggests that investing in climate and nature often gives equivalent or higher returns than investing in economic growth and is, therefore, a rational economic policy while also delivering environmental benefits.

Jordan has a comprehensive set of climate and nature strategies to reduce vulnerability and protect economic growth. The government is currently undertaking detailed work on the costs of these strategies relating to climate change but is doing less work on protection against land degradation and biodiversity loss. Indicative estimates for this note suggest that there could be an annual financing gap of JOD1,095 million, or 3.4% of GDP.

KPIs could facilitate a growth in climate and nature financing, both for conventional programmes and new financing modalities (for example, in thematic use-of-proceeds bonds, sustainability-linked bonds, climate and nature performance bonds and debt for climate and nature swaps). Jordan is well-placed to exploit this potential because it has a well-developed system of KPIs, both in the budget and in key strategy documents. This paper suggests a shortlist of 27 KPIs based on the following criteria: they are included in the budget and strategy documents; they are at a relatively high level, while also being monitorable and changing from year to year; and they could relate to international conventions thereby facilitating access to international finance. A typical KPI instrument would be based on a selection of three or four of these KPIs.

This paper reviews the options for closing the climate and nature financing gap. In the long term (ten years), about 72% of the gap could be covered from: conventional sources of public finance (29%), 'natural growth' of the private sector (17%) and innovative sources of public finance (18%). The use of KPI-related innovative instruments could provide certainty to the private sector (for example, through commitment to policy and complementary public infrastructure), which could accelerate private investment and meet 9% of the gap. But the situation is much more serious in the short term, and urgent grant support is needed. Grants could use modalities that support the growth of innovative KPI-linked long-term financing.

To pursue the opportunities listed above, the government could create a working group building on existing climate and nature coordination bodies. The working group could encourage work to develop climate and nature financing plans (including for biodiversity and land degradation) to explore all financing options, including the potential for accelerating private climate and nature finance. A KPI-linked bond could promote private investment by building confidence. This could also encourage donors to provide grants to fill the serious short-term gap.



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Jordan is highly vulnerable to climate change and nature degradation but has constraints on financing options. This toolkit reviews opportunities for expanding the sources of finance for climate and nature, including the use of key performance indicator-related innovative instruments, and it makes some initial suggestions for steps to promote this financing.

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