

SYRIA



ECONOMIC MONITOR

Syria's Economy in Ruins after a Decade-long War

Winter 2022/23



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after a Decade-long War

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Middle East and North Africa Region

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LIST OF ABBREVIATIONS

ACLED	Armed Conflict Location & Event Data Project	HNAP	Humanitarian Needs Assessment Programme
AIS	Automatic Identification System	HTS	Hay'at Tahrir Al-Sham
BdL	Bank du Liban	ICRC	International Committee of the Red Cross
CBS	Central Bank of Syria	IDMC	Internal Displacement Monitoring Center
CHIRPS	Climate Hazards Group InfraRed Precipitation with Station data	IDPs	Internally Displaced Persons
COVID-19	Corona Virus Disease 2019	ISIS	Islamic State in Iraq and Syria
CPI	Consumer Price Index	MENA	Middle East and North Africa
DA	Damage Assessment	MODIS	Moderate Resolution Imaging Spectroradiometer
DMSP	US Air Force Defense Meteorological Satellite Program	MOF	Ministry of Finance
EIA	US Energy Information Administration	MTI	Macroeconomics, Trade & Investment Global Practices
ERPT	Exchange Rate Pass-Through	NDVI	Normalized Difference Vegetation Index
EU	European Union	NGOs	Non-governmental Organizations
FAOSTAT	Food and Agriculture Organization of the United Nations Statistics Department	NTLs	Nighttime Lights
FCV	Fragile, Conflict, and Violence	OCHA	Office For the Coordination of Humanitarian Affairs
FTS	Financial Tracking Service	OCV	Oral Cholera Vaccines
FX	Foreign Exchange Market	OHCHR	Office of the High Commissioner for Human Rights
FY	Fiscal Year	PDNA	Post-Disaster Needs Assessment
GDP	Gross Domestic Product	RDNA	Rapid Damage and Needs Assessment
GFSAD	Global Food Security-Support Analysis Data	SAR	Synthetic Aperture Radar
GMM	Generalized Method of Moments	SCI	Statistical Capacity Indicator
GPS	Global Positioning System		

SDF	Syrian Democratic Forces	US	United States
SIG	Syrian Interim Government	US\$	United States Dollar
SYP	Syrian Pound	USD	United States Dollar
UAE	United Arab Emirates	VHR	Very High Resolution
UN	United Nations	VIIRS	Visible Infrared Imaging Radiometer Suite
UNCTAD	United Nations Conference on Trade and Development	WASH	Water, Sanitation and Hygiene
UNHCR	United Nations High Commissioner for Refugees	WFP	World Food Programme
UNICEF	United Nations International Children's Emergency Fund	WHO	World Health Organization
		WSS	Water Supply and Sanitation
		yoy	Year on Year



PREFACE

The *Syria Economic Monitor* is a semi-annual economic publication on the Syrian Arab Republic, produced by the Macroeconomics, Trade and Investment (MTI) Global Practice of the World Bank. The report aims to provide an update on key economic developments, outlook, risks, and policies in Syria. The *Syria Economic Monitor* is part of a more general effort by the MTI Global Practice at the World Bank to better understand economic and social dynamics in fragile, conflict, and violence (FCV) settings, notwithstanding the lack of physical in-country access in some cases. Conflicts are the dominant source of development regression and are projected by the World Bank to account for up to two-thirds of the extreme poor by 2030 (Corral et al. 2020).

Economic monitoring in FCV contexts presents unusual challenges, not the least of which is the lack of reliable, timely, and comprehensive data. In 2020, Syria ranked last among the 146 surveyed countries on the World Bank's Statistical Capacity Indicator (SCI). To overcome such a severe limitation to data access for economic monitoring, the World Bank's teams have been resorting to the use of a mix of standard tools and innovative geospatial and remote-based data sources (e.g., nighttime lights, shipping-position data, traffic congestion data, aviation statistics, mobile phone location data, remote sensing vegetation indices, and conflict intensity maps) to reveal economic

trends and analyze unrecorded activities that are prominent in war-torn economies like Syria.

The *Syria Economic Monitor* was prepared by a team comprising Luan Zhao (Senior Economist, Task Team Leader), Alain Willy Aeschlimann (Senior Economist), Ali Ibrahim Almelhem (Economist), Anthony Biswell (Consultant), Albin Szakola (Consultant), Andres Chamorro (Geographer), Armine Juergenliemk (Senior Agriculture Specialist), Gabriel Stefanini Vicente (Data Scientist), Ghizlane Aqariden (Consultant), Joanne Matossian (Consultant), Joy Aoun (Disaster Risk Management Specialist), Hadi M.W. Fathallah (Consultant), Holly Krambeck (Program Manager, Data Lab), Ibrahim Jamali (Consultant), Katriel Friedman (Consultant), Maria Ruth Jones (Senior Survey Economist), Mounir Mahmalat (Consultant), Needa Arshad Malik (Disaster Risk Management Analyst), Ola Hisou (Consultant), Robert Andrew Marty (Data Scientist), Sahiti Sarva (Consultant), Silvia Redaelli (Senior Poverty Economist), Sherin Varkey (Senior Health Specialist), Priyanka Kanth (Health Specialist), Xinyi Wang (Consultant), and Yahui Zhao (Consultant).

The Special Focus Chapter, "Syria joint damage assessment of selected cities", was prepared by Joy Aoun, Needa Arshad Malik, and Ghizlane Aqariden. Sherin Varkey, Katriel Friedman, and Priyanka Kanth prepared the box "The spread of cholera across Syria". Anthony Biswell, Albin Szakola, Robert Andrew Marty, Gabriel Stefanini Vicente, Andres Chamorro, and

Luan Zhao prepared the box “Cross-border fuel smuggling between Syria and Lebanon”. Ibrahim Jamali and Luan Zhao prepared the box “the exchange rate pass-through to inflation in Syria”. In addition, Silvia Redaelli prepared the welfare analysis and Armine Juergenliemk and Hadi M.W. Fathallah contributed to the analysis of the agricultural sector.

The *Syria Economic Monitor* benefits from assistance from Data Lab that advised on using alternative data to monitor changing trends in trade and economic activity in Syria. A technical note, “Support for World Bank Syria Economic Monitor – Using Alternative Data to Understand Changing Trends in Trade and Economic Activity”, was prepared by Holly Krambeck (Project Lead), Andres Chamorro, Gabriel Stefanini Vicente, Maria Ruth Jones, Sahiti Sarva, and Robert Andrew Marty.

The authors are grateful to Jean-Christophe Carret (Country Director), Eric Le Borgne (Practice Manager), Norbert Fiess (Lead Economist), Fatima Shah (Country program Coordinator), Salim Rouhana (Sector Lead), Alexis Madelain (Senior Energy Specialist, Program Leader), Dina N. Abu-Ghaida (Lead Economist, Program Leader), Željko Bogeti (Lead Economist), Mohamed Hedi Bchir (Senior Economist), Nadia Fernanda Piffaretti (Senior Economist), and Franz Ulrich Ruch (Senior Economist), for invaluable discussions and comments during the preparation and review of this report. The team is grateful to Zeina Khalil (Senior External Affairs Officer), who led on report publishing, communications, and outreach, and to Barbara

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The findings, interpretations, and conclusions expressed in this Monitor are those of World Bank staff and do not necessarily reflect the views of the Executive Board of The World Bank or the governments they represent.

The data cut-off date for this *Syria Economic Monitor* was December 20, 2022. The *Syria Economic Monitor* was written prior to the February 6, 2023 earthquake that affected Turkey and Syria. The preliminary macroeconomic impact of this earthquake is analyzed in the World Bank publication, “Syria Earthquake 2023 Rapid Damage and Needs Assessment (RDNA)”.

For information about the World Bank and its activities in Syria, including e-copies of this publication, please visit <https://www.worldbank.org/en/country/syria/overview#1>. For questions and comments on the content of this publication, please contact Eric Le Borgne (eleborgne@worldbank.org), Norbert Fiess (nfiess@worldbank.org), and Luan Zhao (lzhao1@worldbank.org). Questions from the media can be addressed to Zeina Khalil (zelkhalil@worldbank.org).

EXECUTIVE SUMMARY

The Syria Economic Monitor was written prior to the February 6, 2023 earthquake that affected Turkey and Syria. The preliminary macroeconomic impact of this earthquake is analyzed in the World Bank publication, “Syria Earthquake 2023 Rapid Damage and Needs Assessment (RDNA)”.

Although large-scale armed conflict has subsided, Syria continues to rank among the top countries in terms of violent deaths.

Around 5,600 conflict-related deaths were recorded in the first 11 months of 2022.¹ Most of the active fighting is concentrated in northern Syria, while northern and southern regions have become even more unstable following the recent uptick in Islamic State violence. These conflicts, along with natural disasters, continue to cause large-scale displacements. According to the latest figures of the United Nations High Commissioner for Refugees (UNHCR), more than half of Syria’s pre-conflict population remains displaced, including 6.8 million internally displaced people (IDPs) and 6.9 million refugees abroad.

Conflict undermines economic activity in Syria. The destruction of physical capital, casualties, forced displacement, and the breakup of economic networks halved Gross Domestic Product (GDP) between 2010 and 2020. Nighttime light emissions—one way to assess economic activity when no formal statistics are available—suggest that output has further contracted since 2020, particularly in conflict-intensive regions. The hydrocarbon sector has been particularly

hard hit by the conflict. Crude oil production declined by an estimated 80 percent between 2010 and 2022, largely due to conflict-related damage to the energy infrastructure and disruptions stemming from disputes between the Syrian government and opposition forces.

Multiple domestic and external shocks are adversely affecting the economy. Severe water restrictions have been weighing on agricultural production since 2021. After a decade of war, a severely degraded health care system is preventing an effective response to ongoing cholera outbreaks. Economic instability in neighboring Lebanon and Turkey, and new US sanctions under the Caesar Act,² are further exacerbating crisis conditions.

Macroeconomic conditions have substantially deteriorated since the start of the war on Ukraine. With nearly half of oil consumption and

¹ The data is from the Armed Conflict Location & Event Data Project (ACLED).

² The Caesar Syria Civilian Protection Act of 2019 gives the US sanctioning authority against entities that support the Syrian government's ability to commit human rights violations.

about one-third of cereal consumption imported, higher commodity prices, triggered by the Ukraine war, have weakened the fiscal and external positions, and are fueling inflation. The market exchange rate of the Syrian pound depreciated by about 48 percent against the US dollar between February and November 2022. Currency depreciation has been accompanied by rising inflation. Syria's food prices, as proxied by the World Food Programme's (WFP) minimum food basket price index, were 44 percent higher in September than February 2022.

With higher costs of essential goods, fiscal policy has become more restrictive. From late 2021 to early 2022, the authorities removed around 600,000 of 4 million smart card holders from governmental assistance, or an estimated 15 percent of the population. Immediately after the start of the war on Ukraine, authorities strictly prioritized cuts to already inadequate public spending, further tightening subsidy programs. Authorities also rationed the supply of essential food and fuel commodities in an effort to sustain supply for a longer period. The FY2023 budget reaffirms the government's plans to further cut subsidies.

Conflict-related disruptions have had a devastating impact on foreign trade. Mirror statistics from the UN Comtrade database, showing other countries' reported imports from Syria, indicate that Syrian exports fell dramatically from \$18.4 billion in 2010 to \$1.8 billion in 2021, largely due to a sharp decline in oil and tourism receipts. Given a high import dependence for essential commodities, imports have declined somewhat less than exports, dropping from \$22.7 billion in 2010 to \$6.5 billion in 2021. Maritime data, as well as passenger and cargo flights arrival data, indicate that trade activities slowed further in 2022, partly driven by new government policies that restrict food exports and imports of non-essential goods.

Conflict and sanctions have also increased smuggling. Nighttime light emissions data suggest that towns and regions close to smuggling routes experienced a short-lived economic boom between early 2020 and the summer of 2021, when profit margins for smuggling Lebanese diesel into Syria increased significantly. Nighttime light emissions and mobile device usage data further indicate that smuggling bypassed official checkpoints. Indeed, Lebanese customs data

show no increase in exit movement of gasoline and diesel from Lebanon to Syria between 2020 and 2021.

Already very high, the vulnerability of Syrian households is on the rise. Since 2019, the WFP minimum food basket price index has grown twice as fast as non-skilled labor wages in Syria, suggesting that food is becoming increasingly difficult to afford. As of the summer of 2022, according to Humanitarian Needs Assessment Programme (NHAP) data, only 15 percent of households reported enough income to satisfy essential needs, and close to 50 percent had to sell assets to make ends meet. Increased household vulnerability went hand in hand with an increase in labor force participation, especially for workers at the margins of the labor market with relatively limited earning opportunities, which includes women, youth, and the elderly. As households increasingly struggle to make ends meet, this increase in labor force participation among vulnerable people could be interpreted as a sign of distress, with individuals increasingly forced to accept any available income opportunity, irrespective of quality.

Subject to high uncertainty, real GDP is projected to contract by 3.2 percent in 2023, following a 3.5 percent decline in 2022. Conflict, high input costs, and water scarcity are projected to limit crop production. In addition, fuel shortages are expected to further weaken manufacturing and disrupt transportation and services. Inflation is projected to decline but remain high in 2023, due to exchange rate pass-through, persistent food and fuel shortages, and further cuts to subsidies. The fiscal deficit is expected to remain large in 2023, as efforts to reduce fiscal subsidies will only partly offset the cost-driven increase in expenditures.

Risks to the growth outlook are significant and tilted to the downside. Recurring climate shocks may severely affect crops and agricultural livelihoods. A prolonged war on Ukraine could push up commodity prices even higher, negatively affecting Syria's position as a food and energy importer. Inadequate health facilities could exacerbate the impact of rapidly spreading contagious diseases. Despite growing needs, there is a risk of further reductions in humanitarian assistance for Syria. On the upside, the United Nations (UN) recently exempted the provision



of humanitarian assistance in northwest Syria from UN sanctions, which may potentially facilitate trade, investment, and humanitarian operations in Syria.

Special Focus: Syria Joint Damage Assessment of Selected Cities

The World Bank, in collaboration with the European Union (EU), conducted the 2022 Syria Joint Damage

Assessment (DA) of Selected Cities in Syria. The Damage Assessment, relying heavily on remote-based analysis, provides information on the impact of ongoing conflict in Syria on the population, physical infrastructure, and quality of service delivery in targeted cities. The Damage Assessment shows that, as of January 2022, total damages across the assessed 14 cities and 11 sectors (physical infrastructure, social, and crosscutting) range between \$8.7 billion to \$11.4 billion.

الملخص التنفيذي

تم إعداد المرصد الاقتصادي لسوريا قبل حدوث زلزال 6 شباط/فبراير 2023 الذي ضرب تركيا وسوريا. يتضمن تقرير البنك الدولي تحت عنوان "زلزال سوريا 2023: تقييم سريع للأضرار والاحتياجات" بيانات تحليلية أولية حول أثر الزلزال على الإقتصاد الكلي

ألقت القيود الشديدة على المياه بثقلها على الإنتاج الزراعي منذ عام 2021. بعد عقد من الحرب، يحول نظام الرعاية الصحية المتدهور بشدة دون الاستجابة الفعالة لتفشي الكوليرا المستمر. كما يؤدي عدم الاستقرار الاقتصادي في الدول المجاورة، أي في لبنان وتركيا، والعقوبات الأمريكية الجديدة بموجب قانون قيصر²، إلى تفاقم ظروف الأزمة.

تدهورت ظروف الإقتصاد الكلي بشكل كبير منذ بداية الحرب على أوكرانيا. في ظل استيراد ما يقرب من نصف الكميات المستهلكة من النفط وحوالي ثلث الكميات المستهلكة من الحبوب، أدى ارتفاع أسعار السلع الأساسية، الناجم عن الحرب على أوكرانيا، إلى إضعاف الوضع المالي والخارجي، الأمر الذي يتسبب في ارتفاع مستويات التضخم. انخفض سعر صرف الليرة السورية في السوق بنحو 48 بالمائة مقابل الدولار الأمريكي بين شباط/فبراير وتشرين الثاني/نوفمبر 2022، وترافق انخفاض قيمة العملة مع ارتفاع التضخم. وقد ارتفعت أسعار المواد الغذائية في سوريا، وفقاً لمؤشر الحد الأدنى لأسعار سلة الغذاء الخاص ببرنامج الأغذية العالمي، بنسبة 44 بالمائة في أيلول/سبتمبر مقارنة بما كان عليه في شباط/فبراير 2022.

في ظل ارتفاع تكاليف السلع الأساسية، أصبحت السياسة المالية أكثر تقييداً. منذ أواخر عام 2021 حتى أوائل العام 2022،

على الرغم من تراجع حدة النزاع المسلح الواسع النطاق، لا تزال سوريا من بين البلدان الأعلى مرتبة من حيث الوفيات الناجمة عن العنف. تم تسجيل 5,600 حالة وفاة مرتبطة بالنزاع في الأشهر الأحد عشر الأولى من عام 2022، وهو ما يمثل المرتبة الحادية عشرة الأعلى في العالم¹. تتركز معظم المعارك المحتدمة في شمال سوريا، بينما أصبحت المناطق الشمالية والجنوبية أكثر اضطراباً في أعقاب التصعيد الأخير للعنف من جانب تنظيم داعش. لا تزال هذه النزاعات، إلى جانب الكوارث الطبيعية، تتسبب في حالات نزوح واسعة النطاق. وفقاً لأحدث الأرقام الصادرة عن المفوضية السامية للأمم المتحدة لشؤون اللاجئين، فإن نصف سكان سوريا (وفق الإحصاءات قبل النزاع) باتوا نازحين، بما في ذلك 6.8 مليون شخص من النازحين داخلياً و 6.9 مليون شخص من اللاجئين في الخارج.

النزاع يقوض النشاط الاقتصادي في سوريا. أدى تدمير رأس المال المادي والخسائر البشرية والنزوح القسري وتفكك الشبكات الاقتصادية إلى خفض الناتج المحلي الإجمالي إلى النصف بين عامي 2010 و 2020. تشير انبعاثات الأضواء الليلية - وهي إحدى طرق تقييم النشاط الاقتصادي عندما لا تتوفر إحصاءات رسمية - إلى أن الناتج قد انكمش على نحو أكبر منذ العام 2020، لا سيما في المناطق التي تشد فيها حدة النزاع. وقد تضرر قطاع النفط والغاز بشكل خاص من النزاع. انخفض إنتاج النفط الخام بنحو 80 بالمائة بين عامي 2010 و 2022، ويعود ذلك إلى حد كبير إلى الأضرار المرتبطة بالنزاع التي لحقت بالبنية التحتية للطاقة والاضطرابات الناجمة عن النزاعات بين الحكومة السورية وقوات المعارضة.

تؤثر الصدمات الداخلية والخارجية المتعددة سلباً على الإقتصاد.

¹ البيانات مأخوذة من مشروع بيانات الأحداث وموقع النزاع المسلح.

² يمنح قانون قيصر لحماية المدنيين في سوريا لسنة 2019 الولايات المتحدة سلطة فرض عقوبات ضد الكيانات التي تدعم قدرة الحكومة السورية على ارتكاب انتهاكات لحقوق الإنسان.

استبعدت السلطات ما يُقدر بنحو 15 بالمائة من السكان أو حوالي 600,000 شخص من أصل 4 ملايين من حاملي البطاقات الذكية من المساعدات الحكومية. وفور اندلاع الحرب على أوكرانيا، أعطت السلطات الأولوية الصارمة لخفض الإنفاق العام غير الكافي أصلاً، مما زاد من تقليص برامج الدعم. كما قامت السلطات بتشديد إمدادات السلع الغذائية الأساسية والوقود سعياً منها لضمان استمرارها لفترة أطول. وتعيد ميزانية السنة المالية 2023 التأكيد على خطط الحكومة للمزيد من خفض الدعم.

كان للاضطرابات المرتبطة بالنزاع أثر مدمر على التجارة الخارجية. تشير الإحصائيات المتطابقة من قاعدة البيانات الإحصائية لتجارة السلع الأساسية الخاصة بالأمم المتحدة، والتي تُظهر واردات دول أخرى من سوريا، إلى أن الصادرات السورية انخفضت بشكل كبير من 18.4 مليار دولار أمريكي في عام 2010 إلى 1.8 مليار دولار أمريكي في عام 2021، ويُعزى ذلك إلى حد كبير إلى الانخفاض الحاد في عائدات النفط والسياحة. بالنظر إلى الاعتماد الكبير على واردات السلع الأساسية، تراجعت الواردات إلى حد ما بقدر أقل من الصادرات، حيث انخفضت من 22.7 مليار دولار أمريكي في عام 2010 إلى 6.5 مليار دولار أمريكي في عام 2021. تشير البيانات البحرية، بالإضافة إلى بيانات وصول الرحلات الجوية للمسافرين والبضائع، إلى أن الأنشطة التجارية تباطأت أكثر في العام 2022، وهو أمر ناجم جزئياً عن السياسات الحكومية الجديدة التي تقيد الصادرات الغذائية وواردات السلع غير الأساسية.

أدى النزاع وفرض العقوبات إلى زيادة عمليات التهريب. تشير بيانات انبعاثات الأضواء الليلية إلى أن البلدات والمناطق القريبة من مسالك التهريب شهدت طفرة اقتصادية استمرت لفترة قصيرة بين أوائل العام 2020 وصيف العام 2021، عندما زادت هوامش الربح الناتجة عن تهريب المازوت (الديزل) من لبنان إلى سوريا بشكل كبير. وتشير انبعاثات الأضواء الليلية والبيانات حول استخدام الأجهزة المحمولة إلى أن التهريب تجاوز نقاط التفتيش الرسمية. في الواقع، لا تُظهر بيانات الجمارك اللبنانية أي زيادة في حركة خروج البنزين و المازوت (الديزل) إلى سوريا بين عامي 2020 و 2021.

تشهد الأسر السورية، الهشة أصلاً، تدهوراً إضافياً في وضعها المعيشي. منذ عام 2019، ارتفع مؤشر الحد الأدنى لأسعار سلة الغذاء الخاص ببرنامح الأغذية العالمي بصورة سريعة بمقدار الضعفين مقارنة بالزيادة في أجور العمالة غير الماهرة في سوريا، مما يشير إلى الصعوبة المتفاقمة في تحمل تكلفة الغذاء. حتى صيف العام 2022، استطاعت 15 بالمائة فقط من الأسر الحصول على دخل كافٍ لتلبية الاحتياجات الأساسية، في حين أن حوالي 50 بالمائة من الأسر اضطرت إلى بيع الأصول لتغطية نفقاتها، ذلك بحسب بيانات برنامج تقييم الاحتياجات الإنسانية (HNAP). ترافق تزايد هشاشة الأسر جنباً إلى جنب مع زيادة مشاركة القوى

العاملة، وخاصة بالنسبة للعمال على هامش سوق العمل مع فرص محدودة نسبياً لكسب الدخل، والتي تشمل النساء والشباب والمسنين. بينما تكافح الأسر بشكل متزايد لتغطية نفقاتها، تعتبر هذه الزيادة في مشاركة أفراد الأسر الهشة في القوة العاملة دليلاً على ضيق الحال والمعاناة، حيث يضطر الفرد بشكل متزايد إلى قبول أي فرصة متاحة لكسب الدخل، بغض النظر عن نوعيتها. في ظل درجة عالية من عدم اليقين، من المتوقع أن ينكمش إجمالي الناتج المحلي الحقيقي بنسبة 3.2 بالمائة في العام 2023، بعد انخفاضه بنسبة 3.5 بالمائة في العام 2022. من المتوقع أن يؤدي النزاع وارتفاع تكاليف المدخلات وشح المياه إلى الحد من إنتاج المحاصيل. بالإضافة إلى ذلك، قد يؤدي نقص الوقود إلى إضعاف التصنيع وتعطيل النقل والخدمات. كما يُتوقع أن ينخفض معدل التضخم، لكنه سيظل مرتفعاً في عام 2023، بسبب انتقال أثر أسعار الصرف واستمرار نقص الغذاء والوقود والمزيد من تقليص الدعم. ومن المتوقع أيضاً أن يبقى عجز المالية العامة كبيراً في عام 2023، حيث أن الجهود المبذولة لخفض الدعم المالي ستؤدي إلى تعويض الزيادة في النفقات المرتبطة بالتكلفة بشكل جزئي فقط. **المخاطر على توقعات النمو كبيرة وقهليل إلى الإتهجاه سلباً.** يمكن أن تؤثر الصدمات المناخية المتكررة بشدة على المحاصيل وسبل العيش الزراعية. كما يمكن أن يؤدي استمرار الحرب على أوكرانيا لفترة طويلة إلى ارتفاع أسعار السلع الأساسية، مما يؤثر سلباً على وضع سوريا كبلد مستورد للغذاء والطاقة. وقد يؤدي نقص المرافق الصحية إلى تفاقم أثر الانتشار السريع للأمراض المعدية. على الرغم من الاحتياجات المتزايدة، هناك خطر حدوث المزيد من التقليل في المساعدات الإنسانية لسوريا. في الجانب الإيجابي، أعفت الأمم المتحدة مؤخراً تقديم المساعدات الإنسانية في شمال غرب سوريا من العقوبات التي كانت قد فرضتها، من المحتمل أن تؤدي إلى تسهيل التجارة والاستثمار والعمليات الإنسانية في سوريا.

فصل تحليلي خاص: التقييم المشترك للأضرار في مدن مختارة في سوريا

أجرى البنك الدولي، بالتعاون مع الاتحاد الأوروبي، تقييماً مشتركاً للأضرار في مدن مختارة في سوريا لعام 2022. يوفر هذا التقرير حول تقييم الأضرار، والذي يستند إلى حد كبير إلى التقييم عن بُعد، معلومات حول أثر النزاع المستمر في سوريا على السكان والبنية التحتية المادية وجودة تقديم الخدمات في المدن المشمولة. يُظهر التقرير أن حتى تاريخ كانون الثاني/يناير 2022، يتراوح إجمالي الأضرار في 14 مدينة و 11 قطاع بين 8.7 مليار و 11.4 مليار دولار أمريكي. وقد شملت هذه القطاعات البنية التحتية المادية والاجتماعية والقطاعات المشتركة.

THE CONFLICT CONTEXT

Although large-scale armed conflict has subsided, Syria continues to rank among the top countries in terms of violent deaths. Syria recorded around 5,600 conflict-related deaths in the first 11 months of 2022, the eleventh highest in the world, according to the Armed Conflict Location & Event Data Project (ACLED).³ As in previous years, most of the active fighting continued to take place in northern Syria's governorates of Aleppo, Ar-Raqqa, Deir-ez-Zor, and Idleb (Figure 1). The additional threat of a Turkish incursion has resulted in clashes between the Syrian government, the Syrian Democratic Forces (SDF), and Turkish forces, killing and injuring civilians and soldiers. The northern and southern regions of Syria have become even more unstable following the recent uptick in Islamic State violence. Southern Syria, notably in regions under disputed control, also saw an increase in conflict-related killings. Several local armed opposition groups and the pro-government force Qouwat al-Fajjr were eventually dissolved following violent clashes that started in the As-Sweida governorate back in June 2022.

Widespread demonstrations arose throughout Syria in 2022, sparked by the continued dete-

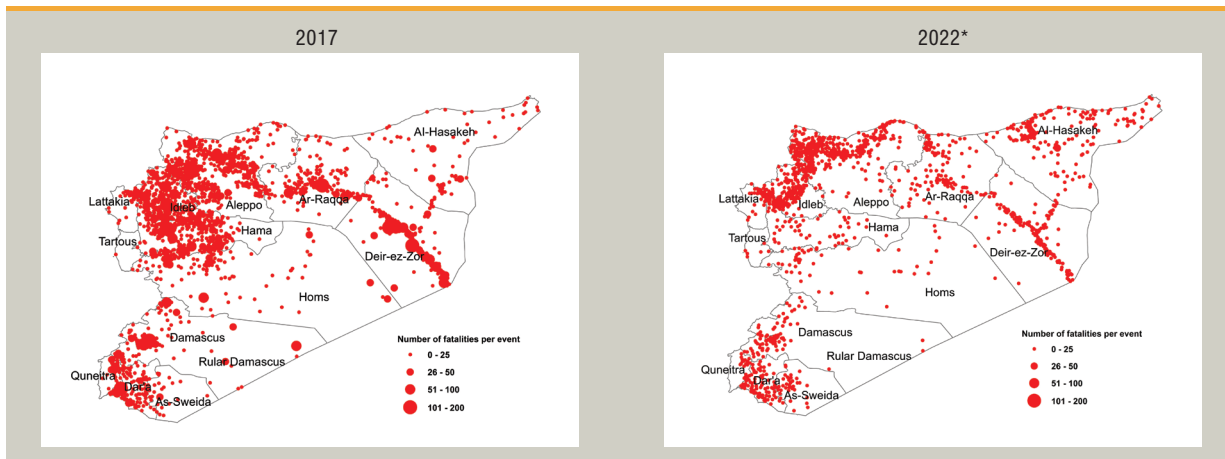
rioration in socio-economic conditions. Protests took place in As-Sweida in response to the loss of government subsidies, in Deir-ez-Zor against alleged fraud in the Autonomous Administration of North and East Syria, and in Aleppo against the extremely high price and inconsistent supply of energy. Protests against Hay'at Tahrir Al-Sham (HTS) policies occurred because the armed organization struggled to pay employees and provide essential services in the regions it controlled; protestors included teachers, locals, and internally displaced people (IDPs). Strikes and demonstrations also persisted throughout northeast Syria as the Autonomous Administration failed to put forth a strategy that addressed the region's socioeconomic problems.

Conflicts, along with natural disasters, continue to trigger large-scale displacements. Conflict and violence triggered about 130,000 internal displacements in Syria in the first eight months of 2022, according to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA).⁴

³ ACLED (<https://acleddata.com/>).

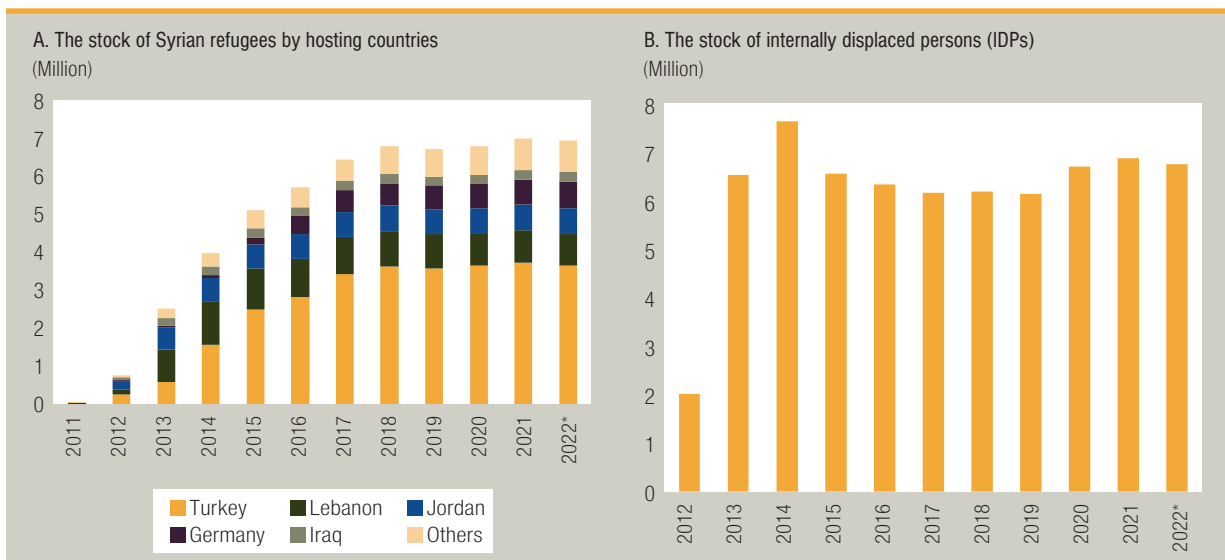
⁴ Sum of the monthly IDP movements recorded by OCHA on their "Syrian Arab Republic: IDP Movements" reports

FIGURE 1 • Despite a General Decline, Syria’s Conflict-Related Fatalities Remain Significant



Source: Armed Conflict Location & Event Data Project (ACLED); World Bank staff estimates.
 Note: * The data for 2022 covers the months of January through November.

FIGURE 2 • More than Half of Syria’s Pre-Conflict Population Remained Displaced



Source: UNHCR’s Refugee Population Statistics Database; World Bank staff estimates.
 Note: (A) Both registered refugees and asylum-seekers are included. Asylum-seekers refers to individuals who have sought international protection but whose claims for refugee status have not yet been determined.
 * The data for 2022 covers the months of January through June.

Additionally, the Internal Displacement Monitoring Center (IDMC)⁵ reports that in the first half of 2022, around 20,000 individuals have been forced to flee their homes because of natural disasters, including devastating winter storms in early 2022 that brought significant snowfall to the northern Aleppo and Idlib areas. According to statistics from the United Nations High Commissioner for Refugees (UNHCR), by mid-2022, more than half of Syria’s pre-conflict population

remained displaced, including 6.8 million IDPs and 6.9 million refugees displaced abroad (Figure 2.A and Figure 2.B).

from January to August 2022; updates from OCHA’s reliefweb.int.

⁵ IDMC is a non-governmental organization focused on collecting and analyzing data on internal displacement, see <https://www.internal-displacement.org/>.

Ongoing armed clashes continue to cause extensive infrastructural damage throughout Syria. The fighting in northern Aleppo in mid-2022 has damaged important infrastructure, including administrative structures, schools, mosques, markets, and civilian homes. As a result of the intermittent battle between the SDF and the Syrian National Army,

the central Tell Abiad region was also attacked, damaging residential areas and public facilities, including hospitals. A recent damage assessment conducted by the World Bank in collaboration with the European Union (EU) in early 2022 concluded that damage to physical infrastructure remained substantial (see Special Focus).

RECENT ECONOMIC DEVELOPMENTS

Economic challenges persist

Conflict undermines economic activity in Syria.

The destruction of physical capital, as well as casualties, forced displacement, and the breakup of economic networks conspired to halve Gross Domestic Product (GDP) between 2010 and 2020. In the absence of GDP data for 2020 and beyond, nighttime light emissions—one way to assess economic activity when no formal statistics are available⁶—suggest that output has further contracted since 2020, particularly in conflict-intensive regions (Figure 3.A). In Lattakia and Tartous, two port cities that have experienced limited conflict, nighttime light emissions also declined, likely caused by weakened trade activity. In general, nighttime light emissions indicate that economic activities appear to be stronger in certain border areas (Figure 3.B).

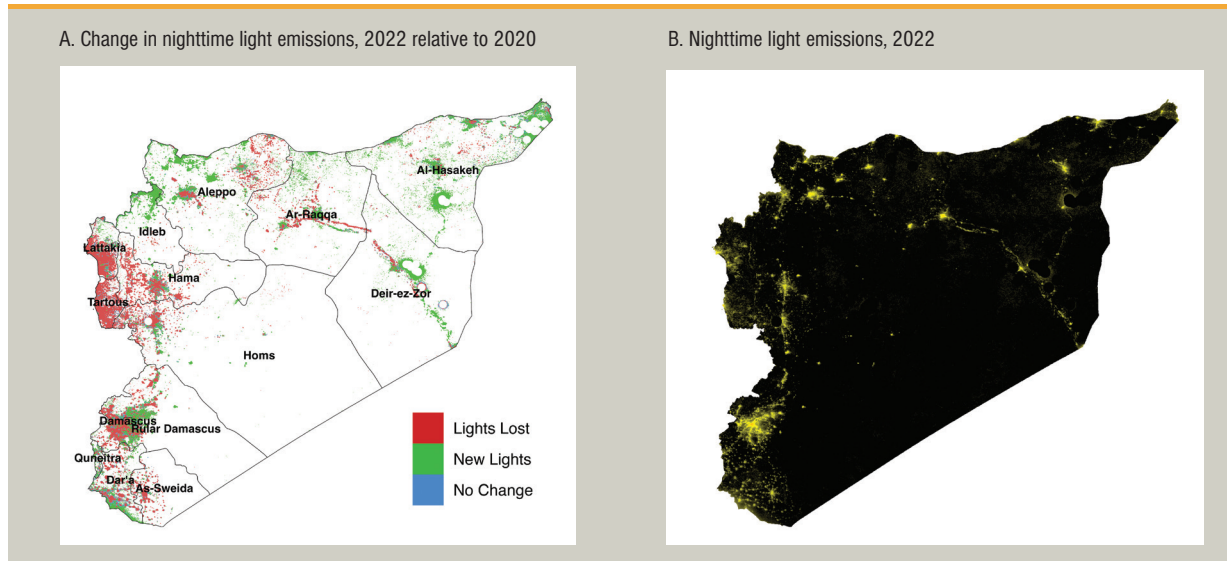
Besides the conflict, multiple domestic and external shocks are adversely affecting the economy. Since 2021, severe droughts, worsened by heightened competition for water across international boundaries, have negatively impacted agricultural production. After a decade of war, a severely degraded

health care system is preventing an effective response to the ongoing cholera outbreaks (Box 1). Economic instability in neighboring Lebanon and Turkey, and new US sanctions under the Caesar Act, are further exacerbating crisis conditions. Owing to its heavy dependence on food and fuel imports, higher commodity prices triggered by the war on Ukraine have substantially weakened Syria's fiscal and external positions.

Agricultural production fell to a record low for the second consecutive year. Wheat production, estimated at around 1 million tons in 2021 and 2022, is much lower than the 2.8 million tons produced in 2020 and just about one-fourth of the 4.1 million tons recorded on average in the pre-conflict years between

⁶ Data on nighttime light emissions are high-frequency, granular, and free from human error or misinterpretation (e.g., misinformation). As such, they are particularly welcome in a conflict context as they provide more timely, granular (spatial information is readily available), comprehensive (they cover 100 percent of Syria's territory), and potentially more reliable information than official national accounts data. However, nighttime light emissions may not be a good indicator of economic activity in rural areas with a higher share of agricultural output.

FIGURE 3 • Nighttime Light Emissions Suggest Economic Activities Have Further Contracted since 2020



Source: Satellite images from the US Commerce Department’s Visible Infrared Imaging Radiometer Suite (VIIRS); World Bank staff estimates.

Note: Nighttime light emissions are commonly used as a proxy for economic activities. All figures remove locations with gas flaring. The Nighttime Light emission data covers January to August and is applied for both 2020 and 2022 to avoid seasonality issues.

BOX 1: THE SPREAD OF CHOLERA ACROSS SYRIA

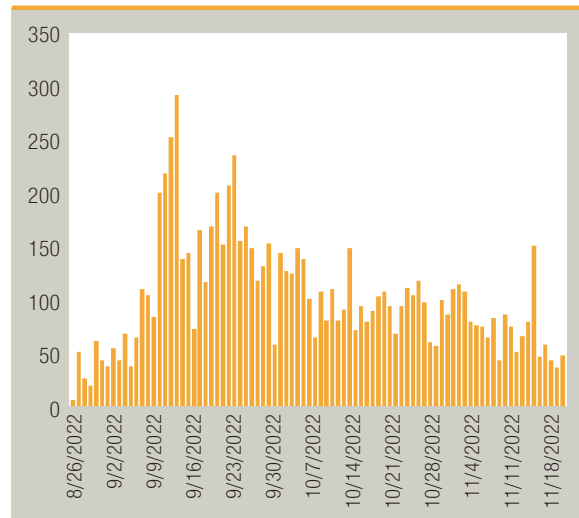
Even prior to the conflict, Syria was vulnerable to cholera outbreaks.

In 2009, a cholera outbreak resulted in 1,000 infections and several deaths, though it was successfully contained to two governorates.^a Cholera spreads through water and food contaminated with fecal matter from infected people. Almost all Syrians had access to safe water at the time, but the few gaps in coverage and rationing due to water shortages evidently enabled outbreaks nonetheless.^b

The conflict has devastated both the health system and water infrastructure, worsening existing vulnerabilities.

More than 50 percent of the health infrastructure has been damaged or destroyed.^c Recent reports show that even among undamaged or rehabilitated facilities, many are not operating or providing only limited services; 44 percent of primary health centers and 34 percent of hospitals are either not functioning or partially functioning.^d Closures of border crossings in 2020 have interfered with humanitarian deliveries of medical supplies, especially in northeast and northwest Syria.^e These challenges were exacerbated by a mass exodus of health workers, who fled routine attacks against health care providers.^f By 2015, infectious disease surveillance was particularly weak in government-controlled areas.^g The water sector faces similar challenges as a result of damage to water facilities and electricity shortages. Almost 47 percent of the population relies on potentially

FIGURE 4 • Syria’s Cholera Outbreak Has Been Spreading (daily new cases)



Source: OCHA and WHO 2022.

^a Sparrow, A., et al. 2016.

^b World Bank 2017.

^c Devi S. 2021.

^d WHO (World Health Organization) 2022. WHO Summary of Key Indicators – Whole of Syria Dashboard. Accessed November 29, 2022. <https://app.powerbi.com/view?r=eyJrjoiYzdkN2Y5YWyNmeE4OS00YjNkLWFkZjktMGJhYzA4MGQzMdk1IiwidCl6ImY2MTBjMG13LWJkMjQ0NGZOS04MTBjLTNkYzI4MGFmYjU5MClmMi0jh9.>

^e OCHA 2021.

^f Fouad et al. 2017.

^g Sparrow, A., et al. 2016.

(continued on next page)

BOX 1: THE SPREAD OF CHOLERA ACROSS SYRIA *(continued)*

unsafe alternatives to piped water, and at least 70 percent of sewage is discharged untreated.^h Moreover, the conflict has displaced tens of thousands of Syrians into overcrowded settings with limited safe water and sanitation supplies, where they are at high risk.ⁱ As with other protracted humanitarian situations, donor fatigue has set in, and humanitarian agencies identify funding shortfalls as the main challenge for their cholera response operations.^j

The outbreak of cholera is widespread. Suspected cholera cases have been reported from all 14 governorates.^k Illustrating the multifarious harmful effects of climate change, the outbreak may have originated in the Euphrates River, whose water quality has worsened with a decrease in water levels, driven by a drought that began in 2021.^l As of November 19, a total of 46,409 suspected cases and 97 suspected cholera-attributable deaths had been identified. Apparent clinical outcomes are consistent with acceptable care quality, with a recorded case fatality rate of 0.2 percent compared to the WHO's benchmark of under 1 percent, but underreporting is likely. Figure 4: Syria's cholera outbreak has been spreading shows the rapid spread from the first detected case to hundreds of weekly cases. Cases in the Aleppo governorate were first reported on September 10, and by October 2, cases had been found in 11 governorates. As the outbreak in Syria has grown, cholera has also spread to neighboring Lebanon, which had been free of the disease for decades.

Massive supply shortages are impeding an effective response. Domestic supply shortages are pervasive, and because of the impact of the protracted conflict on health and water systems, many local communities have resorted to compromised sources to fetch their water, such as rivers or open canals.^m This poses the danger of the cholera outbreak continuing to affect vulnerable families. Despite concerns about a global shortage of oral cholera vaccines (OCV), two million doses of OCV have recently arrived in Damascus.ⁿ Health workers often lack the capacity to treat complex cholera cases, including with respect to dehydration and the appropriate use of antibiotics. In some areas, active conflict reduces access and poses other operational challenges. The UN and other humanitarian partners are mobilizing critical water, hygiene, and sanitation (WASH) and health supplies, response services, and expertise in the affected governorates, along with support for the communication of key messages and enhanced treatment and surveillance capacity.

Syria requires a focused strategy to contain cholera, protect other essential health services, and, over a longer term, deepen the resilience of its health, water, and sanitation systems. Climate-smart investments in rebuilding health and water systems devastated by war are crucial priorities for preventing future outbreaks of water-borne disease.

^h OCHA 2022a.

ⁱ World Health Organization. "WHO in Syria: Communicable Diseases." Accessed November 18, 2022. <https://www.emro.who.int/syria/priority-areas/communicable-diseases.html>.

^j OCHA and WHO 2022.

^k OCHA and WHO 2022a.

^l Mercy Corps, 2022. "Cholera Spreads Across Syria Putting Vulnerable People at Serious Risk." October 21, 2022. <https://www.msf.org/cholera-spreads-across-syria-putting-vulnerable-people-serious-risk>.

^m Médecins Sans Frontières. 2022. "Combatting Cholera Amidst Displacement and the Remnants of War." News Release November 22, 2022. <https://reliefweb.int/report/syrian-arab-republic/combating-cholera-amidst-displacement-and-remnants-war-enar>.

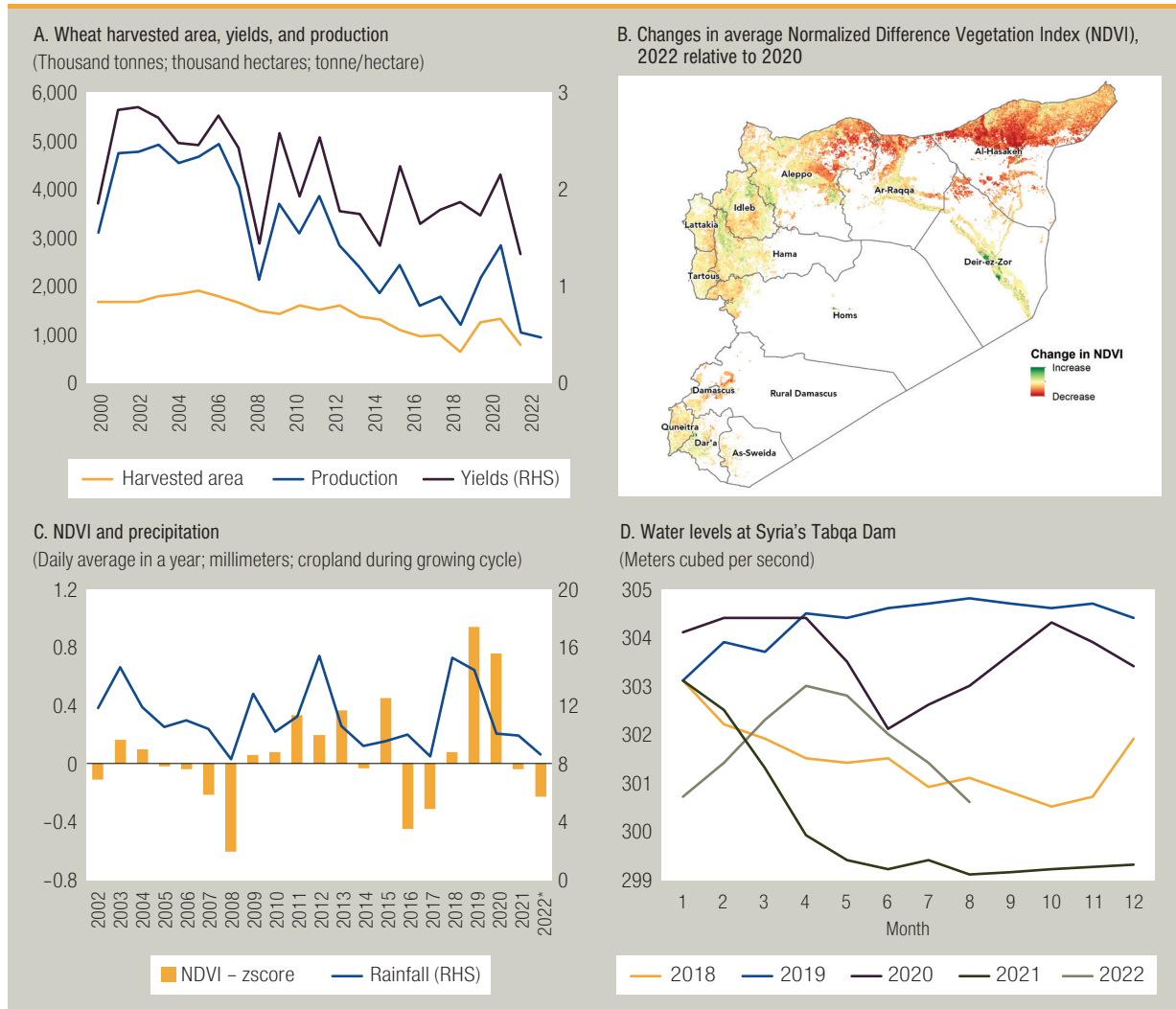
ⁿ UNICEF and WHO 2022.

2002 and 2011 (Figure 5.A). Remote sensing indices for vegetation reveal that cereal yields have been weaker during the 2021–2022 growing seasons relative to the previous years, especially in northeast Syria (Figure 5.B). A contraction of the harvestable cereal area, damaged irrigation systems, a shortage of agricultural inputs, and the high cost of fuel for pumping water have strained crop production since the start of the conflict. In addition, agricultural production was particularly low in 2021 and 2022 due to severe water restrictions caused by insufficient rainfall and reduced Euphrates River water flows from Turkey into Syria (Figure 5.C and Figure 5.D).

Oil production remained weak in 2022, owing to conflict-related damage to the energy

infrastructure and disruptions stemming from disputes between the Syrian government and opposition forces. According to the data from the US Department of Energy's statistical arm, the Energy Information Administration (EIA), Syria's crude oil production has gradually recovered since 2017, reaching 84,000 barrels per day in the first seven months of 2022, but remains substantially below the pre-2011 output of over 400,000 barrels per day (Figure 6.A). Similar trends can be observed in nighttime light emissions from gas flaring, which is commonly used as a proxy for oil production. After the conflict started in 2011, several armed groups, including the Islamic State in Iraq and Syria (ISIS), and opposition groups, successively took control of most of Syria's oil resources,

FIGURE 5 • Severe Water Restrictions Have Led to Record-Low Agricultural Production in 2021-2022



Source: Anomaly Hotspots of Agricultural Production, Joint Research Centre, European Commission, <https://mars.jrc.ec.europa.eu/asap/country.php?cntry=238>; NDVI from Moderate Resolution Imaging Spectroradiometer (MODIS), processed by authors in Google Earth Engine; OCHA; World Bank staff estimates.

Note: RHS = Right-Hand Side. (B) NDVI is a satellite-derived proxy of vegetation status, which represents agricultural production to some extent. The standardized anomalies Z-score of NDVI indicates how many standard deviations the NDVI is from its historical average. The average NDVI is calculated from MODIS images that overlap the agricultural growing season in Syria (October to June). The crop extent layer is derived from the Global Food Security-Support Analysis Data (GFSAD). (C) Rainfall data is provided by the Climate Hazards Group at 0.05° spatial resolution.

* The data for 2022 covers the months of January through November.

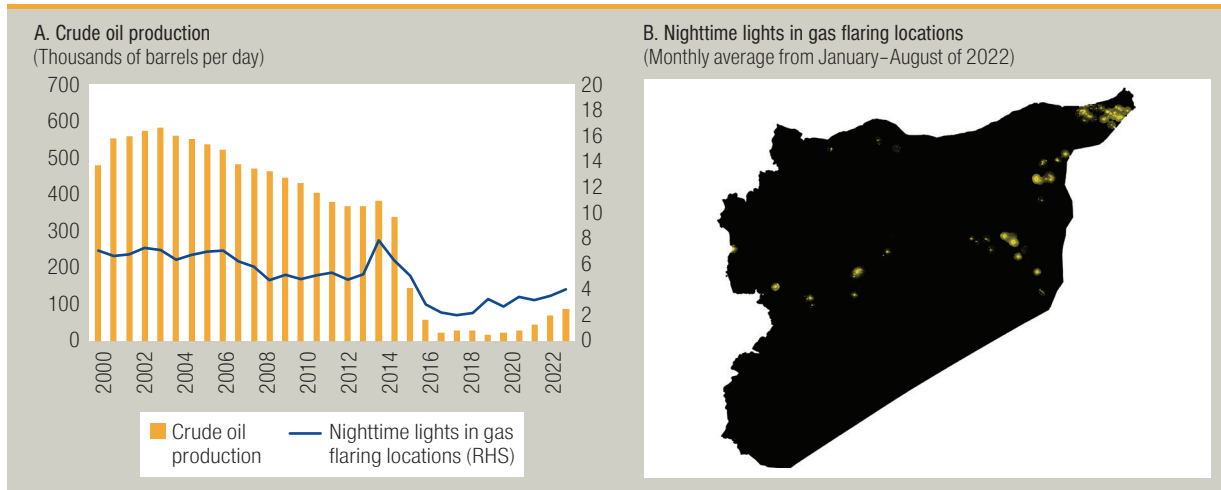
leading to persistent bombings and clashes. Oil infrastructure remains a major target of bombings in 2022, particularly in northeast Syria, where natural gas and oil installations have been frequently attacked.⁷ Oil production is concentrated in northeast Syria, with the SDF controlling the vast majority of the oil fields (Figure 6.B).⁸ In April 2022, the SDF stopped shipping crude oil to the regime-controlled areas, temporarily reducing Syria's oil production; shipments resumed in June 2022, following agreements between the SDF and the Syrian government.

High commodity prices triggered by the war on Ukraine have adversely impacted Syria as a net food and fuel importer. Since the start of the conflict, Syria, once the largest oil producer in the

⁷ Al-Khalidi, Suleiman. 2022. "Turkish Strikes Hit Oil Installations in Northern Syria, Sources Say." Reuters, November 24, 2022.

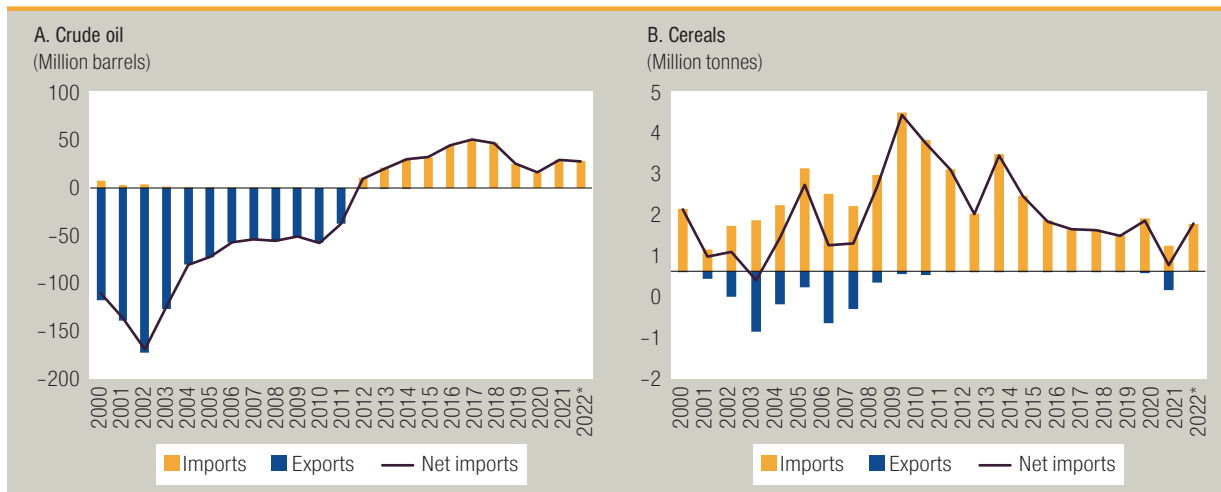
⁸ The Syrian Observer. 2022. "The Syrian Oil: Time for New Approach? – The Syrian Observer" November 10, 2022. <https://syrianobserver.com/commentary/80046/the-syrian-oil-time-for-new-approach.html>.

FIGURE 6 • Oil Production Remained Much Weaker than Pre-2011 Levels



Source: Central Bureau of Statistics of Syria; data from the US Department of Energy's Energy Information Administration (EIA). <https://www.eia.gov/international/data/country/SYR>; satellite images from the VIIRS and the US Department of Defense's Defense Meteorological Satellite Program (DMSP). World Bank staff estimates.
 Note: Nighttime lights in gas flaring locations are considered as a proxy for oil production.
 * 2022 is an estimate based on data in the first eight months of the year.

FIGURE 7 • Syria Has Relied Heavily on Imports of Essential Commodities since the Conflict



Source: Food and Agriculture Organization of the United Nations Statistics Department (FAOSTAT) Trade Indices and Food Balances databases; EIA; World Bank staff estimates.
 Note: (A) Syria's oil imports during 2000-2018 are estimates from EIA. Syria's oil imports during 2019-2022 are estimates based on Syria's oil imports from Iran, according to TankerTrackers.com, an independent online service that tracks global shipments of crude oil, and Syria's unofficial fuel imports from Lebanon (see Box 2).
 * 2022 is an estimate based on data in the first three quarters of the year.

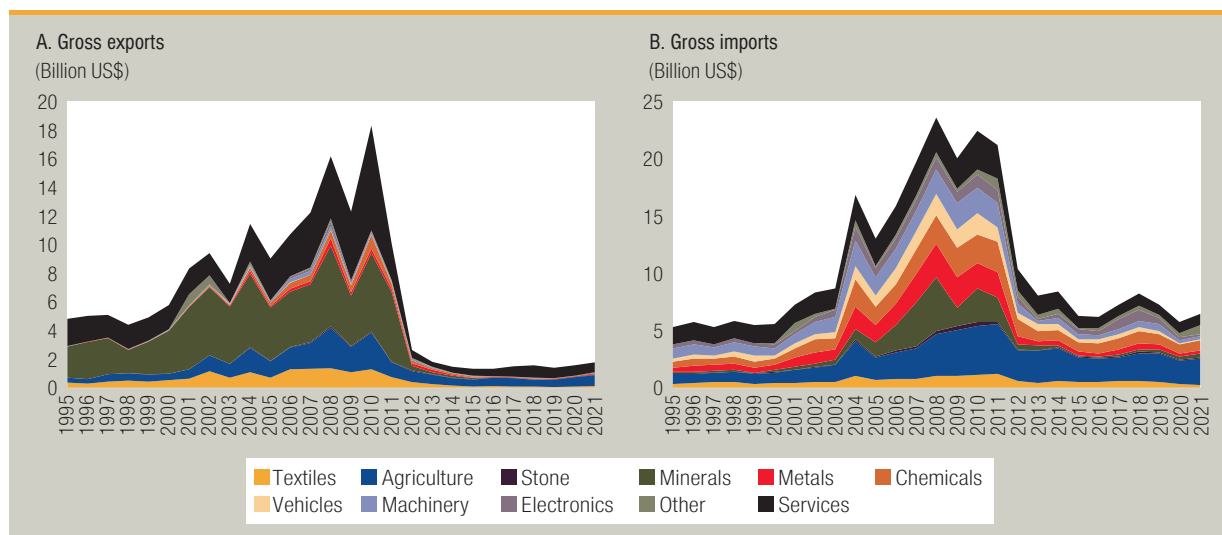
eastern Mediterranean, has become an oil importer due to a sharp decline in oil production (Figure 7.A). Although Syria was already a food importer before 2011, reliance on imports has increased due to the conflict (Figure 7.B). During 2011–2021, nearly half of domestic oil consumption and about one-third of domestic cereal consumption in Syria came from imports. In light of Syria's high import dependency on essential commodities, higher global commodity prices stemming from the war on Ukraine have

increased the country's import bills, adversely affected its trade balance, and depleted its foreign reserves.

Trade activities have declined

Conflict-related disruptions have led to a collapse of foreign trade since 2011. Mirror statistics from the UN Comtrade database, showing other countries' reported imports from Syria, indicate that Syrian exports fell dra-

FIGURE 8 • Syrian Exports and Imports Steeply Declined after the Start of the Conflict



Source: UN Comtrade database; World Bank staff estimates.
Note: The analysis uses mirror trade statistics from Syria's trading partners.

matically from \$18.4 billion in 2010 to \$1.8 billion in 2021, largely due to a sharp decline in oil and tourism receipts (Figure 8.A).⁹ The prolonged civil war has led to a collapse in domestic industrial output and agricultural supply, making the country heavily reliant on manufactured goods and foodstuffs produced overseas. While imports have also contracted since the start of the conflict, the decline has been less pronounced than for exports, which dropped from \$22.7 billion in 2010 to \$6.5 billion in 2021 (Figure 8.B).¹⁰ These figures should be treated with caution. The introduction of sanctions in Syria may have triggered evasion strategies, causing a larger share of trade to go unreported after the start of the conflict, as evidenced by large imports of oil smuggled from Lebanon (see Box 2).

Maritime data suggest that trade activities have further moderated in 2022. In the absence of official trade statistics, maritime data from the Automatic Identification System (AIS) is applied to monitor recent trade activity.¹¹ Estimates from maritime data suggest that import volume in terms of metric tons has further declined in 2022. This is possibly due to new policies implemented in early 2022 that restricted the import of non-essential goods.¹² Maritime data also indicate that export volume decreased in 2022, likely reflecting the impact of the export ban on selected agricultural products in order to meet domestic demand (Figure 9.A and Figure 9.B).¹³ It is worth noticing that measuring trade through AIS may also under-report activity, as ships seeking to hide their movements may turn off their AIS transporters near Syrian waters.¹⁴

Both passengers and cargo arriving in Syria declined in 2022. As COVID-19 restrictions eased, commercial flights to Syria slowly recovered in 2021 and continued to increase in 2022, after countries

⁹ In 2021, Syria exported primarily agricultural products, including olive oil, seeds, barley, other nuts, and tomatoes. The top five destinations for Syrian exports were Saudi Arabia, Turkey, Lebanon, Jordan, and Egypt.

¹⁰ In 2021, the top five suppliers of Syria's imports were Turkey, Russia, China, the United Arab Emirates (UAE), and Egypt.

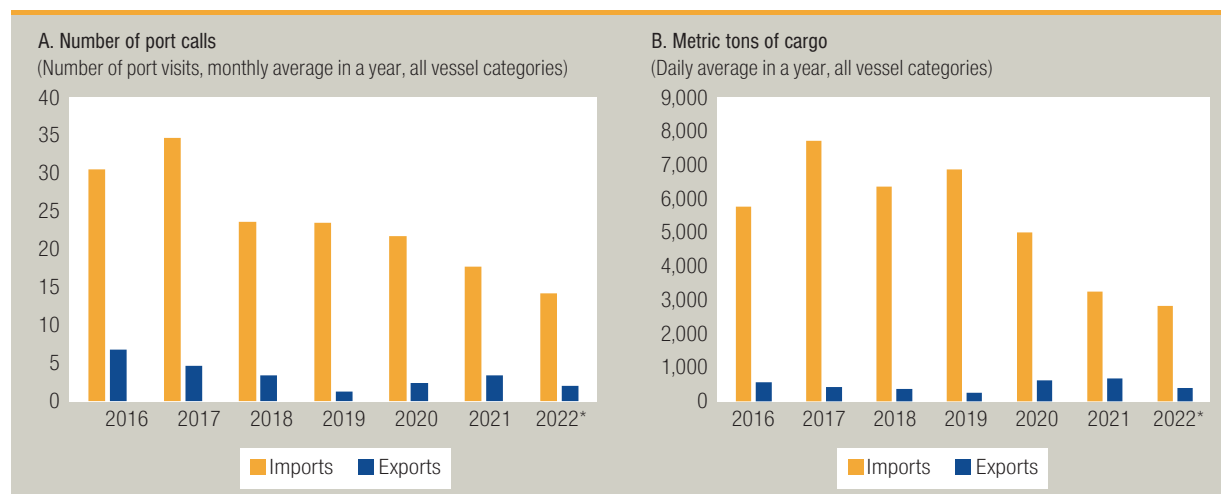
¹¹ Over 80 percent of global merchandise trade by volume and more than 70 percent of its value is carried by the international shipping industry (United Nations Conference on Trade and Development (UNCTAD, 2018). Cargo ships are equipped with a device that periodically emits a signal (Automatic Identification System message, or AIS), which contains information on the vessel's location, speed, draught, etc.

¹² In anticipation of supply chain disruptions from Russia's war on Ukraine, the Syrian government announced policies on February 24 to suspend import licenses for a number of goods and materials.

¹³ On March 3, the regime restricted Syrian exports of fresh produce and animal products. Central to the new rules are stiff restrictions on any wheat exports.

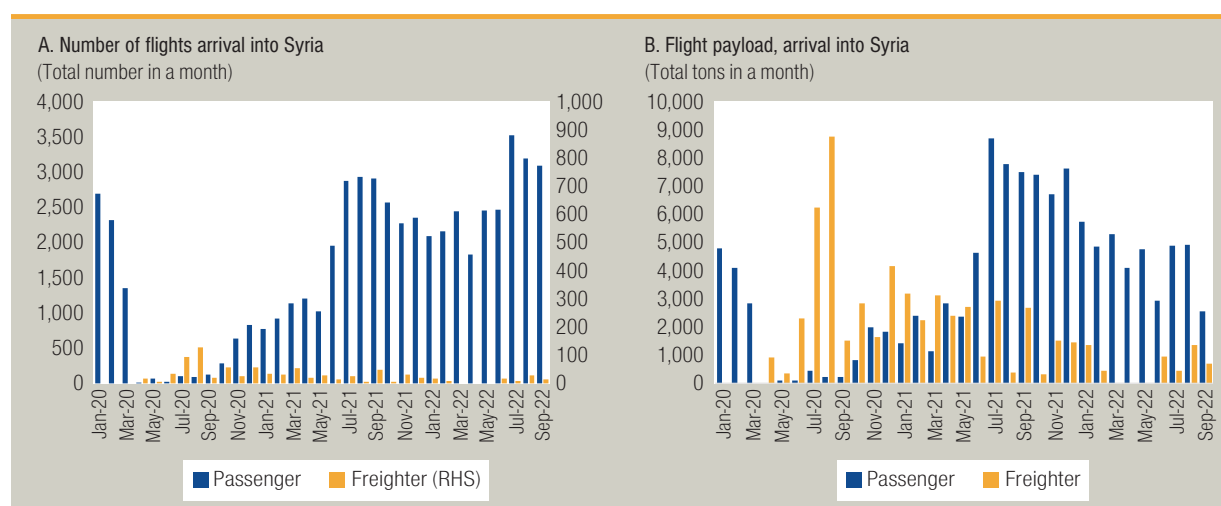
¹⁴ Anecdotally, "Ships are supposed to keep their AIS trackers on, but vessels wanting to hide their movements often turn theirs off. Those heading to Syrian ports routinely do so", according to the article <https://financialpost.com/pmn/business-pmn/satellite-images-show-first-ship-out-of-ukraine-in-syria>.

FIGURE 9 • Maritime Data Show a Decline in Syria's 2022 Trade Volume



Source: Cerdeiro et al. (2020) <https://public.tableau.com/app/profile/uncomtrade/viz/CerdeiroKomaromiLiundSaeed2020AISdatacollectedbyMarineTraffic/AISTradeDashboard>; UN Comtrade Monitor <https://comtrade.un.org/data/ais>; World Bank staff estimates.
* Based on data from January to September 2022.

FIGURE 10 • Passengers and Cargo Arriving in Syria Declined in 2022



Source: World Bank Global Aviation Dashboard, <http://aviation.worldbank.org>; World Bank staff estimates.
Note: Payload is the available weight of passengers, cargo, and baggage, referring to the carrying capacity of the flights.

including the UAE, Armenia,¹⁵ Pakistan,¹⁶ and Jordan resumed travel to Syria in order to improve bilateral ties (Figure 10.A).¹⁷ However, the passenger payload into Syria has notably decreased since mid-2021, likely as fewer people are boarding these flights (Figure 10.B). On the other hand, cargo flights to Syria have started to decrease significantly since the implementation of US sanctions under the Caesar Act in mid-2020. Cargo flights remained extremely low in 2022, with not a single one recorded between March and May.

Cross border trade is not always captured in official records and does not always occur

¹⁵ Syrian Arab Republic Ministry of Transport. 2021a. “وصول” “The arrival of the first flight from the Armenian capital to Aleppo International Airport.” September 5, 2021. mot.gov.sy.
وصول أول رحلة طيران من العاصمة الأرمينية إلى مطار حلب الدولي (mot.gov.sy).

¹⁶ Syrian Arab Republic Ministry of Transport. 2021. “إلى مطار دمشق الدولي قادمة من مطار كراتشي. بحضور وزير النقل.. وصول أولى رحلات الخطوط الجوية الباكستانية” “In the presence of the Minister of Transport, Pakistan International Airlines’ (PIA) first flight arrives at Damascus International Airport from Karachi Airport.” September 17, 2021. mot.gov.sy.
وصول أولى رحلات الخطوط الجوية الباكستانية (PIA) إلى مطار دمشق الدولي قادمة من مطار كراتشي (PIA) (mot.gov.sy).

¹⁷ SachKhabrain. 2021. “Damascus: Arab Flights Resumed to Syria.” March 6, 2021. <https://sachk>

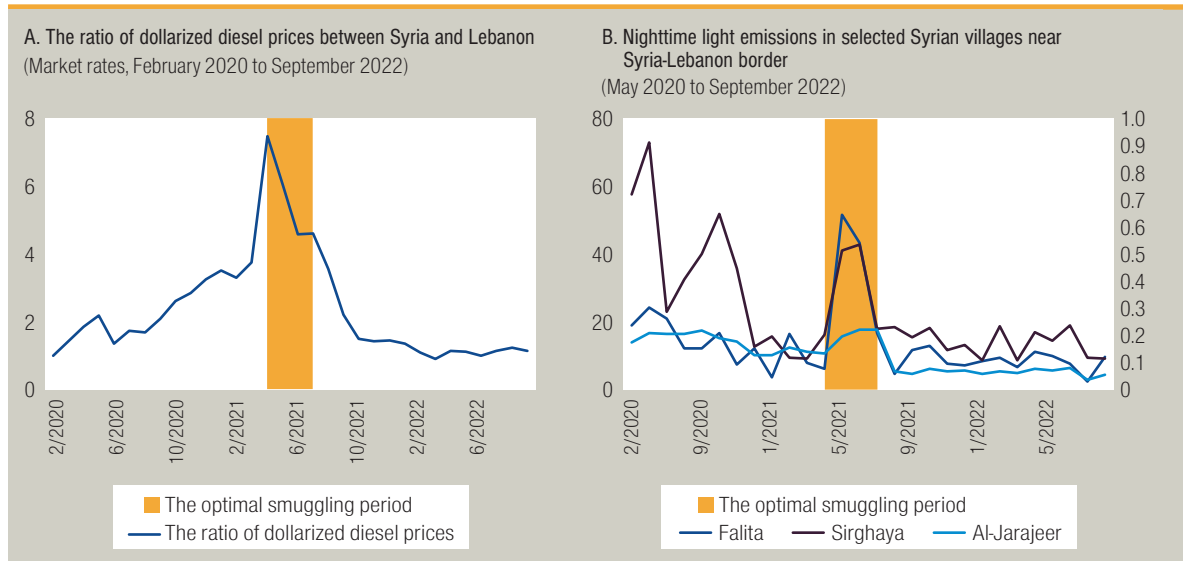
BOX 2: CROSS-BORDER FUEL SMUGGLING BETWEEN SYRIA AND LEBANON

Between mid-2020 and mid-2021, fuel subsidies in Lebanon caused the price of diesel and gasoline in Lebanon to fall significantly below levels in Syria, making diesel smuggling highly profitable (Figure 11.A). Anecdotal evidence indicates a surge in cross-border fuel smuggling activity in 2020 and 2021,^a primarily linked to the implementation of a fuel subsidies program that Banque du Liban (BdL) introduced in late 2019^b until being significantly reduced in September 2021.^c

Nighttime light emissions indicate a short-lived economic boom along the Syria-Lebanon border during the periods when diesel smuggling was most profitable. The economic externalities generated by smuggling activities are expected to increase light reflectance from trucking activity and also from adjacent economic activity built around informal fuel markets, such as restaurants, warehousing, and expanded petrol stations. Nighttime light emissions show, indeed, a noticeable increase in activity in several key border towns on the Syria side of the border, demonstrating a clear correlation with the time period when the price differential between the cost of fuel in Lebanon and Syria was most pronounced, i.e., from April to September 2021. The Syrian village along the Akkar border north of the Qalamoun mountains and along the Baalbek-Hermel border with Rural Damascus had the largest surge of nighttime light emissions during this period (Figure 11.B). Tfail was the only location in Lebanon identified as a likely smuggling node (Figure 12). While profits were likely generated on both sides of the border, the adopted measurement approach was limited in identifying smuggling locations in Lebanon because of the continuously decreasing nighttime light emissions across the country due to the ongoing electricity crisis.

Smuggling activity does not appear to be concentrated near official checkpoints. A remote-sensing radar-based analysis of traffic congestion indicates little change in traffic across the official checkpoints over time (Figure 13.A). Similarly, night light brightness and the number of observed mobile devices both confirm no notable increase in activities within these border crossings (Figure 13.B and Figure 13.C). Instead, analysis of mobile location data suggests that informal movement has been consistently observed around Joussieh (Al-Qaa) and Jdeidet Yabbous (Al Masnaa) (quarterly, between 2020–2022) (Figure 14).^d Indeed, Lebanese Customs data suggests no increase of gasoline and

FIGURE 11 • Higher Profit Margins Led to an Upsurge in Fuel Smuggling between Syria and Lebanon



Source: Syrian Pound Today, <https://sp-today.com/en/>; Dollar to Lebanese Lira Today, <https://lirate.org/>; VIIRS satellite data; Tahaleel Limited's estimates.
 Note: (A) Higher ratio of diesel prices between Syria and Lebanon indicate higher profitability for smuggling from Lebanon to Syria. The dark yellow shading highlights the months when diesel smuggling was most profitable (April to July 2021).

^a Dadouch, Sarah and Nader Durgham. 2021. "Smugglers Are Partly Behind Lebanon's Energy Crisis. The Army Is Struggling to Stop Them." The Washington Post, July 5, 2021. https://www.washingtonpost.com/world/middle_east/lebanon-economic-energy-crisis/2021/07/04/b8367752-d8fe-11eb-8c87-ad6f27918c78_story.html.

^b BdL introduced fuel subsidies on September 30, 2019; the central bank would provide importers with US dollars at the official rate of 1507.5 Lebanese lira to the US dollar for 85 percent of the import bills of diesel and 95 octane gasoline. At that time, the Lebanese lira was trading at 1700 to the US dollar, a rate that has sharply depreciated as the financial crisis significantly worsened in the following months. The support that BdL provided to help cover the cost of the import bills was increased to 90 percent on June 8, 2020. By then, the Lebanese lira's rate to the USD had dropped to 7,600, a 78 percent depreciation in value from the time subsidies were first introduced.

^c BdL cut its subsidy scheme through September 2021 and instead transitioned fuel traders to its Sayrafa currency trading platform, where importers of gasoline could exchange lira for US dollars at a rate slightly below the parallel market rate. Lebanon's last remaining subsidies for fuel came to an end on September 12, 2022, when the then-minimal foreign exchange support for Octane 95 gasoline imports was cut.

^d This study, using the Global Positioning System (GPS) mobile data, considers longitudinal panel data to compare movement in the proximity of border checkpoints (formal activity) and alongside the border (informal activity).

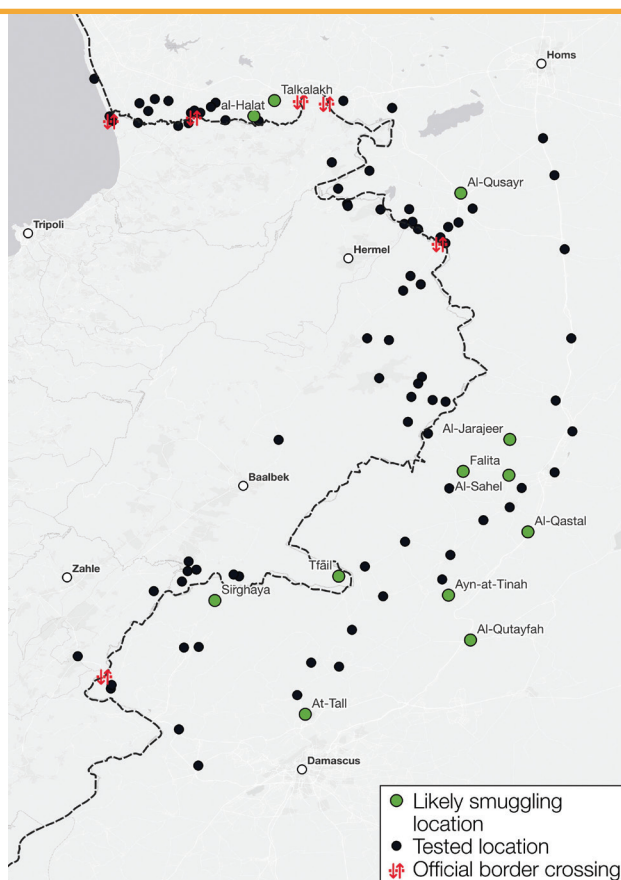
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BOX 2: CROSS-BORDER FUEL SMUGGLING BETWEEN SYRIA AND LEBANON *(continued)*

diesel exports and re-exports into Syria during 2020–2021. It is likely that the limited smuggling activity near official checkpoints is due to the increased police/military presence in those areas. Furthermore, following a July 2020 Syrian government decree, Syrians entering the country are obligated to exchange \$100 for Syrian pounds at the official exchange rate, discouraging people from using official checkpoints.⁸

The 2020–2021 uptick in Lebanon’s fuel imports, despite a crisis-driven decline in its domestic demand, suggests increased fuel smuggling from Lebanon to Syria over this period. In 2020, Lebanon imported a record high of 3.0 million metric tons of diesel, up 0.7 million metric tons from 2019. The total number fell to 2.6 metric tons in 2021, when diesel imports started decreasing with the cutting of subsidies in September. Lebanon’s domestic demand for oil has declined with the onset of the economic crisis and depression. Based on Tahaleel Limited’s Lebanon diesel model,⁹ Lebanon’s diesel import surplus to demand is estimated at 1.1 million barrels and 1.6 million metric tons in 2020 and 2021, respectively. If a vast majority of the diesel surplus has been smuggled to Syria, Syria’s unofficial fuel imports from Lebanon could be substantial. However, the majority of Syria’s oil imports still come from Iran, estimated at 15.0 million and 27.7 million barrels in 2020 and 2021, respectively, according to TankerTrackers.com.

FIGURE 12 • Analysis of Nighttime Light Emissions Reveals Key Areas for Cross-Border Fuel Smuggling Activity



Source: VIIRS satellite data. Tahaleel Limited’s estimates.

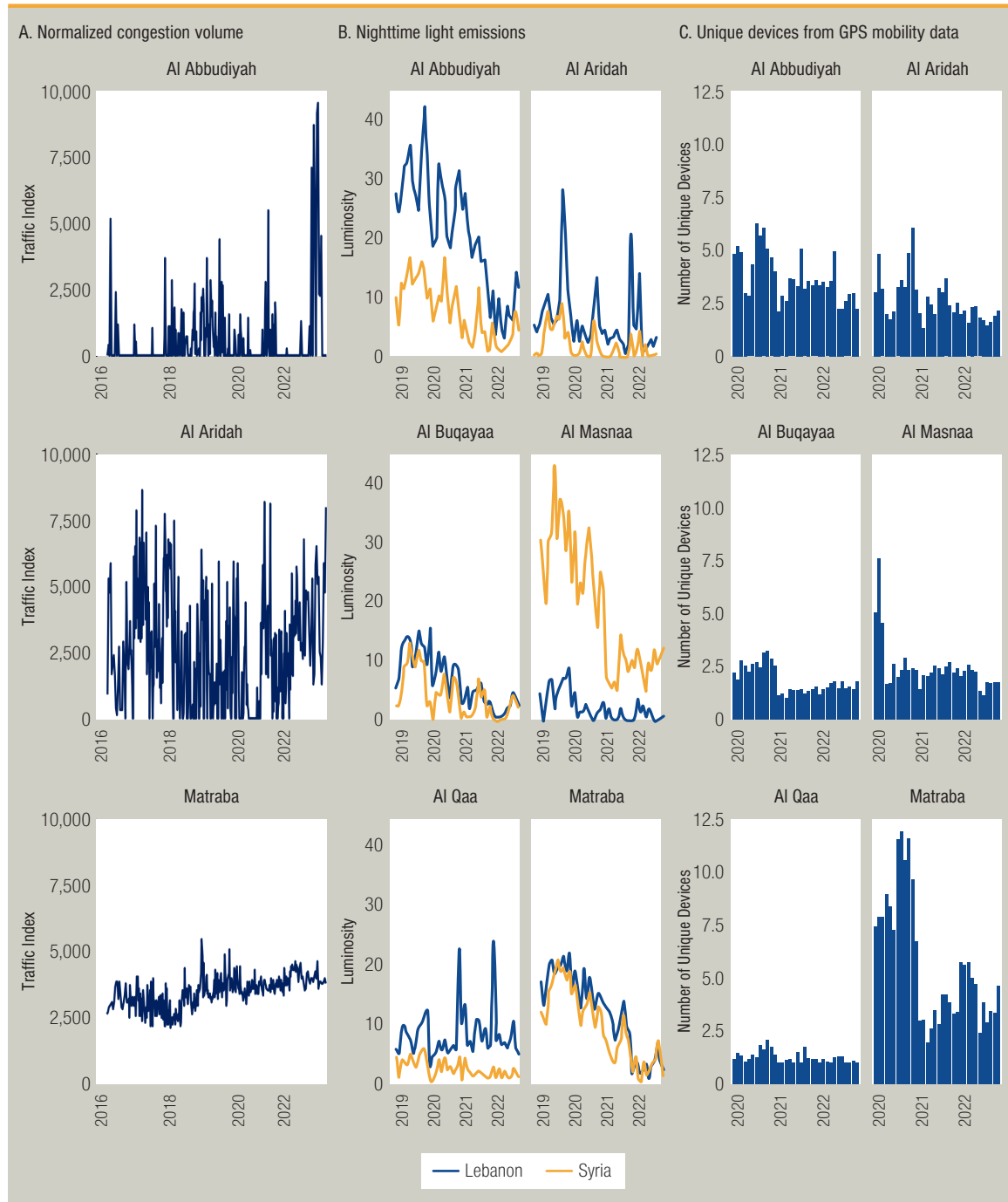
Note: Locations where the nighttime light emissions were at least 30 percent higher during the optimal smuggling period (April to July 2021) compared to the previous four months (December 2020 to March 2021), and at least 30 percent lower in the post-fuel crisis period (September to December 2021) than the optimal smuggling period, were identified as likely significant nodes in the diesel smuggling network.

⁸ Kayyali, Sara. 2022. “Syria’s 100 Dollar Barrier to Return.” Human Rights Watch, September 23, 2020. <https://www.hrw.org/news/2020/09/23/syrias-100-dollar-barrier-return>.

⁹ The model estimates Lebanon’s diesel end-usage demand based on methodologies developed in a 2020 World Bank report, see Ahmad, Ali, “Distributed Power Generation for Lebanon: Market Assessment and Policy Pathways,” <https://openknowledge.worldbank.org/handle/10986/33788?show=full>) and Lebanon’s Fourth Biennial Update Report on Climate Change to the UNFCCC (United Nations Framework Convention on Climate Change), see <https://unfccc.int/sites/default/files/resource/Lebanon%20BUR4%202021.pdf>.

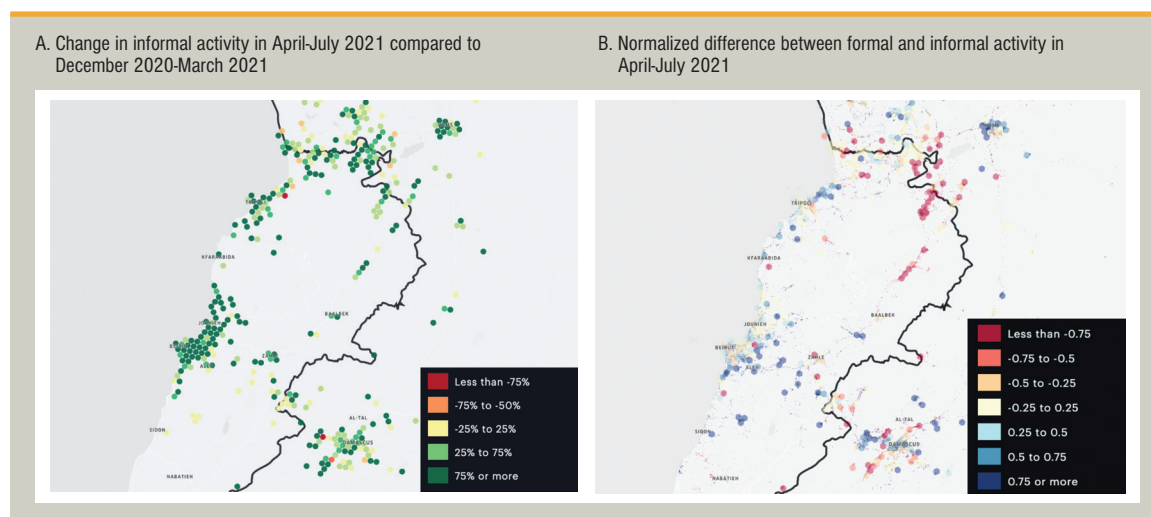
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FIGURE 13 • During the Peak Smuggling Season, Official Checkpoints Showed no Appreciable Increase in Congestion or Activity



Sources: SpaceKnow, <https://spaceknow.com>; VIIRS satellite data; Digital Envoy Data for Impact, <https://www.digitalenvoy.com>; World Bank staff estimates.
 Notes: (A) The normalized traffic congestion volume indicates the amount of reflectance from metallic objects. Along roads, more metallic reluctance is associated with more traffic. (B) The nighttime light emissions are measured within two kilometers of the official checkpoints on both sides of the border. (C) The charts present the monthly average of unique mobile devices around the checkpoints observed daily. The mobility data is provided by Outlogic and is derived from smartphone GPS-enabled device locations.

FIGURE 14 • Mobile Phone Data Shows Greater Activity along the Border during the Peak Smuggling Period



Sources: Digital Envoy Data for Impact, <https://www.digitalenvoy.com>; World Bank staff estimates.

Notes: "Activity" is defined as the number of stay locations generated by sub-panels of devices based on whether they were detected at least once in the proximity of points-of-interest through the time horizon. We approximate formal activity based on the stay locations generated by the sub-panel of devices seen within a 1Km radius of border checkpoints and informal activity based on the stay locations generated by the sub-panel of devices seen within a 500-meter border strip between Lebanon and Syria, excluding official border checkpoints. (A) The figure is a snapshot of the change in informal border activity in April–July 2021 (the optimal smuggling period) compared to December 2020–March 2021. In red, areas with a 75 percent or more decrease in informal activity; in green, areas with a 75 percent or more increase. (B) The image presents a snapshot map of the sub-panel's activity. The activity index is a normalized difference between the formal and informal sub-panels and ranges from -1 to 1 (informal to formal). For instance, an activity index of -0.5 indicates that the informal sub-panel's devices were 3 times as many as the formal sub-panel's devices within an area.

at official border crossings. To identify unofficial border crossings, new trade centers and corridors, the *Monitor* makes use of alternative data sources. Analysis from nighttime light emissions suggests that towns and regions adjacent to smuggling routes in Syria experienced a short-lived economic boom when the profit margin for smuggling Lebanese diesel into Syria increased notably from early 2020 to the summer of 2021. Nighttime light emissions in Syrian villages near Lebanon's border declined significantly since the summer of 2021, which appears to be linked to the narrowed gap in fuel prices between Lebanon and Syria after the Lebanese subsidies ended. Smuggling activity does not appear to bypass official checkpoints, as indicated by both the nighttime light emissions and the observed mobile devices data. A remote-sensing radar-based analysis of traffic congestion confirms little change in traffic across official checkpoints over time. Indeed, the Lebanese Customs data suggests no increase in gasoline and diesel exports and re-exports

to Syria during 2020–2021. Nevertheless, the fact that Lebanon imported record levels of gasoline and diesel during 2020–2021, despite a crisis-driven decline in its domestic demand, suggests increased fuel smuggling from Lebanon to Syria over this period (Box 2).

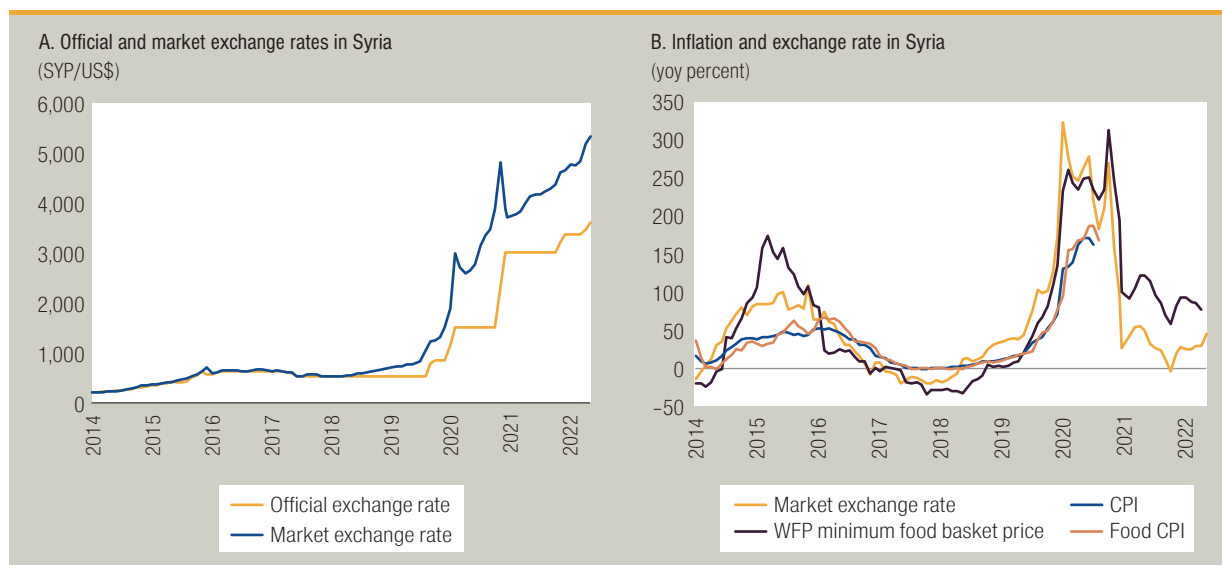
Inflation remains elevated

Since the war on Ukraine, the market exchange rate of the Syrian pound has depreciated by about 48 percent against the US dollar, falling to about SYP 5,400 per dollar in November 2022.

The decline in the Syrian pound is attributed to the country's worsening economic conditions, dollar appreciation, and the contagion effect from currency depreciation in neighboring Lebanon and Turkey.

habrain.com/en/world/damascus-arab-flights-resumed-to-syria/.

FIGURE 15 • Currency Depreciation Was Accompanied by Rising Inflation



Source: Syrian Pound Today, <https://sp-today.com/en/>; World Food Programme (WFP) Syria Price Database; Central Bureau of Statistics, Syria; World Bank staff estimates.

Over the past months, the Central Bank of Syria (CBS) has taken several measures to ease currency depreciation, including curtailing foreign currency demand, tightening import licensing, and raising the interest rates on Syrian pound deposits. Nevertheless, the ability of the authorities to stabilize the currency has proven limited. To narrow the widening gap between the official exchange rate and the market exchange rate, the CBS has devalued the Syrian pound twice since early 2022, with the latest official exchange rate recording SYP 3,015 per dollar (Figure 15.A).

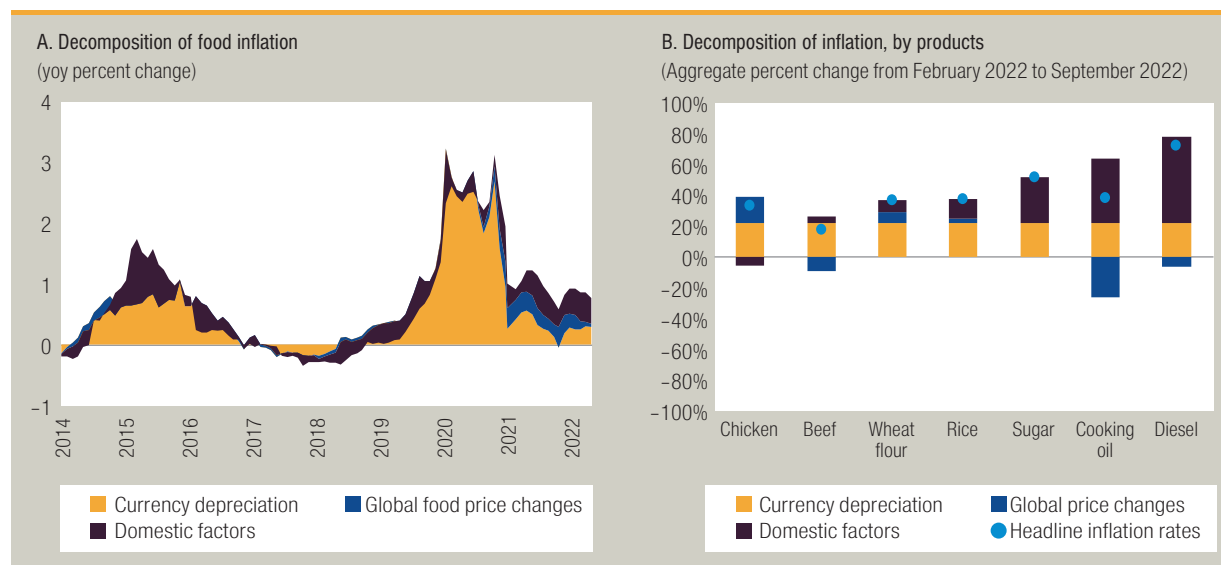
Currency depreciation has triggered high inflation since early 2022. According to preliminary data from the authorities, consumer inflation increased by 55 percent between December 2021 and September 2022. Since food accounts for about 40 percent of the consumption basket, food price increases have contributed significantly to high inflation in Syria. Syria's food prices, as proxied by the World Food Programme (WFP) minimum food basket price index, were 44 percent higher in September than February 2022 (Figure 15.B). Syria's food prices have grown faster than global food prices since the onset of the war on Ukraine (Figure 16.A). In US dollar terms, Syria's food basket prices increased by 9 percent between February and September 2022. In contrast, the WFP global food price index in US dollar terms declined by 4 percent during this period.

Global inflation and domestic policies both contributed to price increases. Even accounting for higher global commodity prices, the pass-through from the exchange rate to food inflation also increased since late 2021, due in part to the withdrawal of price subsidies in Syria (Box 3). This is in sharp contrast to most Middle East and North Africa (MENA) countries, where increased subsidies have limited the pass-through from global inflation to domestic prices.¹⁸ In addition, the record-low domestic agricultural production, combined with supply chain disruptions stemming from the war on Ukraine, also contributed to the high price increases of certain food and energy goods in Syria in recent months (Figure 16.B).

Price increases have varied considerably across regions, likely reflecting weak market integration as the cost of transacting across control zones in Syria is high. Figure 18 shows the prices of main commodities (bread, wheat flours, diesel, and gas) in different locations since 2020. By September 2022, self-administration areas in northeast Syria, where food and energy are mainly produced, have the

¹⁸ World Bank. 2022. *A New State of Mind: Greater Transparency and Accountability in the Middle East and North Africa*. October. Washington DC: World Bank. <https://www.worldbank.org/en/region/mena/publication/middle-east-and-north-africa-economic-update>.

FIGURE 16 • Global Inflation and Domestic Policies Both Contributed to Price Increases



Source: WFP Syria Price Database; World Bank Commodities Price Data (The Pink Sheet) <https://www.worldbank.org/en/research/commodity-markets>; World Bank staff estimates.

BOX 3: THE EXCHANGE RATE PASS-THROUGH TO INFLATION IN SYRIA

The exchange rate pass-through (ERPT) measures the extent to which fluctuations in the exchange rate lead to changes in aggregate prices (i.e., food inflation). The coefficient is, therefore, akin to an elasticity coefficient in that it measures the sensitivity of food inflation to the exchange rate.

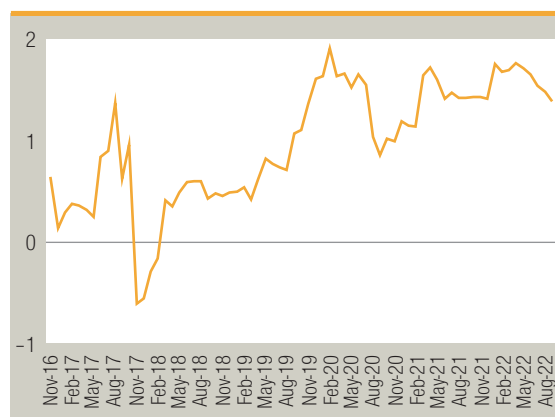
In line with the literature (see, for example, Gopinath, Itskhoki, and Rigobon 2010), standard exchange rate pass-through regressions are employed to gauge the ERPT coefficient:

$$\Delta p_t = \alpha + \sum_{j=0}^n \beta_j \Delta e_{t-j} + \sum_{j=0}^n \gamma_j \Delta p_{t-j}^f + \sum_{j=0}^3 \delta_j \Delta p_{t-j}^{com} + \varepsilon_t$$

where p_t is the Consumer Price Index (CPI) in Syria, e_t is the exchange rate quoted as units of SYP per USD, p_t^f is the foreign price level proxied for using the CPI of the US, and p_t^{com} is a commodity price index. As noted in Gopinath, Itskhoki, and Rigobon (2010), the statistic of interest, which measures the effect of changes in the market exchange rate on inflation, is $\beta(n) \equiv \sum_{j=0}^n \beta_j$. Equation (1) is estimated using monthly data from February 2011 to September 2022, with a lag length of 12. The Syrian authorities have ceased to release data on the money supply since the start of the conflict. As a result, it is impossible to analyze the money supply and its contribution to inflation in Syria quantitatively.

The ERPT coefficient, which gauges the pass-through of exchange rate changes to inflation, $\beta(12)$, is estimated to be between 1.088 and 1.171. That is, a 100 percent depreciation of the Syrian pound against the US dollar increases inflation by 109–117 percent over a 12-month horizon. This is a very high level of pass-through from exchange rate movement to inflation. For comparison, Jašová, Moessner, and Takáts (2019), estimate a yearly pass-through coefficient of 0.222 to 0.231 for emerging market economies and -0.0127 to 0.00592 for advanced economies.^a Two factors may explain why Syria's inflation is sensitive to the depreciation of the Syrian pound. First, Syria's heavy dependence

FIGURE 17 • The Pass-through Effect of the Exchange Rate on Inflation Has Increased Markedly since Late 2019



Source: Central Bureau of Statistics, Syria; World Bank staff estimates.
Note: The graphs provide (rolling window) estimates of the effect of exchange rate changes on inflation, $\beta(12)$, in standard pass-through regression. Given that coefficients from various months are added up, the confidence intervals cannot be computed.

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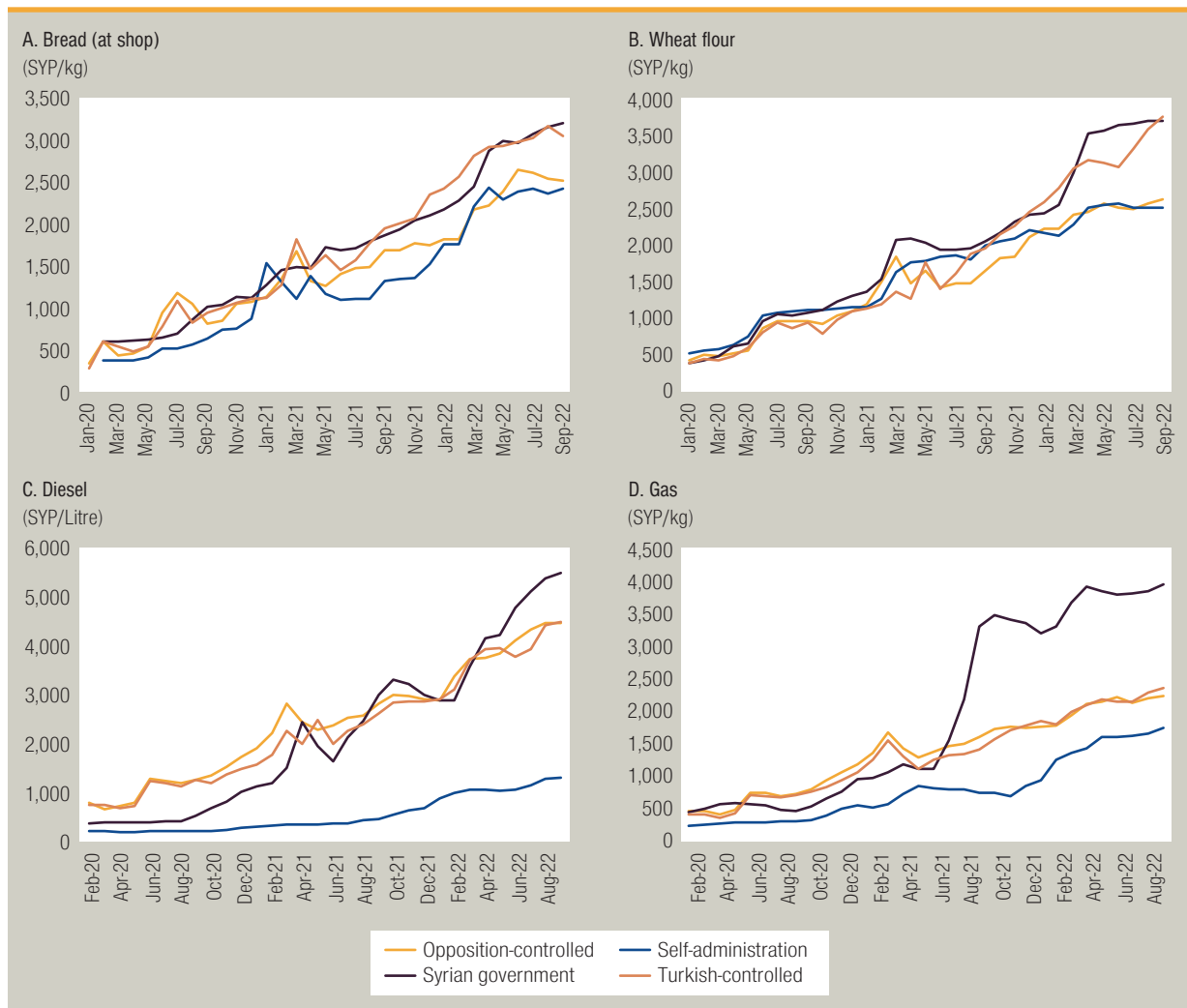
BOX 3: THE EXCHANGE RATE PASS-THROUGH TO INFLATION IN SYRIA *(continued)*

on imports for essential goods implies that a depreciation of the pound would quickly feed into higher domestic prices. Second, Syria financed its fiscal deficit primarily through Central Bank borrowing. Monetary financing debases the value of the currency, which immediately affects the exchange rate and domestic prices.

Time-varying estimates suggest that the pass-through effect of the exchange rate on inflation has increased markedly with the Lebanese financial crisis. (Figure 17). This increase can likely be attributed to higher inflation expectations in Lebanon, which fed inflation expectations in Syria. The pass-through has accelerated again since late 2021, likely due to the withdrawal of subsidies in both countries.

^a Jasova, Moessner, and Takáts (2019) estimate the ERPT in the post-2008 crisis using data for a panel of developed and emerging market economies and a Generalized Method of Moments (GMM) estimation of a hybrid New Keynesian Phillips curve.

FIGURE 18 • Price Increases of Essential Goods Have Varied Considerably across Regions



Source: WFP Syria Price Database https://dataviz.vam.wfp.org/economic_explorer/prices?adm0=238; World Bank staff estimates.

Note: The zones of control are defined according to boundaries obtained from Live Universal Awareness Map, <https://syria.liveuamap.com/>.

lowest food and energy prices. Prices in government-controlled areas, on the other hand, are the highest across products. Various factors, including inadequate

connectivity, trade restrictions across zones of control, and insecurity along major trade routes, could explain the weak market integration in Syria. Price variations

TABLE 1 • Subsidies by Items in Syria
(Billion SYP)

	2017	2018	2019	2020	2021	2022	2023
Subsidies on energy	594	976	1150	722	4,500	6,350	7,410
Petroleum	177	275	430	11	2,700	2,700	3,000
Electricity (off-budget)	417	701	720	711	1,800	3,650	4,410
Subsidies on agriculture	408	367	371	347	750	2,799	1,887
Wheat and flour	398	357	361	337	700	2,400	1,500
Sugar and rice	/	/	/	/	/	300	300
Agricultural support fund*	10	10	10	10	50	50	50
Fund for transition to modern irrigation	/	/	/	/	/	22	30
Fund for droughts and natural disasters	/	/	/	/	/	27	7
National fund for social aid**	15	15	10	15	50	50	50
Total budgeted subsidies	423	657	811	373	3,500	5,549	4,937
Total subsidies (including subsidies for electricity)	840	1,357	1,531	1,084	6,300	9,199	9,347
Memorandum items:							
Total budgeted expenditures	2,660	3,187	3,882	4,000	8,500	13,325	16,550
Total expenditures (including subsidies for electricity)	3,077	3,888	4,602	4,711	10,300	16,975	21,470

Source: World Bank estimates using various MOF reports.

Notes: * Agricultural support fund was established to help farmers cope with rising input prices; ** National Fund for Social Aid offers a variety of social assistance programs to retired soldiers, women, and small businesses.

have incentivized cross-region smuggling; in response, both the Syrian Interim Government (SIG) and the Autonomous Administration formally announced policies to combat wheat smuggling.^{19, 20}

Fiscal policies have tightened

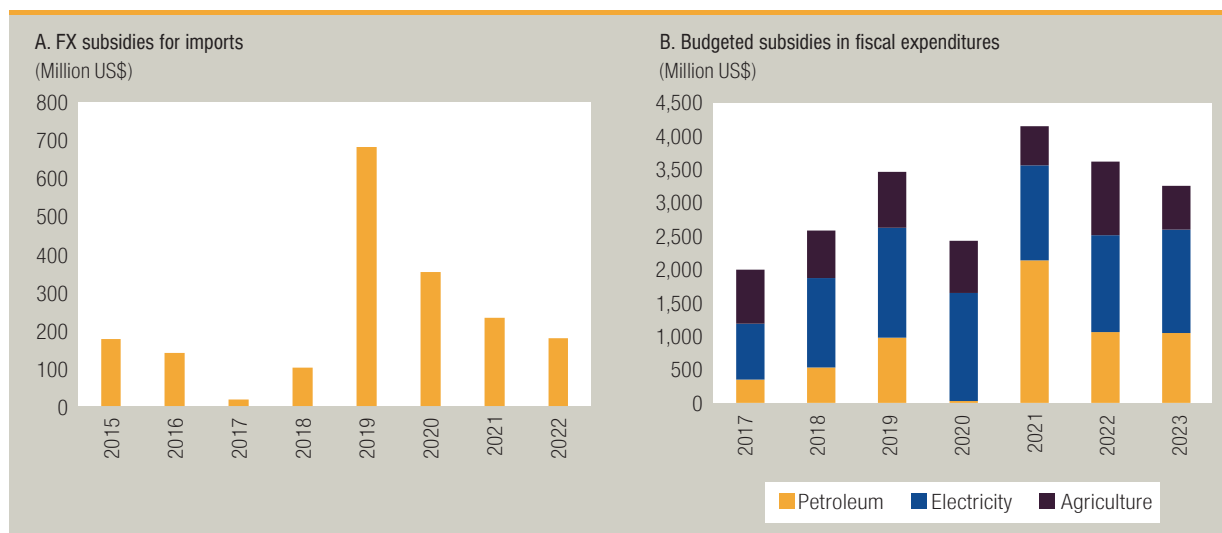
Higher spending associated with higher prices for essential goods has reduced fiscal space, forcing fiscal policies to tighten. Fiscal subsidies accounted for more than half of total government expenditures in 2021 (Table 1). To rein in the subsidy bill, the Syrian government authorities, from late 2021 to early 2022, removed from government assistance an estimated 15 percent of the population, or around 600,000 of 4 million smart card holders.²¹ Those removed included doctors and lawyers; several categories of merchants; owners of commercial, industrial, and tourist establishments; people owning multiple properties; and owners of cars manufactured after 2011.

¹⁹ The SIG's ministry of interior issued an order to the police directorates in northern Syria on May 20, 2022, prohibiting wheat smuggling between them and areas controlled by the government and SDF by conducting patrols, tightening control over traders, and seizing the smuggled quantities. Syria TV. 2022. "خبراء يدقون ناقوس الخطر تهريب القمح ينذر بكارثة شمالي سوريا." "Experts sound the alarm, wheat smuggling portends disaster in northern Syria." June 30, 2022. ..خبراء يدقون ناقوس الخطر. (syria.tv).

²⁰ The Autonomous Administration of North and East Syria's executive council issued a circular on June 2, 2022, prohibiting the transfer of wheat across its areas without an official document from the Agricultural Community Development Company, in an effort to stop wheat smuggling. Hamo, Adnan. 2022. "منعاً للتهريب... الإدارة الذاتية تمنع نقل القمح داخل." "مناطقها." "To prevent smuggling, the Autonomous Administration prevents the transport of wheat within its regions." North Press Agency. June 2, 2022. <https://npasyria.com/110217/>.

²¹ The Syrian electronic smart card enables eligible Syrian families in government-held areas to purchase a set quantity of essential products and services, like sugar, rice, and heating fuel, in predetermined amounts and at discounted rates.

FIGURE 19 • Subsidies of Essential Goods Declined in 2022



Source: United Nations Conference on Trade and Development (UNCTAD); Syrian Pound Today; WFP; CBS; Syria Ministry of Finance (MOF); World Bank staff estimates.
 Note: (A) The mirror trade data from the UN Comtrade database is applied to estimate goods that are imported at the preferential exchange rate. (B) The fiscal data pertains to the Central Government in Damascus and excludes all taxes, transfers, and expenses incurred by the autonomous region in northeastern Syria. Estimates include off-budget subsidies for electricity. Fiscal budget figures are converted from local currency to US dollars based on the market exchange rates during the third quarter of the previous year.

With higher costs of essential goods triggered by the war on Ukraine, fiscal policy has become more restrictive. Unlike in many countries, the Syrian government has been unable to implement fiscal policies to cushion the impact of commodity price shocks on its citizens. Immediately after the start of the war, the Syrian government announced a limit on public spending to cover only priorities over the next months. Since February 2022, over 30 categories of individuals have been excluded from subsidy programs, including doctors and attorneys, business owners, and those formerly classified as middle-class, such as working professionals, vehicle owners, and parents with children in private schools. The government has also tightened the rationing of essential goods. Authorities imposed new limits on fuel allotments for public facilities and heating oil for households in March 2022, halving the allocations for gasoline and heating oil for each family.²² Additionally, the government has reduced bread rations for families. A typical household of five was allocated 12 packets of subsidized bread per week in August 2022, as opposed to 14 packets per week in July 2021.²³

The list of essential items that receive subsidized foreign currency for imports was

further narrowed as of August 2022. A widening gap between the official exchange rate and the parallel market rate led to sharp increases in the foreign exchange market (FX) subsidies for imports in 2019. To preserve its foreign reserves, the Central Bank of Syria has, since 2020, stopped subsidizing most imported goods. Starting in August 2022, the Central Bank only finances the imports of a few essentials at a preferable exchange rate of SYP/\$US 2,500; these essential goods include wheat, baby formula, medicine, and specific medicinal production inputs and supplies.²⁴ Consequently, the FX subsidies for imports dropped sharply, from a peak of \$684 million in 2019 to \$178 million in 2022 (Figure 19.A).

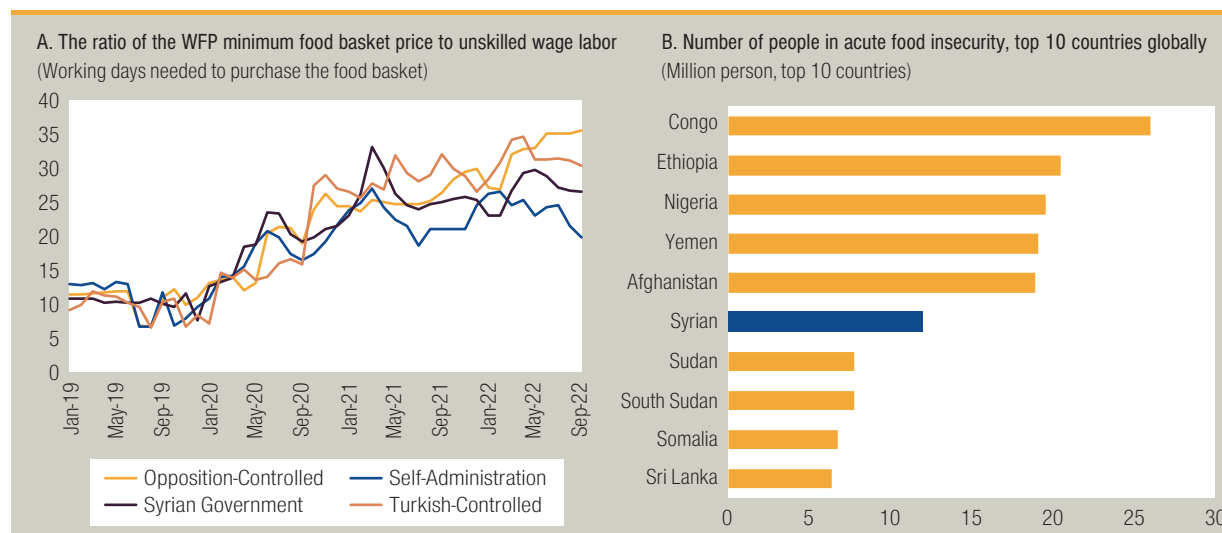
The FY2023 budget reaffirms the government's plan to further reduce subsidies (Figure 19.B). Total subsidies amounting to SYP 9.35 trillion are planned for 2023, approximately the same (in nominal terms) as this year but a reduction in real terms (i.e., adjusted for inflation) (see Table 1). The

²² Etana Syria. 2022. "Syria Brief – Economic Crisis – 8 March 2022." <https://etanasyria.org/syria-brief-economic-crisis-8-march-2022/>.

²³ The Syria Report 2022a.

²⁴ The Syria Report 2022.

FIGURE 20 • Food is Becoming Increasingly Difficult to Afford



Source: Central Bureau of Statistics of Syria; CBS; WFP Syria Market Price Watch Bulletin; WFP Hunger Hotspots: October 2022 to January 2023 Outlook; World Bank staff estimates. Note: (A) The standard food basket is a group of essential food commodities. In Syria, as defined by the WFP, the food basket is set at a group of dry goods providing 2,060 kcal a day for a family of five during a month. The basket includes 37 kg bread, 19 kg rice, 19 kg lentils, 5 kg of sugar, and 7 liters of vegetable oil. The zones of control are defined according to boundaries obtained from Live Universal Awareness Map, <https://syria.liveuamap.com/>.

spending plan calls for a sharp reduction in agricultural subsidies, primarily driven by a reduced allocation of subsidized wheat and flour. On the other hand, energy subsidies, which account for the vast majority of total subsidies, would increase further in nominal terms in 2023, driven by the planned increase in electricity subsidies. Adjusted for inflation, however, energy subsidies would be roughly unchanged in 2023.

Household welfare continues to worsen

Rising prices have eroded real wages, leading to a severe inaccessibility of sufficient food.

Since 2019, the WFP’s minimum food basket price has grown twice as fast as non-skilled labor wages across all zones of control in Syria,²⁵ suggesting that food is becoming increasingly costly to afford (Figure 20.A). In September 2022, low-skilled workers in Turkish-controlled and opposition-controlled areas were unable to afford the minimum food basket for a five-person household, even if they worked 30 days a month. According to the WFP, nearly 9.5 million Syrians were severely food insecure in June 2022, with an additional 2.5 million at risk of falling into food

insecurity. As such, Syria ranks among the 10 most food-insecure countries globally (Figure 20.B)

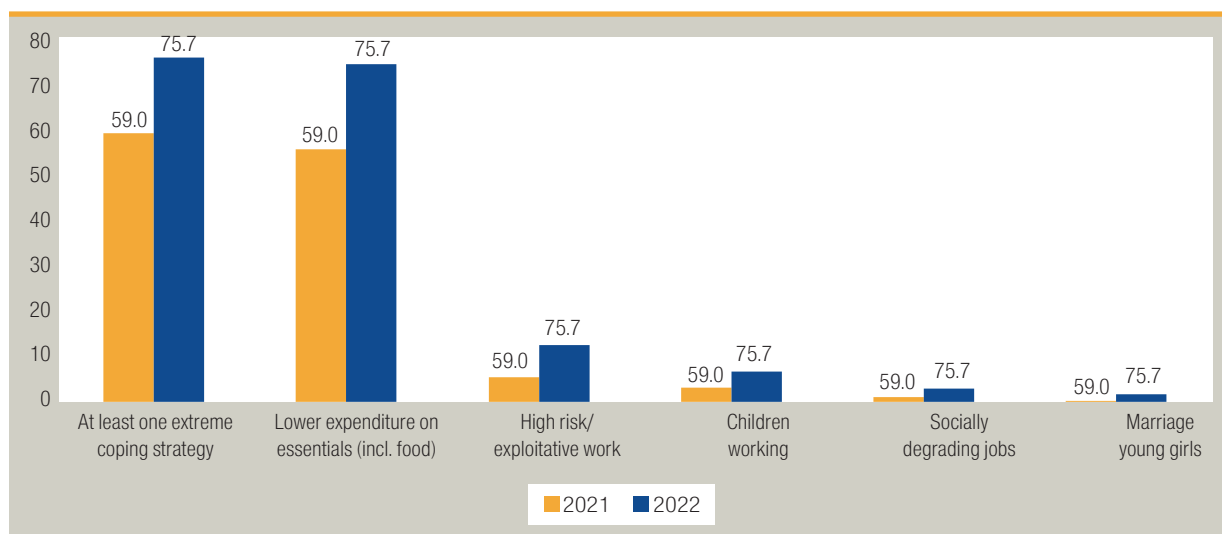
Already very high, the vulnerability of Syrian households is on the rise. According to data from the Humanitarian Needs Assessment Programme (HNAP),²⁶ between summer 2021 and summer 2022, the share of households having to rely on at least one extreme negative coping strategy²⁷ increased from 59 to 76 percent. As shown in Figure 21, deteriorating welfare conditions are well evidenced by the substantial increase in households forced to reduce their expenditure on essential items, take up high risk and exploitative work, or even rely on child labor. As of the summer of 2022, only 15 percent of households reported having enough income to satisfy essential needs, and close to 50 percent had to sell their assets—either productive, unproductive, or both—to make ends meet.

²⁵ According to the WFP, non-skilled labor wages represent wages in construction and agriculture.

²⁶ The Humanitarian Needs Assessment Programme is part of the United Nations’ refugee agency, the UN High Commissioner for Refugees.

²⁷ Coping strategies are defined as extreme when they adversely affect the welfare of the household as a whole or of any of its members.

FIGURE 21 • Share of Households Relying on Extreme Coping Strategies Increased in 2022 (Percent)



Source: World Bank calculations based on HNAP household survey data (Summer 2021 and 2022).

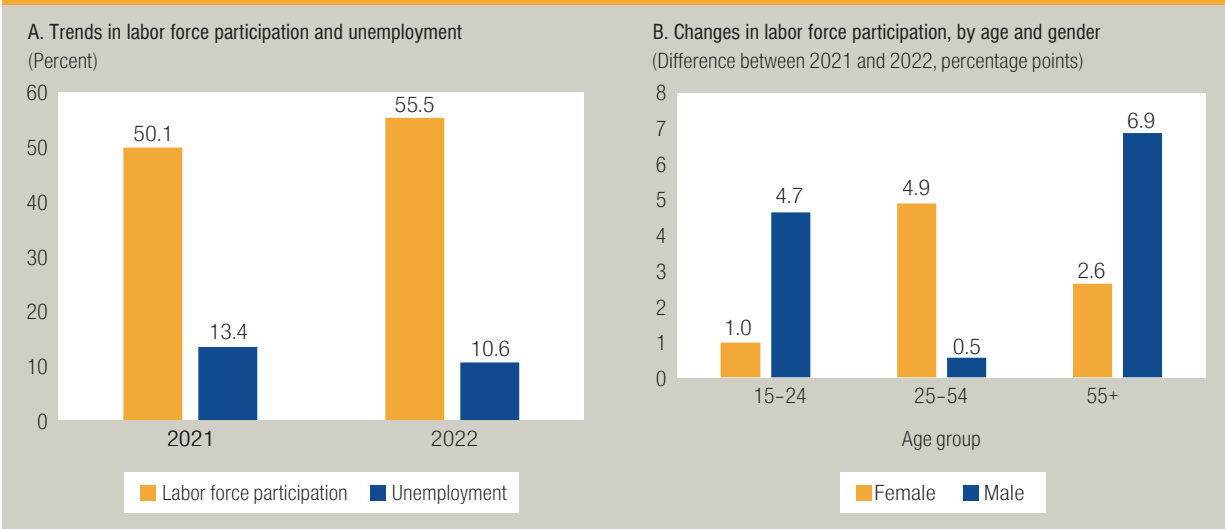
Increased hardships faced by Syrian households have pushed more vulnerable people to enter the labor market to help support their families. Deterioration of Syrian households' welfare between 2021 and 2022 went hand in hand with an increase in labor force participation and a decline in unemployment (Figure 22.A). With labor force participation of prime-age men (ages 25–54) already above 95 percent in 2021, the observed increase in labor supply was mostly driven by the greater participation of women, youth, and the elderly (Figure 22.B), categories of workers at the labor market's margins with relatively limited earning opportunities. As Syrian households increasingly struggle to make ends meet, the increased labor force participation among vulnerable people could be interpreted as another sign of distress, with individuals increasingly forced into

accepting any available income opportunity, irrespective of its quality.²⁸

Welfare challenges of Syrian households are further intensified by a decline in access to basic services. According to HNAP data, between 2021 and 2022, access to water and electricity saw a marked deterioration. The share of households without regular access to any water source increased from 42.4 to 48.2 percent, whereas the share of households without access to electricity increased from 33.6 to 43.5 percent.

²⁸ This interpretation is consistent with the observed increase in the share of households reporting they had to rely on high risk and/or exploitative work, which increased from 5.4 percent in 2021 to 12.6 percent in 2022.

FIGURE 22 • More Vulnerable People Were Pushed to Enter the Labor Market in 2022



Source: World Bank calculations based on HNAP household survey data (Summer 2021 and 2022).

OUTLOOK AND RISKS

Subject to high uncertainty, real GDP is projected to contract by 3.2 percent in 2023 after declining by 3.5 percent in 2022 (Table 2).

The projections assume that conflict activity will continue at a level comparable to 2022, and that the war on Ukraine will continue to impair supply chains and the supply of essential commodities. From the demand side, private consumption will remain subdued as purchasing power is eroded by rising prices and currency depreciation. Private investment is projected to remain weak given a volatile security situation and continued economic and policy uncertainties. Lack of financing is expected to constrain government spending, especially for capital expenditures. On the supply side, conflict, high input costs, and water scarcity are projected to limit crop production. In addition, fuel shortages are expected to further weaken manufacturing and disrupt transportation and services.

Inflation is projected to decline but remain high in 2023 due to exchange rate pass-through, persistent food and fuel shortages, and further cuts to subsidies. Using trends until the first nine months of 2022, we forecast that the WFP minimum food basket price index will grow by 48.5 percent in

2023, down from 77.3 percent in 2022. Assuming the historical relationship between the WFP food basket price and food inflation remains stable—as well as a stable relation between food inflation and overall inflation—the 2023 CPI is projected to be 44.0 percent yoy, down from 70.1 percent in 2022.

The fiscal deficit is expected to remain large in 2023, as efforts to reduce fiscal subsidies will only partly offset the cost-driven increase in expenditures. The government's fiscal plan projects a modest (nominal) increase in the budgeted fiscal deficit, from SYP 4.1 trillion (8.4 percent of GDP) in 2022 to SYP 4.9 trillion (8.2 percent of GDP) in 2023. However, if off-budget electricity subsidies and military expenses are included, the fiscal deficit would be considerably larger: since 2018, the military budget has been excluded from the government's general budget, although in 2017 it accounted for some 20 percent of total expenditure.²⁹ On the other hand, another SYP 4.4 trillion is planned for off-budget electricity subsidies in 2023, up from SYP 3.7 trillion in 2022. Due to a lack of access to domestic and international financing,

²⁹ The Syria Report 2022b.

TABLE 2 • Macro Outlook Indicators
(Annual percent changes unless indicated otherwise)

	2017	2018	2019	2020	2021e	2022f	2023f
Real GDP growth, at constant prices	-0.7	1.4	1.2	-3.9	-2.9	-3.5	-3.2
Inflation (Consumer Price Index)	18.0	1.0	13.4	114.2	118.8	70.1	44.0
Fiscal balance (% of GDP) (on-budget)	-8.9	-8.3	-8.1	-8.4	-8.6	-8.4	-8.2

Source: World Bank estimates.
Notes: e = estimate, f = forecast.

most of the deficit will continue to be financed by Central Bank borrowing. Treasury bonds and foreign loans combined are projected to cover approximately 20 percent of the budgeted fiscal deficit in 2023, according to the Syrian government's fiscal plan.

Risks to the growth outlook are significant and tilted to the downside. Spillovers from further weakness in neighboring countries, recurring climate shocks, and further reductions in humanitarian assistance may further deepen the economic contractions in Syria. A prolonged war on Ukraine could lead to further increases in commodity prices, negatively affecting Syria as a food and energy importer. Inadequate health facilities in Syria could exacerbate the impact of rapidly spreading contagious diseases.

Recurring climate shocks may severely affect Syria's crops and agricultural livelihoods. Syria is vulnerable to drought, given its strong dependence on rainfall and declining groundwater for agriculture.³⁰ Insufficient rainfall in recent years, combined with low water levels in the Euphrates River and damaged water infrastructure, have reduced Syrians' access to water for drinking and domestic use and triggered substantial harvest and income losses, as well as an increase in water-borne diseases. Syria is experiencing rising temperatures, which have also contributed to the growing intensity of drought.³¹ The frequent climate-induced and human-caused drought shocks could cause widespread crop failure and induce large-scale displacement, exacerbating already high levels of food insecurity.

Owing to its heavy reliance on food and fuel imports, Syria is vulnerable to another spike in global commodity prices or supply chain disruptions. The impact of another spike in global food prices could be substantial for Syria, given that the

demand for food tends to be less elastic as it is hard to substitute. Over the past several years, Syria has procured its imported wheat almost exclusively from Russia. Likewise, Syria is highly dependent on oil supplies from Iran. Reportedly, the temporary suspension of Iranian oil shipments since early September 2022 has caused widespread energy shortages across the country.³² A lack of alternative sources may threaten Syria's food and fuel supply stability.

The ongoing cholera outbreak could pose a serious threat to the Syrian people. Cholera continues to sweep through Syria at an alarming pace. If cholera or other bacterial diseases spread rapidly, the limited resilience of Syria's health, water, and sanitation systems, devastated by conflict, could exacerbate the impact.

Despite growing needs, there is a risk of further reductions in humanitarian assistance for Syria. Humanitarian assistance is needed globally to cushion the blow from surging commodity prices triggered by the war on Ukraine, and in particular for Syria, which is facing acute food insecurity. Yet, reported humanitarian donor funding for Syria in 2022 reached the lowest levels since 2016, according to data collected by the UN Financial Tracking Service (FTS).³³ After several cuts in 2021, the WFP further

³⁰ Kelley et al, 2015.

³¹ ICRC (The International Committee of the Red Cross), 2021. "Syria: Country-Level Climate Sheet Fact." Climate Centre. <https://www.climatecentre.org/wp-content/uploads/RCCC-ICRC-Country-profiles-Syria.pdf>.

³² The Syria Report 2022c.

³³ Syrian Arab Republic 2022 – Financial Tracking Service - OCHA <https://fts.unocha.org/countries/218/summary/2022>.

reduced the size of food rations in all areas of Syria in May 2022, a move attributed to funding constraints and rising global food prices.³⁴ A rise in global food prices may force further reductions in food assistance.

There are some upside risks to the outlook.

Non-governmental organizations were allowed to carry out additional transactions and activities in November 2021, and restrictions on foreign investments in non-regime held areas of Northeast and Northwest Syria were eased in May 2022.³⁵ More recently, the UN Security Council exempted humanitarian aid in Northwest Syria from all UN sanctions in December 2022.³⁶ These measures could potentially facilitate trade, investment, and humanitarian operations in Syria. Nevertheless, given Syria's worsening economic conditions, trade and investment are unlikely to pick up dramatically in the short term, as the private sector may continue to pursue de-risking strategies.

³⁴ WFP Syria Country Brief, April 2022 https://api.godocs.wfp.org/api/documents/6b5e29e015c6412188aad0f99e7886d6/download/?_ga=2.150466870.1270354178.1671581871-107722965.1625932630

³⁵ On November 24, 2021, the US Treasury Department amended a general license for non-governmental organizations to allow them to engage in additional transactions and activities in support of non-profit activities in Syria, including new investment, the purchase of refined petroleum products of Syrian origin for use in Syria, and certain transactions with parts of the Syrian government. In May 2022, the Treasury announced the authorization of activities in certain economic sectors in the non-regime-held areas of Northeast and Northwest Syria.

³⁶ In December 2022, The UN Security Council introduced humanitarian exemptions across UN sanctions regimes, including the Islamic State of Iraq and Syria (IS) and Al-Qaida sanctions regime.



SPECIAL FOCUS: SYRIA JOINT DAMAGE ASSESSMENT OF SELECTED CITIES

The World Bank, in collaboration with the EU, conducted the 2022 Syria Joint Damage Assessment (DA) of Selected Cities.

The assessment provides information on the ongoing conflict in Syria with respect to the population, physical infrastructure, and quality of service delivery in 14 cities³⁷ and 11 sectors.³⁸ The selection of cities for this assessment was based on several criteria—the extent of physical damage caused by the conflict, the security conditions, the accessibility of the area, the presence of humanitarian actors, the ethnic diversity of the population, the mix of government and opposition-controlled areas, and the number of internally displaced persons (IDPs). Sectors were selected based on a combination of factors, including data access and impact.

This Syria DA provides a broad-brush estimate of the effects of the Syrian conflict on physical assets and service delivery. It adapts from the Post-Disaster Needs Assessment (PDNA) methodology jointly developed by the EU, World Bank, and United Nations, and has been utilized in numerous analytical assessments around the world.³⁹ The DA relies primarily on a remote-based assessment

methodology and uses high-resolution satellite imagery, social media analytics, mobile signal data, and publicly available information. When possible, it uses damage data from publicly available ground-based assessments to confirm findings.

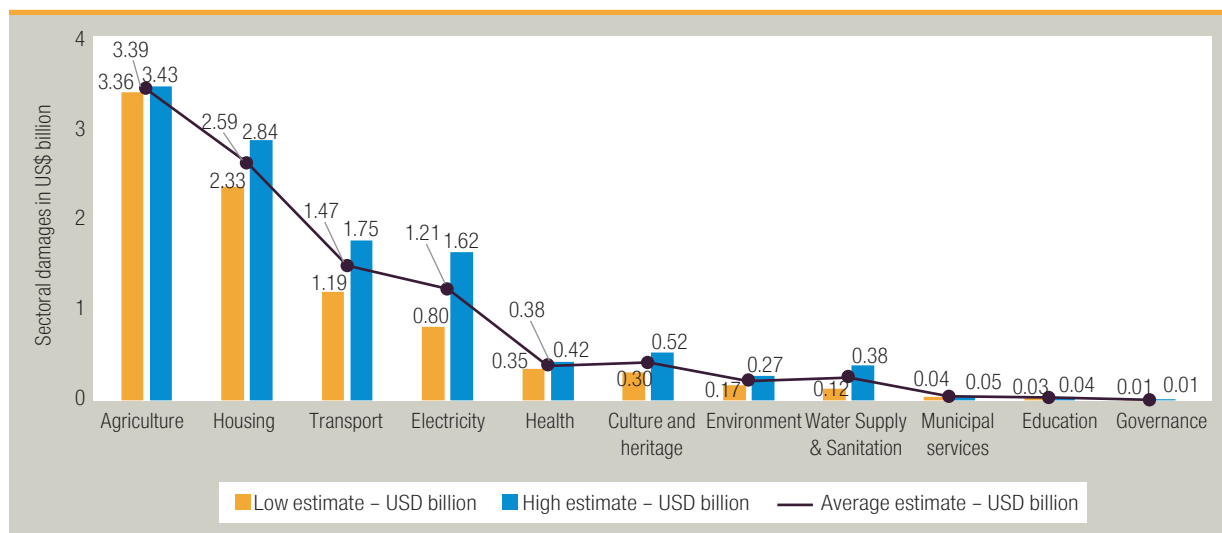
Damage was calculated against the actual or estimated pre-2011 baseline of physical assets, in line with the start of the Syrian crisis. Because this DA builds on previous assessments, much of the baseline data relied on previously established baselines. The baseline asset inventories were gathered from pre-crisis (in line with standard

³⁷ The selected cities are Afrin, Aleppo, Dar'a, Daraya, Deir-ez-Zor, Al Hasakah, Homs, Idlib, Manbij, Palmyra, Ar-Raqqa, Rastan, Tell Abiad, and Zabadani.

³⁸ The 11 selected sectors covered are: (i) Physical infrastructure sectors: transport, electricity, water supply and sanitation (WSS), municipal services, cultural heritage, and agrifood value chains; (ii) Social sectors: housing, health, and education; and (iii) Crosscutting sectors: environment and public institutions.

³⁹ European Union, World Bank, United Nations. Post-Disaster Needs Assessments, Volume A Guidelines (2013).

FIGURE 23 • Bulk of Damage in Syria Found in Agri-Food Value Chains, Housing, Transport and Electricity Sectors (Billion US\$)



Source: World Bank 2022 Syria Joint Damage Assessment of Selected Cities in Syria.

PDNA methodology) government sources and crowd-sourced mapping data, and therefore describe assets prior to the crisis. For the damage estimation, the average was calculated based on the number of damaged facilities, their physical status (partially damaged or completely destroyed), and the estimated pre-crisis unit cost⁴⁰ associated with each asset class. In line with standard DA methodology, destroyed assets were costed at 100 percent of their unit cost and partially damaged assets at 40 percent.⁴¹ These assessments employed low and high replacement cost estimates, based on pre-crisis unit replacements costs. For most sectors, these ranges were based on plus or minus 10 percent of the average unit cost or used a reasonable range based on experience.⁴² Whenever possible, the damage assessment also estimated the operational status of facilities (functional or non-functional) to determine the level and quality of service delivery in that sector.

The DA finds that as of January 2022, total damage across the assessed cities and sectors was estimated at \$8.7 billion to \$11.4 billion. Of the total damage estimate, 68 percent, or \$5.80 billion to \$7.8 billion, was attributed to damage in the Physical Infrastructure sectors; 30 percent, or \$2.7 billion to \$3.3 billion, to damage in the Social Sectors; and 2 percent, or \$175 million to \$278 million, to

Cross-Cutting sectors. The functionality of agri-food value chains was the most distorted by the conflict (Figure 23). Syria’s wholesale vegetable markets have been damaged, with 82 percent assessed as either partially damaged or destroyed in the conflict. While the operational status of assets varies across sectors and cities, the enabling conditions play a significant role in the functionality of sectors. For example, although a large part of the physical infrastructure was undamaged in the Water, Sanitation and Hygiene (WASH) sector, 51 percent of assets suffered from reduced functionality, including 11 percent that are not functioning, which is a significant problem for the most affected cities.

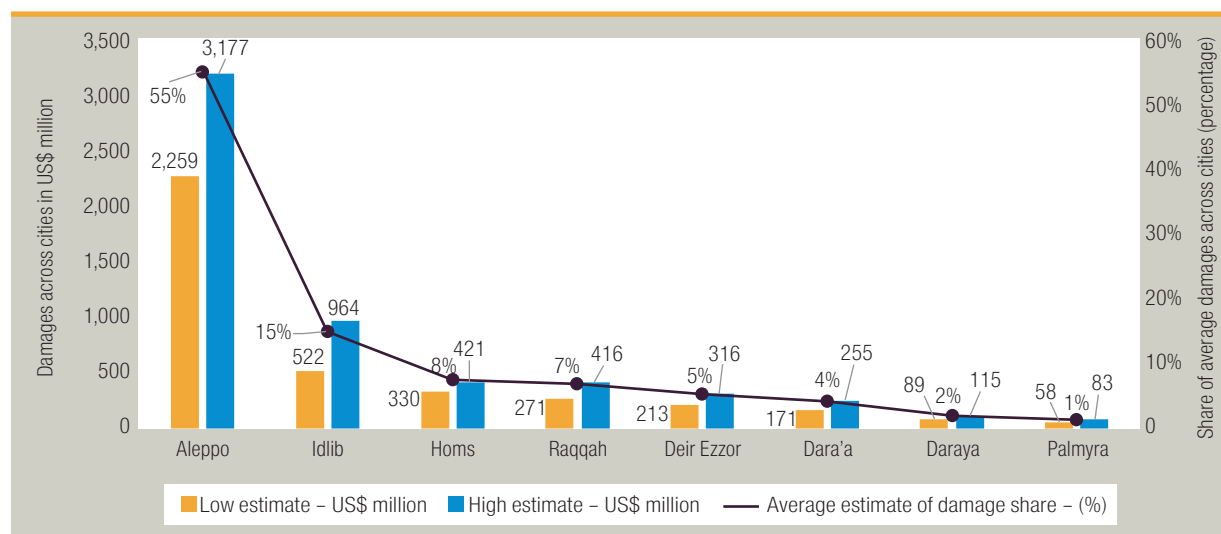
Within the Physical Infrastructure sectors, the Agrifood Value Chains were by far the most heavily affected (50 percent of total physical infrastructure

⁴⁰ Pre-crisis unit cost was adopted as part of the cost calculation methodology, since only damages were assessed in this report. This is the standard practice for estimating damages, as the methodology for damage estimation is backward looking.

⁴¹ For the Transport sector, however, destroyed assets were costed at 60 percent instead of 100 percent, in line with prior damage assessments.

⁴² An exception was the Housing and Environment sectors, which relied on a fixed cost.

FIGURE 24 • More than Half of the Damage in Assessed Cities Was in Aleppo^a (Million US\$)



Source: World Bank 2022 Syria Joint Damage Assessment of Selected Cities in Syria.
^a The graph does not display all cities covered in this assessment.

damage), largely related to irrigation systems, followed by Transport (22 percent of total physical infrastructure damage). **Within the Social sectors**, Housing incurred the greatest damage (86 percent), followed by Health, at 13 percent of total social sector damage. **Under the Cross-Cutting sectors**, Environment was the most heavily affected (97 percent of total Cross-Cutting sector damage, or \$168 million to \$269 million), followed by Public Institutions⁴³ (3 percent of total Cross-Cutting sector damage or \$7.0 million to \$8.5 million).⁴⁴

The city analysis reveals that Aleppo bore the brunt of the damage, followed by Idlib, Homs, and Ar-Raqqah (Figure 24). The high damage estimates for Syria’s largest city, Aleppo, which experienced prolonged conflict due to being a key base for several opposition factions, stem largely from the Housing, Electricity, Health, and Transport sectors (Figure 24). Damage in Idlib was largely in the Electricity and Housing sectors. In Homs, the Housing and Health sectors accounted for most of the damage. Finally, in Ar-Raqqah, damage to the Housing, Water, and Sanitation sectors accounted for much of the overall damage.

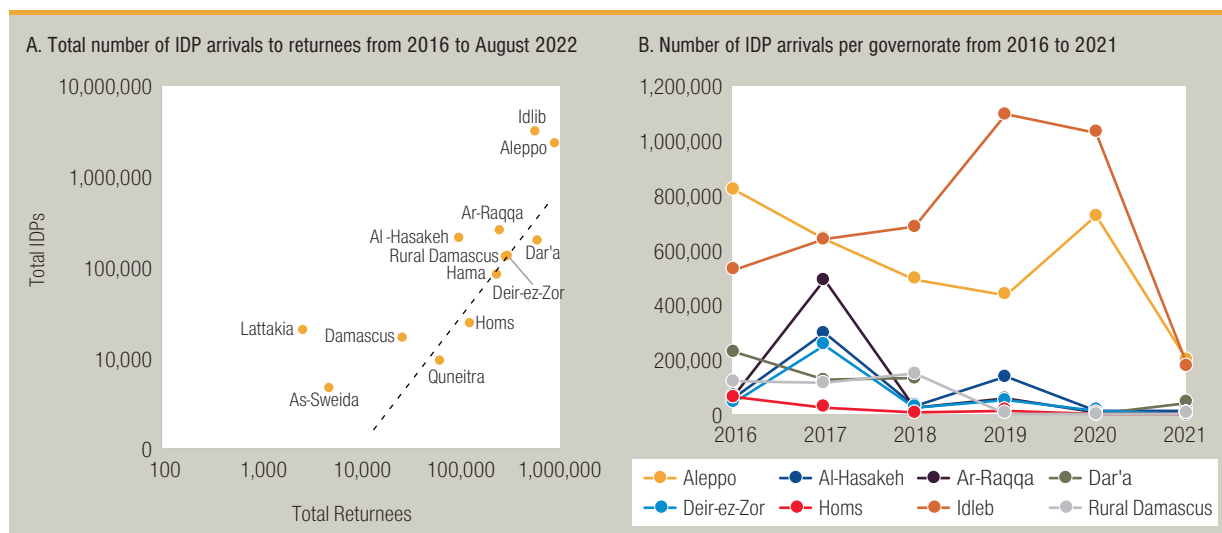
The conflict has displaced millions and continues to do so, with most IDPs losing their livelihoods. The closing of borders with Jordan

and Turkey made it increasingly difficult for IDPs to seek asylum abroad, resulting in protracted internal displacement. Many IDPs live in highly vulnerable conditions and are forced to rely on already scarce public services. Except for Ar-Raqqah, Deir-ez-Zor, and Al Hasakah, which lost 53, 28, and 27 percent of their populations, respectively, during the conflict, other governorates witnessed a significant influx of IDPs since 2011. Idlib, for example, known as the last opposition-controlled area in Syria, has doubled its population to over 2.7 million, with IDPs comprising almost two-thirds of its population in 2021 (Figure 25.A). Many camps and informal settlements remain overcrowded, mostly in the Idlib and Aleppo governorates. With the conflict abating and amid slightly improved security conditions, the northeast-

⁴³ The Public Institutions sector covers a wide range of government facilities including national, municipal, and provincial administrative buildings, courthouses, prisons, fire stations, police stations, vehicle registration offices, civil defense, police traffic offices, post offices, real estate registration offices, and other offices and buildings.

⁴⁴ It is important to note that the damage estimates are not conclusive or representative of the entire sector. The scope of each sector’s assessment is defined in its chapter. Given data limitations, some sectors had a wider coverage than others.

FIGURE 25 • IDPs Continue to Greatly Outnumber Returnees in Syria



Source: UN Office for the Coordinate of Humanitarian Affairs (2022), IDP movements and IDP spontaneous return movements. Data available at <https://data.humdata.org/dataset/syrian-arab-republic-idp-movements-and-idp-spontaneous-return-movements-data>.

ern regions registered a drop in IDP arrivals in 2021 compared to 2020 (Figure 25.B).

Finally, it should be noted that data fragmentation, a lack of baseline information, and issues with the accuracy of findings were among the challenges encountered while conducting this assessment. Fragmentation across sectors, time, and countries makes it hard to compare data and corroborate findings from multiple data sources. In addition, confidentiality issues and a reluctance to share data due to security concerns also lead to fragmentation and gaps in information. Furthermore, pre-conflict baseline information at the city level was

not available for each sector or city. This DA addresses this by collecting data across various sources to formulate a baseline for each sector against which more recent damage data may be compared. Finally, given the dynamic situation of the ongoing conflict and the frequency and rapidity with which damage occurs, data may not remain accurate for long. However, such assessments are useful to understand the nature and extent of impacts and the broad enabling conditions for the return of displaced populations. This can inform in-depth assessments and help craft strategies and roadmaps for coordinated interventions in the future.



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