Public Disclosure Authorized
Public Disclosure Authorized
Public Disclosure Authorized
Public Disclosure Authorized

Gulf Economic Update

Navigating the Water Challenge in the GCC: Paths to Sustainable Solution

December 2024

AUTHORS

Muhammad Khudadad Chattha
Hoda Youssef
Olena Ftomova
Ashwaq Natiq Maseeh
Xinyue Wang
Željko Bogetić
Dominik Naeher
Christian Borja-Vega
Adnan Ghosheh

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

© 2024 International Bank for Reconstruction and Development/The World Bank

1818 H Street NW

Washington DC 20433

Telephone: 202-473-1000

Internet: www.worldbank.org

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

Cover photos courtesy of:
amalia-peigneux-iQ7UkufQv6E-unsplash.jpg

Further permission required for reuse.
Publication design and layout by Muhammad Kamal.

Acronyms

CCS	Carbon Capture and Storage	**MENA**	Middle East and North Africa
CIT	Corporate Income Tax	**NCSI**	National Centre for Statistics and Information
CPI	Consumer Price Index	**NPLs**	Non-Performing Loans
FDI	Foreign Direct Investment	**OECD**	Organization for Economic Co-operation and Development
FBP	Fiscal Balance Program	**OMN**	Sultanate of Oman
FED	Federal Reserve Board	**OPEC**	Organization of the Petroleum Exporting Countries
FGF	Future Generations Fund	**PIF**	Public Investment Fund
FLFPR	Female Labor Force Participation Rate	**PMI**	Purchasing Managers' Index
GBI	Gulf Bridge International	**QIA**	Qatar Investment Authority
GCC	Gulf Cooperation Council	**QNBN**	Qatar National Broadband Network
GDP	Gross Domestic Product	**QTR**	State of Qatar
GRE	Government-Related Entity	**SPPC**	Saudi Power Procurement Company
ILO	International Labor Organization	**SWFs**	Sovereign Wealth Funds
IMF	International Monetary Fund	**UAE**	United Arab Emirates
KSA	Kingdom of Saudi Arabia	**UNCTAD**	United Nations Conference on Trade and Development
KUNA	Kuwait News Agency	**VAT**	Value-Added Tax
LNG	Liquefied Natural Gas		

Preface

The Gulf Economic Update (GEU) is the product of the Economic Policy unit for Middle East and North Africa at the World Bank Group. It provides an update on key economic developments and policies in the Gulf Cooperation Council (GCC) countries over the past six months, places them in a longer-term and global context and assesses the implications of these developments and other changes in policy on the outlook for the GCC. Its coverage ranges from the macroeconomy to financial markets to indicators of human welfare and development. It is intended for a wide audience, including policymakers, business leaders, financial market participants, and the community of analysts and professionals engaged in the GCC.

The main authors of this edition are Muhammad Khudadad Chattha (TTL), Hoda Youssef, Olena Ftomova, Ashwaq Natiq Maseeh, Xinyue Wang, Željko Bogetić, Dominik Naeher, Christian Borja-Vega and Adnan Ghosheh. The Recent Developments and Outlook chapters were prepared by Muhammad Khudadad Chattha, Hoda Youssef, Olena Ftomova, Ashwaq Natiq Maseeh and Xinyue Wang. The Spotlight Section was prepared by Željko Bogetić and Dominik Naeher, based on their paper "Is Escaping Fiscal Procyclicality Trap Possible? New Evidence from MENA," World Bank Policy Research Paper Series, 2024 (forthcoming). Box 3 was prepared under the guidance of Zeljko Bogetic by Luan Zhao, Joanne Matossian, and Weijian Li, based on the updated data from World Bank, 2024, "Dire Strait: The Far-Reaching Impact of the Red Sea Shipping Crisis". The Special Focus was led by Christian Borja-Vega and Adnan Ghosheh with contributions from various colleagues: Fernando Miralles-Willhelm, George Joseph, Rita Cestti, Pavel Luengas, Vera Kehayova, Qiao Wang, Yi Jong Roo and Patrick Kabanda. The design and typesetting of the report was done by Muhammad Kamal and Mikael Jonathan Bima Nainggolan. The team benefitted from administrative support from Ghadi Bint Abdulaziz Bin Faisal Al Saud. The Arabic translation of the executive summary was done by Mirna Tabet.

The GEU was completed under the guidance of Safaa Tayeb El Kogali (Country Director) and Eric Le Borgne (Practice Manager). The Special Focus was developed under guidance from Michael Haney (Practice Manager), Yogita Mumssen (Practice Manager) and Rafeef Abdelrazek (Program Leader).

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

For questions and comments on the content of this publication, please contact Muhammad Khudadad Chattha (mchattha@worldbank.org). For media communication, please contact Ashraf Al-Saeed (aalsaeed@worldbank.org), and Saleh Alobaidi (salobaidi@worldbank.org). To be included on an email distribution list for this or other related publications, please contact Mariem Sghaier (msghaier@worldbank.org). For information about the World Bank and its activities in the GCC, including e-copies of this publication, please visit (www.worldbank.org/en/country/gcc).

Table of contents

Foreword V
Executive Summary 01
Recent Developments 10
Spotlight Section 21
Outlook and Risks 25
Special Focus 40
References 78
Annex 1: GCC Summary Statistics Table 85
Annex 2: Country Summary Tables 85

Table of Figures, Tables & Boxes

Figure 1: The GCC region is experiencing a deceleration in growth during 2024 12
Figure 2: ... mainly due to a contraction in the oil sector, while non-oil sector remains resilient 12
Figure 3: Growth recovered for several economies over H1 12
Figure 4: ... however the PMI survey, an indication of economic trends in private sector manufacturing and service sectors, is on a slightly declining trend 12
Figure 5: Oil sector contractions affected several countries in the region... 13
Figure 6: ...while non-oil sector growth across the region remains stable and resilient 13
Figure 7: Inflation across GCC remains low and stable with some recent volatility in Oman and Qatar 14
Figure 8: GCC Banks cut rates in 2024, following the U.S. Fed rate cut to maintain currency peg with US 14
Figure 9: The banking sector across the GCC remains generally resilient, but NPLs in the UAE are on the higher side 14
Figure 10: Fiscal balances vary across countries, influenced by a combination of increased government spending and fluctuating oil revenues 16
Figure 11: Debt levels broadly stayed stable and below MENA average in most GCC countries 16
Figure 12: Current account surplus narrowed in H1 2024 with declining oil receipts 17
Figure 13: Meanwhile international reserves remain at robust levels, bolstering resilience against external shocks. 17
Figure 14: Share of nationals and non-nationals of total private sector employment, percent 19
Figure 15: Fiscal Policy Cyclicality in GCC Countries and the World, 2000-2022 23
Figure 16: Cyclicality of Fiscal Policy Variables in GCC Countries, 2000-2011 vs. 2012-2022 23
Figure 17: Oil prices are projected to decline in the absence of major economic shocks 26
Figure 18: GDP growth projected to rebound, tracking oil sector developments 27
Figure 19: The increase in projected growth driven primarily by exports and consumption 27
Figure 20: Economic growth is expected to rebound in most GCC countries, helped by increase oil production and continued strong non-oil growth 29
Figure 21: GCC countries' inflation projected to remain contained at relatively low levels 30
Figure 22: GCC banks' credit growth is expected to be stimulated by lower interest rates. 30
Figure 23: The GCC fiscal surplus is projected to turn into a deficit in 2024, and to remain on deficit in the medium term 32
Figure 24: There is significant divergence in individual countries' positions 32
Figure 25: The overall debt-to-GDP ratio projected to increase, but there is significant regional variation 33
Figure 26: Large fiscal buffers through the regional SWFs expected to insulate economy from external shocks 33

Figure 27: Current balance surplus is expected to narrow before expanding in the medium term 34
Figure 28: ...tracking the developments in oil market. 34
Figure 29: A-D. The Red Sea crisis forced many vessels to divert from their original routes, straining the supply chains of GCC countries and causing a decline in maritime shipping across the region 36
Figure 30: China sources nearly 30 percent of its crude oil imports from five of the GCC countries in 2023 38
Figure 31: The U.S. economy has shown resilience in 2024, with higher contributions to global growth 38
Figure 32: Projected exposure to water stress by 2050 42
Figure 33: Temperature increases of GCC cities and global and northern hemisphere averages 1979-2019 43
Figure 34: Water withdrawals by economic sector, MENA and GCC countries 46
Figure 35: Agricultural production (Kg/m3) for GCC and MENA region 46
Figure 36: Adaptation measures linked to water, select MENA and GCC countries 47
Figure 37: Water Footprint in GCC 48
Figure 38: Composition of Water Footprint GCC and Non-GCC MENA Countries 49
Figure 39: Trends in Water Footprint per capita, GCC and Non-GCC MENA countries 50
Figure 40: Efficiency in Water Use for Industrial Production, GCC and Non-GCC MENA Countries 51
Figure 41: Efficiency in Water Use for Agricultural Production, GCC and Non-GCC MENA Countries 52
Figure 42: Decomposition of Changes in Water Use for Agricultural Production, GCC and Non-GCC MENA Countries 53
Figure 43: Water productivity (US$/cubic meter for GCC and high-income countries, 2022 54
Figure 44: Oman's water security performance indicators 57
Figure 45: Qatar's water security performance indicators 59
Figure 46: Saudi Arabia's water security performance indicators 61
Figure 47: UAE water security performance indicators 63
Figure 48: Benchmarks of Environmental Performance Index (EPI) of Water Quality 64
Figure 49: Exposure to drought risk between all regions and GCC countries 65
Figure 50: Ratio of productivity and water use efficiency ($ / cubic meter) 65
Figure 51: Selected indicators of water resources of GCC countries compared to Asian countries 66
Figure 52: GCC countries and worldwide estimates of water and sanitation services in health care facilities 67
Figure 53: Rates of public sector execution 69
Figure 54: Projected total water withdrawals by sector and by source across water resources management scenarios 72
Figure 55: Implications of reduced demand on agricultural revenue losses and needed investments in electricity 75

Box 1: Labor market reforms to boost employment of nationals in the private sector in GCC 19
Box 2: Tax Revenue Mobilization Efforts in the GCC – Progress to Date 31
Box 3: The Impact of the Red Sea Shipping Crisis on the Gulf States 35
Box 4: Assessing Water Security Impacts on Poverty and Inequality 41
Box 5: Energy Consumption and Innovation in Saudi Arabia's Water Sector 70

Table 1: Irrigation upgrade and expansion needs for sustainable water use and storage in agriculture 43
Table 2: Water Resources in GCC countries 44
Table 3: Comparison of Water Expenditures with other development sectors by region 68
Table 4: Potential application of Nature-based Solutions towards water security and climate adaptation in the water sector 73

Foreword

The Gulf Cooperation Council (GCC) countries— Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the UAE—have made significant strides in diversifying their economies, investing in, and building up their digital and green economies. At the same time, they have shown remarkable resilience in the face of global disruptions, including fluctuations in energy markets and the ongoing effects of geopolitical tensions.

The Gulf region has long been central to global energy markets, with its economies historically reliant on oil and gas. While hydrocarbons remain vital, the region is proactively embracing diversification to foster innovation and build sustainable industries. These forward-thinking efforts are reshaping the socioeconomic landscape, ensuring long-term resilience, and positioning the Gulf states for a future beyond fossil fuels.

This is an evolving but unfinished agenda. As the region navigates the transition away from oil dependency, challenges remain, requiring continued attention, collaboration, and adaptation to changing global trends. At the same time, geopolitical shifts and global economic uncertainties demand careful policy formulation and timely decision-making to ensure long-term stability.

In the December 2024 edition of the Gulf Economic Update, we reflect on the region's recent economic performance and discuss the region's economic outlook in the medium term. The report highlights key trends, challenges, and opportunities that are shaping its future.

This edition of the Gulf Economic Update takes a special focus on one of the region's most pressing challenges—water scarcity. As a largely arid region, the Gulf faces significant challenges in ensuring a sustainable water supply to meet the needs of its rapidly growing populations and industrial sectors. The report highlights the key challenges within the water sector, documenting the region's ongoing efforts to address water scarcity through innovative solutions such as desalination and demand management strategies. It also explores the way forward, examining how policy reforms can contribute to securing water resources for the future and promote long-term environmental sustainability.

I am proud of the role the World Bank partnership in the GCC plays in supporting the economic development of this region. Through our research and analytical work, policy dialogue, and capacity building with key stakeholders, we aim to contribute valuable insights that help shape informed decisions and foster sustainable development.

I invite you to explore the insights in this report and join us in our continued commitment to understanding and driving positive change in the Gulf economies.

Safaa El Tayeb El-Kogali
Country Director
Gulf Cooperation Council Countries

TOYOTA

Chapter E.S. Page 01 – 05

Executive Summary

Economic growth in the GCC countries remains heavily influenced by global energy markets, but the impact is mitigated by robust non-oil growth reflecting the advancement of diversification efforts. In 2024, GCC economies continue to experience a contraction in the oil sector due to OPEC+ production cut decisions to stabilize global energy prices. Additionally, **Saudi Arabia, UAE, Kuwait**, and **Oman** had agreed to extend their additional voluntary output cuts until the end of November. Meanwhile, robust growth in non-oil sectors is mitigating the impact, reflecting the region's diversification efforts. In the first half of 2024 (H1-2024), the region's overall GDP growth shows a large contraction of 7.5 percent in oil-GDP while non-oil GDP remains resilient with a 3.8 percent growth. Going forward, the GCC economy is expected to grow by 1.6 percent in 2024, before accelerating to an average of 4.2 percent over 2025-2026. This reflects the impact of weak oil GDP in 2024 - estimated to contract by 2 percent – before the expected rolling back of crude production cuts starting December 2024 onward. Non-oil GDP is estimated to grow by 3.7 percent in 2024 and is expected to remain robust in the following two years - albeit at slower rates as lower oil prices may prompt fiscal consolidation measures in most of the Gulf.

Driven by ambitious reform agendas, growth in the non-oil sectors reflect the advancement of economic diversification efforts in many of the GCC countries, albeit at different paces. The **UAE** continues to lead in diversification, with accelerated growth in financial services, logistics, and transport, underscoring the success of service-oriented diversification strategy. In **Saudi Arabia**, the implementation

of Vision 2030 led to substantial investments in tourism and renewable energy and a strong performance of the retail and hospitality sectors. **Kuwait's** non-oil economy is driven by gains in Al-Zour refining, in addition to other services including real estate. In **Oman**, agriculture, refined petroleum products, manufacturing, and transport are the main drivers of non-oil growth, while **Bahrain's** non-oil economy is largely supported by growth in financial and insurance services, manufacturing and construction. **Qatar**'s non-hydrocarbon sector grew at a more moderate pace than the rest of the region, bolstered by a notable rise in sports events-related tourism, and advancements in the IT sector, aiming at positioning the country as a leading regional and global digital hub.

Headline inflation in the GCC remains low and stable, but significant inflationary pressures are evident in the housing sector. Inflation in the region remains very moderate compared to global peers, estimated to average 2.1 percent in 2024. This is attributed to several factors including tighter monetary policies, generous subsidies, caps on fuel prices, declining global food prices, and the stabilizing effect of the currency peg to the U.S. dollar. In **Saudi Arabia** and the **UAE**, however, upward pressures on housing prices pushed inflation rates up. Going forward, further easing in key policy rates in the United States is likely to push GCC countries to slash their interest rates in response. In 2025, a combination of interest rate cuts, and stronger economic growth may exert upward pressure on prices from stimulated demand, but the same factors mentioned above are expected to avert any significant rebound in inflation.

Fiscal conditions across the GCC reflected a combination of increased government spending and declined oil revenues, with a varying impact across countries. **Saudi Arabia** and **Kuwait** are facing rising pressures and larger fiscal deficits. **Bahrain** also faces considerable fiscal challenges, but these have pushed the country to pursue fiscal consolidation efforts notably through enhanced non-oil revenue generation. **Qatar's** fiscal surplus is shrinking due to a drop in oil and gas revenues. In this regard, **Oman's** continued focus on fiscal consolidation has helped stabilize its fiscal position and maintain a fiscal surplus, although a narrowing one compared to the previous year due to declining gas receipts. On the brighter side, the **UAE** is maintaining stronger position, supported by a large reduction in government spending and the introduction of corporate income taxation, which diversified revenue sources. In the medium term, GCC Fiscal balances are expected remain in deficit in 2025-2026 (of around 0.2 percent of GDP) as the extension of OPEC+ oil production cuts through the end of 2025, coupled with relatively low oil prices and higher expenditures across the region, will have adverse effects on the fiscal accounts.

Debt dynamics on the GCC countries, showed diverging trends across countries. **Oman** made significant progress, reducing its public debt by close to 3 percentage points of GDP within a year time frame, demonstrating its commitment to fiscal discipline. **Bahrain**'s debt situation, however, remains challenging with its public debt reaching around 123 percent of GDP in 2023 and expected to stay above 100 percent through 2024-2026.

GCC countries with strong diversified economies are avoiding risks to their external positions from declining commodity revenues and rising imports, supported by strong foreign reserves. The **UAE, Oman, Bahrain**, and **Qatar** maintained or strengthened their external positions. In the **UAE,** the current accounts surplus continues to be supported by rising non-oil exports, in turn facilitated by free trade agreements, while **Oman and Bahrain's** current account surplus is still underpinned by growth in hydrocarbon exports. **Qatar's** external position strengthened further, with the larger current account surplus owing to robust services export growth, driven by the tourism sector. Among the six GCC countries**,** **Saudi Arabia** and **Kuwait** are experiencing large pressures on their current accounts, with a narrowing surplus in 2024. In the medium term, the current account surplus of GCC is expected to further narrow to 7.1 percent of GDP in 2024, mainly reflecting lower energy exports. In 2025-2026, strong performance of service exports across most GCC will provide support to the external sector, widening the external balance surplus to 8 percent of GDP.

Foreign Direct Investment (FDI) trends in the GCC region present a mixed picture. The **UAE** continues to stand out as a key destination, attracting substantial investments in sectors

such as manufacturing, tourism, and finance and helped by key implemented reforms to streamline regulatory processes, ease foreign ownership restrictions, and introduce attractive incentives for global investors. In contrast, **Saudi Arabia's** FDI inflows remain largely stagnant, highlighting challenges in sustaining investor confidence despite the ambitious Vision 2030 reforms aimed at streamlining regulations and fostering economic transformation.

International reserves remained at adequate levels, providing the region with substantial buffers to manage economic shocks. In 2023, international reserves remained strong across most nations, with the **UAE** achieving substantial growth from strong FDI inflows. Meanwhile, **Saudi Arabia** and **Kuwait** faced declines in reserves due to falling oil exports, albeit from comfortable levels. This accumulation of foreign reserves strengthens external stability and serves as a crucial buffer against global financial volatility.

Labor markets in the GCC region experienced moderate employment growth, though structural challenges persist around gender imbalances and youth unemployment. While many economies have successfully reduced overall unemployment rates, the pace of job creation varies, and participation rates are not uniformly increasing, signaling that more targeted policy efforts are required. Women's participation in the workforce remains a central challenge, despite the previously achieved progress. On the employment side, the **UAE, Oman** and **Bahrain** continue to see strong employment growth, bolstered by the country's adoption of gender balance strategies. In **Saudi Arabia**, there was a decline in the unemployment rate, signaling a robust labor market. **Kuwait** sees a rise in private sector employment of non-Kuwaitis, while nationals remain largely employed in the public sector. In **Qatar**, labor market stability persists with a low unemployment rate, though a slight rise in unemployment is expected in 2024, primarily among women, exacerbating existing gender disparities. Youth unemployment continues to outpace the broader labor market, suggesting that labor market reforms and inclusion strategies will need to be intensified to sustain and broaden economic gains.

The developments in GCC economies highlight the importance of countercyclical fiscal policy in stabilizing the economy. By countering the business cycle, such policies to reduce the economy's vulnerability to shocks, while procyclical fiscal policy can exacerbate economic fluctuations. Over the past two decades, GCC countries generally adhered to countercyclical fiscal policies, with government expenditures being countercyclical in **Oman**, **Saudi Arabia**, **Kuwait**, **UAE**, and **Bahrain**, but slightly procyclical in **Qatar**. Conversely, government revenues were procyclical in all GCC countries, influenced by volatile oil and gas revenues. Trends also vary over time: while **Qatar**, **Kuwait**, and **Oman** moved towards stronger countercyclicality, the **UAE** and **Saudi Arabia** moved away from it. **Bahrain** showed slight improvement in revenue cyclicality but less countercyclical expenditure. Internationally, GCC countries perform relatively well in achieving countercyclicality compared to other MENA countries but lag behind other high-income countries.

Special Focus:
Navigating the Water Challenge in GCC countries

The GCC countries face a complex and urgent set of challenges in managing their water resources. These challenges are deeply intertwined with their arid climate, rapid population growth, economic structures, and dependence on water-intensive sectors. Below is a summary of the special focus chapter, presenting a coherent narrative about the GCC's water sector and its critical role in shaping the region's economic and environmental future.

Economic Significance of Water Security in GCC countries

Water-dependent sectors contribute significantly to GCC economies. For instance, 51–58 percent of gross value added and over 90 percent of export earnings in some GCC states are tied to water-intensive industries. However, the unsustainable use of water resources creates vulnerabilities that could undermine economic diversification efforts, particularly as the GCC nations seek to reduce their reliance on oil revenues.

The investments in the water sector to meet the challenges of the next 50 years can help diversity the GCC economies. Economic diversification is identified as essential for long-term growth, particularly in regions heavily dependent on sectors such as agriculture or resource extraction. Water plays a vital role here by supporting diverse industries. Investments in water-related projects not only secure access to a critical resource but also open avenues for economic transformation. Securing financing under tight capitals, limits investments in competing priorities. Innovative public-private partnerships, concessional loans, and development aid are suggested pathways to bridge the gap.

Water security underpins productivity across sectors, particularly in agriculture, which contributes to employment generation. Addressing water scarcity and quality issues is critical for ensuring economic resilience and mitigating risks to food systems, public health, and broader economic stability. To tackle the dual challenges of economic pressures and water security, governments must integrate water resource management into macroeconomic planning. Policies fostering private sector engagement in the water sector can alleviate fiscal burdens while accelerating the development of necessary infrastructure. Strengthening institutional frameworks and governance is pivotal for effective water resource management and investment.

Water is also central to achieving sustainable development goals (SDGs) and is intrinsically linked to key macroeconomic variables like GDP growth, employment, and industrial productivity. Water must satisfy the various needs of people, economic sectors and the environment. The risks of water insecurity can hamper socioeconomic progress and hinder industrial activities or agricultural outputs, further stressing the aggregate economy. Strategic investment in water efficiency and water saving technologies serves as a cornerstone for economic diversification and resilience-building.

Water Scarcity and Dependency

The GCC region is one of the most water-scarce in the world, with renewable freshwater availability often below 100 cubic meters per capita annually—far below the global scarcity threshold. This severe scarcity necessitates heavy reliance on non-renewable groundwater and energy-intensive desalination. Agriculture, a key driver of water use, consumes 70–80 percent of the water supply but contributes minimally to GDP, highlighting inefficiencies in water allocation across the productive sectors of the economy.

Water to Reduce Climate and Environmental Pressures

Climate change exacerbates water stress through more frequent droughts and rising temperatures, increasing evapotranspiration and further straining fragile ecosystems. Groundwater depletion and salinization, driven by over-abstraction for agriculture and urban uses, threaten long-term water security. Conservation of biodiversity and wetlands re-

mains insufficient, with poor performance on indicators of protected aquatic ecosystems.

Fiscal and Governance Constraints

Heavy subsidies on water tariffs could generate distortions in water values and discourage efficient water use. Fiscal pressures tied to volatile oil revenues complicate the ability to sustain high levels of public investment in water infrastructure. Governance inefficiencies, such as fragmented policies and weak regulatory enforcement, limit the effectiveness of water resource management.

GCC economies face fiscal constraints and pressures as they try to balance urgent public investments with limited resources. Water, as a fundamental necessity, requires significant investment to support both social needs and economic growth. Debt dynamics play a central role, as GCC countries often fund water infrastructure while maintaining fiscal discipline. Rising debt levels requires careful prioritization and innovative financing mechanisms. The GEU with special focus on "Water" underscores the urgent need for coordinated action across public and private sectors to address water challenges, reduce fiscal pressures, and unlock economic potential.

Infrastructure and Technological Opportunities

While GCC countries lead globally in desalination, they face high costs, energy demands, and environmental trade-offs. Treated wastewater remains underutilized, with only about 35 percent reused, leaving significant room for improvement. Investment inefficiencies and operational challenges, such as high non-revenue water losses, further constrain the potential of the sector.

Finally, there are five policy pathways of the water sector promoted in the GEU based on evidence and benchmarks of GCC countries:

- **Promoting Water Efficiency: Reforming pricing policies and improving water use in agriculture and industry.**
- **Expanding Non-Conventional Sources: Scaling up wastewater reuse and adopting renewable energy-powered desalination technologies.**
- **Enhancing Governance: Strengthening regulatory frameworks and fostering regional cooperation on shared water challenges.**
- **Investing in Resilience: Building infrastructure to mitigate climate risks and protect ecosystems, while integrating nature-based solutions.**
- **Fostering Public-Private Partnerships: Leveraging private investment and expertise to address funding gaps and improve service delivery.**

A pathway towards water security

Managing water as a strategic resource in GCC countries requires policy shifts, particularly in agriculture, to address severe water stress while balancing economic and employment impacts. Investments in water-saving technologies and advanced irrigation can optimize water use, while structural reforms, such as focusing on less water-intensive crops and relying on global food imports, can lower agricultural water footprints without compromising food security. Redirecting investments to water-efficient sectors like renewable energy, logistics, and technology can create high-value jobs, offsetting employment losses from agricultural reforms. However, non-economic factors such as food security and national productivity may drive governments to maintain export-oriented agriculture, despite its unsustainable water use and potential geopolitical tensions.

ملخص تنفيذي

لا يزال النمو الاقتصادي في دول مجلس التعاون الخليجي شديد التأثر بأسواق الطاقة العالمية، غير أن حدّة التأثر قد تراجعت بفضل النمو القوي للقطاعات غير النفطية، ممايعكس استمرار جهود التنويع الاقتصادي. في عام ٢٠٢٤، لا تزال اقتصادات دول مجلس التعاون الخليجي تشهد حالة انكماش في قطاع النفط بسبب قرارات منظمة أوبك+ بخفض الإنتاج لتثبيت أسعار الطاقة على الصعيد العالمي. بالإضافة إلى ذلك، كانت كل من المملكة العربية السعودية والإمارات العربية المتحدة والكويت وسلطنة عُمان قد وافقت على تمديد فترة إضافية للتخفيض الطوعي للإنتاج حتى نهاية تشرين الثاني/نوفمبر. في الوقت نفسه، خفف النمو القوي للقطاعات غير النفطية من حدّة التأثير، مما يعكس جهود التنويع الاقتصادي الجارية في المنطقة. ففي النصف الأول من عام ٢٠٢٤، يُظهر نمو الناتج المحلي الإجمالي الكلي للمنطقة انكماشاً كبيراً بنسبة ٧.٥ في المائة في الناتج المحلي الإجمالي النفطي، بينما ظلّ الناتج المحلي الإجمالي غير النفطي صامداً بنسبة نمو تبلغ ٣.٨ في المائة. ومن المتوقع أن ينمو اقتصاد دول مجلس التعاون الخليجي بنسبة ١.٦ في المائة في عام ٢٠٢٤، قبل أن يتسارع ويسجل متوسط نمو بنسبة ٤.٢ في المائة خلال الفترة الممتدة بين ٢٠٢٥ ٢٠٢٦. ويعكس هذا المسار ضعف الناتج المحلي الإجمالي النفطي في عام ٢٠٢٤ - والذي من المتوقع أن ينكمش بنسبة ٢ في المائة - قبل أن يعود إنتاج النفط الخام اعتباراً من كانون الأول/ديسمبر ٢٠٢٤. ومن المتوقع أن ينمو الناتج المحلي الإجمالي غير النفطي بنسبة ٣.٧ في المائة في عام ٢٠٢٤ ويظل قوياً في العامين التاليين - وإن كان بمعدلات أبطأ، حيث قد تدفع أسعار النفط المنخفضة إلى اتخاذ تدابير لضبط الأوضاع المالية في معظم دول الخليج.

يعكس النمو المتسارع في القطاعات غير النفطية تقدم جهود التنويع الاقتصادي في العديد من دول مجلس التعاون الخليجي مدفوعةً بأجندات الإصلاح الطموحة، وإن كان بوتيرة مختلفة. ولا تزال دولة الإمارات العربية المتحدة تتصدر جهود التنويع، مع تسارع النمو لديها في مجال الخدمات المالية والخدمات اللوجستية والنقل، مما يؤكد نجاح استراتيجية التنويع الموجهة نحو قطاع الخدمات. وفي المملكة العربية السعودية، أدى تنفيذ رؤية ٢٠٣٠ إلى استثمارات كبيرة في قطاعات السياحة والطاقة المتجددة وإلى تسجيل أداء قوي في قطاعَي تجارة التجزئة والضيافة. ويعتمد الاقتصاد غير النفطي في الكويت على المكاسب المحققة بفضل عمليات التكرير في مصفاة الزور، بالإضافة إلى خدمات أخرى تشمل قطاع العقارات. وفي عُمان، تشكل قطاعات الزراعة والمنتجات النفطية المكررة والتصنيع والنقل المحركات الرئيسية للنمو غير النفطي، في حين يدعم النمو في الخدمات المالية والتأمينية والتصنيع والبناء الاقتصاد غير النفطي في البحرين إلى حدٍّ كبير. وقد نما القطاع غير الهيدروكربوني في قطر بوتيرة أكثر اعتدالاً من بقية دول المنطقة، مدعوماً بارتفاع ملحوظ في السياحة المرتبطة بالفعاليات الرياضية والتقدم في قطاع تكنولوجيا المعلومات، بهدف جعل البلاد مركزاً رقمياً رائداً على الصعيدين الإقليمي والعالمي.

وتظل معدلات التضخم في دول مجلس التعاون الخليجي منخفضةً ومستقرةً، مع وجود ضغوطا تضخمية كبيرة في قطاع الإسكان. لا يزال التضخم في المنطقة معتدلاً للغاية مقارنةً بمناطق أخرى من العالم، حيث يُقدَّر متوسط هذا التضخم بنحو ٢.١ في المائة في عام ٢٠٢٤. ويُعزى هذا الإعتدال إلى عوامل عديدة بما في ذلك تشديد السياسات النقدية أكثر ، ومستويات الدعم السخية، والحدود القصوى المفروضة على أسعار الوقود، وانخفاض أسعار المواد الغذائية العالمية، والاستقرار الناجم عن ربط العملة بالدولار الأمريكي. أما في المملكة العربية السعودية والإمارات العربية المتحدة، فقد دفعت الضغوط التصاعدية على أسعار الإسكان إلى ارتفاع معدلات التضخم. من المرجح أن يدفع التخفيض الإضافي في أسعار الفائدة الرئيسية في الولايات المتحدة الأمريكية دول مجلس التعاون الخليجي إلى خفض أسعار الفائدة لديها بشكل حادّ. وفي عام ٢٠٢٥، قد تؤدي تخفيضات أسعار الفائدة، مقرونةً بنمو اقتصادي أقوى، إلى ضغوط تصاعدية على الأسعار بسبب زيادة الطلب، ولكن من المتوقع أن تساهم العوامل نفسها المذكورة أعلاه في تفادي أي ارتفاع ملحوظ في معدلات التضخم.

يعكس الوضع المالي في جميع دول مجلس التعاون الخليجي مزيجاً من زيادة الإنفاق الحكومي وانخفاض عائدات النفط،

مع تفاوت تأثير ذلك بين البلدان. تواجه كل من المملكة العربية السعودية والكويت ضغوطاً متزايدة وعجزاً مالياً أكبر. كما تواجه البحرين تحديات مالية كبيرة، لكن هذه التحديات دفعت البلاد إلى القيام بجهود لضبط الأوضاع المالية العامة، ولا سيما من خلال تعزيز توليد الإيرادات غير النفطية. وقد تقلص الفائض المالي في قطر بسبب انخفاض عائدات النفط والغاز. أما في لسلطنة عمان، فقد ساعد التركيز المستمر على ضبط الأوضاع المالية العامة في استقرار وضعها المالي والحفاظ على فائض مالي، وإن كان يتقلص مقارنةً بالعام الماضي بسبب انخفاض عائدات الغاز. وعلى الجانب المُشرق، تحافظ الإمارات العربية المتحدة على وضعية مالية قوية بفضل الحدّ الكبير من الإنفاق الحكومي وفرض ضريبة الشركات، مما أدى إلى تنويع مصادر الإيرادات. وفي المدى المتوسط، من المتوقع أن تظل الأرصدة المالية لدول مجلس التعاون الخليجي في حالة عجز في الفترة بين ٢٠٢٥ ٢٠٢٦ (بنحو ٠.٢ في المائة من الناتج المحلي الإجمالي)، حيث سيكون لتمديد فترة تخفيضات إنتاج النفط من قبل منظمة أوبك+ حتى نهاية عام ٢٠٢٥، إلى جانب الانخفاض النسبي في أسعار النفط وارتفاع النفقات في دول المنطقة، آثارا سلبية على الحسابات المالية.

لقد أظهرت ديناميكيات الدين في دول مجلس التعاون الخليجي اتجاهات متباينة بين البلدان. فقد أحرزت عُمان تقدماً كبيراً، وخفضت دينها العام بنحو ٣ نقاط مئوية من الناتج المحلي الإجمالي في غضون عام واحد، مما يدل على التزامها بالانضباط المالي. أما في البحرين فلا يزال وضع الدين يشكل تحدياً، إذ بلغ الدين العام حوالى ١٢٣ في المائة من الناتج المحلي الإجمالي في عام ٢٠٢٣ ومن المتوقع أن يظل أعلى من ١٠٠ في المائة خلال الفترة بين ٢٠٢٤ و٢٠٢٦.

وتتجنب دول مجلس التعاون الخليجي ذات الاقتصادات القوية والمتنوعة المخاطر التي تهدد مراكزها الخارجية نتيجة انخفاض عائدات السلع الأساسية وارتفاع الواردات، وذلك بدعم من الاحتياطيات القوية من العملات الأجنبية. وقد حافظت وعززت كل من الإمارات العربية المتحدة وعُمان والبحرين وقطر على مراكز حساباتها الخارجية. ففي الإمارات العربية المتحدة، لا يزال ارتفاع الصادرات غير النفطية تسهم في تحقيق فائض في الحساب الجاري، مستفيدا من اتفاقيات التجارة الحرة. أما في كل من عُمان والبحرين، لا يزال فائض الحساب الجاري مدعوماً بنمو الصادرات الهيدروكربونية. وتعزز مركز قطر الخارجي بشكل أكبر، إذ سجلت فائض الحساب الجاري الأكبر بفضل النمو القوي في صادرات الخدمات، مدفوعاً بقطاع السياحة. ومن بين دول مجلس التعاون الخليجي الست، تواجه المملكة العربية السعودية والكويت ضغوطاً كبيرة على حساباتهما الجارية، إلى جانب تقلص الفائض في عام ٢٠٢٤. وفي المدى المتوسط، يُتوقع أن يتقلص فائض الحساب الجاري لدول مجلس التعاون الخليجي إلى ٧.١ في المائة من الناتج المحلي الإجمالي في عام ٢٠٢٤، وهو ما يعكس بشكل أساسي انخفاض صادرات الطاقة. وفي الفترة بين العامَين ٢٠٢٥ و٢٠٢٦، سيوفر الأداء القوي لصادرات الخدمات في معظم دول مجلس التعاون الخليجي الدعم للقطاع الخارجي، مما يؤدي إلى توسيع فائض الميزان الخارجي إلى ٨ في المائة من الناتج المحلي الإجمالي.

تتباين تدفقات الاستثمارات الأجنبية المباشرة في منطقة مجلس التعاون الخليجي من دولة إلى أخرى. فما زالت دولة الإمارات العربية المتحدة تتصدر المشهد كوجهة رئيسية تجتذب استثمارات كبيرة في قطاعات مثل التصنيع والسياحة والتمويل، وذلك بمساعدة الإصلاحات الرئيسية المنفذة لتبسيط اللوائح التنظيمية، وتخفيف القيود على الملكية الأجنبية، وتقديم حوافز لاستقطاب المستثمرين العالميين. وفي المقابل، ظلّت تدفقات الاستثمارات الأجنبية المباشرة في المملكة العربية السعودية مستقرة إلى حدٍّ كبير، مما يسلط الضوء على تحديات الحفاظ على ثقة المستثمرين على الرغم من إصلاحات رؤية ٢٠٣٠ الطموحة التي تهدف إلى تبسيط الأنظمة وتعزيز التحول الاقتصادي.

تعتبر الاحتياطيات الدولية عند مستويات مناسبة، مما وفر لدول المنطقة هوامش أمان مهمة لاستيعاب الصدمات الاقتصادية. وفي عام ٢٠٢٣، ظلت الاحتياطيات الدولية قوية في معظم الدول، حيث حققت الإمارات العربية المتحدة نمواً كبيراً نتيجة تدفقات ملحوظة من الاستثمارات الأجنبية المباشرة. وفي المقابل، شهدت كل من المملكة العربية السعودية والكويت تراجعاً في الاحتياطيات بسبب انخفاض صادرات النفط، وإن كان من مستويات مريحة. ويعزز تراكم الإحتياطيات الأجنبية من استقرار الحسابات الخارجية ويشكل حماية أساسية في وجه التقلبات المالية العالمية.

وقد شهدت أسواق العمل في منطقة دول مجلس التعاون الخليجي نمواً معتدلاً في التوظيف، على الرغم من استمرار التحديات الهيكلية المرتبطة باختلال التوازن بين الجنسين وبطالة الشباب. وفي حين نجحت العديد من الاقتصادات في خفض المعدلات الإجمالية للبطالة ، فإن وتيرة استحداث فرص العمل متفاوتة في ما بينها، ومعدلات المشاركة لا تتزايد بشكل موحد، مما يشير إلى الحاجة إلى جهود سياسية أكثر استهدافاً. ولا تزال مشاركة المرأة في القوة العاملة تشكل تحدياً رئيسياً، على الرغم من التقدم الذي تحقق سابقاً. وعلى صعيد التوظيف، يستمر النمو القوي في كل من الإمارات العربية المتحدة وسلطنة عُمان والبحرين مدعوماً باستراتيجيات التوازن بين الجنسين التي عمدت البلدان إلى تبنّيها. وتشهد الكويت ارتفاعاً في توظيف غير الكويتيين في القطاع الخاص، في حين يتم توظيف المواطنين إلى حدٍّ كبير في القطاع العام. وفي قطر، يستمر استقرار سوق العمل الذي سجّل معدل بطالة منخفض، على الرغم من توقع ارتفاع طفيف في البطالة في عام ٢٠٢٤، وخاصةً بين النساء، مما يؤدي إلى تفاقم أوجه التفاوت القائمة بين الجنسين. ولا تزال البطالة بين الشباب تسيطر على سوق العمل ، مما يبيّن الحاجة إلى تكثيف إصلاحات سوق العمل واستراتيجيات الإدماج للحفاظ على المكاسب الاقتصادية وتوسيع نطاقها.

وتسلط التطورات التي تشهدها اقتصادات دول مجلس التعاون الخليجي الضوء على أهمية السياسة المالية المعاكسة للدورة الاقتصادية في تأمين استقرار الاقتصاد. فمن خلال مواجهة الدورة الاقتصادية، تساهم مثل تلك السياسات في الحد من تعرض الاقتصاد للصدمات، في حين يمكن للسياسة المالية المسايرة للدورة الاقتصادية أن تؤدي إلى تفاقم تقلباتها. وعلى مدى العقدين الماضيين، اتبعت دول مجلس التعاون الخليجي بشكل عام سياسات المالية المعاكسة للدورة الاقتصادية، حيث كانت النفقات الحكومية معاكسة للدورة الاقتصادية في **عُمان والمملكة العربية السعودية والكويت والإمارات العربية المتحدة والبحرين**، ولكنها كانت مسايرة للدورة الاقتصادية بشكل طفيف في **قطر**. وفي المقابل، كانت الإيرادات الحكومية معاكسة للدورة الاقتصادية في جميع دول مجلس التعاون الخليجي، متأثرةً بإيرادات النفط والغاز المتقلبة. هذه الاتجاهات اختلفت بمرور الوقت: فبينما اتجهت **قطر والكويت وعُمان** نحو معاكسة أقوى للدورة الاقتصادية، ابتعدت **الإمارات العربية المتحدة والمملكة العربية السعودية** عنها. وأظهرت **البحرين** تحسناً طفيفاً في معاكسة الدورة الاقتصادية على صعيد الإيرادات مقابل إنفاق أقل معاكسة للدورة الاقتصادية. وعلى الصعيد الدولي، يُعتبر أداء دول مجلس التعاون الخليجي جيداً نسبياً في تبني سياسات مالية معاكسة الدورة الاقتصادية مقارنةً بالدول الأخرى في منطقة الشرق الأوسط وشمال أفريقيا، ولكنها لم تلحق بعد بسياسات الدول الأخرى ذات الدخل المرتفع.

تحت المجهر: مواجهة تحديات قضايا المياه في دول مجلس التعاون الخليجي

تواجه دول مجلس التعاون الخليجي مجموعة معقدة وطارئة من التحديات في إدارة مواردها المائية. وتتداخل هذه التحديات بشكل وثيق مع التحديات المتمثلة في مناخها الجاف، ونموّها السكاني السريع، وهياكلها الاقتصادية، واعتمادها على القطاعات كثيفة الاستهلاك للمياه. وفي ما يلي ملخص للفصل المخصص للتركيز على تلك القضية، والذي يقدم سرداً متسقا حول قطاع المياه في دول مجلس التعاون الخليجي ودوره الحاسم في تشكيل المستقبل الاقتصادي والبيئي للمنطقة.

الأهمية الاقتصادية للأمن المائي في دول مجلس التعاون الخليجي

تساهم القطاعات المعتمدة على المياه إسهاماً كبيراً في اقتصادات دول مجلس التعاون الخليجي. فعلى سبيل المثال، يرتبط ما بين ٥١ و٥٨ في المائة من القيمة المضافة الإجمالية وأكثر من ٩٠ في المائة من أرباح التصدير في بعض دول مجلس التعاون الخليجي بالصناعات كثيفة الاستهلاك للمياه. هذا الاستخدام غير المستدام للموارد المائية يشكل نقاط ضعف تهدد بتقوّض جهود التنويع الاقتصادي، خصوصاً في الوقت الذي تسعى فيه دول مجلس التعاون الخليجي إلى تقليل اعتمادها على عائدات النفط.

إن الاستثمار في قطاع المياه لمواجهة لتحديات المرتقبة في السنوات الخمسين المقبلة من شأنه أن يساهم في تنويع اقتصادات دول مجلس التعاون الخليجي. ويُعَدّ التنوع الاقتصادي أمراً ضرورياً لتحقيق النمو على المدى الطويل، وخاصةً في المناطق التي تعتمد بشكل كبيرعلى قطاعات مثل الزراعة أو استخراج الموارد. وتلعب المياه دوراً حيوياً في هذا السياق من خلال دعم الصناعات المتنوعة. ولا تساهم الاستثمارات في المشاريع المتصلة بالمياه في تأمين الوصول إلى مورد حيوي فحسب، بل تفتح أيضاً آفاقاً للتحول الاقتصادي. ويعدّ تأمين التمويل في ظل محدودية رؤوس أموال من العوامل المعرقلة للاستثمار وفقا ل للأولويات المختلفة. وتُعتبر الشراكات المبتكرة بين القطاعين العام والخاص، والقروض الميسرة، والمساعدات الإنمائية من السُبل المقترحة لسد هذه الفجوة.

إن الأمن المائي يدعم الإنتاجية في مختلف القطاعات، وخاصةً في قطاع الزراعة، مما يساهم في توليد فرص العمل. تُعتبر قضايا معالجة ندرة المياه وجودتها أمراً بالغ الأهمية لضمان المرونة الاقتصادية وتخفيف المخاطر التي تهدد النظم الغذائية والصحة العامة والاستقرار الاقتصادي عموماً. ولمعالجة التحديات المزدوجة المتمثلة في الضغوط الاقتصادية والأمن المائي، يتعين على الحكومات دمج إدارة الموارد المائية في التخطيط الاقتصادي الكلي. ومن الممكن أن تساهم السياسات التي تعزز مشاركة القطاع الخاص في قطاع المياه في تخفيف الأعباء المالية مع تسريع تطوير البنية التحتية الضرورية. كما أن تعزيز الأطر المؤسسية والحوكمة أمرٌ محوري لإدارة الموارد المائية والاستثمار فيها بشكل فعال.

كذلك تُعتبر المياه عنصراً أساسياً لتحقيق أهداف التنمية المستدامة، وهي مرتبطة ارتباطاً جوهرياً بمتغيرات الاقتصاد الكلي الرئيسية مثل نمو الناتج المحلي الإجمالي، والعمالة، والإنتاجية الصناعية. لا بدّ من أن تلبي المياه الاحتياجات المختلفة للسكان والقطاعات الاقتصادية والبيئة. ومن الممكن أن تعوق المخاطر المرتبطة بغياب الأمن المائي من التقدم الاجتماعي والاقتصادي بالإضافة إلى الأنشطة الصناعية أو المخرجات الزراعية، الأمر الذي يزيد من الضغوط على الاقتصاد الكلي. ويشكل الاستثمار الاستراتيجي في كفاءة استخدام المياه وتقنيات توفير المياه حجر الزاوية للتنويع الاقتصادي وتعزيز قدرة الاقتصاد على مواجهة الصدمات.

ندرة المياه وفرط الاعتماد عليها

تُعدّ منطقة مجلس التعاون الخليجي واحدة من أكثر مناطق العالم ندرةً في المياه، حيث غالباً ما يكون مستوى توافر المياه العذبة المتجددة دون المائة متر مكعب للفرد سنوياً ــ وهو مستوى أدنى بكثير من الحد الأدنى للندرة عالميا. وتؤدي هذه الندرة الشديدة إلى الاعتماد المفرط على المياه الجوفية غير المتجددة وكذلك على تحلية المياه التي تتطلب قدراً كبيراً من الطاقة. وتستهلك الزراعة، وهي المحرك الرئيسي لاستخدام المياه، ما بين ٧٠-٨٠ في المائة من إمدادات المياه ولكنها تساهم

بشكل ضئيل في الناتج المحلي الإجمالي، وهو ما يسلط الضوء على عدم الكفاءة في تخصيص المياه عبر القطاعات الإنتاجية للاقتصاد.

دور المياه في الحد من الضغوط المناخية والبيئية

يؤدي تغير المناخ إلى تفاقم الضغوط المائية من خلال زيادة وتيرة موجات الجفاف وارتفاع درجات الحرارة، وزيادة التبخر وإجهاد النظم البيئية الهشة. ويهدد استنزاف المياه الجوفية والملوحة الأمن المائي في الأمد البعيد، بسبب الإفراط في استخراج المياه للاستخدامات الزراعية والحضرية.. ويبقى الحفاظ على التنوع البيولوجي والأراضي الرطبة غير كاف، إلى جانب ضعف الأداء بالنسبة إلى مؤشرات النظم البيئية المائية المحمية.

القيود المالية والحوكمة

من شأن الدعم الكبير لسعر استهلاك المياه أن يولد اختلالات في قيمتها ويثني عن الاستخدام الكفء للمياه. كما أن الضغوط المالية المرتبطة بتقلب عائدات النفط تقود من القدرة على الحفاظ على مستويات مناسبة من الاستثمار العام في البنية الأساسية للمياه. كذلك، تحدّ أوجه القصور في مجال الحوكمة، مثل تجزؤ السياسات وضعف إنفاذ الضوابط، من فعالية إدارة موارد المياه.

تواجه اقتصادات دول مجلس التعاون الخليجي قيوداً وضغوطاً مالية في محاولتها تحقيق التوازن بين الاستثمارات العامة العاجلة ومحدودية الموارد. وتتطلب المياه، باعتبارها ضرورة أساسية، استثمارات كبيرة لدعم كل من الاحتياجات الاجتماعية والنمو الاقتصادي. وتلعب ديناميكيات الدين العام دوراً محورياً، حيث غالباً ما تقوم دول مجلس التعاون الخليجي بتمويل البنية الأساسية للمياه مع الحرص على الحفاظ على الانضباط المالي. وتستوجب مستويات الدين العام المتزايدة تحديد الأولويات بعناية واعتماد آليات تمويل مبتكرة. ويؤكد التقرير حول آخر المستجدات الاقتصادية لمنطقة الخليج الذي يتضمن قسماً خاصاً يسلط الضوء على موضوع «المياه» على الحاجة الملحة إلى اتخاذ إجراءات منسقة في القطاعين العام والخاص لمعالجة قضايا المياه، والحد من الضغوط المالية، وإطلاق العنان للإمكانات الاقتصادية.

البنية الأساسية والفرص التكنولوجية

تحتل دول مجلس التعاون الخليجي الصدارة عالميا في مجال تحلية المياه، لكنها تواجه من أجل ذلك تكاليف مرتفعة، وطلب متزايد على الطاقة، واختيارات صعبة فيما خص القضايا البيئية. ولا تزال مياه الصرف الصحي المعالجة غير مستغلة بالكامل، حيث يتم إعادة استخدام حوالى ٣٥ في المائة فقط منها، مما يترك مجالاً كبيراً للتحسين. كما تؤدي عدم كفاءة الاستثمارات والتحديات التشغيلية إلى تقييد إمكانات القطاع بشكل أكبر مثل خسائر الكبيرة المرتبطة بالمياه غير المدرّة للدخلز.

أخيراً، يقدم التقرير خمسة مسارات يمكن تبنيها لسياسيات لقطاع المياه والمبنية على الأدلة والمعايير المرجعية في دول مجلس التعاون الخليجي. وهي:

- **تعزيز كفاءة المياه:** إصلاح سياسات التسعير وتحسين استخدامات المياه في الزراعة والصناعة.
- **توسيع المصادر غير التقليدية للمياه:** توسيع نطاق إعادة استخدام مياه الصرف الصحي وتبني تقنيات تحلية المياه المعتمدة على الطاقة المتجددة.
- **تعزيز الحوكمة:** تعزيز الأطر التنظيمية وتشجيع التعاون الإقليمي بشأن تحديات المياه المشتركة.
- **الاستثمار في القدرة على امتصاص الصدمات:** بناء البنية التحتية الكفيلة بالتخفيف من مخاطر المناخ وحماية النظم البيئية، إلى جانب دمج الحلول القائمة على الطبيعة.
- **تعزيز الشراكات بين القطاعين العام والخاص:** الاستفادة من استثمارات القطاع الخاص والخبرة المتوفرة فيه لمعالجة فجوات التمويل وتحسين الخدمات المقدمة.

نحو توفير الأمن المائي

تتطلب إدارة المياه - باعتبارها مورداً استراتيجياً في دول مجلس التعاون الخليجي - تحولات في السياسات، لا سيما في مجال الزراعة، لمعالجة الضغوط المائية الشديدة إلى جانب موازنة التأثيرات الاقتصادية والتشغيلية. ويمكن للاستثمار في تقنيات توفير المياه والري المتطورة أن تسهم في تحسين استخدام المياه، في حين يمكن للإصلاحات الهيكلية، كالتركيز على المحاصيل الأقل استهلاكاً للمياه والاعتماد على الواردات الغذائية العالمية، أن تخفض من أثر الزراعة على الموارد المائية من دون المساس بالأمن الغذائي. ويمكن أن يؤدي إعادة توجيه الاستثمارات إلى القطاعات الموفرة للمياه مثل الطاقة المتجددة والخدمات اللوجستية والتكنولوجيا إلى خلق فرص عمل عالية القيمة، وتعويض خسائر العمالة الناجمة عن الإصلاحات الزراعية. غير أن الاعتبارات الأخرى كتلك الخاصة بالأمن الغذائي والإنتاج الوطني قد تدفع الحكومات إلى الحفاظ على الزراعة الموجهة للتصدير، على الرغم من استخدامها غير المستدام للمياه والتوترات الجيوسياسية المحتملة.

Chapter 01 Page 10 – 20

Recent Developments

GCC economies face oil sector contractions while non-oil growth remains resilient as diversification efforts progress in most countries.

Economic growth in the GCC countries in 2024 continues to depend on developments in the global energy markets. Reductions in oil output and ongoing volatility in global energy prices have constrained growth for major oil-exporting economies, with overall GCC growth showing a slight decrease of 0.1 percent in H1 2024 and a 7.5 percent contraction in oil GDP (Figure 1). Non-oil sectors have shown resilience with 3.8 percent growth in H1 2024, driven by diversification efforts in the region.

The oil sector across the GCC contracted by 7.5 percent in H1 2024, driven by OPEC+ agreements to reduce output (Figure 2). **Saudi Arabia**, **Kuwait**, **Oman** and **Bahrain** experienced significant oil sector contractions of 8.9, 9.8, 4.0 and 2.1 percent, respectively. **Qatar's** hydrocarbon sector remained stable with a modest growth of 1.4 percent, underpinned by its LNG production expansion, despite disruptions in global gas markets. The **UAE** saw a 4 percent decline in oil production, but this was partially offset by a 14.3 percent rise in natural gas output, reflecting the country's broader focus on energy diversification.[1] Across the region, oil output remains constrained by the OPEC+ quota agreements, limiting fiscal revenues and posing challenges for broader economic growth.

1 The UAE Energy Strategy 2050 targets an energy mix as follows: 44 percent clean energy; 38 percent gas; 12 percent clean coal; and 6 percent nuclear. Source: UAE Energy Strategy 2050.

Non-oil sector growth remained robust, expanding by 3.8 percent in H1 2024, helping to mitigate the impact of oil sector contractions. Several economies also saw growth recover over the past three quarters (Figure 3). High-frequency indicators, such as the PMI index (Figure 4), also confirm non-oil economic expansion through H1 2024 albeit signs of weakness are emerging in the most recent months. Key highlights regarding the non-oil growth in individual countries for 2024 are given below:

Bahrain: Expansion of the non-oil economy by 3.1 percent in H1 2024, with accommodation and food services, and business activities important contributors.

Kuwait: The non-oil sector rebound to 4.2 percent in Q2 following a contraction in late 2023. Overall, the non-oil economy in Kuwait grew by 3.5 percent in H1 2024, driven by gains in other services including real estate (6.2 percent) and manufacturing (5.7 percent) and offset by declines in public administration, telecommunications, and hospitality.

Oman: Recorded a 4.3 percent growth in H1 2024, driven by growth in agriculture,refined petroleum products, manufacturing, and transport.

Qatar: The non-hydrocarbon sector grew at a more moderate pace of 1.1 percent, though this was bolstered by a notable 26 percent rise in tourism, driven by major sporting events.

Saudi Arabia: The non-oil sector expanded by 4.4 percent in Q2, driven by strong performance in tourism, retail, and hospitality, with a 5.9 percent increase in the wholesale, restaurant, and hotel sectors.

UAE: The non-oil economy maintained strong momentum with 4 percent growth in Q1, supported by gains in financial services, tourism, and transport, underscoring the success of service-oriented diversification strategies in both economies.

Driven by ambitious reform agendas, GCC countries are making significant strides toward economic diversification. Saudi Arabia's Vision 2030 has spurred substantial investments in tourism, with visitor numbers rising by 73 percent above 2019 levels in the first seven months of 2024. The country has made significant progress in renewable energy in 2024, including signing power purchase agreements for 5.5 GW of solar projects worth US$3.28 billion and initiating annual tenders for 20 GW of new capacity to achieve its Vision 2030 targets.[2] The **UAE** continues to lead in regional diversification, with Q1 2024 real growth of 7.9 percent in financial services, 7.3 percent in logistics, and 5.6 percent in technology. **Qatar** has capitalized on international sporting events to bolster non-hydrocarbon growth, solidifying its position as a sports tourism hub with a 26 percent increase in visitor numbers over the first eight months of 2024 compared to the same period of the previous year. Additionally, **Qatar** is prioritizing its IT sector, achieving over 90 percent 5G coverage in populated areas, supported by extensive broadband and 5G infrastructure. In October 2024, the Qatar Investment Authority (QIA) announced the merger of Qatar National Broadband Network (QNBN) and Gulf Bridge International (GBI) to enhance digital infrastructure and position Qatar as a leading regional and global digital hub.[3] **Oman** is enhancing its business environment, with a real increase in manufacturing output up by 11.8 percent and agricultural growth by 6.6 percent in H1 2024. **Bahrain** is focusing on growth in accommodation and food services, and business activities, which expanded by 10.7 percent and 9.4 percent, respectively, in the H1 2024, among others.

2 Ministry of Energy, Saudi Arabia. " Saudi Power Procurement Company (SPPC) Signs Power Purchase Agreements for Three New Solar Energy Projects with a Total Capacity of 5,500 MW." 2024. https://www.moenergy.gov.sa/en/MediaCenter/News.

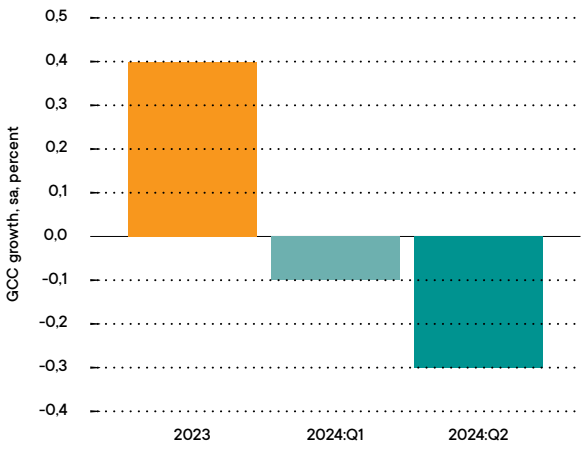
3 Qatar Investment Authority (QIA). "QIA to combine QNBN & GBI as part of efforts to enhance Qatar's digital infrastructure ecosystem." Oct 2024.

73%

Increase in visitor numbers in Saudi Arabia during the first 7 months of 2024, compared to 2019

FIGURE 1

The GCC region is experiencing a deceleration in growth during 2024...

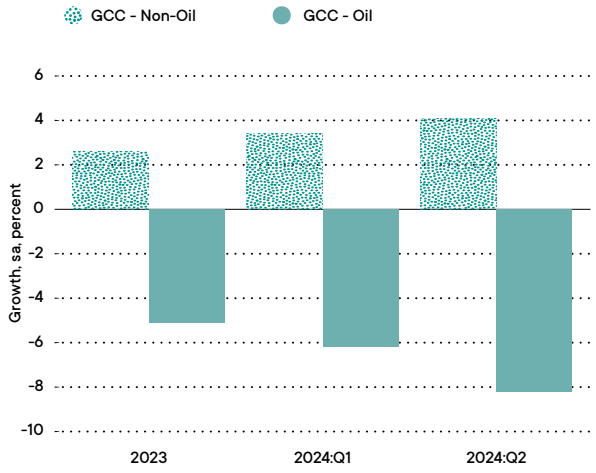


Source: Haver and World Bank staff calculations.

Note: Quarterly data calculated as weighted average of available data (Q1:2024 include KSA,UAE,KWT,OMN,BHR and Q2:2024 include KSA, KWT, OMN, BHR)

FIGURE 2

...mainly due to a contraction in the oil sector, while non-oil sector remains resilient.

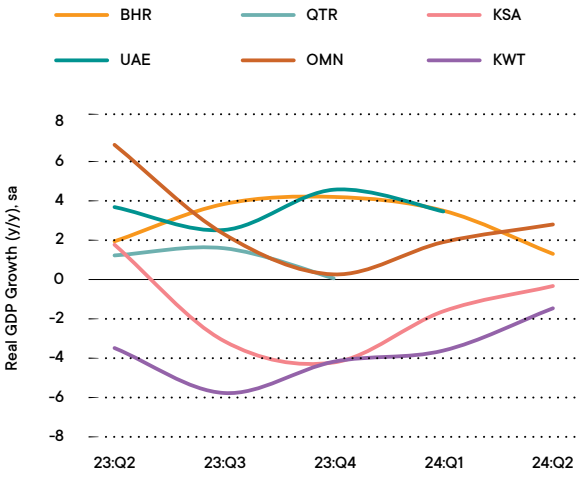


Source: Haver Analytics and World Bank staff calculations.

Note: Quarterly data calculated as weighted average of available data (Q1:2024 include KSA,UAE,KWT,OMN,BHR and Q2:2024 include KSA, KWT, OMN)

FIGURE 3

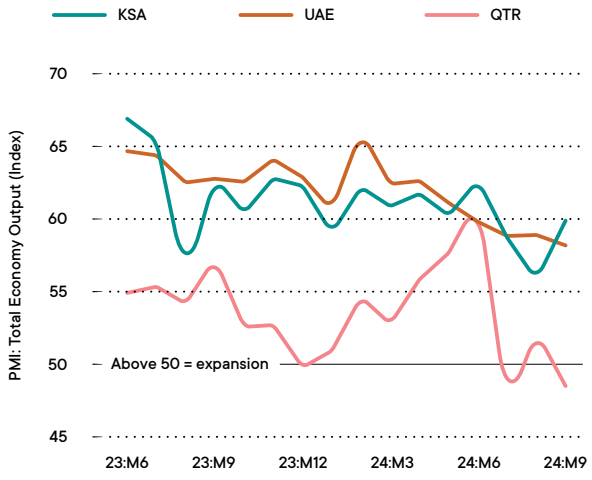
Growth recovered for several economies over H1...



Source: Haver Analytics and World Bank staff calculations.

FIGURE 4

... however the PMI survey, an indication of economic trends in private sector manufacturing and service sectors, is on a slightly declining trend.

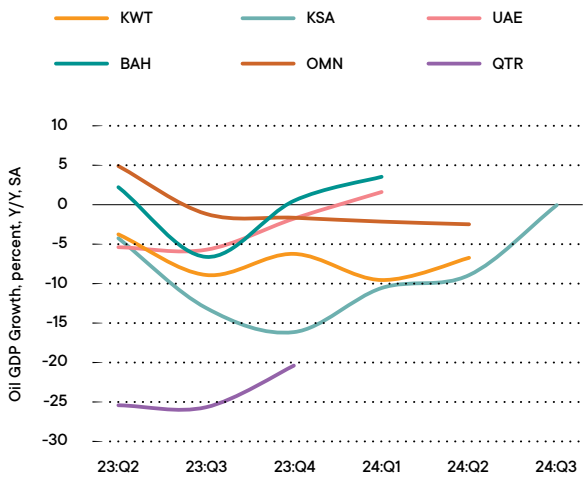


Source: S&P Global Purchasing Managers Survey.

Note: Data for UAE, OMN, BHR is not available.

FIGURE 5

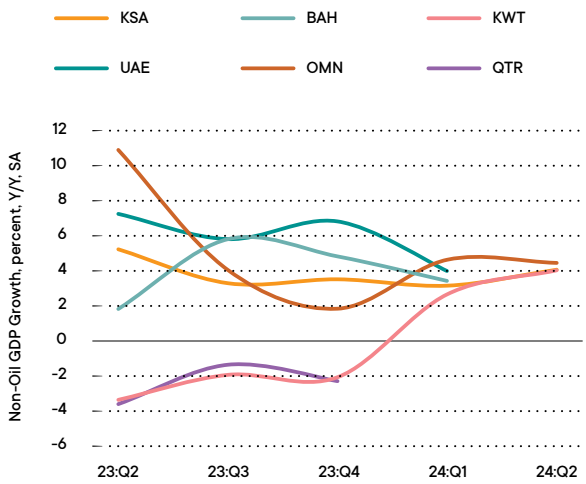
Oil sector contractions affected several countries in the region...



Source: Haver and World Bank staff calculations.

FIGURE 6

...while non-oil sector growth across the region remains stable and resilient



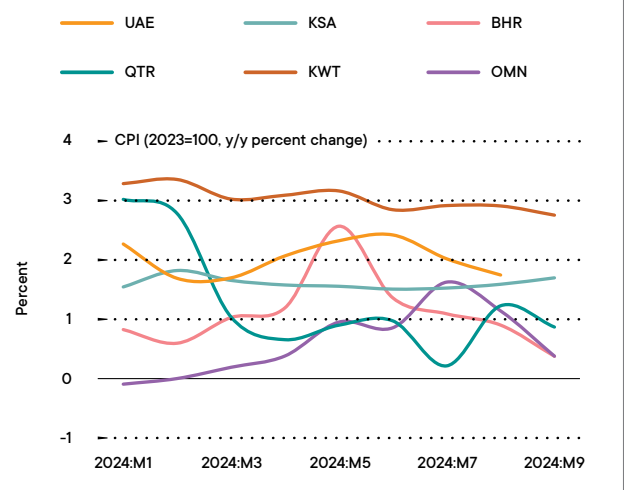
Source: Haver and World Bank staff calculations.

Headline inflation in GCC countries remains low and stable, but significant inflationary pressures are evident in the housing sector.

Inflation in the GCC region has remained relatively moderate compared to global peers, averaging 2.3 percent in the first nine month of 2024 (Figure 7). GCC central banks have aligned their policies with U.S. Federal Reserve, helping maintain monetary stability, containing inflationary pressure, while supporting domestic economic conditions (Figure 8). Sectoral inflationary pressures persist, particularly in housing, which has experienced notable price increases in specific countries, contrasting with deflationary trends in sectors like transport. **Saudi Arabia** and the **UAE** maintained low headline inflation at 1.5 percent and 2 percent in August 2024, respectively, despite notable sectoral pressures. In **Saudi Arabia**, housing inflation surged to 9.3 percent, while transport costs saw deflation at -3.5 percent, balancing overall price stability. Similarly, in the **UAE**, Dubai's inflation reached 3.9 percent, driven by rising housing and transport costs linked to population growth. **Kuwait**, **Oman**, and **Qatar** reported easing inflation, at 2.9 percent, 1.1 percent, and 1.2 percent, respectively, supported by monetary policies and government interventions, particularly in housing and food. **Bahrain**, with the lowest inflation at 1 percent, experienced modest pressure from food prices.

FIGURE 7

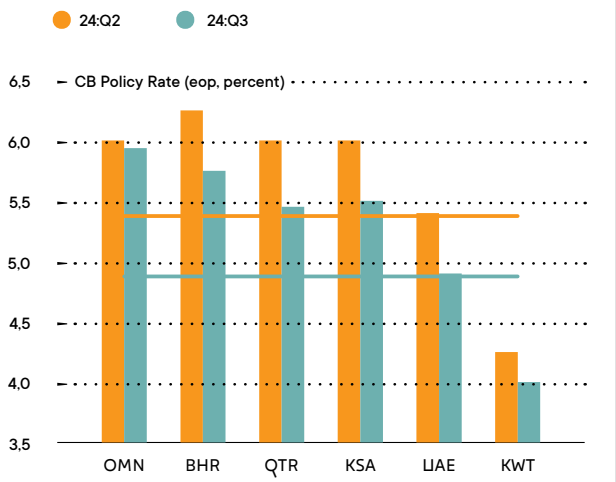
Inflation across GCC remains low and stable with some recent volatility in Oman and Qatar



Source: Haver and World Bank staff calculations.

FIGURE 8

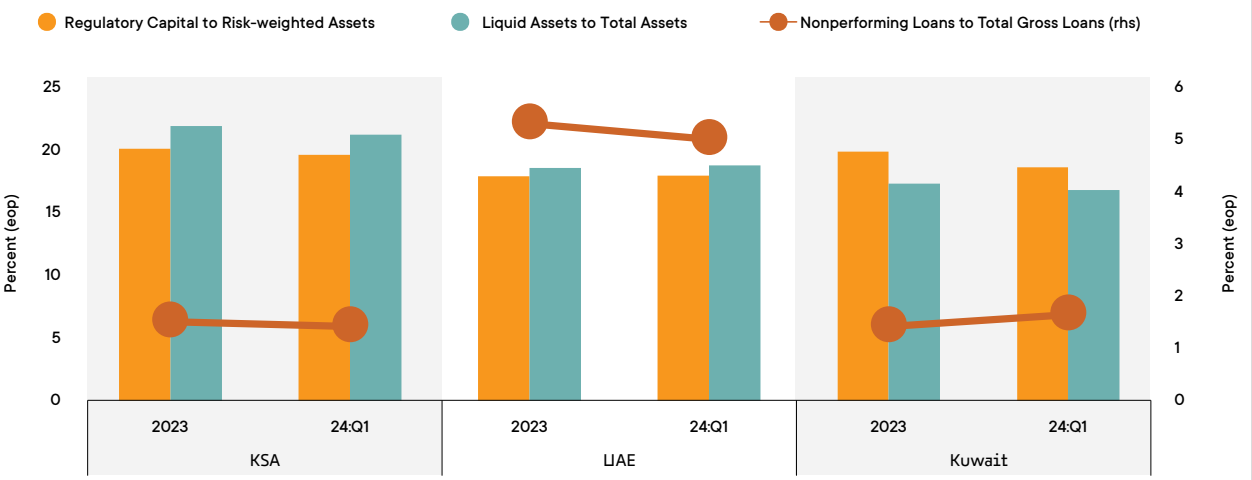
GCC Banks cut rates in 2024, following the U.S. Fed rate cut to maintain currency peg with US



Source: Haver Analytics

FIGURE 9

The banking sector across the GCC remains generally resilient, but NPLs in the UAE are on the higher side



Source: Haver Analytics, IMF FSI database.
Note: Data for BHR, QRT, and OMN is not available.

The financial sector across the region remains strong and resilient. The banking systems across the GCC countries remain resilient, supported by strong capital and liquidity buffers, low non-performing loans (NPLs), and effective regulatory oversight (Figure 9). However, NPLs in **UAE's** banking sector were at 5.0 percent in Q1 2024, which is on the higher side. Capital adequacy ratios and liquidity buffers remain strong, reinforcing the sector's capacity to absorb potential shocks from external economic pressures. Despite global economic challenges and market volatility, GCC banks continue to demonstrate solid financial performance, with sustained profitability and sound risk management practices, further enhancing their stability and ability to navigate an evolving economic environment.

The fiscal position in the GCC countries diverged, with two countries facing widening deficits from rising expenditures and oil revenue fluctuations, while others maintaining stability.

Fiscal conditions across the GCC were shaped by a mix of increased government spending and fluctuating oil revenues, but the impact varied significantly between countries (Figure 10). While some countries, like **Saudi Arabia** and **Kuwait** faced rising fiscal pressures due to expanding deficits, others, such as the **UAE** and **Qatar**, maintained stronger fiscal positions. Further details are summarized below:

- **Some countries faced rising fiscal pressures: Saudi Arabia** and **Kuwait** encountered significant fiscal pressures in H1 2024, primarily driven by rising expenditures and fluctuating oil revenues. **Saudi Arabia's** fiscal deficit widened due to a sharp increase in spending, particularly on municipal services (up 116 percent) and public administration (up 30 percent). Similarly, **Kuwait's** deficit reached 12.6 percent of GDP in Q1 2024, largely due to reduced oil revenues and increased government spending. Both countries are highly reliant on hydrocarbons, underscoring the need for accelerated revenue diversification and fiscal reforms. **Bahrain**, while facing significant fiscal challenges, is gradually reducing its deficit through consolidation efforts and enhanced non-oil revenue generation, although official fiscal data for 2024 is yet to be released.

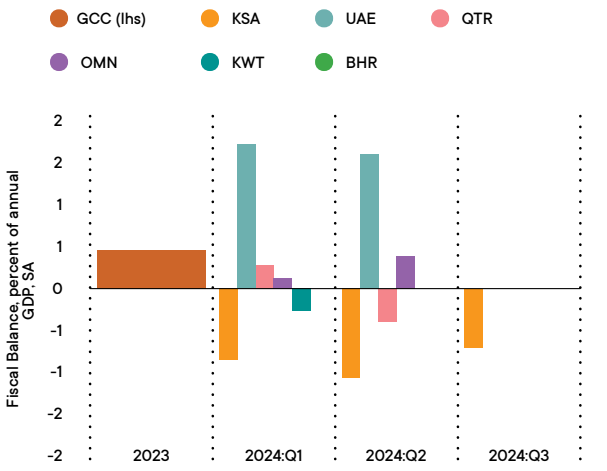
- **While others maintained stronger fiscal positions:** The **UAE** and **Qatar** maintained relatively stronger fiscal positions. The **UAE** posted a fiscal surplus of approximately 6 percent of GDP in Q1 2024, supported by a 20 percent reduction in government spending and the introduction of corporate income taxation, which diversified revenue sources. **Qatar** continues to benefit from substantial financial reserves despite a shrinking fiscal surplus due to a 15 percent year-on-year drop in oil and gas revenues. **Oman's** fiscal surplus narrowed to 1 percent of GDP as of end-August 2024, down from 1.8 percent a year earlier.[4] Despite rising public spending, **Oman's** continued focus on fiscal consolidation has helped stabilize its fiscal position. Its revenues were impacted by a 15 percent decline in gas receipts, but this was partially offset by a 12 percent increase in oil revenues.

Debt management across the GCC showed varying levels of fiscal resilience in 2024 (Figure 11). **Oman** made significant progress, reducing its public debt from 36.5 percent of GDP at the end of 2023 to 33.9 percent by mid-2024, demonstrating its commitment to fiscal discipline. On the other hand, **Bahrain's** debt situation remains challenging, with its public debt reaching around 123 percent of GDP in 2023 and expected to stay above 100 percent through 2024. The nation has implemented fiscal reforms and is actively working to stabilize its financial position, supported by significant GCC financial assistance, including a remaining US$2.8 billion from a 2018 support package funded by **Saudi Arabia**, the **UAE**, and **Kuwait**. Despite these efforts, **Bahrain's** high debt level and reliance on hydrocarbon revenues—still accounting for about 75 percent of government income—expose it to fiscal risks, especially during periods of oil price instability.

4 National Centre for Statistics and Information (NCSI), Oman. (2024). Monthly Statistical Bulletin: October 2024. URL: https://www.ncsi.gov.om/Elibrary/LibraryContentDoc/bar_bar_Monthly%20Statistical%20Bulletin%20Oct%202024_5f349c50-8f86-4174-9ca0-2fdad56bfdb2.pdf

FIGURE 10

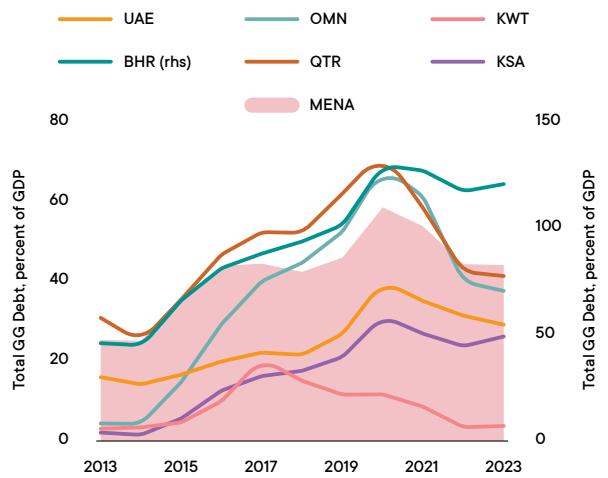
Fiscal balances vary across countries, influenced by a combination of increased government spending and fluctuating oil revenues



Source: Haver analytics and WB Staff calculations and estimates.

FIGURE 11

Debt levels broadly stayed stable and below MENA average in most GCC countries



Source: Haver analytics and WB Staff calculations and estimates.

The GCC experienced a narrowing current account surplus driven by a decline in commodity revenues and rising imports, but there is significant variation across countries (Figure 12).

The GCC's external sector was characterized by decline in commodity revenues, increase in investment-driven imports, and improved non-oil export performance. While many economies maintain current account surpluses, some have experienced a narrowing of these surpluses driven by a reduction in commodity exports and rising imports. Strong foreign reserves across the region provide a crucial buffer against global uncertainties and oil market fluctuations. Further details are summarized below:

- **Saudi Arabia and Kuwait experienced pressures on their current accounts:** **Saudi Arabia's** current account surplus narrowed to 2.8 percent of GDP in Q1 2024, down from 5.6 percent in Q1 2023, reflecting higher import demand and lower oil export receipts. Similarly, **Kuwait** saw a 12 percent contraction in its trade balance year-on-year in Q1 2024, continuing the moderation of its current account surplus following a decline to 32.9 percent of GDP in 2023.
- **UAE, Oman, Bahrain, and Qatar maintained or strengthened their external positions:** The **UAE's** surplus continues to be supported not only by oil revenues but also by rising non-oil exports, facilitated by free trade agreements, underscoring the economy's diversification and its relatively higher share of non-oil GDP within the GCC economies. **Oman** reported a trade surplus of 12.9 percent of GDP as of end-August 2024, underpinned by growth in hydrocarbon exports. **Bahrain** also posted a 5.8 percent of GDP current account surplus in Q2 2024, aided by higher oil export growth. **Qatar's** external position strengthened further, with its current account surplus widening due to robust services export growth, driven by the tourism sector, alongside a 4 percent increase in international reserves.

International reserves remained at adequate levels, providing the region with substantial buffers to manage economic shocks (Figure 13). The GCC has significantly improved its external balances over the past year, driven mainly by the hydrocarbon sector and the growth of non-oil exports in several countries. In 2023, international reserves remained strong across most nations, with the **UAE** achieving substantial growth supported by economic diversification efforts, strategic economic initiatives, and regulatory reforms.[5] Meanwhile, **Saudi Arabia** and **Kuwait** faced declines in reserves due to falling oil exports. This accumulation of foreign reserves strengthens external stability and serves as a crucial buffer against global financial volatility.

Foreign Direct Investment (FDI) in the GCC region presented a mixed picture in 2024. The **UAE** continues to stand out as a key destination, attracting substantial investments in sectors such as manufacturing, tourism, and finance. Under its Economic Vision 2030, the **UAE** has streamlined regulatory processes, eased foreign ownership restrictions, and introduced attractive incentives for global investors. Notably, the **UAE** ranked second globally, after the United States, in greenfield FDI projects in 2023[6], solidifying its position among the top global destinations for foreign investment. In contrast, **Saudi Arabia's** FDI inflows have remained largely stagnant in 2024. While FDI volumes in the second quarter increased by 14.5 percent compared to the first quarter, total inflows for the first half of 2024 were nearly unchanged at 36.41 billion riyals, compared to 36.35 billion riyals in the same period of 2023. This stagnation highlights challenges in sustaining investor confidence despite the ambitious Vision 2030 reforms aimed at streamlining regulations and fostering economic transformation. In response, **Saudi Arabia** has introduced new investment laws set to take effect in 2025, designed to create a more business-friendly environment for foreign investors.[7] Overall, FDI inflows across the GCC demonstrate varying levels of success, underscoring the region's long-term growth potential and its focus on building sustainable, non-oil economies.

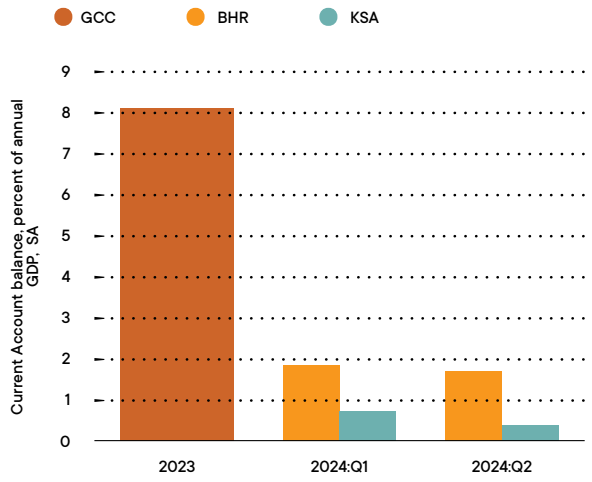
5 The UNCTAD World Investment Report 2024 reports UAE FDI inflows rising to USD 30.688 billion in 2023 from USD 22.737 billion in 2022, ranking 2nd globally. This growth is driven by full foreign ownership reforms and initiatives like NextGenFDI, streamlining business setup for tech firms. https://u.ae/en/information-and-services/finance-and-investment/foreign-direct-investment/foreign-direct-investment-in-the-uae

6 United Nations Conference on Trade and Development (UNCTAD), World Investment Report 2024, https://unctad.org/publication/world-investment-report-2024.

7 Royal Decree No. (M/19) dated 16/01/1446H (corresponding to July 22, 2024)

FIGURE 12

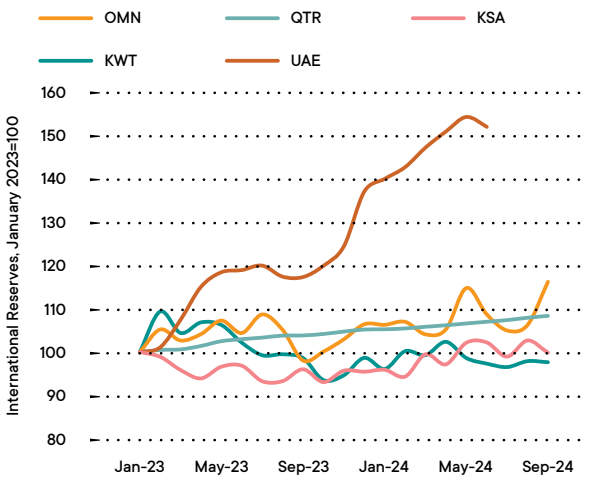
Current account surplus narrowed in H1 2024 with declining oil receipts



Source: Haver and World Bank staff calculations.

FIGURE 13

Meanwhile international reserves remain at robust levels, bolstering resilience against external shocks.



Source: Haver and World Bank staff calculations.

Labor markets in the GCC region experienced moderate employment growth, though challenges persist around gender imbalances and youth unemployment.

Employment rates continue to improve, but structural challenges, particularly around gender imbalances and youth unemployment remain. While many economies have successfully reduced overall unemployment rates, the pace of job creation varies, and participation rates are not uniformly increasing, signaling that more targeted policy efforts are required. Women's participation in the workforce remains a central challenge, despite progress in several economies. Youth unemployment continues to outpace the broader labor market, suggesting that labor market reforms and inclusion strategies will need to be intensified to sustain and broaden economic gains. In **Saudi Arabia**, the unemployment rate decreased from 4.2 percent in Q1 2023 to 3.5 percent in Q1 2024. The **UAE** continues to see strong employment growth, with the employment-to-population ratio projected to reach 80.3 percent in 2024, bolstered by the country's adoption of gender balance strategies. **Kuwait** saw a 9 percent rise in total employment in 2023, driven by a 17 percent increase in private sector employment of non-Kuwaitis, while nationals remain largely employed in the public sector. **Oman** and **Bahrain** experienced steady employment gains, especially among women, reflecting targeted national policies aimed at increasing female workforce participation. These policies include granting allowances and maternity benefits, promoting more women to senior positions and supporting female entrepreneurs would generate positive demonstration effects to increase female labor participation, among other. In **Qatar**, labor market stability persists with a low unemployment rate of 0.13 percent, though a slight rise in unemployment is expected in 2024, primarily among women, exacerbating existing gender disparities.

BOX 1

Labor market reforms to boost employment of nationals in the private sector in GCC

GCC economies have historically relied on foreign labor to achieve development goals, with the ratio of expatriates exceeding 52 percent across the region. However, with a rapidly growing youth population, the challenge of providing private sector jobs for nationals has intensified.

Key Labor Market Insights:

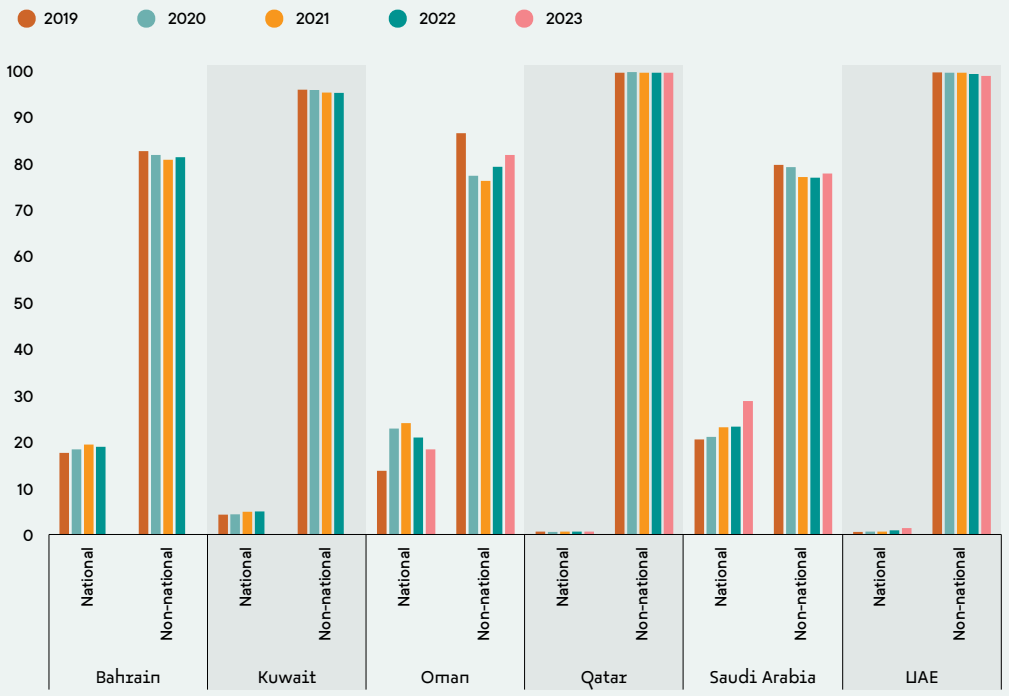
- **Public Sector Dominance:** The public sector is the primary employer of nationals, with around 83.5 percent of public sector workers in the GCC being local citizens in 2022. This preference for public sector jobs has persisted over time. Attractive compensation and job security make government roles more desirable, often overshadowing private sector opportunities for nationals.

- **Foreign Dominance in Private Sector:** Expatriates make up over 88 percent of private sector jobs in the GCC, with varying degrees among different countries – 88.5 percent of the total population in the **UAE**, 87.9 percent in **Qatar**, 70.1 percent in **Kuwait**, and 53.2 percent in **Bahrain**, with **Oman** and **Saudi Arabia** at 42 percent and 40 percent, respectively (GLMM, 2023). **Bahrain** and **Oman** have seen increases in foreign labor in their private sectors, while **Saudi Arabia** has shown slight improvement.

- **Wage Distortions:** Private sector wages for non-nationals are significantly lower than for nationals at similar education levels, leading employers to favor expatriates, particularly for lower-skilled positions.

FIGURE 14

Share of nationals and non-nationals of total private sector employment, percent



Source: Haver, DLX database.

To boost national employment in the private sector, GCC countries continue to implement various measures, some of them are listed below:

Bahrain: A draft law to amend Bahrainization policies is under review, emphasizing the hiring of Bahraini nationals in key sectors like healthcare, law, accounting, education, banking, and aviation. It mandates companies to hire Bahrainis within two years and limits foreign workers to 30 percent of the workforce in private-sector establishments. Violations may incur fines of up to 20 percent of a foreign worker's salary. The government aims to employ 20,000 Bahrainis and train 10,000 by the end of 2024.[8]

Kuwait: Kuwait's development plans revolve around efforts to create more job opportunities for nationals in the private sector. There is a plan to increase the percentage of Kuwaiti employees from 25 percent to 50 percent in private companies, and from 30 percent to 60 percent in the private oil companies.[9]

Oman: In 2022, a list of 207 jobs was announced as reserved for Omani citizens.[10] In July 2024, new measures were introduced to enhance private sector employment for Omanis, by adding 30 new professions to the list of jobs reserved for them while also providing financial incentives to companies hiring locals.[11]

Qatar: The third National Development Strategy (NDS3), in alignment with Qatar National Vision 2030, supports the creation of opportunities for employment and training for Qatari citizens and the nationalization of jobs in the private sector. In September 2024, Qatar enacted a law to boost national workforce participation in the private sector. The initiative aims to harness a skilled Qatari talent pool while attracting highly skilled foreign talent.[12]

Saudi Arabia: Saudi Arabia has been increasing the number of Saudi nationals in the private sector through the Saudization program, also known as the Saudi Nationalization Scheme. The program requires private sector companies to hire a certain percentage of Saudi nationals, depending on the company's size, industry, and other factors. The Nitaqat program, an initiative by Saudi Arabia's Ministry of Human Resources and Social Development, complements the Saudization program by setting specific employment quotas for Saudi nationals. These quotas are based on company size, industry, and compliance levels, categorized into bands (Red, Green, and Platinum). Key elements of the Nitaqat program include tailored sector-based targets, incentives such as expedited visa processing for compliant companies, and penalties like hiring restrictions for non-compliance, making it a structured framework to enforce and enhance Saudization efforts effectively.[13]

UAE: In May 2024, the cabinet approved an incentive package to boost Emirati participation in the private sector. Key measures include an 80 percent reduction in service fees for businesses, an annual increase of 2 percent in Emiratization rates for companies with 50 or more employees until reaching 10 percent by 2026, and a requirement for companies with 20 to 49 workers to hire at least one Emirati in 2024 and two by 2025. This initiative aims to create over 12,000 annual job opportunities for Emiratis.[14]

The progress has been modest so far in most GCC countries. Non-nationals continue to form the majority in the private sector in GCC, with divergence across the region. In **Saudi Arabia**, the share of Saudi employees has slightly risen from an average of 20 percent in 2019 to 22.3 percent in 2023. Latest news indicate that the **Saudi Arabia's** private sector had an increase of 37,009 local employees in August 2024, a 6.9 percent rise from the 34,606 new hires in July, which is helping narrow the wage gap with expatriates.[15] In contrast, **Oman** has witnessed a significant surge in its expatriate population, with the total number of expatriates working in the private sector reached 1,420,587 (77.4 percent of total private sector jobs) at the end of September, compared to 413,964 Omanis.[16] Recently, **Oman** has implemented a six-month ban on issuing work permits for expatriates in 13 specific professions, aimed at promoting employment opportunities for Omani nationals.[17] Strong preference for public sector jobs due to higher compensations, shorter working hours disincentivized nationals from seeking jobs in the private sector.

While these incentives aim to boost local employment, they can create imbalances in the labor market that might hurt productivity. Moreover, these measures mainly encourage people to enter the job market but do not necessarily promote high performance or commitment once they are employed. These are important caveats to consider for labor market reforms in the region.

8 Ministry of Finance and National Economy, Bahrain. (2021). Economic Recovery Plan. URL: https://www.mofne.gov.bh/en/project-initiatives/economic-recovery-plan/

9 Arab Times, Proposal seeks to double citizens in private sector, June 5, 2024, URL: https://www.arabtimesonline.com/news/proposal-seeks-to-double-citizens-in-private-sector/.

10 Oman. (2022). Ministerial Decision No. 235/2022. URL: https://qanoon.om/p/2022/mol20220235/

11 Mogielnicki, R., The bread-and-butter issues of jobs and taxes in the Gulf, Arab Gulf States Institute in Washington, September 23, 2024, URL: https://agsiw.org/the-bread-and-butter-issues-of-jobs-and-taxes-in-the-gulf/.

12 The Ministry of Labour has spotlighted Law No. (12) of 2024, https://www.qna.org.qa/en/News%20Area/News/2024-09/01/0065-ministry-of-labour-highlights-law-no-(12)-of-2024-on-job-nationalization-in-the-private-sector.

13 Ministry of Human Resources and Labor. https://www.hrsd.gov.sa/en/knowledge-centre/decisions-and-regulations/regulation-and-procedures/832742

14 Emirates News Agency (WAM), UAE Cabinet increases Emiratisation rate to 2% annually, May 9, 2022, URL: https://www.wam.ae/en/details/1395303045347.

15 National Labor Observatory, Saudi Arabia, Infographics, n.d., URL: https://nlo.gov.sa/landing/info-graphics?curent=1&Keywords=&c=&oba=&obd=desc&lang=ar

16 Zawya, Expatriate workforce in Oman reaches 1.8mln, September 2024, URL: https://www.zawya.com/en/economy/gcc/expatriate-workforce-in-oman-reaches-18mln-el7rdquk.

17 Muscat Daily, Work visas stopped for select professions for 6 months, August 13, 2024, URL: https://www.muscatdaily.com/2024/08/13/work-visas-stopped-for-select-professions-for-6-months/

Spotlight Section

Fiscal Policy Cyclicality in GCC

The rationale behind countercyclical fiscal policy

Fiscal policy, meaning government spending, tax plans and their execution, can be a powerful tool to stabilize the economy. However, it can also have unintended consequences. When fiscal policy is "procyclical" - meaning it expands spending and deficits when times are good or does the opposite by pursuing austerity when times are bad - it can make economic ups and downs worse, undermining both short-term stability and long-term growth. On the other hand, "countercyclical" policy that goes against the business cycle can help smooth out the economy's natural booms and bust cycles, and consequently reduce vulnerability to exogenous shocks (Chari et al. 1994, Riera-Crichton et al. 2015, Aizenman et al. 2019). Empirical evidence shows that this contributes to more consistent growth over time (Woo 2009; World Bank 2024). However, implementing effective countercyclical fiscal policy requires understanding of past trends and precise sources of cyclicality, so reforms can be pursued accordingly.

Fiscal policy cyclicality in GCC

Over the past two decades, fiscal expenditures and revenues in GCC countries were mostly in line with countercyclical fiscal policy. Figure 15 presents correlation coefficients between the cyclical components of real GDP and fiscal expenditures and revenues across 184 countries from 2000 to 2022, highlighting the six GCC countries. A countercyclical fiscal approach necessitates countercyclical expenditure (negative coefficient) and procyclical revenue (positive coefficient) relative to the business cycle. As Figure 15 shows, government expenditures were countercyclical in **Oman** (-0.06), **Saudi Arabia** (-0.33), **Kuwait** (-0.38), **UAE** (-0.45), and **Bahrain** (-0.48). Only **Qatar** (+0.14) shows slightly procyclical expenditure. Government revenues were procyclical (as desired) in all GCC countries: **Qatar** (+0.10), **Oman** (+0.16), **Bahrain** (+0.52), **Kuwait** (+0.53), **UAE** (+0.63), and **Saudi Arabia** (+0.65). This is related to the preponderance of volatile oil and gas revenues in these countries.

A general observation is that, in most countries in the world, revenues tend to be more strongly in line with countercyclical fiscal policy than expenditures. Apart from a few exceptions, most countries shown are located above the zero-horizontal line for revenue in Figure 15. This is consistent with the literature and is typically attributed to the existence of "automatic stabilizers" (such as progressive income tax and unemployment insurance), whereby tax revenues tend to decrease during recessions and increase during economic booms (Talvi & Vegh 2005, Vegh & Vuletin 2015, Bashar et al. 2017). By contrast, less than half of the countries in Figure 15 display countercyclical government expenditures, with a clear pattern of stronger countercyclicality in richer nations (including GCC countries) and procyclical or neutral expenditures in low-income and middle-income countries. This has been partly attributed to stronger automatic stabilizers in high-income countries compared to low- and middle-income countries, but also to challenges arising from imperfect access to international credit markets, lack of financial depth, and political distortions (Talvi & Vegh 2005, Alesina et al. 2008, Frankel et al. 2013, Bogetić & Naeher 2024b).

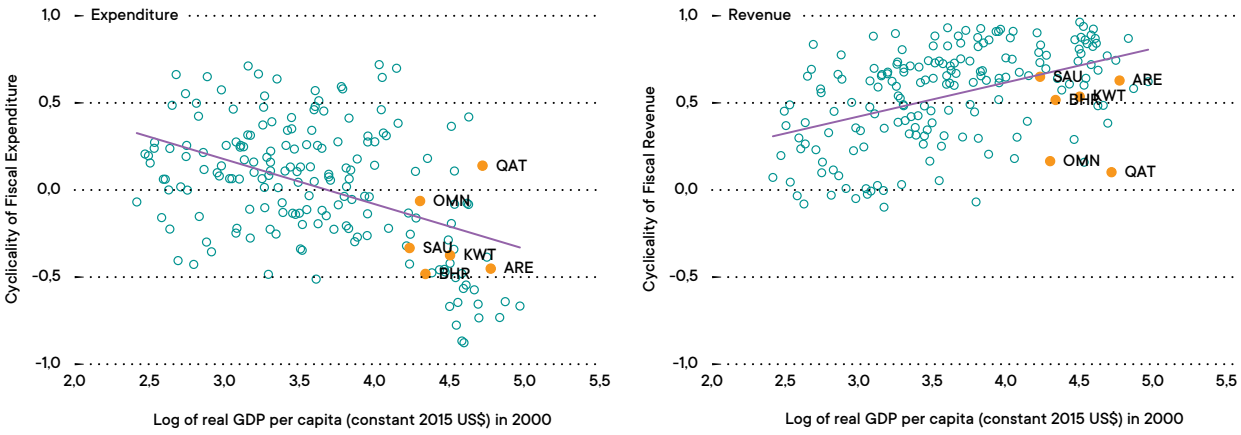
Dynamic country experiences in GCC over the past two decades are mixed, with some GCC countries moving toward stronger countercyclicality, and others moving away from it. Figure 16 depicts the cyclicality of fiscal expenditures and revenues separately for the periods 2000-2011 and 2012-2022. Notably in **Qatar**, **Kuwait**, and **Oman** both expenditures and revenues transitioned to be more in line with countercyclical fiscal policy between these two periods. **Oman**, in particular, has achieved this turnaround in the context of significant fiscal consolidation. The opposite was the case in **UAE** and **Saudi Arabia**, where expenditures and revenues became less in line with countercyclical fiscal policy. In **Bahrain**, expenditure became slightly less countercyclical while the cyclicality of revenue moved into the desired direction.

Overall, this underscores the relative good performance of the GCC countries in achieving countercyclicality relative to other countries in the MENA region; yet challenges remain. Remaining challenges are evident by the fact that the GCC countries are *less* successful in achieving fiscal countercyclicality than most other countries with similarly high-income levels, both on the expenditure and on the revenue side (see Figure 15). On the upside, this suggests that there may be further potential in GCC to move towards stronger countercyclicality.

> Countercyclical Fiscal Policy

Policy that goes against the business cycle can help smooth out the economy's natural booms and bust cycles, and consequently reduce vulnerability to exogenous shocks

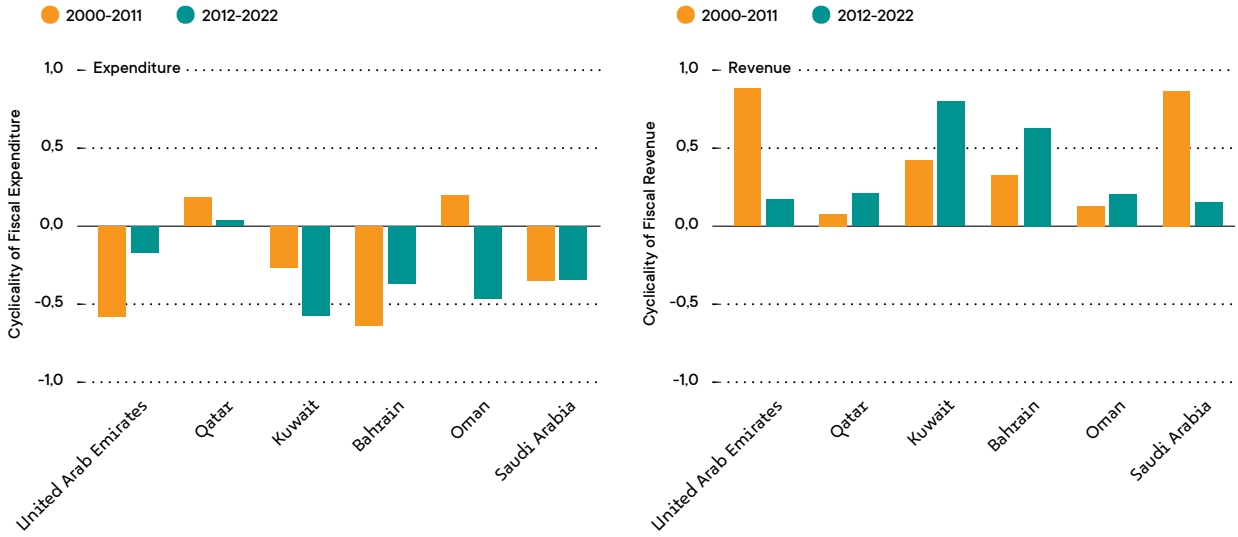
FIGURE 15 Fiscal Policy Cyclicality in GCC Countries and the World, 2000-2022



Note: Cyclicality is calculated as the correlation coefficient between the cyclical component of the Log of real GDP (constant LCU) and the cyclical component of the respective fiscal policy variable. A countercyclical fiscal approach necessitates countercyclical expenditure (negative coefficient) and procyclical revenue (positive coefficient) relative to the business cycle. The sample covers 184 countries.

Source: Bank staff estimates using the methodology described in Bogetić & Naeher (2024), "Is Escaping the Fiscal Pro-Cyclicality Trap Possible? Evidence from the Middle East and North Africa" and data on general government revenue (percent of GDP) and general government total expenditure (percent of GDP) from the International Monetary Fund's World Economic Outlook; data on real GDP (constant LCU) and real GDP per capita (constant 2015 US$) from the World Bank's World Development Indicators.

FIGURE 16 Cyclicality of Fiscal Policy Variables in GCC Countries, 2000-2011 vs. 2012-2022



Note: Cyclicality is calculated as the correlation coefficient between the cyclical component of the Log of real GDP (constant LCU) and the cyclical component of the respective fiscal policy variable. A countercyclical fiscal approach necessitates countercyclical expenditure (negative coefficient) and procyclical revenue (positive coefficient) relative to the business cycle.

Source: Bank staff estimates using the methodology described in Bogetić & Naeher (2024), "Is Escaping the Fiscal Pro-Cyclicality Trap Possible? Evidence from the Middle East and North Africa" and data on general government revenue (percent of GDP) and general government total expenditure (percent of GDP) from the International Monetary Fund's World Economic Outlook; data on real GDP (constant LCU) from the World Bank's World Development Indicators.

Policies towards greater fiscal countercyclicality

What can GCC countries do over the medium- to longer term to achieve greater countercyclicality of its fiscal policy? Achieving countercyclical fiscal policy faces challenges, including the structure of the tax system, timing of policy decisions, fiscal space, external and domestic financing conditions, and other political or external economic influences (Alesina et al. 2008, Frankel et al. 2013, Bogetić & Naeher 2024b). However, there are several measures available to enhance countercyclicality. First, **automatic stabilizers** like progressive income taxes (and unemployment benefits) may be considered in line with improvement in tax administrative and collection capacity, which would help limit economic overheating in good times and reducing slumps in bad times (Bashar et al. 2017, Aizenman et al. 2019). Second, **structural policies** like exchange rate flexibility, currency convertibility, and lifting restrictions on international trade and financial flows can help mitigate fiscal procyclicality, especially when supported by fiscal discipline and well-designed fiscal rules, transparency, and institutions ensuring the conservation of fiscal space (World Bank 2024). For example, **fiscal rules** that aim at current expenditures being financed by government revenues (limiting borrowing for capital expenditures only) can help reduce fiscal policy volatility and allow governments to respond to adverse shocks countercyclically by conserving fiscal space (Marioli et al. 2023). Third, some countries may need to **mobilize more revenues** to reduce the burden of fiscal deficit and public debt and build buffers in preparation of expansionary fiscal policies during recessions, which is often a challenge due to unfavorable demographic and economic structures (IMF 2018, Bogetić et al. 2023) as well as institutions (Bogetić & Naeher 2024c). Therefore, strengthening tax collection administrations, eliminating costly and regressive tax exemptions, and attracting private investments with improved investment climate are crucial for revenue improvement (Djankov et al. 2010, Naeher & Narayanan 2023, World Bank 2024). In addition, **expenditure measures** such as eliminating distortionary subsidies (e.g., for fossil fuels) and investing in human capital and productive infrastructure can enhance fiscal balances and stimulate economic development (Ansar et al. 2016).

Chapter 03 Page 25 – 39

Outlook & Risks

Global growth shows signs of stabilization despite geopolitical risks, while the MENA region faces an uneven recovery amid persistent energy market uncertainties.

The global economy is stabilizing after two consecutive years of slowdown, as inflation returns closer to targets and monetary easing supports economic activity globally. However, growth prospects are insufficient to offset the damage done to the global economy by several years of successive negative shocks, with particularly adverse outcomes in the most vulnerable countries.[18] Global growth is projected to hold steady at 2.6 percent this year, unchanged from 2023, before edging up to 2.7 percent in 2025-26, alongside modest expansions in trade and investment.[19] However, the overall outlook remains subdued, with growth expected to remain nearly half a percentage point below its 2010-19 average. Escalating geopolitical tensions pose risks of volatile commodity prices, while further trade fragmentation could disrupt global trade networks. Global inflation has eased from its 2022 peak but is declining more slowly than expected. More persistent

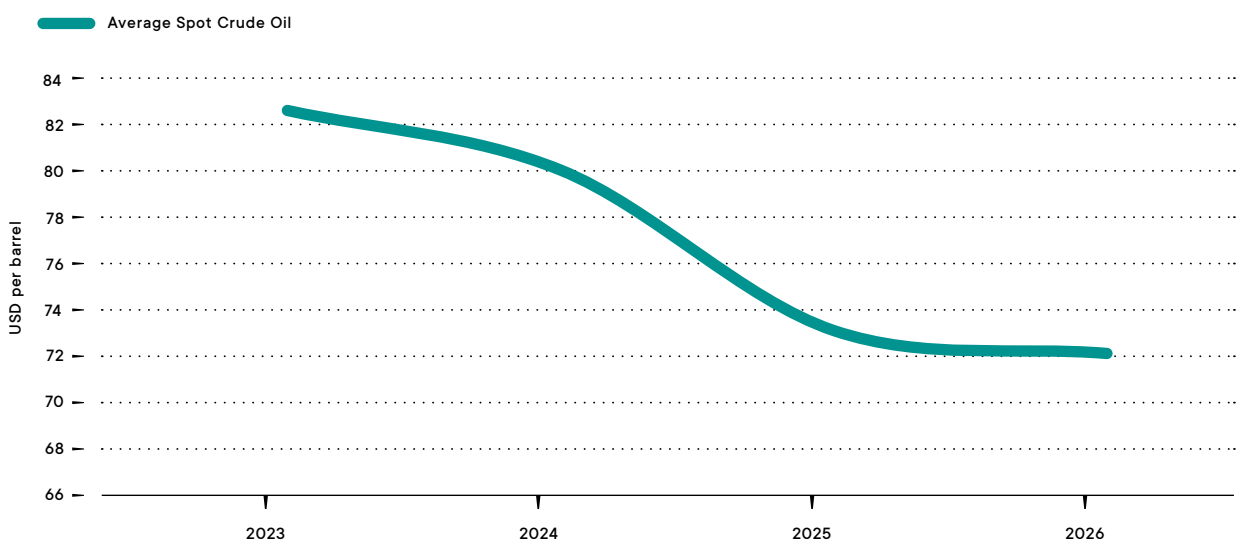
18 Global Economic Prospects, January 2025 (Forthcoming)

19 World Bank, Global Economic Prospects, June 2024

inflation could lead to prolonged higher interest rates, tightening financial conditions and weakening global growth. Additional challenges could also arise from climate-related disasters and weaker-than-anticipated performance in key economies.

In the absence of major external shocks, average oil prices in 2024 are expected to experience a slight decline, with a further decrease anticipated in 2025. Although OPEC+ members have implemented cautious production levels, oil prices are projected to slightly decline in 2024, averaging USD 80 per barrel, before declining to USD 73 per barrel in 2025 (Figure 17). In September, OPEC+ extended their voluntary production cuts of 2.2 million barrels per day for an additional two months, through the end of November 2024, as oil prices declined amid concerns over a weak global economy and weaker-than-expected economic performance in China, which is the world's second largest consumer of oil. However, several factors present significant uncertainties to the energy market outlook. Notably, the ongoing conflict in the Middle East, centered in Gaza and recently intensified through the military attacks between Iran and Israel, presents significant downside risks. These heightened geopolitical tensions risk disruptions to commercial shipping routes in the Red Sea and a potential broader regional escalation threatens to disrupt energy supplies and drive-up oil prices. Other sources of uncertainty include the extent of OPEC+ members' compliance with production quotas, the prospects for global economic growth, and the resulting volatility in world oil consumption and demand.

FIGURE 17 Oil prices are projected to decline in the absence of major economic shocks



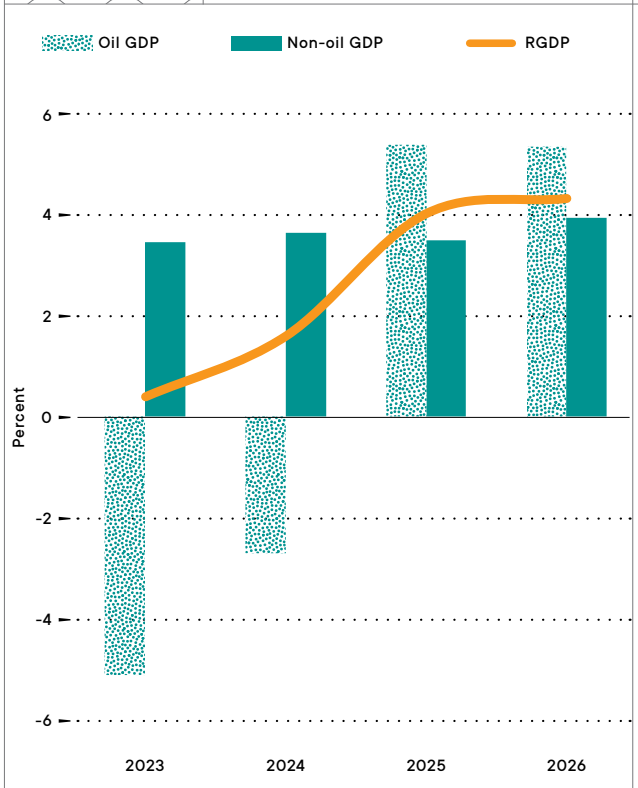
Source: Commodity Market Outlook; and WB Staff calculations.

Economic growth in the GCC is expected to accelerate in the medium term, led by a recovery in the hydrocarbon sector and ongoing progress on diversification.

The GCC economy is expected grow by 1.6 percent in 2024, before accelerating over 2025-2026, driven by higher oil output and supported by a continued growth of the non-oil sector. The low growth in 2024 reflects the impact of weak oil GDP which is estimated to contract by 2 percent (y/y) in 2024, as **Saudi Arabia, UAE, Kuwait**, and **Oman** agreed to extend their additional voluntary OPEC+ output cuts until the end of November.[20] However, the robust growth in non-oil sector is mitigating the overall impact of low oil output on overall growth. The region's non-oil GDP is estimated to grow by 3.7 percent (y/y) in 2024, driven by the countries' diversification plans and associated reforms. Looking ahead to 2025-2026, the overall growth across the region is expected to accelerate to an average of 4.2 percent in 2025-2026 (Figure 18), reflecting the rolling back of crude production cuts by OPEC+ from December 2024 onward. On the other hand, non-oil GDP is expected to remain robust, albeit slower in 2025, as lower oil prices are prompting fiscal consolidation measures in most of the Gulf. The non-oil sector is projected to be resilient in the medium-term supported by consumption and investment (Figure 19).

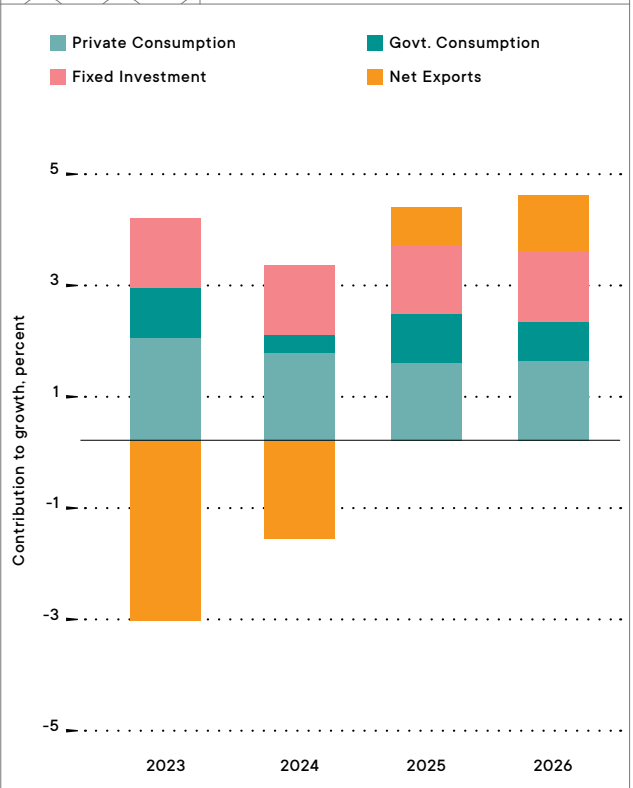
20 OPEC+ countries agreed on September 2024, to extend the cuts of 3.66 mbpd by a year until the end of 2025 and prolong the voluntary cuts of 2.2 mbpd until the end of November 2024.

FIGURE 18 GDP growth projected to rebound, tracking oil sector developments



Source: WB Staff calculations.

FIGURE 19 The increase in projected growth driven primarily by exports and consumption



Source: WB Staff calculations.

3.3%

UAE's estimated growth for 2024

Economic growth is expected to rebound in 2024 and to accelerate in 2025-2026 in most GCC countries, driven by continued strong non-oil growth (Figure 20). Details of growth projections for individual countries are given below:

Bahrain: Growth is likely to improve in 2024 to reach 3.5 percent – from 3.0 percent in the previous year - driven by growth in a diverse range of non-oil activity (3.5 percent), while the oil sector is expected to witness a partial recovery in 2024 with a contraction of 1.0 percent compared to a steeper contraction of 2.4 percent in the previous year. The recovery is supported by higher oil production in the Abu Safah oilfield. Over 2025-2026, growth is projected to reach 3.3 percent in line with the increase in the oil sector output.

Kuwait: Economic growth is expected to contract by 1 percent in 2024 (albeit narrower than 2023), largely attributed to repeated extension of voluntary OPEC+ output cuts but is projected to pick up over 2025-2026 to reach 2.6 percent underpinned by rising oil output in addition to an acceleration of infrastructure projects in Kuwait.[21]

Oman: GDP growth is expected to decelerate in 2024, also largely attributed to repeated extension of voluntary OPEC+ output cut. However, overall growth in is projected to pick up over 2025-2026 to an average of 3.0 percent, also underpinned by rising oil output and ongoing reforms and investment in non-oil sectors in Oman, setting the stage to higher non-oil growth.

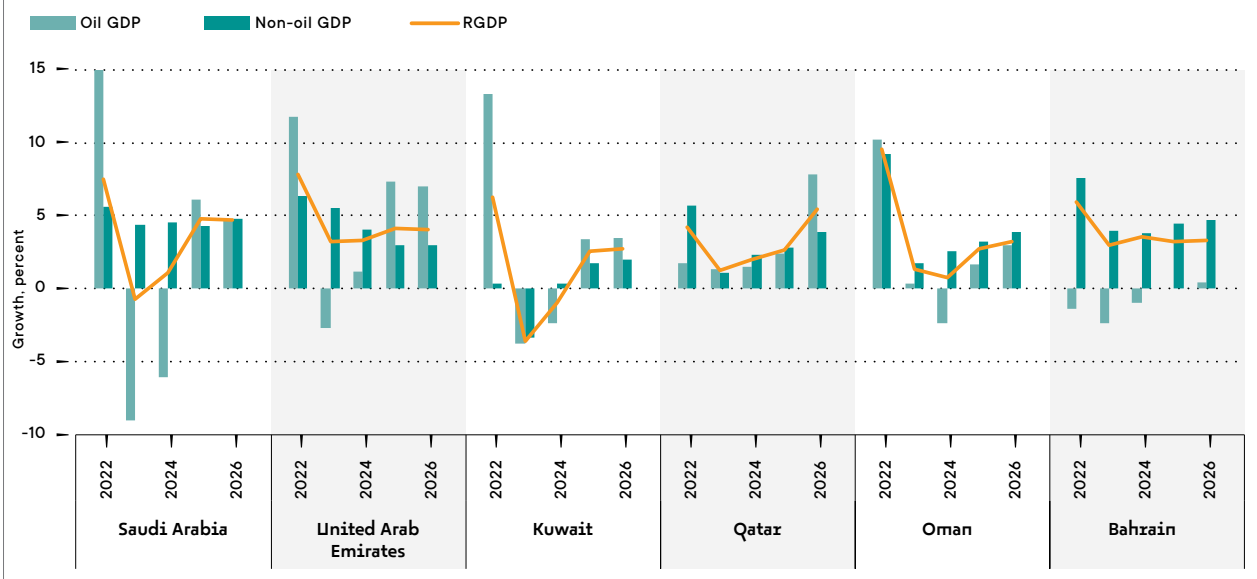
Qatar: The economy is expected to strengthen slightly to an average of 2.4 percent in 2024-2025, until it jumps to 4.1 percent in 2025-2026, primarily driven by increased gas production capacity. The non-oil GDP sector is anticipated to stay strong at 2.3 percent in 2024, supported by new infrastructure projects, expanding manufacturing sector, and rapidly growing tourism industry. This momentum is anticipated to strengthen further, reaching 3.4 percent growth in 2025-2026.The hydrocarbon sector is expected to remain at 1.5 percent in 2024 due to capacity constraints, but a significant boost is anticipated between Q4 2025 and 2027 with the North Field expansion.

Saudi Arabia: Following the contraction of 0.8 percent in 2023, real GDP is expected to grow by 1.1 percent in 2024, driven primarily by robust growth in non-oil activities of 4.6 percent, which will partially offset the expected 6.1 percent contraction in oil GDP. The contraction in the oil sector is expected given the extension of voluntary oil production cuts until the end of November-2024. Growth is expected to accelerate to an average of 4.7 percent in 2025-2026 as oil production increases, while the non-oil sector, critical to Saudi Arabia's economic diversification agenda, is expected to stay steady at an estimated 4.5 percent in 2025-2026.

UAE: Economic growth is estimated to reach 3.3 percent in 2024, driven by a sustained expansion of 4.1 percent in non-oil sector. This is underpinned by robust performance across multiple sectors notably tourism, real estate, construction, transportation, and manufacturing. In the medium-term, overall GDP growth is projected to accelerate to 4.1 percent in 2025 and 2026, supported by the recovery in oil production.

21 Kuwait's infrastructure initiatives include a KD 400 million (about USD 1.3 billion) road maintenance program contracted in October 2024, a long-term LNG supply agreement signed in August 2024 between Qatar Energy and Kuwait Petroleum Corporation to deliver 3 million tons of LNG annually starting in January 2025, and a power and water desalination plant expansion contracted in November 2024 valued at KD 118 million (USD 384 million), alongside other projects under implementation. Kuwait News Agency (KUNA), *Qatar agrees 15-year LNG supply deal with Kuwait*, August 26, 2024, URL: https://www.kuna.net.kw/ArticleDetails.aspx?id=3189996 Reuters, *Qatar strikes another 15-year LNG supply deal with Kuwait*, August 26, 2024, URL: https://www.reuters.com/business/energy/qatar-strikes-another-15-year-lng-supply-deal-with-kuwait-2024-08-26/ Reuters, November 12, 2024, URL: https://www.reuters.com/ar/business/MUF5TMPSMZPNXNTKTZB5TA2HUY-2024-11-12/

FIGURE 20 Economic growth is expected to rebound in most GCC countries, helped by increase oil production and continued strong non-oil growth



Source: WB Staff calculations.

Regional inflation is likely to remain subdued compared to other regions.

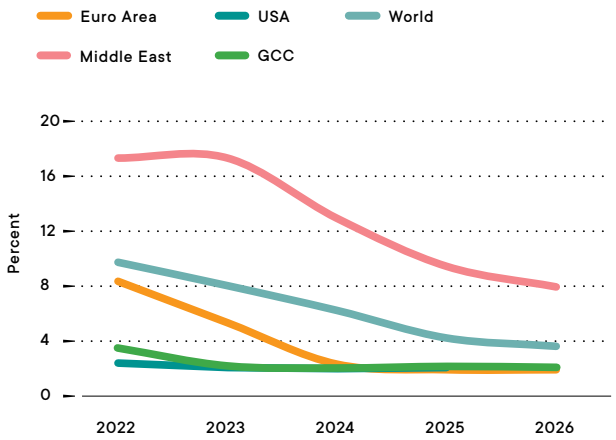
Inflationary pressures have eased in the GCC region since 2022 and are expected to remain well-contained in 2024, and in the medium term contained by several favorable factors. Inflation is estimated to ease to 2.1 percent in 2024, down from 2.2 percent in 2023 and 3.5 percent in 2022. This is mainly attributed to many factors including interest rate hikes, tighter monetary policies, generous subsidies, decline in global food prices, and the stabilizing effect of the currency peg to the U.S. dollar (Figure 21).Falling food prices and tight monetary conditions caused average inflation to decelerate in **Kuwait, Qatar and Saudi Arabia,** while stronger growth in housing prices pushed inflation rates up in the **UAE** and **Bahrain.**[22] In September 2024, and following the decision made by US federal reserve to cut its benchmark interest rate by 50 basis points, most GCC central banks have decided to slash their interest rates in response, though the magnitude of the cuts varied across the region. In 2025, a combination of interest rate cuts, and stronger economic growth may exert upward pressure on prices from stimulated demand, leading to an expected moderate rise in inflation by 2.2 percent. At the same time, generous subsidies, cap on fuel prices and strong local currencies that are mostly pegged to the U.S. dollar are expected to avert any significant rebound in inflation, and hence is projected to remain contained at an average of 2.1 percent in 2026.[23] Furthermore, in a context of increasing housing prices in the GCC countries, lower interest rates are expected to make mortgages and financing properties more affordable for consumers, boosting the sector growth. It is also expected to boost credit (Figure 22), and reduce debt servicing costs, among other things. Even prior to the recent cut in policy rate, Saudi central bank showed the fastest pace of credit growth in the GCC during Q2 2024 of 3.1 percent (y/y), followed by **Oman**, **Kuwait** and **Qatar** with a credit growth of around 1.0 percent.

22 BMI, September 19, 2024.

23 External factors such as the imported inflation from main trading partners, mainly China, could also drive domestic inflation in GCC.

FIGURE 21

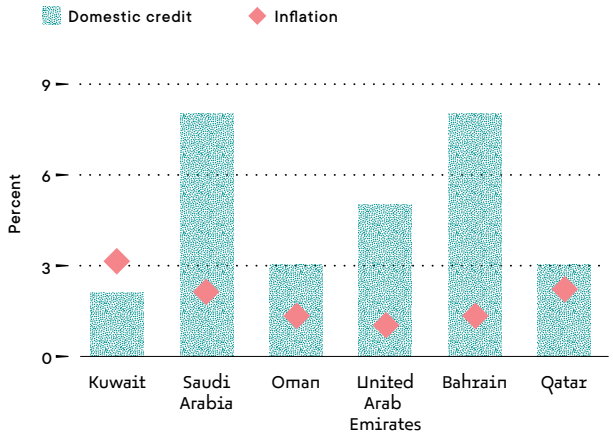
GCC countries' inflation projected to remain contained at relatively low levels



Source: Economist Intelligence Unit, 2024; WB Macro-Poverty Outlook, AM 2024; and WB staff calculations.

FIGURE 22

GCC banks' credit growth is expected to be stimulated by lower interest rates.



Source: WB Macro-Poverty Outlook, AM 2024; and Economist Intelligence Unit, 2024.

Note: Domestic credit growth measured as percentage change in bank lending to public and private sectors, plus bank lending in domestic currency overseas.

There is a projected increase in overall fiscal pressures in the GCC, but with significant variation across individual countries across the region.

The regional fiscal surplus is expected to turn into a small deficit in 2024 due to lower oil revenues following oil production cuts, and to remain in deficit in 2025-2026. Despite ongoing diversification efforts, hydrocarbon revenues remain crucial in shaping the regional fiscal outlook for the GCC. The extension of OPEC+ oil production cuts through the end of 2025, coupled with relatively low oil prices, are expected to impact the fiscal account balances in GCC, and to remain significantly below the high levels experienced in 2022. As a result, the combined fiscal balance for the GCC region is projected to register a small deficit of 0.1 percent of GDP in 2024, down from 0.6 percent of GDP in 2023 (Figure 23). Over the 2025-2026 period, a slightly wider fiscal deficit of 0.2 percent of GDP is projected on a combination of lower oil revenues and higher expenditures across the region. Stepping up efforts to diversify revenue sources and implement fiscal consolidation will mitigate the impact of projected lower oil prices on the region's fiscal balances.

BOX 2

Tax Revenue Mobilization Efforts in the GCC – Progress to Date

The sharp decline in oil prices that started in mid-2014 prompted a wave of tax reforms to balance strained fiscal positions across the GCC and diversify revenue sources. Bahrain introduced VAT taxation in 2019 and doubled the rate to 10 percent (in 2022); in September 2024 the country also adopted domestic minimum top-up tax (DMTT) to levy a minimum 15 percent rate of tax on the profits of multinational enterprises effective January 1, 2025;[24] **Saudi Arabia** introduced a VAT of 5 percent in 2018, and further increased the rate to 15 percent (effective July 2020). The government has also implemented excise taxes on tobacco, sugary drinks, and energy drinks, revised customs duties, and maintained a 20 percent corporate income tax (CIT).In the **UAE,** federal CIT was introduced at a rate of 9 percent since July 2023. VAT was introduced in 2018 at a rate of 5 percent on most goods and services, but certain financial services, residential properties and local passenger transport are exempt. Excise tax is levied on specific goods that are harmful to human health or the environment, and municipal taxes are levied by individual Emirates on various activities, including property rentals and hotel stays. Meanwhile, personal income tax on high earners in **Oman** was approved by Oman's Majlis A'Shura in June 2024, which is currently being considered by the State Council, making it the first GCC state to introduce personal income taxation (in addition to 5 percent VAT adopted in 2021). In 2023, **Qatar** enacted Law No. 11 of 2022, amending the Income Tax Law No. 24 of 2018, to expand the scope of taxable income, revise exemptions, enhance compliance measures, and introduce economic substance requirements, aligning its fiscal framework with international standards.[25] Progress in revenue diversification for **Kuwait,** however, lags their GCC peers.

Individual country fiscal balance outlook will diverge in 2024, with Saudi Arabia, Kuwait, and Bahrain expected to run fiscal deficits, while the rest will maintain surpluses (Figure 24). Details of the fiscal sector for individual countries are given below:

- **Fiscal pressures for Saudi Arabia, Kuwait and Bahrain: Saudi Arabia** is estimated to have a fiscal deficit of 2.9 percent of GDP in 2024 sustained by increased government spending. The deficit is to stay at these elevated levels over the period 2025-2026 (2.2 and 2.8 percent of GDP). Aramco performance-linked dividends (US$108 billion in Q2 2024) will contribute to enhance fiscal revenues and thereby put a lid on larger potential fiscal deficit.[26] The fiscal deficit in **Kuwait** is expected to be 5.8 percent of GDP in 2024 and widen to 8.1 and 7.9 percent of GDP in 2025, 2026 respectively due to expansionary fiscal stance. There is an absence of additional fiscal consolidation to increase non-oil revenue and tackle current spending rigidities. Lower energy prices and continued high interest burden will keep fiscal balance for **Bahrain** in deficit. However, limited spending growth under the Fiscal Balance Program (FBP) and higher oil revenues are expected to narrow the fiscal deficit by 2.6 percentage point of GDP in 2024, down from10.4 in the previous year. The deficit is projected to be 7.4 percent in 2025, before slightly accelerating to 7.7 percent in 2026 in line with lower projected oil prices.

- **Stable fiscal surpluses in UAE, Oman and Qatar: UAE's** Estimated fiscal surpluses are projected to remain stable at 4.9, 4.7, and 4.5 percent of GDP in 2024, 2025, and 2026, respectively, supported by the expansion of non-oil revenues and a broader tax base. **Qatar** is estimated to have an increasing fiscal surplus projected to increase from 4.2 percent in 2024 to 6.0 percent of GDP in 2026. The long-delayed implementation of value-added tax (VAT), anticipated in 2025, can help further support the fiscal sector. Finally, **Oman's** increased non-hydrocarbon receipts, and prudent fiscal discipline are expected to keep fiscal balance in surplus from 2024-2026, averaging 4.1 percent of GDP.

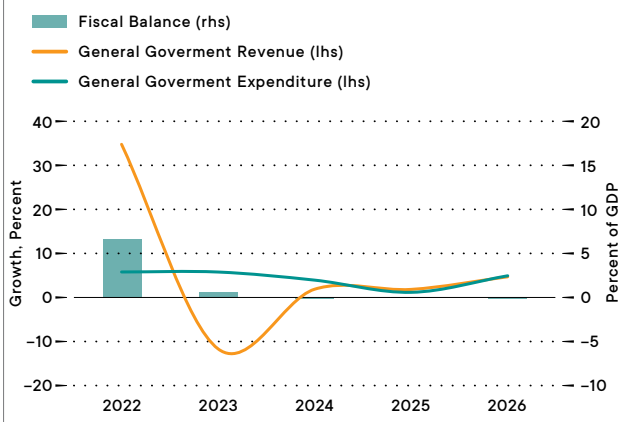
24 With global revenue exceeding €750 (US$828 million).

25 General Tax Authority. Amending Several Provisions of Income Tax Law. 2023.

26 Aramco has reported a 3.4 percent fall in Q2 2024 profit on lower crude volumes and softer refining margins, yet kept its generous dividend at US$31.1 billion in payouts, including US$10.8 billion in performance-linked payouts (US$29.03 billion net income). See, https://www.aramco.com/ /media/publications/corporate-reports/reports-and-presentations/2024/h1/saudi-aramco-h1-2024-interim-report-english.pdf

FIGURE 23

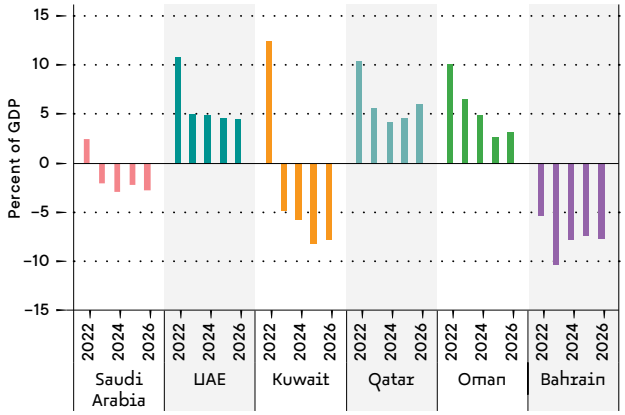
The GCC fiscal surplus is projected to turn into a deficit in 2024, and to remain on deficit in the medium term



Source: WB Macro-Poverty Outlook, AM 2024.

FIGURE 24

There is significant divergence in individual countries' positions



Source: WB Macro-Poverty Outlook, AM 2024.

The GCC fiscal position is expected to lead to divergent trends in debt-to-GDP ratios in individual countries (Figure 25). Lower interest rates will also drive stronger growth in non-oil sectors and reduce debt servicing costs across the region. This will especially benefit **Bahrain**, with the highest debt ratio among GCC. However, oil price volatility and contingent liabilities from SOEs (or government-related entities), will remain the main sources of vulnerability, highlighting risks to debt sustainability in the absence of additional fiscal consolidation over the medium-term. Budgetary financing needs will grow in **Saudi Arabia** in 2024, with the debt-to-GDP ratio expected to rise to 28.7 percent, and to remain elevated in the medium term. In **Bahrain**, absent additional fiscal reforms, declining oil prices will keep the debt-to-GDP high in 2024 (128 percent) and increasing thereafter (despite a noticeable decline in 2022), requiring deeper fiscal consolidation measures to put the debt on a firm downward trend. Additionally, the implementation of fiscal revenue reforms and active debt management strategies in the **UAE** are expected to enhance overall fiscal sustainability. Although debt sustainability in **Oman** has improved markedly supported by sizable fiscal adjustment and continued debt repayment, the government debt outlook remains vulnerable to risks, particularly from oil market developments.

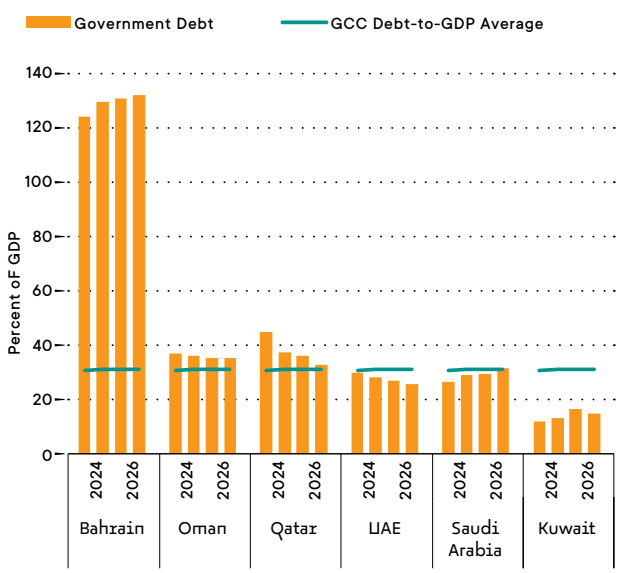
Total GCC Sovereign Wealth Funds (SWFs) assets stood at US$ 4.1 trillion in 2023 with investments of US$ 55 billion till Q3 2024, highlighting adequate fiscal buffers. Latest reports indicate that GCC SWFs deployed USD 55 billion in capital in the first nine months of 2024 across 126 different transactions.[27] As the rise in international oil prices over the years has contributed to increase the investment of GCC SWFs, these funds played a central role in reducing reliance on oil by developing new industries in technology, tourism, and renewable energy. The SWFs have supported the economic diversification strategies undertook by the GCC countries, bringing an additional source of fiscal buffers. With US$ 7.6 trillion in assets[28] expected by 2030 (Figure 26), the ample funds can help insulate the economy from commodity price volatility and external shocks, and provide resources for long-term investments, among other.

27 Global SWF, Sovereign Wealth Funds and Public Pension Funds Data Platform, n.d., URL: https://globalswf.com/ Economy Middle East, *GCC sovereign wealth funds deploy $55 billion in first 9 months of 2024: Report*, October 1, 2024, URL: https://economymiddleeast.com/news/gcc-sovereign-wealth-funds-deploy-55-billion-in-first-9-months/

28 2024 Annual Report, globalswf.com

FIGURE 25

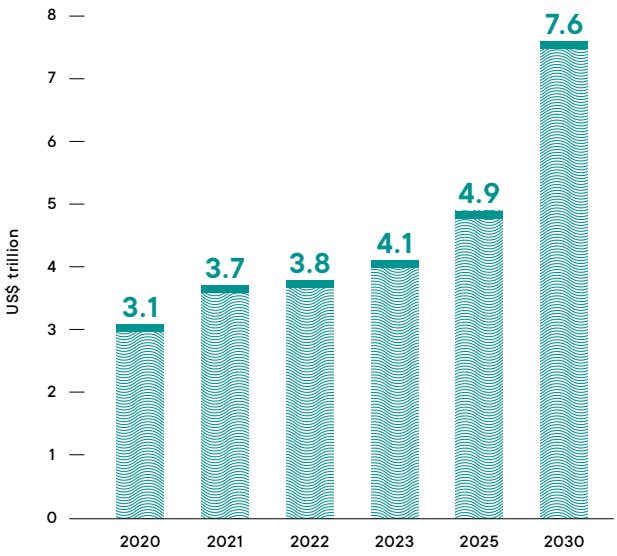
The overall debt-to-GDP ratio projected to increase, but there is significant regional variation



Source: WB Macro-Poverty Outlook, AM 2024.

FIGURE 26

Large fiscal buffers through the regional SWFs expected to insulate economy from external shocks



Source: Global SWF Data Platform and Projections.

The regional external balance surplus is expected to decline in 2024 compared to 2023 but increase in the medium-term, driven by an increase in hydrocarbon exports.

The regional external balance surplus is expected to narrow before expanding in the medium term. The current account surplus is expected to narrow to 7.1 percent of GDP in 2024, mainly reflecting lower energy exports (Figure 27). In 2025-2026, strong performance of service exports across most GCC will provide support to the external sector, widening the external balance surplus to 8 percent of GDP over 2025-2026 (Figure 28).

There is significant divergence in individual country outlooks for the external sector. Key highlights of the external sector of individual countries are given below:

Bahrain: The current account surplus will also likely increase to 7.3 percent of GDP in 2024 helped by higher non-oil exports volume, but to narrow in 2025-2026 in line with oil price outlook.

Kuwait: Narrowing current account surplus at 21.6 percent of GDP in 2024 affected by lower oil exports. Estimated further decline in the current account balance in 2025-2026, as the uptick in oil production fails to completely offset the decline in prices.

Oman: There is an estimated increase in the current account surplus in 2024 to 1.7 percent of GDP, and to further increase in 2025-2026 supported by increased nonhydrocarbon exports.

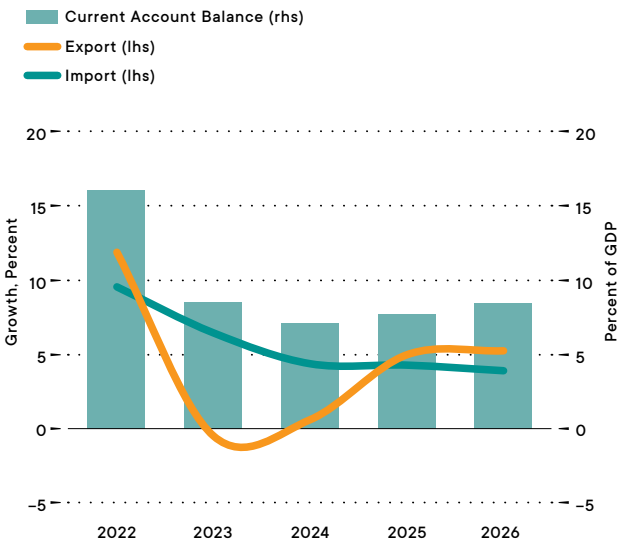
Qatar: The current account surplus in is expected to narrow to 14.5 percent of GDP in 2014 but should remain robust at an estimated of 14.8 percent over 2025-2026 buoyed by strong energy and services (tourism) exports.

Saudi Arabia: The current account surplus is estimated expected to narrow to 2.5 percent of GDP in 2024 mainly reflecting lower oil exports and a strong growth in investment-related imports. There is also a projected increase to an average of 5.1 percent over 2025-2026 due to rising non-oil exports and increase in tourism receipts.

UAE: There is an anticipated decrease in the current account surplus from 9.2 percent in 2023 to 7.5 percent of GDP in 2024, and to an average 7.3 percent in 2025-206, despite continued efforts to increase non-oil exports.

FIGURE 27

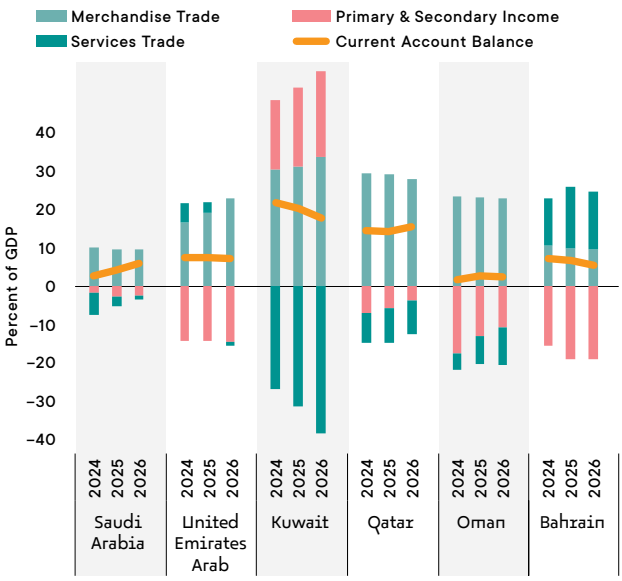
Current balance surplus is expected to narrow before expanding in the medium term...



Source: WB Macro-Poverty Outlook, AM 2024.

FIGURE 28

...tracking the developments in oil market.



Source: WB Macro-Poverty Outlook, AM 2024.

1.7%

Oman's estimated increase in the current account surplus in 2024

The region faces downside risks from escalating Middle East conflicts, OPEC+ production cuts, a sluggish recovery in China, and global decarbonization efforts.

The uncertain regional context of the ongoing Middle East conflict heightens the risk of broader regional spillovers with substantial economic consequences. Heightened geopolitical tensions can significantly dampen growth prospects by increasing uncertainty, undermining business and consumer confidence, curbing tourism, triggering capital outflows, and tightening financial conditions. Historical data shows that during periods of intense regional conflict, countries in the Middle East have experienced a decline of about 2 percent in real GDP per capita within a year of conflict onset, with losses reaching around 10 percent over a decade.[29] Additionally, investor behavior tends to shift toward safer assets during such periods, leading to capital outflows from higher-risk regions. Although GCC banking systems have shown resilience under past geopolitical stress, sustained uncertainty could weaken non-oil sector growth in the GCC as businesses and consumers adjust to an elevated risk environment. Additionally, the Red Sea shipping crisis, driven by Houthi attacks and geopolitical tensions, has disrupted global trade routes, impacting the Gulf States' oil and gas exports, maritime traffic, and investment flows, while prompting a shift to land transport (see Box 3). Intensification of this crisis poses further risks to economic growth. However, an escalation of the conflict in the region could lead to oil supply disruptions affecting global oil prices, which could result a windfall for the region.

BOX 3

The Impact of the Red Sea Shipping Crisis on the Gulf States

The Red Sea, a vital maritime artery, is currently facing a shipping crisis of unprecedented scale. The Red Sea is channeling 30 percent of global container traffic, 12 percent of the world's oil, and 8 percent of liquefied natural gas (LNG) shipments. Since November 2023, Yemen-based Houthis have been conducting missile and drone attacks against commercial vessels in the Gulf of Aden and southern Red Sea.[30] Security threats in the Red Sea have compelled ships on the Asia-Europe and Asia-Atlantic trade lanes to be rerouted around Africa's Cape of Good Hope, greatly extending travel distances and times. In the wake of these disruptions, the once-thriving maritime passage, prized for its role as the most expedient link between Asia and Europe, has witnessed a precipitous drop in vessel traffic. As of September 2024, the volume of traffic through the strategic Suez Canal and Bab El-Mandeb Strait has dropped by three-fourths relative to historical norms, while the alternative route via the Cape of Good Hope route has witnessed an increase in navigation by over 50 percent (Figure 29, A).

The disruption of Red Sea trade routes has primarily affected the Gulf States' oil and gas exports to Europe. Since January 2024, **Qatar**, the world's second-largest exporter of LNG, has suspended its LNG shipments via the Red Sea, forcing a longer route around the Cape of Good Hope, which adds approximately nine days to the journey to Europe.[31] **Saudi Arabia**, which has the longest coastline along the Red Sea, relies on its ports there as vital trade hubs. Since the start of the crisis, most shipping companies handling Saudi oil have rerouted vessels around the Cape of Good Hope to reach European markets, bypassing the Suez Canal.[32] In July 2024, following attacks by Houthi forces on two Saudi ships, the country announced that it would cease oil shipments through the Red Sea.

The Red Sea shipping crisis has had a profound impact on the regional supply chain, particularly for GCC countries, because of their proximity to the conflict's center. The Strait of Hormuz, the world's most critical oil passageway and a chokepoint between the Arabian Gulf and the Gulf of Oman, has experienced approximately a 15 percent decrease in traffic volume compared to the pre-conflict baseline of January to September 2023 (Figure 29, A). Additionally, delayed container shipping capacity of the ports of the Gulf States, especially in **Oman**, the **UAE**, and **Saudi Arabia**, has dramatically increased since the start of the crisis, reflecting the strain on the supply chain (Figure 29,B).

The conflict in the Middle East and the ensuing Red Sea shipping crisis have led to a sharp decline in maritime shipping and trade across GCC countries. From October 2023 to August 2024, shipping volumes across all GCC nations fell significantly compared to the baseline period of January 2022 to September 2023. **Saudi Arabia** and **Oman** saw the steepest export declines, with drops of 29 percent and 31 percent, respectively, while **Qatar** experienced the largest import decline at 30 percent (Figure 29, C). Nearly all of the top 15 GCC ports recorded notable drops in both imports

29 International Monetary Fund, Regional economic outlook Chapter 2, April 2024

30 While the Yemeni group has vowed to target only vessels bound for and affiliated with Israel, and—following the British and US military strikes—vessels from the latter nations as well, many vessels with no connection to the stated targets have also been struck.

31 Emily Chow and Marwa Rashad, "Tankers carrying Qatari LNG change course amid Red Sea tension -data", https://www.reuters.com/markets/commodities/lng-tankers-carrying-qatari-lng-resume-course-data-shows-2024-01-16/

32 IntelliNews, "Oil shipments from Saudi Arabia and Iraq to Europe delayed amid Red Sea tensions", https://www.intellinews.com/oil-shipments-from-saudi-arabia-and-iraq-to-europe-delayed-amid-red-sea-tensions-308609/

and exports as opposed to their pre-crisis levels, with trade volumes decreasing by an average of 17 percent (Figure 29, D). Nevertheless, **Saudi Arabia's** King Fahd Port has bucked the trend, showing positive growth. Its location, well north of Houthi-controlled Yemeni territory, has likely allowed it to continue sending cargo through the Suez Canal to Europe and beyond without disruption.

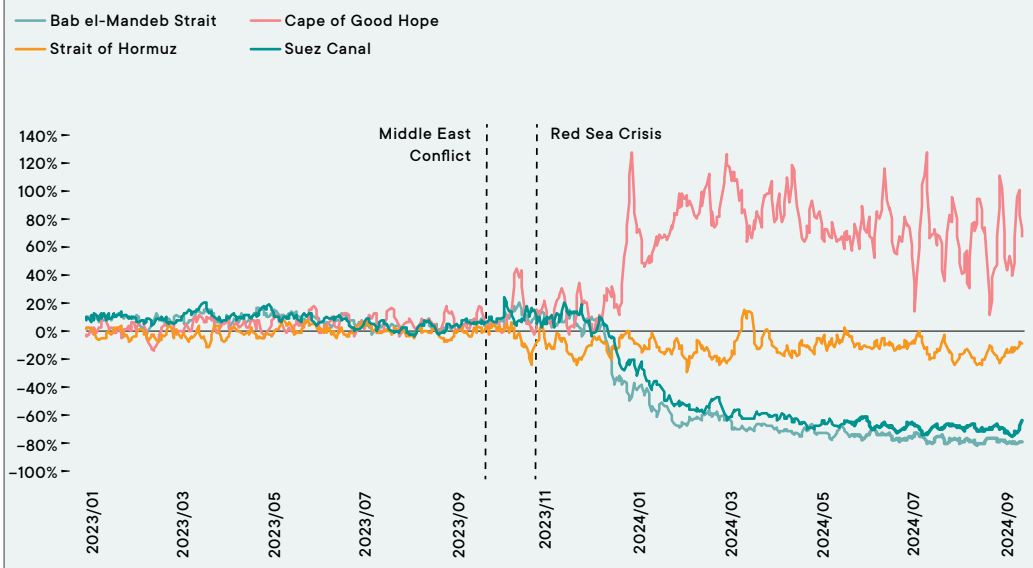
The Red Sea shipping crisis has also affected the Gulf States through investment channels. The **UAE** has invested heavily in port infrastructure in the Red Sea basin and the Horn of Africa, notably through Dubai Ports (DP) World.[33] Attacks have disrupted the flow of commercial traffic through Red Sea ports, some operated by DP World, resulting in a 59 percent drop in the company's net profit in the first half of 2024.[34] The crisis has also financially affected **Saudi Arabia**, which has heavily invested in developing Jeddah as a tourist and commercial hub on the Red Sea's east coast.

FIGURE 29

A-D. The Red Sea crisis forced many vessels to divert from their original routes, straining the supply chains of GCC countries and causing a decline in maritime shipping across the region

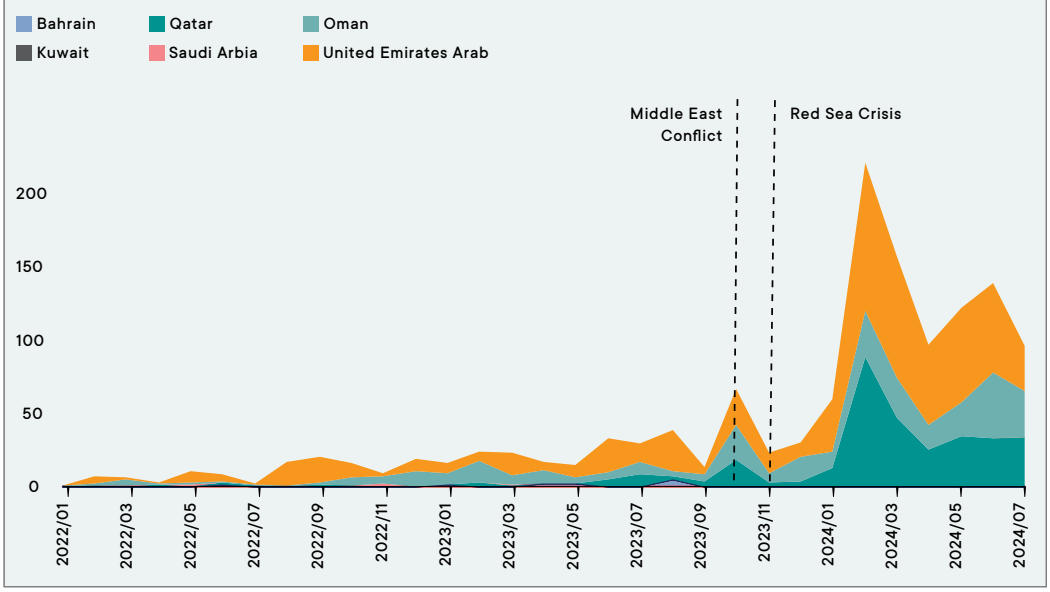
A

AIS transit volume at key maritime chokepoints
(percentage change from the historical average between Jan 2022 to Sep 2023)



B

The World Bank supply chain stress index, ports of GCC countries
(Millions of 20-foot equivalent units (TEUs))

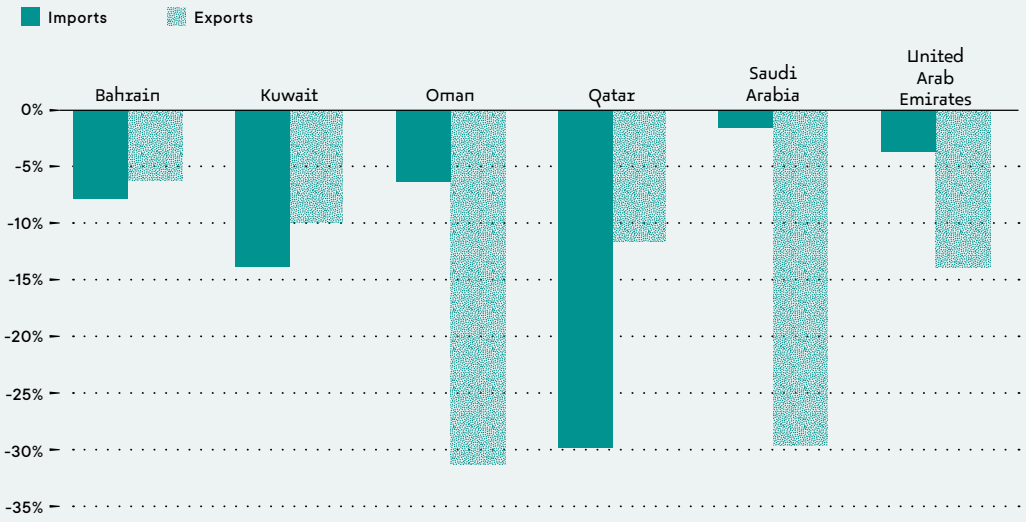


33 Azure, "UAE and KSA: Growth and influence along Red Sea", https://azure-strategy.com/uae-and-ksa-ramp-up-port-investments-along-red-sea/

34 DP World. (2024). 2024 Financial Report.

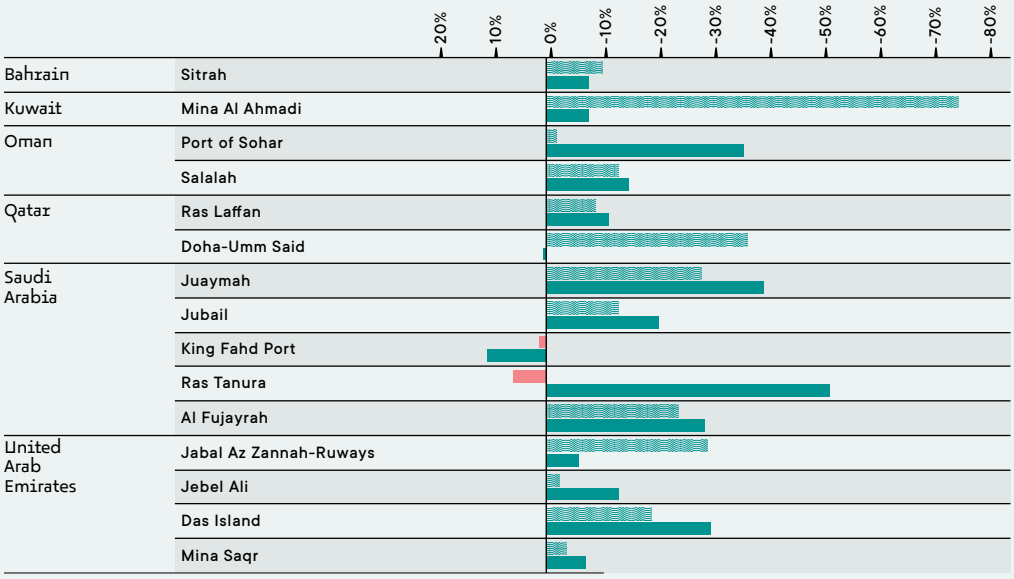
C

Shipping volume in GCC countries
(percentage change from Oct 2023 to Aug 2024, compared to Jan 2022 to Sep 2023)



D

Shipping volume at the top 15 GCC ports
(percentage change from Oct 2023 to Aug 2024, compared to Jan 2022 to Sep 2023)



Source: IMF Portwatch, https://portwatch.imf.org/; World Bank Group Global Supply Chain Stress Index, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099746107032431443/idu19447dab513757140b1193cd19643f0ab7c10; World Bank staff estimates.

Note: A. The lines represent the 7-day moving average percentage change in daily capacity of ships passing through key chokepoints, compared to its historical daily average since January 1, 2022. The two vertical lines mark the onset of the Middle East conflict and the Red Sea crisis. B. The lines show the shipping capacity under stress in GCC countries by aggregating the obstructed shipping capacity of their ports. This is estimated as the difference between current data and the monthly median from January 2016 to April 2024. For further details, please refer to the WBG working paper A Metric of Global Maritime Supply Chain Disruptions. C. The histograms display changes in the shipping import and export capacity of GCC countries, comparing the monthly average from September 2023 to August 2024 with data from January 2022 to September 2023. D. The histogram shows changes in aggregated import and export shipping capacity for the top 15 ports in GCC countries, comparing the monthly average from September 2023 to August 2024 with data from January 2022 to September 2023.

At the same time, the scope and duration of the crisis has prompted inter-modal transport adjustment from maritime shipping towards land transport of cargo across the Arabian Peninsula. While the disruption of the cheapest means of transportation remains a significant challenge, the availability of alternatives such as land corridors has ensured that transport has not shut down entirely for the **UAE** and **Saudi Arabia**. The shipping companies have increasingly opted to move cargo using the land corridors from Dubai to Jeddah and, to a lesser extent, from Dubai to Haifa,[35] despite higher costs and logistical complexities compared to pre-crisis maritime transport.

Decisions by OPEC+ to extend or deepen voluntary cuts could dampen recovery and weaken fiscal and external positions. In October, OPEC+ members led by **Saudi Arabia** and Russia agreed to extend their additional voluntary production cuts of 2.2 million barrels per day for two months until the end of November 2024, following a drop in crude prices to a nine-month low. Further adjustments, including pausing or reversing production increases, remain possible. This, in turn, would lead to lower government revenues, potentially widening fiscal deficits. Additionally, lower export volumes would reduce foreign exchange earnings, weakening external balances. Consequently, these factors could impede economic recovery.

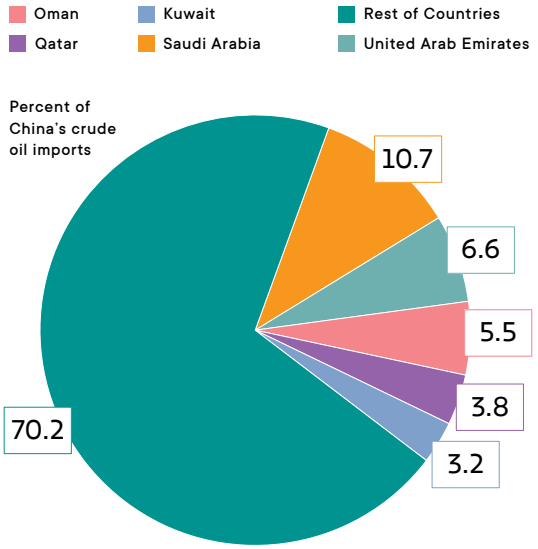
A weaker-than-expected recovery in China would have significant cross-border effects. A slowdown in China's growth would exert downward pressure on oil prices and demand, reducing oil GDP and revenues in the GCC. This impact is more significant today than a decade ago, given the increased exposure of GCC economies to China. As the world's second-largest oil consumer, China sources nearly 30 percent of its crude oil imports from five of the GCC countries in 2023 (Figure 30). Additionally, weaker growth in China could directly affect GCC non-oil GDP due to stronger non-oil linkages. A negative growth shock in China would adversely impact GCC non-oil growth in both the short and medium term. Specifically, it is estimated that a 1 percentage point decline in China's growth is estimated to reduce GCC non-oil output by 0.24 percent in the same year as the shock and by 0.57 percent over the medium term (four years).[36] Furthermore, the persistent fragility in the Chinese real estate market could pose a larger-than-expected drag on growth and potentially lead to financial stability risks.

35 Middle East Institute, "The Houthi-UAE collision course in the Red Sea", https://www.mei.edu/publications/houthi-uae-collision-course-red-sea

36 Y. Korniyenko et al, 2023, "Gulf Cooperation Council: Economic Prospects and Policy Challenges for the GCC Countries". IMF Country Report No. 2023/413.

FIGURE 30

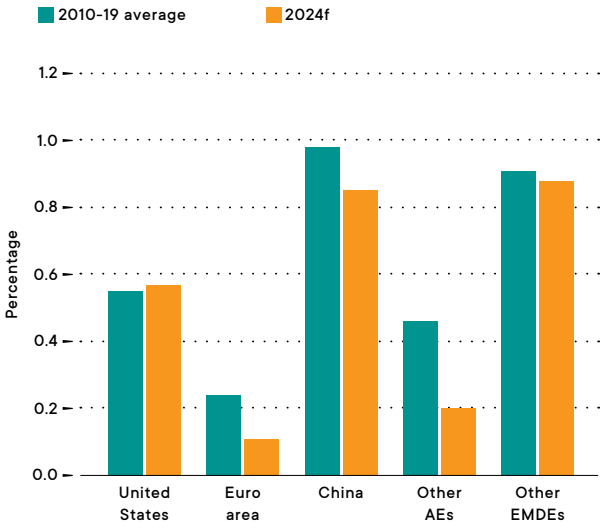
China sources nearly 30 percent of its crude oil imports from five of the GCC countries in 2023



Source: International Trade Centre.

FIGURE 31

The U.S. economy has shown resilience in 2024, with higher contributions to global growth



Source: Global Economic Prospects, June 2024.

The region faces medium-term risks from a growing pressure for climate transition, particularly disruptions in fossil fuel trade as the global economy shifts to net-zero emissions. The uncertainty surrounding future oil prices, driven by factors such as the global shift towards low-carbon consumption, adds complexity to the macroeconomic outlook. Accelerated global decarbonization efforts could further strain GCC financial systems, weakening asset quality and increasing the risk of stranded assets. At the same time, the GCC faces significant challenges in advancing its own energy transition. The region has some of the world's highest per capita emissions—ranging from 1.5 to 4 times the global average—further highlighting the urgency of transitioning towards a greener economy. As of now, the GCC is home to only three major carbon capture and storage (CCS) facilities, which together account for approximately 10 percent of global CO_2 capture annually.[37] This limited scale underscores the significant gap between current actions and the requirements for achieving net-zero commitments by mid-century. To address these challenges, the GCC should prioritize strengthening macroeconomic buffers, diversifying economies, and reducing reliance on extractive industries. The growth of the green economy presents an opportunity for the GCC to leverage its energy infrastructure and expertise, particularly in solar and hydrogen production, where the region has been actively pursuing partnerships and initiatives. For instance, **Saudi Arabia** plans to produce 650 tons of hydrogen per day by 2025[38], while **Oman** targets 1 million tons of green hydrogen output by 2030. Additionally, the **UAE** is playing a critical role in advancing green technology. The Abu Dhabi National Oil Company, for example, has been aggressively investing in decarbonization initiatives, including carbon capture and storage, renewable energy partnerships, and innovative hydrogen projects. This expansion into green sectors could help capitalize on the region's competitive advantage in renewable energy potential and support economic diversification.

A potential upside risk to the region's growth outlook is stronger-than-expected economic growth in the United States. The U.S. economy has shown resilience, driven by robust domestic demand and a stable labor market, despite tight monetary policy (Figure 31). Stronger U.S. growth could lead to increased global energy demand, benefiting GCC countries by driving up oil prices. This, in turn, would allow the GCC to expand oil production, particularly after the anticipated lifting of OPEC+ production cuts at the end of 2025. Additionally, improved global investor sentiment resulting from U.S. economic growth could lead to greater capital inflows, further supporting economic recovery and diversification efforts in the GCC.

37 A. Al-Sarihi, 2023, "The GCC and the road to net zero". Middle East Institute.

38 "Hydrogen to Play a Central Role in Saudi Arabia's Energy Transition," German-Saudi Arabian Liaison Office for Economic Affairs (AHK)

Chapter 04 Page 40 – 77

Special Focus:

Water Security and Climate Uncertainty in Gulf Cooperation Council (GCC) countries

PART I

Water Scarcity and Thirsty Economies

Why Water Matters for Economic Growth and Development?

Water is essential to life, production, and ecosystems. However, global water scarcity poses a critical challenge to human development and the achievement of the Sustainable Development Goals (SDGs). Water is also central to reducing ecological and climate risks, which now threaten the stability of civilizations that have thrived for thousands of years (Wang-Erlandsson et al. 2022). Climate change, for example, will likely worsen global water stress[39], as rising temperatures increase the frequency and severity of extreme weather events, including floods and droughts (United Nations 2021). These events disturb the water balance and ecosystems, destabilizing the delicate balance needed to sustain life.

As water stress intensifies, communities face challenges to meet their water needs due to insufficient supplies or inadequate infrastructure. Currently, billions of people experience water stress, with the poorest populations bearing the greatest risks (CFR 2023). Such conditions heighten the risk of poverty, creating a "poverty trap", where individuals remain impoverished due to water-related challenges. This perpetuation of poverty exacerbates global socioeconomic inequality, as those without such risks can achieve faster economic growth (Barrett et al. 2018).

39 Water stress is a condition in which water demand and supply are not "cleared" (or diverge) because of different water risks. These risks include uncontrolled increase in demand (Allegretti et al 2022), water scarcity (UNESCO 2023), water abundance when floods hit (Yadav and Ibrar 2023)—often leading to increasing concentrations of minerals and salts that are expensive to treat or can even make the water unusable—, or water pollution that restricts water use and consumption (van Vliet et al., 2017).

In addition to the human toll, inefficient water usage and poor water and sanitation service delivery incur substantial economic costs. These issues undermine long-term human capital, reduce productivity, and slow inclusive economic growth. Recent estimates value the global economic and environmental contributions of water at $58 trillion, with consumptive uses in households, agriculture, and industry accounting for $7 trillion. Biodiversity and environmental benefits add up to $39 trillion. However, inefficiencies in consumptive water use alone cost $3.2 trillion, or 45 percent of consumptive use value (WWF 2023).

Research indicates that persistent water scarcity, as measured by declining water availability, significantly hampers economic growth. For instance, consecutive years of below-average runoff can reduce local economic growth by up to 2.5 percent annually due to impacts on agriculture and hydropower (Russ 2020). In regions with high water scarcity, such as parts of Africa, Northeast Asia, and the Middle East, growth rates could decline by up to 6 percent of GDP by 2050 due to water-related impacts on agriculture, health, and income (World Bank 2016). Erratic rainfall also disrupts food production. This affects the supply of food needed to feed around 81 million people each year (Damania et al. 2017). Extreme droughts on the other hand have reduced per capita GDP growth by nearly 1 percent annually (Zavery, Damania, and Engle 2023).

BOX 4

Assessing Water Security Impacts on Poverty and Inequality

To evaluate water security risks around the World, the World Bank conducted Water Security Diagnostics in around 12+ countries. Such analyses identify various types of water shocks, showing the increasing importance of investing in reliable and resilient infrastructure and preserving water resources. For instance, erratic water flows for hydropower generation in Argentina — the second largest electricity source — is at risk of losing 0.2 percent of the gross domestic product (GDP) per year. In another example, in Moldova, water risks in the form of floods cause damages of estimated at US$100 million annually (0.2 percent of GDP). In Peru and Colombia production shocks due to water risks represent around 1.2 percent of GDP losses. In Vietnam, the diagnostic found that water quality risks affect agricultural, fisheries, and water shortages of utilities that accrue to 4.3 percent of GDP annually. Globally, the World Bank estimated the costs of water pollution under a water security framework: when surface water bodies have pollutants in high excess, such as Biological Oxygen Demand (BOD), the GDP growth in those areas is only a third (0.82 percent) compared to the GDP growth areas without those pollutants (2.33 percent), but with similar characteristics (Damania et al 2019).

In 2017, the World Bank made its first effort to understand the relationship between access to water and sanitation services and poverty through the WASH Poverty Diagnostic Initiative (World Bank 2017).[40] Consistently, in all countries where the analysis was done, the interplay between poverty and water and sanitation access not only highlighted geographic areas of need (that is, where poverty rates are high and access low) but also helped identify potential "islands of effectiveness" (that is, where access rates are high despite high income poverty). Among many social, economic, and geographical factors, wealth was found to be the most important determinant globally of accessing these basic services. A stark finding to all countries showed that access gaps in water and sanitation services not only explain gaps in child's health, but also on gaps in food security and health care.

40 Water and sanitation services indicators and income poverty were overlaid and spatially represented in more than 18 countries around the World.

The importance of drought resilience of water services

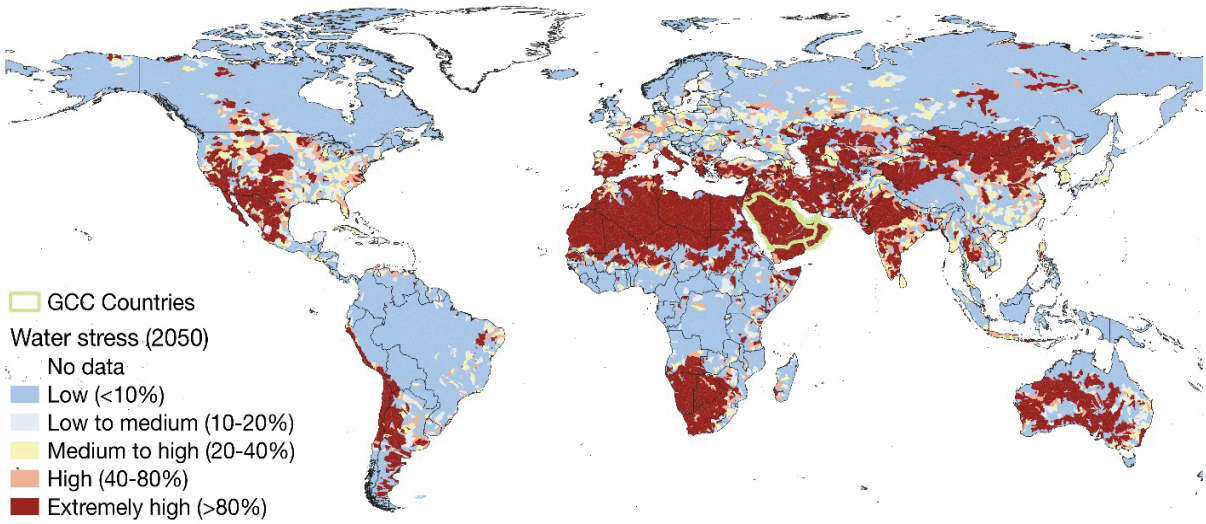
Strengthening the resilience and reliability of water services is crucial to mitigating economic and social costs. Disruptions in water and sanitation infrastructure due to climate impacts are estimated to cost $6 billion per year (Hallegatte et al. 2019). The poor are particularly affected by unreliable water services and limited access to quality infrastructure. With population growth and rising temperatures, water stress is expected to increase, making arid regions more vulnerable. Given that water is essential for agriculture, energy generation, public health, environmental conservation, and economic stability, declining water availability especially threatens food and energy security globally.

Water scarcity and Thirsty Sectors (GCC and Global Benchmarks)

The GCC countries and the Middle East and North Africa (MENA) region are projected to experience the highest levels of water stress globally (Figure 32). GCC countries, facing limited surface water and unsustainable groundwater use, are among the most water-scarce nations in the world. The threshold for absolute water scarcity is 500 cubic meters of renewable freshwater per person annually, yet many of these countries have access to less than 100 cubic meters per capita annually. Despite this, per capita water consumption in the GCC averages around 550 liters per day (200 cubic meters per person per year).

Annual freshwater consumption in the GCC is expected to reach 33.7 billion cubic meters, exceeding projected storage by nearly 8 billion cubic meters. The region's population, currently around 50 million, is projected to increase by 14 million by 2050, further escalating water demand. Four of the 17 countries worldwide facing "extreme high water stress" (where at least 80 percent of available surface and groundwater is consumed annually) are in the GCC: Qatar, Kuwait, Saudi Arabia, and the UAE.

FIGURE 32 Projected exposure to water stress by 2050

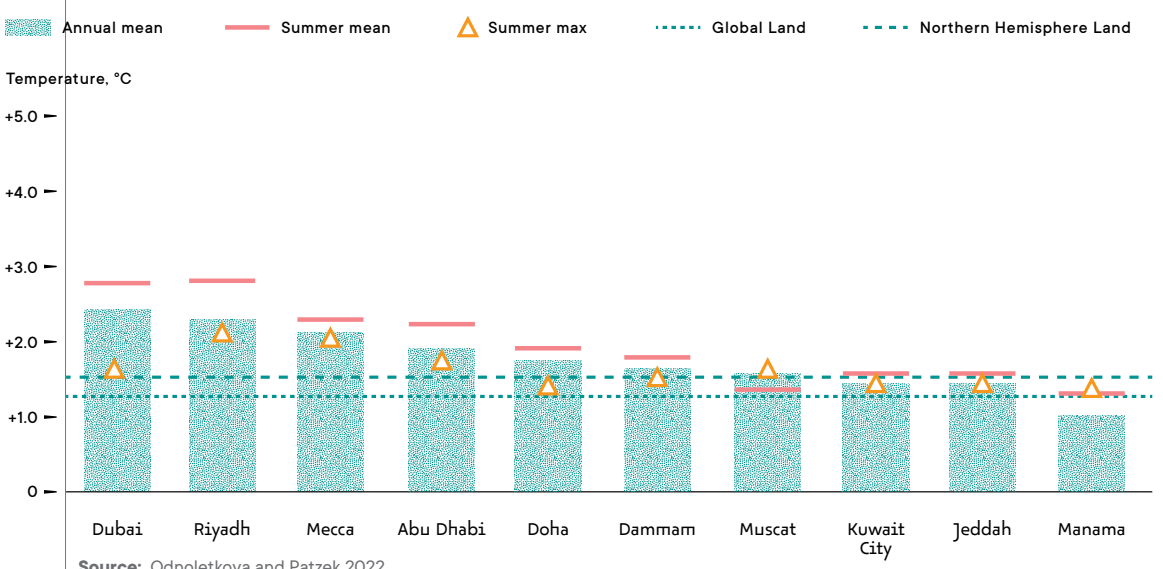


Source: AQUEDUCT 4, World Resources Institute (2024)

Naturally arid, the GCC countries are increasingly affected by groundwater depletion and rising global temperatures, further diminishing its water supplies. Studies indicate that from 1979 to 2019, GCC cities such as Manama and Dubai (Figure 33) experienced annual temperature increases of 1.0 to 2.4°C, compared to the global average increase of 0.8 to 1.4°C (Odnoletkova and Patzek 2022).

The GCC is a global hotspot for unsustainable groundwater abstraction, with groundwater pumping exceeding natural recharge rates, particularly for agricultural use (see Table 1). This over-extraction not only degrades groundwater quality but also depletes reserves, exacerbating water scarcity. Although treated wastewater could be a valuable resource, much of it remains underutilized, with desalination being the main source of water supply. Subsidized water prices mean that consumers pay far less than the actual cost of water production, and groundwater pumping for irrigation is often unmonitored or uncontrolled (Sherif et al. 2023). Effective groundwater storage solutions could help meet additional water needs while promoting sustainable water management. As irrigation expands in GCC countries concrete plans for sustainable use of water must accompany those interventions.

FIGURE 33 Temperature increases of GCC cities and global and northern hemisphere averages 1979-2019



Source: Odnoletkova and Patzek 2022

TABLE 1 Irrigation upgrade and expansion needs for sustainable water use and storage in agriculture

Region	Unsustainable irrigation (ha)	Irrigation expansion (ha)	Irrigation expansion and upgrade (ha)
Sub-Saharan Africa	2,742,130	50,904,559	53,646,689
East Asia and Pacific	36,135,260	6,815,020	42,950,280
Europe and Central Asia	15,018,514	60,790,425	75,808,939
Latin America and Caribbean	7,466,972	5,302,903	12,769,875
Middle East and North Africa	13,749,423	3,872,553	17,621,976
GCC countries	*1,064,081*	*576,469*	*1,640,550*
North America	15,457,692	6,200,331	21,658,023
South Asia	56,691,695	6,233,961	62,925,656
World	**148,325,767**	**140,696,221**	**289,021,988**

Source: World Bank 2024.

Water scarcity and thirsty economic sectors in the GCC

The intensity of water use in the GCC affects several economic sectors. Renewable surface water, desalination capacity, and wastewater treatment capacity are estimated at 4.14, 26.4, and 10.07 billion cubic meters, respectively. Despite tertiary treatment, treated wastewater reuse is limited to developing green spaces and forests, signaling a need for sustainable water management programs.

Water scarcity and growing gaps between supply and demand present major challenges for GCC economies. Factors such as lifestyle changes, industrialization, urbanization, and climate change have intensified competition for water among agriculture, industry, and urban centers. On average, agriculture accounts for around 77 percent of the GCC water consumption, industry 18 percent, and households 5 percent. Despite heavy groundwater use in agriculture, the sector's value-added contribution remains low compared to countries with similar income levels (Table 2). Over-extraction has led to groundwater pollution from seawater intrusion and brackish water migration from lower aquifers (Saleh et al. 2023).

Agriculture and industry are also driving pollution in water resources at an increasing rate. Direct and indirect subsidies for well drilling, pumps, fuel, and other inputs encourage unsustainable water use. Excessive fertilizers and pesticides, as well as industrial production, raise levels of untreated wastewater, contributing to groundwater pollution through seepage. Large quantities of low-quality water are used to prevent crop wilting, with farmers applying heavy chemical fertilizers to boost yields. While basic sanitation coverage is high across the GCC, a significant portion relies on on-site facilities like septic tanks, which may be inadequate for pollution control in densely populated areas.

Between 2017 and 2020, per capita freshwater availability for productive and human use in the GCC dropped by 25 percent. This reduction has been offset by increased use of non-conventional sources, such as desalination, to ease pressure on conventional resources. Consequently, the share of extracted groundwater in total freshwater use dropped to 70.5 percent in 2020 (Helal et al. 2024).

TABLE 2 Water Resources in GCC countries

Country	Population (millions)	Mean Annual Precipitation (mm)	Annual Freshwater Resources (hm3)	Treated wastewater use (million m3)	Percent of Water Use in Agriculture	Agriculture Value Added to GDP (%)
Bahrain	1.7	80	116	31	45	0.3
Kuwait	4.3	110	20	189	54	0.4
Oman	5.1	175	1400	67	89	1.3
Qatar	2.9	75	58	64	59	0.1
Saudi Arabia	34.8	285	2400	487	88	1.9
UAE	9.9	90	150	264	83	0.7
Total	**58.7**	**136**	**4144**	**1102**	**70**	**0.8**

Sources: Helal et al. 2024. World Bank 2022.

Expanding wastewater treatment and reuse is crucial to mitigating water scarcity and containing costs. However, economic, cultural, and social barriers limit the adoption of treated water in the GCC. Despite a high capacity of wastewater treatment in GCC countries a small fraction of recycled water is used for human consumption. However, other uses of treated wastewater can be used to reduce the risks of water stress, like aquifer recharge, and fodder crop production. Aquifer replenishment has environmental benefits and is also significant for GCC societies. **Saudi Arabia**, for example, faces increasing water demand in municipalities, which rose by 4.5 percent annually over the past decade, while treated wastewater rose by 5.5 percent annually. In 2020, only half of municipal water use was treated, with 18 percent of treated wastewater further reused, illustrating the need for more robust regulatory frameworks to manage water consumption and pollution (Odnoletkova and Patzek 2023).

PART II

Economic Impacts of Water Scarcity

Impact of water scarcity on agriculture and industry

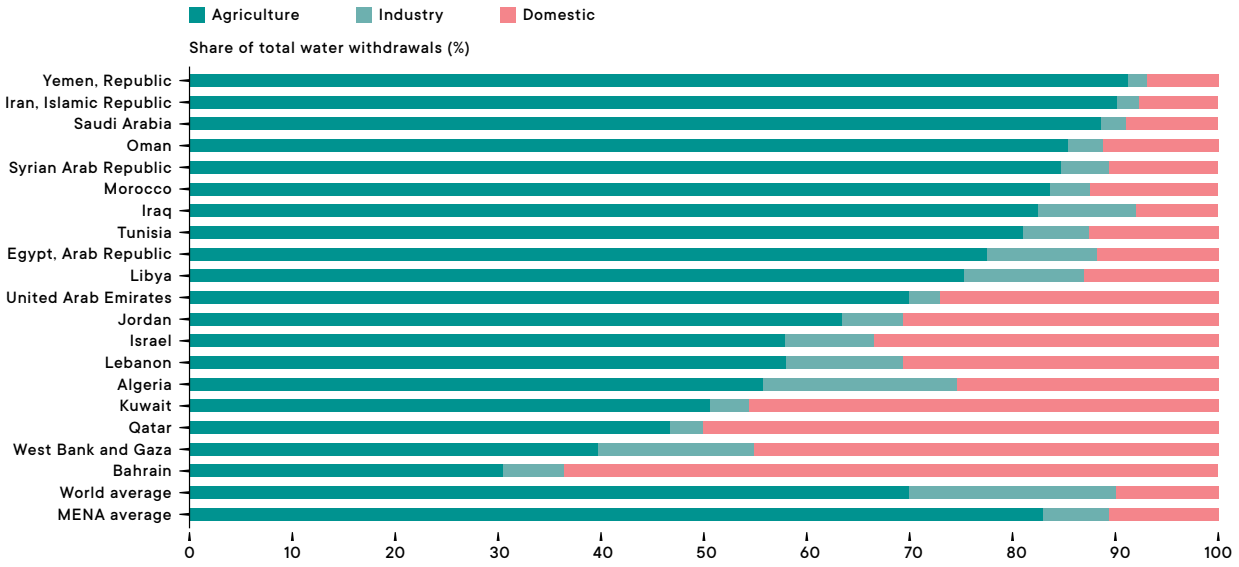
Climate change affects the structure and functioning of economic and ecological systems, particularly in countries with a high proportion of dryland areas. The impacts of water scarcity on agriculture are significant, with production projected to drop by 60 percent by 2050 in some countries. Water-saving technologies and fuel-switching in the power sector play a key role in mitigating the effects of water scarcity on electricity generation in some parts of the Middle East (Hejazi et al. 2023).

Changes in water availability and other climate-related disturbances can significantly impact food prices and inflation. Unfavorable climate conditions hinder the monetary policy pass-through to headline inflation, making price stability more achievable under positive climate conditions. Effective climate policies, such as sustainable agricultural practices and robust water management, could help mitigate these impacts on food prices and inflation. For instance, increasing temperatures and declining water resources elevate the costs of agricultural and industrial production and distribution, driving up the cost of goods and services independently of demand, leading to supply-side inflation. Climate-driven costs in areas like food and energy can create persistent inflationary pressures, meaning inflation remains high despite central banks' efforts to stabilize it (Abidi et al. 2024). Reducing the concentration of water withdrawals in agriculture (Figure 34) can offset some of the economic risks associated with water scarcity (De Wall et al 2023).

Global estimates indicate that water scarcity and rising temperatures could lead to a decline of 6 to 10 percent in food production by 2050 (Kompas et al 2024). The MENA region is projected to experience the highest decline in food production under any climate scenario. Climate change alters precipitation patterns, modifying the spatial and temporal distribution of green water availability for both rainfed and irrigated crops. The **UAE**, **Saudi Arabia**, and **Oman** are predicted to face greater water demand than they can feasibly meet by 2050, resulting in a combined loss of agricultural exports totaling $10 billion (Borgomeo et al. 2018).

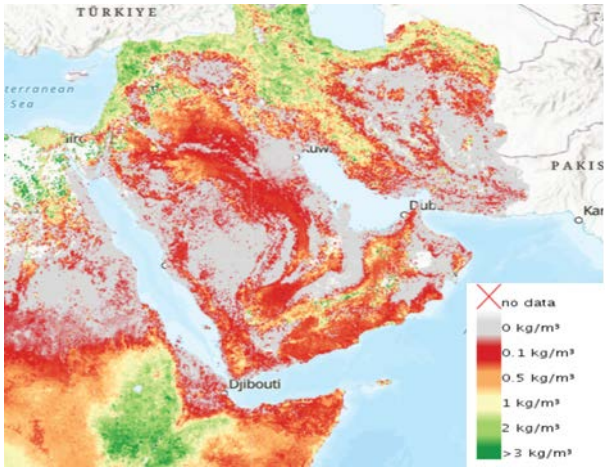
Although agriculture contributes a small share of value added to the economy, it employs one in five people in the GCC. In the MENA region including the GCC countries, the agricultural sector produces less than 10 percent of total value added on average. Yet it accounts for 22 percent of total employment, increasing to 31 percent among women (Nin-Pratt et al 2018). Despite substantial water withdrawals in agriculture, the sector's contribution to the economy remains low compared to other sectors (Di Baldassarre et al. 2018).

FIGURE 34 Water withdrawals by economic sector, MENA and GCC countries



Source: : De Waal et al. 2023.

FIGURE 35 Agricultural production (Kg/m3) for GCC and MENA region



Source: : Source: FAO 2021.

Food production weight per cubic meter of water in the GCC and MENA countries is one of the lowest in the world (Figure 35). As new crops that require less water are introduced to enhance revenue, total agricultural production may still fall short of meeting future food demand. The reliance on imported agricultural products can increase the nutrient availability of food, as these imports often substitute for domestically grown crops that yield lower productivity per unit weight. Reducing water consumption is essential for conserving valuable groundwater resources, which are frequently overexploited in GCC countries and other arid regions. By utilizing less water, agricultural practices can align with sustainability principles, enabling farming in arid areas to persist without depleting water resources. This approach not only supports the long-term viability of the agricultural sector but also ensures its sustainability for future generations.

To address these challenges, GCC countries must enhance water adaptation strategies to reduce the unsustainable use of water resources. Economic diversification is increasingly necessary. Most GCC countries have limited adaptation measures linked to water use and efficiency (Figure 36). Research indicates that countries with a significant proportion of unsustainable water footprints associated with crop production are primarily found in the Middle East, including the GCC countries, and Central Asia (Mekonnen and Hoekstra, 2020). **Qatar** ranks highest, with approximately 71 percent of its water footprint deemed unsustainable. In **Saudi Arabia**, groundwater depletion has primarily resulted from extensive agriculture, particularly in Riyadh, prompting ambitious policy reforms. Water depletion in Wadi Uranah and Makkah has increased, with irrigation rates exceeding recharge rates, putting aquifers at risk. In **Oman**, rapid urban and agricultural expansion has strained groundwater resources, threatening traditional Aflaj irrigation systems. Studies indicate declining cultivated areas and vegetation, with urbanization encroaching on agricultural land. Rising sea levels exacerbate groundwater salinity, while declining agriculture in areas like Al-Jebel Al-Akhdar impacts tourism and water sustainability. The **UAE's** rapid development strains groundwater, with urban and agricultural expansion depleting resources and contaminating water (Helal et al. 2024).

Kuwait, Qatar, and the UAE import nearly 100 percent of their cereals from the international supply chain to mitigate high water stress. Water stress arises when withdrawals for human, agricultural, and industrial uses exceed renewable water resources, resulting in a high water withdrawal-to-availability ratio. In all GCC countries, water withdrawals exceed 95 percent of surface freshwater availability. Despite clear strategies to gradually reduce agricultural water footprints and alleviate water stress, water demand management remains essential for the domestic sector, which increasingly consumes more water. Domestic water consumption among GCC residents is nearly double that of high-income residents in other regions with similar development levels and greater freshwater resource endowments. Evidence shows also that countries with similar levels of development and much greater freshwater resource endowments have much lower levels of residential water consumption (World Bank 2017a).

FIGURE 36 Adaptation measures linked to water, select MENA and GCC countries

Country	Irrigation	Water efficiency	Water for livestock	Water harvesting
Algeria				
Bahrain				■
Djibouti				
Egypt	■	■	■	■
Iraq	■	■	■	■
Israel				
Jordan	■	■		■
Kuwait		■		
Lebanon	■	■		■
Morocco	■			■
Oman				
Qatar		■		
Saudi Arabia	■			■
Syrian Arab Republic		■		■
Tunisia				
United Arab Emirates		■		■

Source: World Bank 2024. CLEAR Framework.

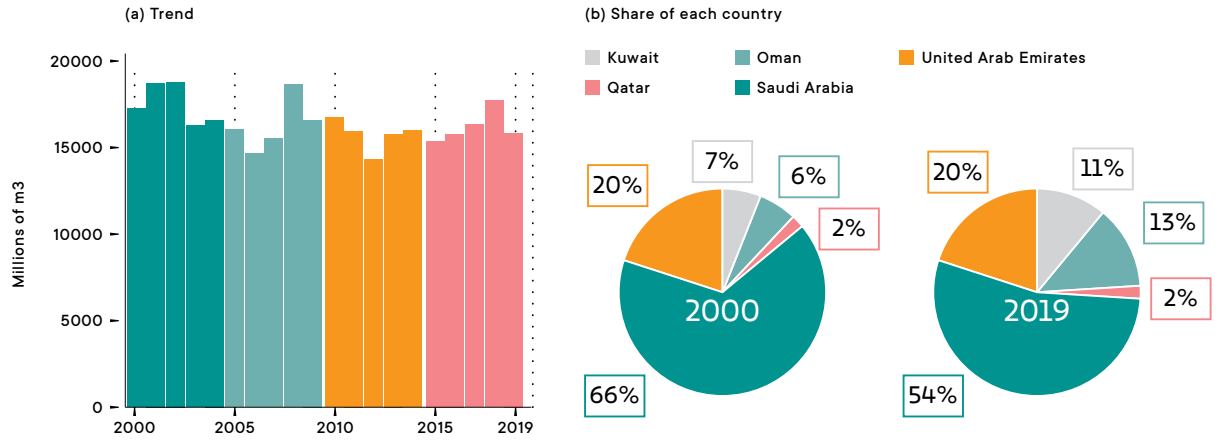
Limits on water availability significantly impact water-intensive sectors of the economy in GCC countries. Hejazi et al. (2023) estimate that water scarcity has pronounced effects on reducing total crop production in **Saudi Arabia**, and to a lesser extent in **Kuwait**. By applying the GCAM model to MENA region countries, it is projected that agricultural production in the Arabian Peninsula will decline nearly threefold by 2040 compared to 2018 baseline production (Hejazi et al. 2023). However, important trade-offs exist in substituting domestic agricultural production with imports. A reduction in domestic production of agricultural commodities significantly impacts agricultural trade patterns in the region. If supplies of agricultural commodities decrease in one area, increased agricultural imports in the MENA region could generate welfare gains if water footprint costs are considered. These countries could achieve greater economic value by importing agricultural needs from regions where water and land resources are not constrained.

With global supply chains increasingly disrupted by extreme weather, the importation of food and essential goods to the region is at risk. The **UAE** imports 90 percent of its food, representing an economic vulnerability that the government seeks to mitigate. In recent years, the **UAE** has experimented with growing rice in Sharjah. While the prospect of desert-grown crops (with coffee and wheat next on the trial list) is appealing for enhancing food security, it places additional strain on existing water supplies.

Trends in Water Footprints and Water Use Efficiency

With most reductions taking place in the early 2000s, the water footprint in GCC has been declining. The water footprint, the total blue and green water used in production of GCC countries, declined from 17.3 billion m3 in 2000 to 15.8 billion of m3 in 2019 (Figure 37, a). Most of the decline in the water footprints of GCC countries took place in the early 2000s. But in recent years (2015-19), the water footprint has been increasing slightly. In GCC countries where water is scarce due to high aridity, increments in water footprints can accelerate water stress over time. Half of the footprint (54 percent) corresponds to Saudi Arabia, the largest and most populous GCC country (61 percent of the GCC population). Relative to 2000, **Saudi Arabia** decreased its share in the footprint while **Oman** and **Kuwait** increased it (Figure 37, b).

FIGURE 37 Water Footprint in GCC

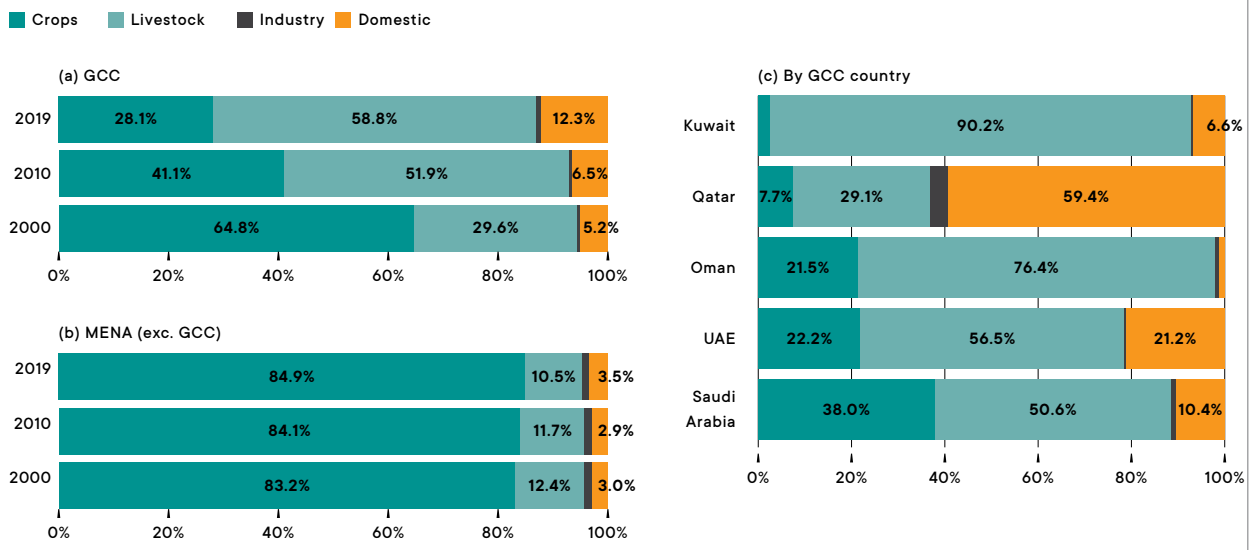


Note: Bahrain is excluded because it lacks information of livestock water footprint.

Source: Global Water Monitoring Report (2024, forthcoming) World Bank. Based on global gridded crop model ACEA 175 individual crops of 13 crop groups represented in FAOSTAT. Livestock, industry, and domestic use is calculated at the grid- level using information from FAOSTAT.

The composition of the footprint markedly differs from other Middle East and North Africa (MENA) countries (Figure 38). In other MENA countries, the composition of the footprint has changed little since 2000, most of it corresponding to crop production (85 percent) and livestock (11 percent). In GCC countries, currently most of it corresponds to livestock (59 percent), followed by crop production (28 percent), domestic use (12 percent), and industry (1 percent). It changed, diverging from crop production towards livestock. The share of crop production decreased from 65 percent in 2000 to 28 percent in 2019 while the share of livestock increased from 30 to 59 percent. The share of domestic use increased from 5 to 12 percent while the share of industry remained at around 1 percent. The composition differs by country (Figure 38, c). Livestock is the largest share in **Oman** (76 percent) and **Kuwait** (9 percent). Domestic use is the largest share in **Qatar** (59 percent). Industrial use has its largest relative share in **Qatar** (11 percent). Finally, crop production has its largest relative share in **Saudi Arabia** (38 percent).

FIGURE 38 Composition of Water Footprint GCC and Non-GCC MENA Countries



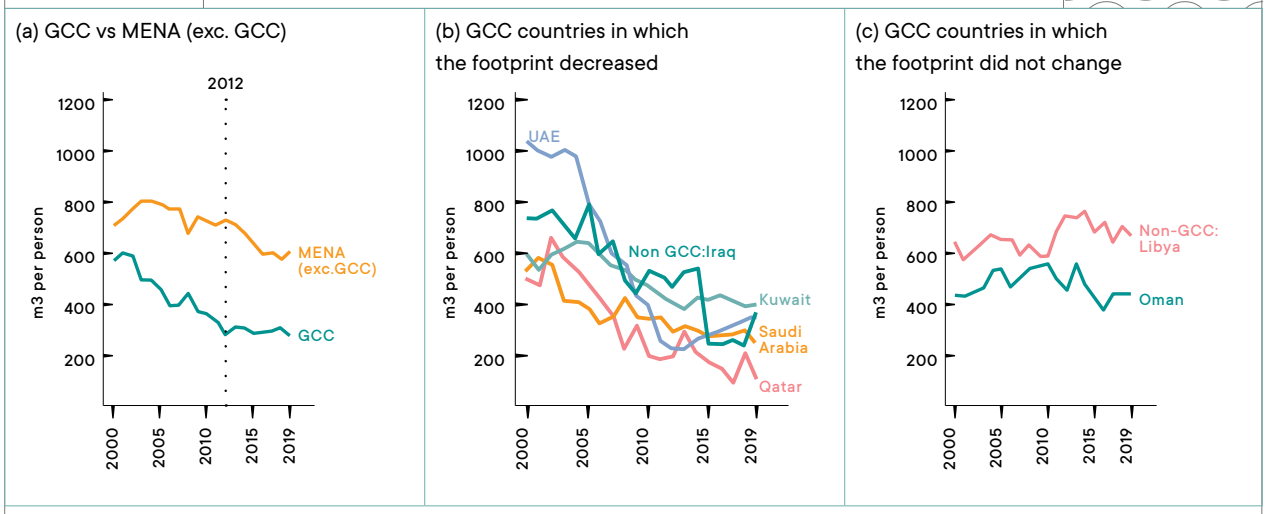
Note: Bahrain is excluded because it lacks information of livestock water footprint. Source: Global Water Monitoring Report (2024, forthcoming) World Bank. Based on global gridded crop model ACEA 175 individual crops of 13 crop groups represented in FAOSTAT. Livestock, industry, and domestic use is calculated at the grid-level using information from FAOSTAT.

5% to 12%

Increase in share of domestic use from 2000 to 2019

The per capita water footprint in GCC countries is lower than in other MENA countries, but it has remained stable since 2012. In GCC countries, the footprint per person is 271 m³, approximately half that of other MENA countries (569 m³). It steadily decreased from 567 m³ in 2000 to 289 m³ in 2012. Since then, it has remained relatively constant, while that of other MENA countries has decreased. Among GCC countries, the **UAE** experienced significant reductions (from around 1000 m³ in 2000 to 350 m³ in 2019), followed by Qatar (500 m³ to 100 m³). **Kuwait** and **Saudi Arabia** experienced lower reductions, while Oman's footprint per person remained unchanged (Figure 39, c).

FIGURE 39 Trends in Water Footprint per capita, GCC and Non-GCC MENA countries



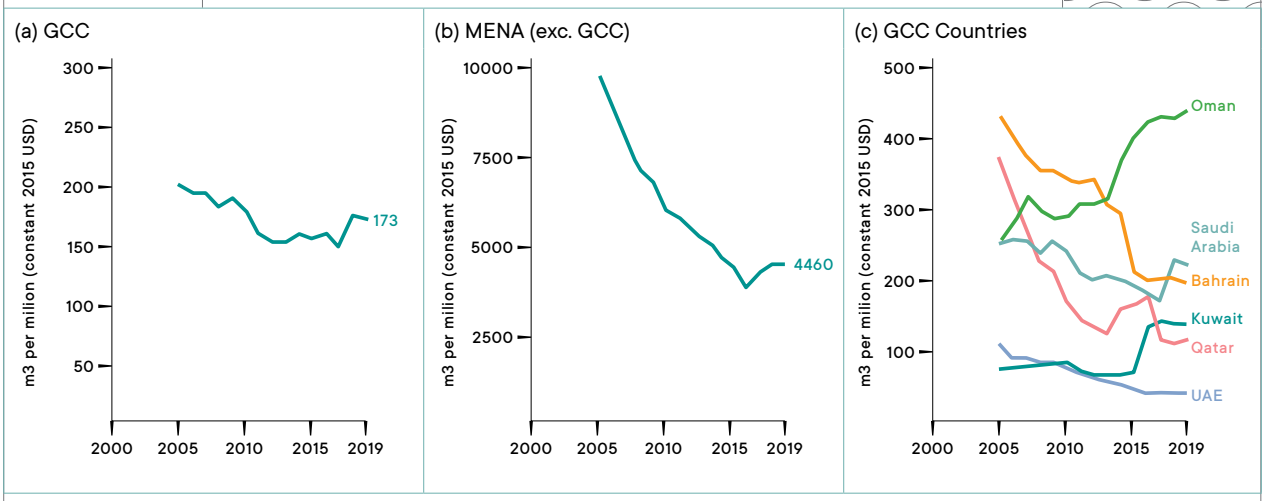
Note: Bahrain is excluded because it lacks information of livestock water footprint.

Source: Global Water Monitoring Report (2024, forthcoming) World Bank. Based on global gridded crop model ACEA 175 individual crops of 13 crop groups represented in FAOSTAT. Livestock, industry, and domestic use is calculated at the grid-level using information from FAOSTAT.

Efficiency in Industry

The amount of water used by industry has increased, but efficiency has improved. Since 2005, water use in industry by GCC countries rose from 79 to 131 million m³. However, water use has become more efficient. The amount of water used per million dollars of value added in industry (constant 2005 prices) decreased from 202 to 173 m³. Although not strictly comparable due to differing reliance on oil production, efficiency is lower in other MENA countries. Among GCC countries, **Bahrain** and **Qatar** experienced the largest increases in efficiency, while the **UAE** also improved. In **Saudi Arabia**, efficiency remained constant, and in **Kuwait**, it decreased. **Oman** experienced a substantial decrease in efficiency.

FIGURE 40 Efficiency in Water Use for Industrial Production, GCC and Non-GCC MENA Countries



Note: Industrial GDP (constant 2015 USD prices) is available for almost all MENA countries since 2005.

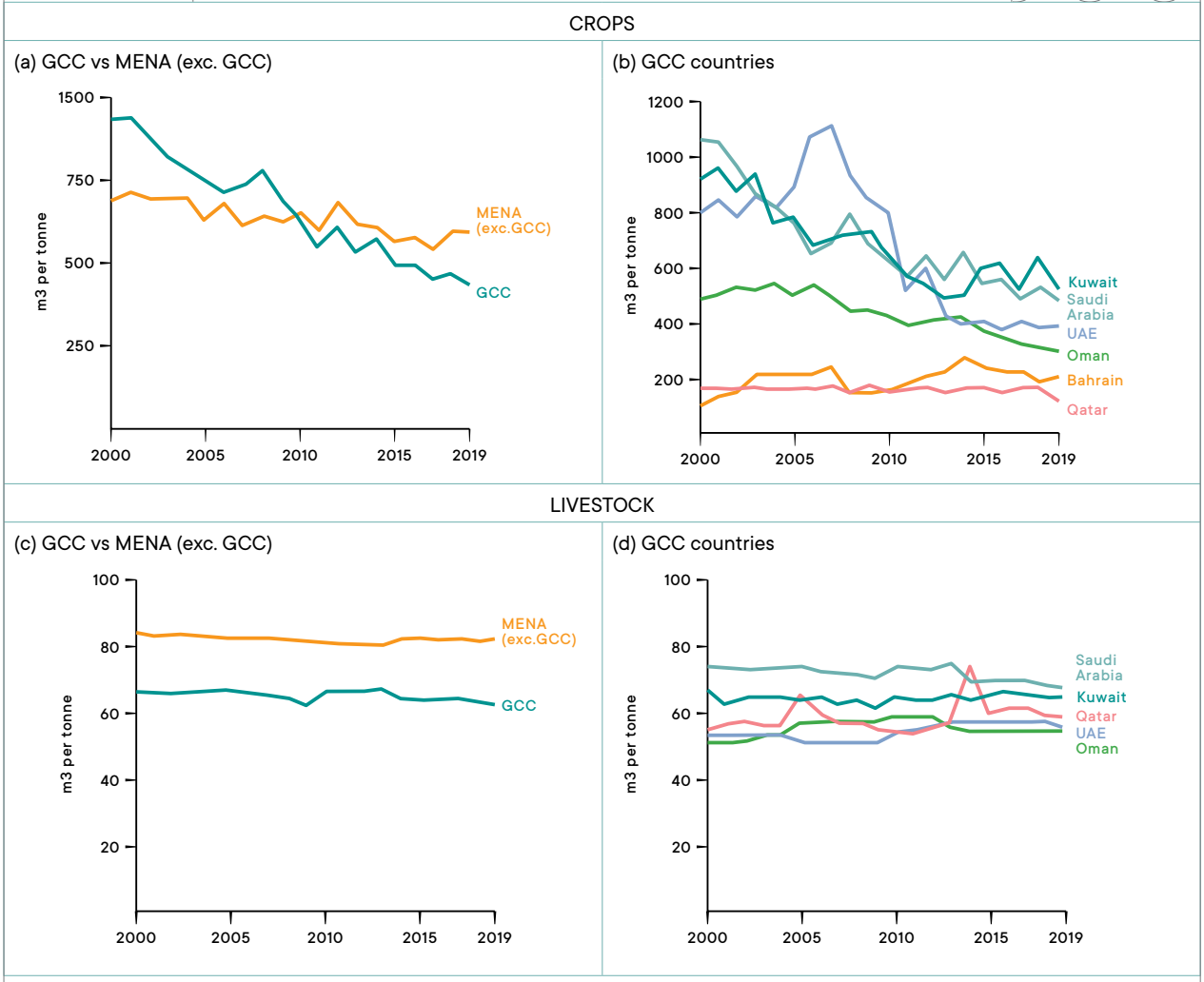
Source: Global Water Monitoring Report (2024, forthcoming) World Bank.

Efficiency in Agriculture

Water efficiency in crop production has increased and surpassed that of other MENA countries. In 2019, GCC countries produced 10.2 million tons of crops, down from 12.0 million tons in 2000. Most production consists of forage crops (42 percent) and dates (18 percent), with other major crops including watermelons, cantaloupes, potatoes, tomatoes, and barley (24 percent). The total amount of water used decreased from 11.2 billion m³ in 2000 to 4.4 billion m³ in 2019. In 2000, other MENA countries were more efficient, using fewer cubic meters of water per ton (692 vs. 932). While efficiency in other MENA countries improved slightly, GCC countries experienced substantial efficiency gains. Currently, GCC countries use 435 m³ per ton, half the amount used in 2000, and are more efficient than other MENA countries (593 m³). The **UAE** experienced the largest increase in efficiency, followed by **Kuwait** and **Saudi Arabia**. **Oman** achieved fewer gains but remains more efficient than the **UAE**, **Kuwait**, and **Saudi Arabia**. **Qatar** and **Bahrain** experienced minimal gains in efficiency but are the most efficient GCC countries.

Water efficiency in livestock production is higher than that of other MENA countries but has remained constant. In 2019, GCC countries produced 3.1 million tons of livestock, up from 1.9 million tons in 2000. Most production consists of chickens (27 percent), camels (23 percent), cattle (19 percent), sheep (18 percent), and goats (12 percent). The total amount of water used increased from 5.1 billion m³ in 2000 to 9.3 billion m³ in 2019. In 2019, GCC countries used 63 m³ per ton compared to 82 m³ per ton used by other MENA countries. Throughout the period, other MENA countries were less efficient. **Saudi Arabia** is the only country to experience gains in efficiency, while efficiency worsened in **Qatar**, and remained constant in all other countries.

FIGURE 41 Efficiency in Water Use for Agricultural Production, GCC and Non-GCC MENA Countries



Note: Bahrain is excluded from the analysis of livestock because it lacks information of livestock water footprint.

Source: Global Water Monitoring Report (2024, forthcoming) World Bank. Based on global gridded crop model ACEA 175 individual crops of 13 crop groups represented in FAOSTAT and on gridded estimations of water use by livestock.

Efficiency gains have shifted changes in the water footprint of crops, while increased production has shifted that of livestock. An index decomposition analysis determines the contribution of three factors to changes in the water footprint: the production effect (changes due to increased production), the structure effect (changes due to producing different types of crops or livestock), and the efficiency effect (changes due to using less or more water). The Logarithmic Mean Divisia Index method was employed for this analysis. Negative values denote that less water is used. Between 2000 and 2019, GCC countries reduced their water footprint for crops by 60 percent, primarily due to the efficiency effect. The structure and production effects also contributed to gains, as GCC countries produced fewer crops and shifted towards less water-intensive crops. In contrast, other MENA countries increased their water footprint for crops by 25 percent, with a significant increase in production leading to a higher footprint despite efficiency gains. In GCC countries, increased production resulted in a substantial increase in the livestock footprint, while other MENA countries experienced a smaller increase due to a lower production effect. Neither GCC nor non-GCC countries gained in efficiency, with both experiencing minor gains from the structure effect.

FIGURE 42 Decomposition of Changes in Water Use for Agricultural Production, GCC and Non-GCC MENA Countries

Source: Global Water Monitoring Report (2024, forthcoming) World Bank. Based on global gridded crop model ACEA 175 individual crops of 13 crop groups represented in FAOSTAT and on gridded estimations of water use by livestock.

Water efficiency in GCC for productive purposes

There is a stark contrast in water productivity ratios between water-intensive sectors, particularly in GCC and European countries. GCC countries maximize economic output from industrial water use, while European countries maintain a more balanced water productivity across productive sectors (agriculture, industry, municipal services). Comparing industrial water productivity to both agricultural and municipal services water productivity indicates how much more productive industrial water use is compared to agricultural water use in each country. Higher ratios signify that industrial water productivity significantly surpasses that of agriculture. All GCC countries, except **Oman** and **Saudi Arabia**, exhibit high values, indicating that water is much more economically productive in industrial uses compared

to agriculture. This disparity may result from inefficiencies or high subsidized tariffs in agriculture compared to the industrial sector.

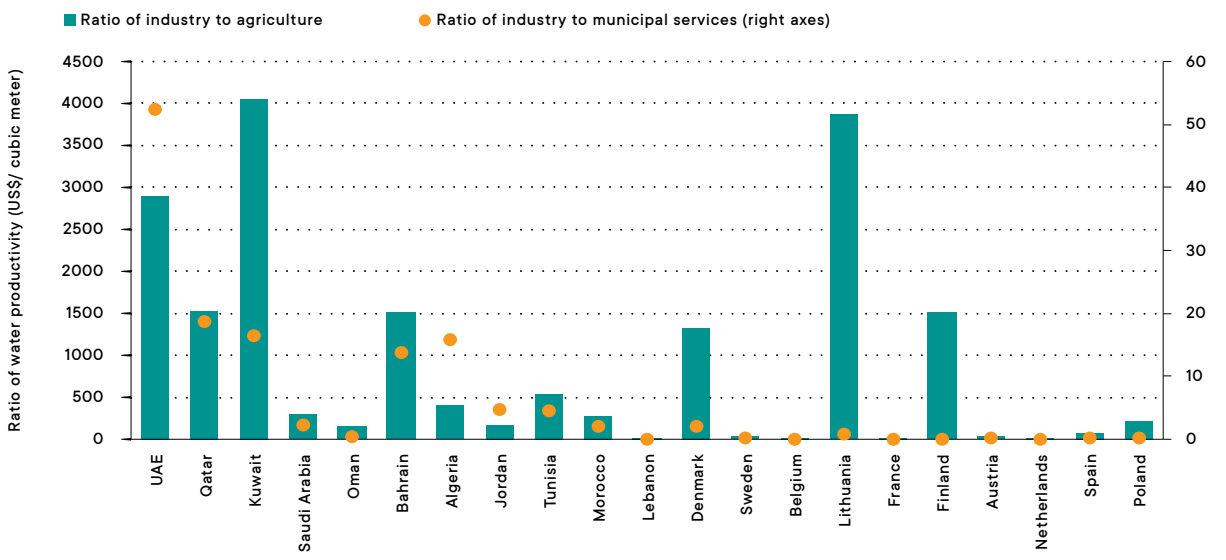
Municipal services also exhibit higher inefficiency than the industrial sector. Represented by orange dots (Figure 43), the ratio between industrial water productivity and municipal water productivity (right y-axis) shows that in most GCC countries water use in industry has higher economic returns than in municipal services. In contrast, European countries like France, the Netherlands, and Austria have lower ratios, indicating a relatively smaller gap between industrial and municipal water productivity.

The industrial sector in GCC countries yields higher economic productivity per unit of water compared to agriculture and municipal services. European countries display a more balanced use of water between industry, agriculture, and municipal services, with lower ratios especially for industry-to-municipal services, suggesting more consistent water productivity across sectors. Other countries in the Middle East and North Africa show modest ratios, indicating a more balanced or lower economic productivity of water across sectors, with industry not significantly more productive than agriculture or municipal services.

Improving water productivity and efficiency in water-intensive sectors contributes to enhancing both water security and energy security. Domestic electricity and water consumption reduce the availability of fossil fuels for export. The production of freshwater risks GCC hydrocarbon exports and their significant contribution to budget revenues (Zubari and Alajjawi, 2021). For instance, in the next three decades, **Saudi Arabia** may require 18 billion cubic meters per year, a projected sixfold increase from 2018, significantly increasing energy demands (Al-Badi and Al-Mubarak, 2019). By 2050, certain GCC members may lack sufficient natural gas to desalinate the water needed for municipal use alone (Jägerskog and Barghouti, 2022).

Water use efficiency can be improved cost-effectively through the current structure of wastewater treatment, desalination, and water reuse infrastructures in GCC countries. Increasing wastewater treatment and reuse capacity can significantly alleviate pressure on freshwater resources. Research emphasizes that wastewater treatment can help meet the growing water demand in these countries, thereby reducing reliance on expensive desalination processes and over-extraction of groundwater (Saleem 2023). The economic viability of wastewater treatment is further sup-

FIGURE 43 Water productivity (US$/cubic meter for GCC and high-income countries, 2022)



Source: Prepared by World Bank with data from FAO Aquastat.

ported by the potential for treated wastewater to be reused in agriculture, which constitutes a major portion of water consumption in the GCC. This reuse can lead to savings in water costs for farmers and contribute to food security in a region that imports a large percentage of its food (Qureshi 2020).

Moreover, the economic analysis of wastewater treatment plants indicates that investments in these facilities can yield long-term financial benefits. While specific studies on the economic viability of wastewater treatment systems in the GCC are limited, Bassi et al. discuss the broader economic implications of wastewater treatment investments, highlighting that the social and environmental benefits derived from efficient systems can outweigh initial capital expenditures (Bassi et al. 2022). Additionally, the integration of innovative technologies in wastewater treatment can enhance economic efficiency by reducing operational costs and improving treatment outcomes (Faraloni et al. 2023).

The economic implications of expanding wastewater treatment extends to the stability of GDP growth in GCC countries. Evidence suggests that effective wastewater management can positively impact economic development by creating jobs in the wastewater sector and related industries, thereby contributing to overall economic diversification efforts in GCC countries (Alharthi 2023). This is particularly relevant as GCC countries seek to reduce their dependence on oil revenues and diversify their economies in line with strategic initiatives like Vision 2030 (Alharthi 2019).

Furthermore, the adoption of public-private partnerships (PPPs) in wastewater treatment can enhance economic efficiency by leveraging private sector investment and expertise. Meng et al. argue that such collaborations can lead to improved performance and innovation in wastewater management, ultimately resulting in cost savings and better service delivery (Meng et al. 2022). This model can be particularly beneficial in the GCC context, where rapid urbanization and population growth demand efficient and scalable solutions to water management challenges.

Country Benchmarks of Water Security

The country level overview of water security indicators benchmarks the performance between Oman, Qatar, Saudi Arabia, and the United Arab Emirates against high-income countries in the Middle East, including the six GCC nations, and two countries in Europe with similar water-endowment conditions and per capita income, Cyprus, Malta and Spain. The benchmarks are visualized using "Flower Diagrams," where the length of each petal corresponds to performance: longer petals represent stronger performance or lower dependence on water resources, while shorter petals indicate weaker performance or higher water dependence. Indicators with very short petals signify that the country is performing near the level of the worst performer in the peer group. In these diagrams, a red label marks the worst performance or proximity to it, whereas a green label indicates leading performance or closeness to the best performer. The analysis below summarizes the key water security challenges faced by these countries, focusing on the areas where their performance significantly lags behind the best performers in the region.

Oman

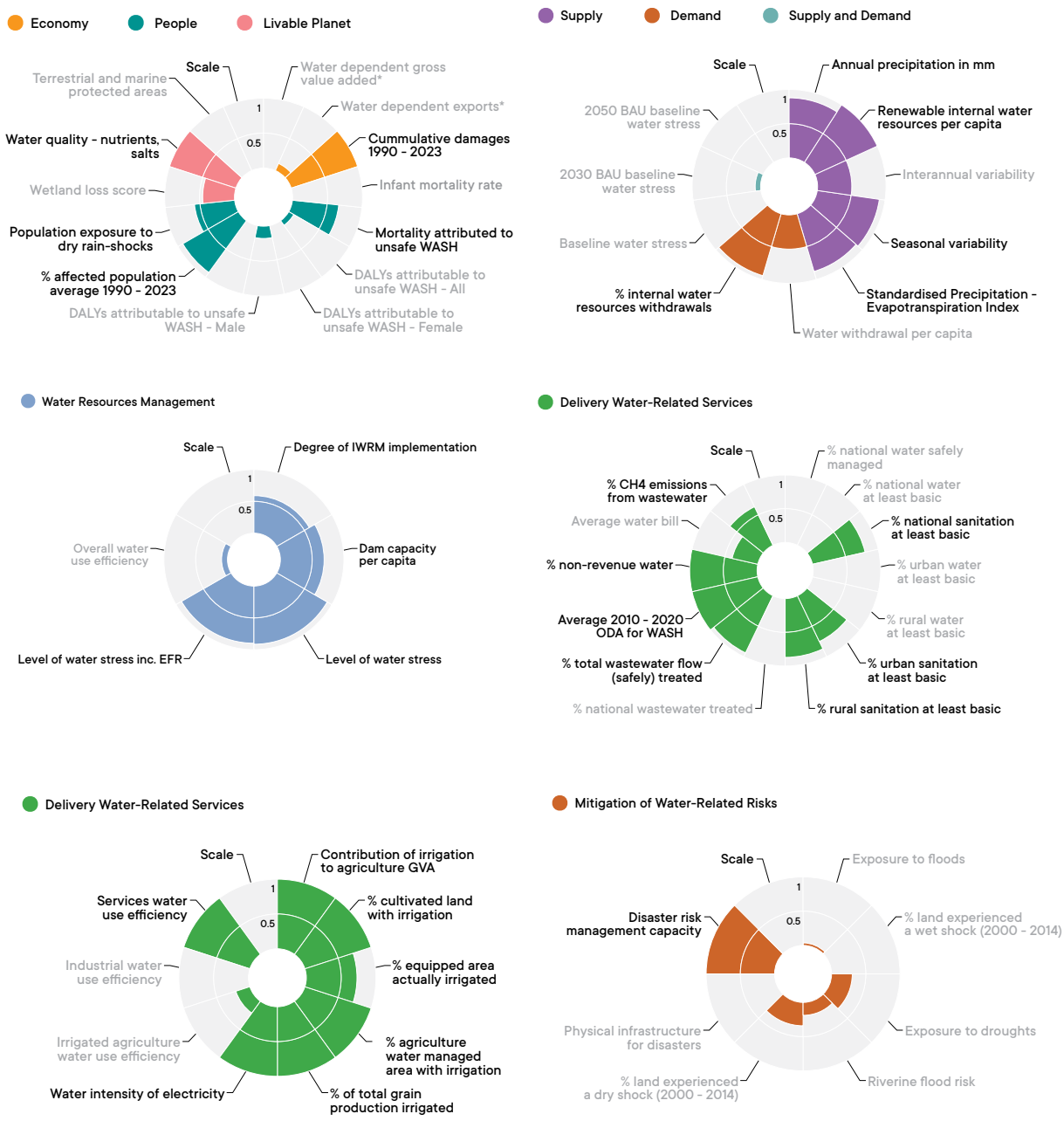
Compared to its peer countries, Oman's economy exhibits a heavy reliance on water-dependent sectors, which contribute approximately 58 percent of gross value added and nearly 90 percent of major export earnings. This dependence underscores the critical role of water in sustaining economic activity and export performance. But Oman ranks among the lowest performers in terms of health indicators, including infant mortality and prevalence of stunting. Despite significant progress in reducing disability-adjusted life years (DALYs) linked to unsafe water, sanitation, and hygiene, Oman remains far from the best performers, particularly for women, with a rate of 57 DALYs per 100,000 population compared to Cyprus's leading rate of 11 per 100,000.

Oman also faces challenges in biodiversity conservation. Its wetland loss score and the proportion of its territory under terrestrial and marine protection are closer to the lowest performers, signaling insufficient safeguards for critical biodiversity areas. This highlights an urgent need to enhance conservation efforts for aquatic ecosystems. Regarding water resources, Oman experiences high inter-annual rainfall variability, high per capita water withdrawal, and the highest levels of water stress among its peers, as measured by AQUEDUCT. Projections indicate that Oman's population will face extreme water stress under a business-as-usual scenario by 2030 and 2050.

Benchmarking Oman against high-income Middle Eastern and European countries with similar water endowment reveals several key areas for improvement:

- **Water pricing and efficiency:** Oman has low water utility prices and low water use efficiency, particularly in irrigated agriculture and industry. This highlights the need for more effective water demand management and the adoption of better water use practices across sectors.
- **Access to water supply:** Levels of access to at least basic and safely managed water supply, particularly in rural areas, remain close to the worst-performing peer countries.
- **Water-related risk mitigation:** Oman has high exposure to water-related risks, such as floods, riverine and droughts, indicating that current mitigation practices require significant upgrades, particularly in infrastructure and risk management systems.

FIGURE 44 Oman's water security performance indicators



Source: Water Security Dashboard, World Bank 2024.

> By 2030 and 2050, the population is expected to undergo the highest level of water stress under a business-as-usual scenario.

Qatar

Qatar

Compared to selected peer countries, Qatar relies heavily on water for economy, with water dependent sectors contributing around 57 percent of gross value added. For export earnings water-dependent sectors represent almost 95 percent of major export earnings. Qatar is performance is the lowest in terms of wetland loss and closer to the worst performer among the selected peer countries in terms of share of territory under territorial and marine protected areas, highlighting the need to significantly improve efforts for conservation of aquatic ecosystems.

Regarding water endowment and water balance, Qatar, which has low renewable internal freshwater resources per capita (about 20 cubic meters per year), faces the highest level of water stress. By 2030 and 2050, the population is expected to undergo the highest level of water stress under a business-as-usual scenario.

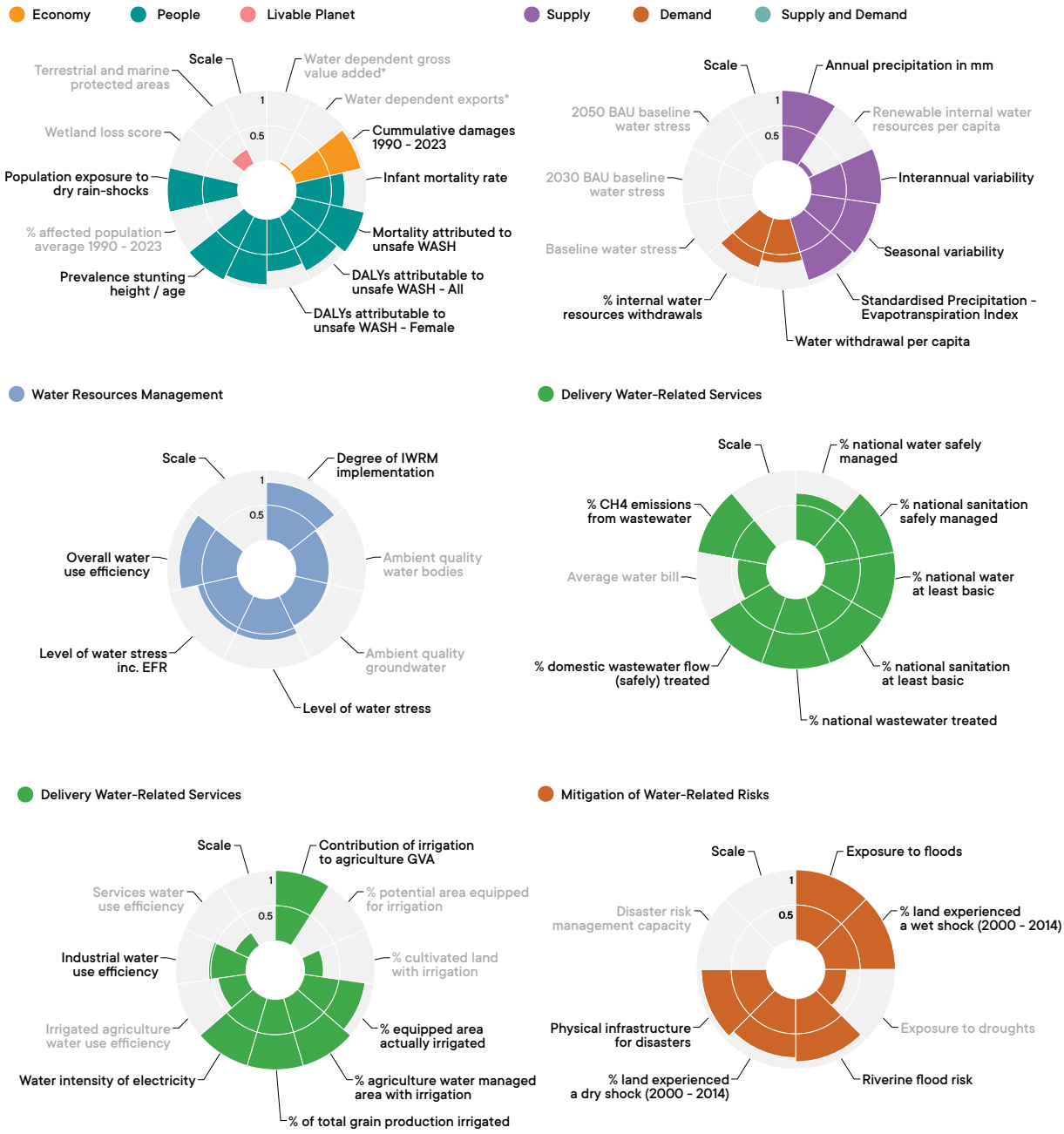
Identified improvement areas for Qatar when benchmarked with high-income Middle Eastern and European countries with similar water endowment to tackle performance challenges include the following:

- **Water quality and groundwater management:** Qatar displays relatively low ambient quality of water bodies and groundwater. This highlights the need for more effective policies and practices to reduce water pollution and prevent further depletion of groundwater resources.
- **Water pricing and water use efficiency:** Qatar's low water utility prices and relative low water use efficiency in irrigated agriculture and services suggest a need for effective water demand management.

Mitigation of drought risks. The high exposure to droughts and low disaster risk management capacity suggests current practices to mitigate drought risks need improvement.

Source: Water Security Dashboard, World Bank 2024.

FIGURE 45 Qatar's water security performance indicators



Source: Water Security Dashboard, World Bank 2024.

Saudi Arabia

Compared to its peer countries, Saudi Arabia's economy demonstrates significant reliance on water-dependent sectors, which account for approximately 52 percent of gross value added. Water accounts for nearly 94 percent of major export earnings. Additionally, between 1990 and 2023, the country faced substantial cumulative damage from extreme hydroclimatic events. Despite reducing disability-adjusted life years (DALYs) from unsafe water, sanitation, and hygiene from 766 per 100,000 people in 1990 to 50 per 100,000 in 2021, Saudi Arabia remains closer to the lowest-performing countries across all demographics. Conservation efforts also lag. Only 17.7 percent of freshwater key biodiversity areas are protected, compared to 51.4 percent in Spain and 36.6 in Cyprus, and just 4.5 percent of its territory under terrestrial and marine protection, compared to Bahrain's 20.5 percent and 17.9 percent in Spain. These gaps underscore an urgent need to bolster biodiversity and freshwater conservation.

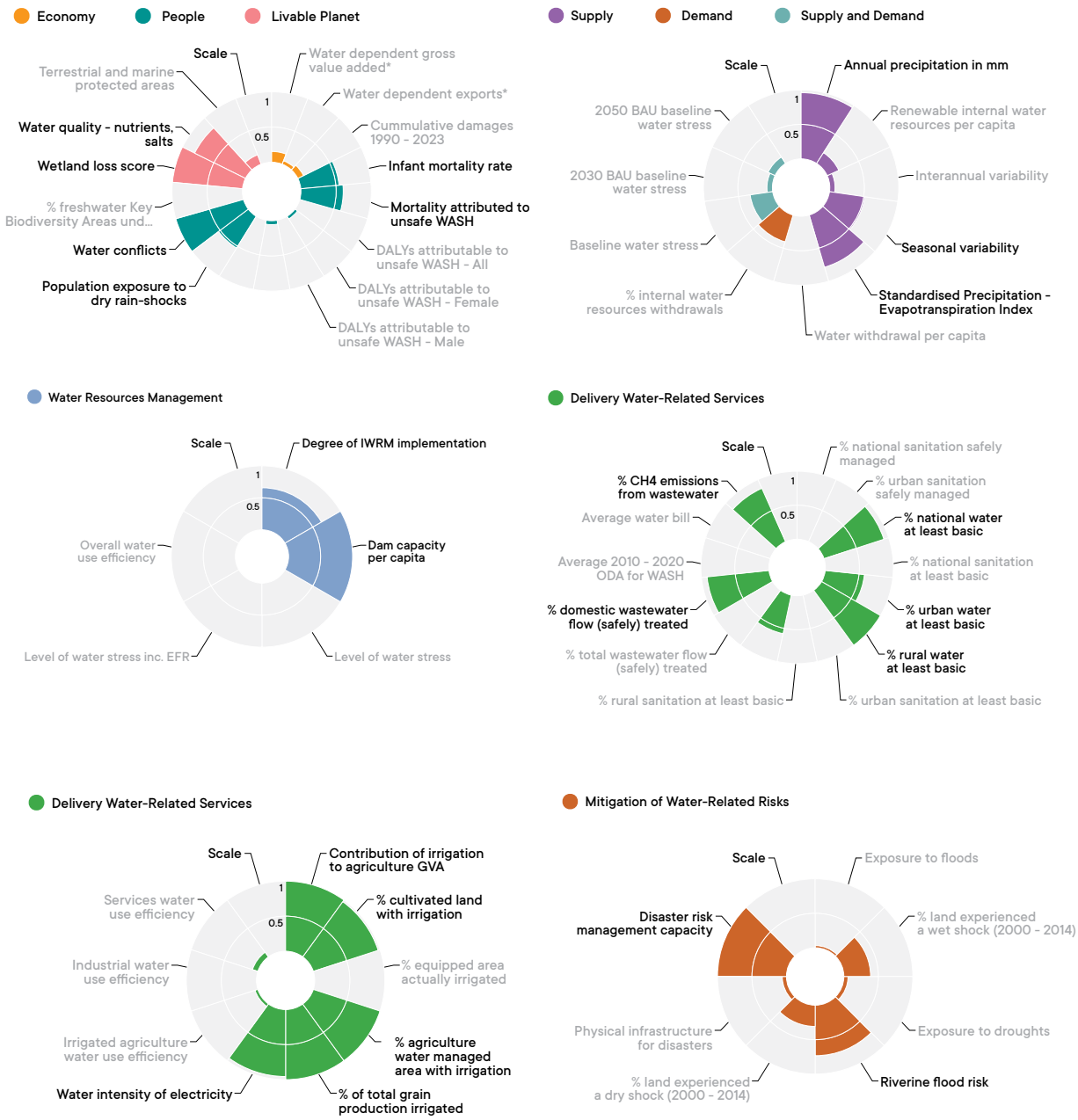
In terms of water resources and balance, Saudi Arabia faces challenges of groundwater depletion. It has critically low renewable internal freshwater resources per capita (67 cubic meters annually). The country records the highest per capita water withdrawal (723 cubic meters per year) and an unsustainable withdrawal of 974 percent of its renewable water resources. Under a business-as-usual scenario, Saudi Arabia is already under high water stress, which is projected to persist through 2030 and 2050.

When benchmarked against high-income Middle Eastern and European countries with similar water endowment, Saudi Arabia's key areas for improvement include:

- **Water stress and competition:** Extreme water stress, where demand far exceeds renewable supply, leads to intense competition over freshwater resources.
- **Water pricing and efficiency:** Water utility prices are low, and water use efficiency is poor. For example, irrigated agriculture yields just $0.73 per cubic meter compared to $3.16 in Malta, industry achieves $212 per cubic meter compared to $4,436 in the UAE, and services produce $95 per cubic meter compared to $339 in Oman. This highlights a critical need for improved water demand management and efficiency across sectors.
- **Sanitation access:** Access to basic and safely managed sanitation for urban and rural populations is closer to the selected peers' worst performers.
- **Wastewater treatment:** Saudi Arabia treats 88 percent of wastewater, which is below Bahrain's near-complete rate of nearly 100 percent.
- **Irrigation systems:** One-third of the land equipped for irrigation is not utilized, representing missed opportunities to optimize water use in agriculture.
- **Disaster preparedness:** High exposure to droughts and inadequate physical infrastructure to mitigate flood and drought risks further compound water-related challenges.

To address these issues, Saudi Arabia must focus on enhancing water governance, improving infrastructure for water-related risk mitigation, investing in wastewater treatment and reuse, and implementing policies to encourage efficient water use across all sectors. These steps are vital to ensuring long-term water security and sustainability.

FIGURE 46 Saudi Arabia's water security performance indicators



Source: Water Security Dashboard, World Bank 2024.

United Arab Emirates

Compared to its peer countries, the United Arab Emirates (UAE) demonstrates a strong dependence on water to sustain its economy, employment, and export earnings. Water-dependent sectors contribute approximately 51 percent of gross value added, employ 42 percent of the workforce, and account for 93 percent of major export revenues. At the same time, the UAE faces significant exposure to dry rainfall shocks, with 0.42 percent of the population affected compared to only 0.01percent in Qatar. Moreover, 39.4 percent of the land receives dry shocks compared to only 6.7 percent in Qatar.

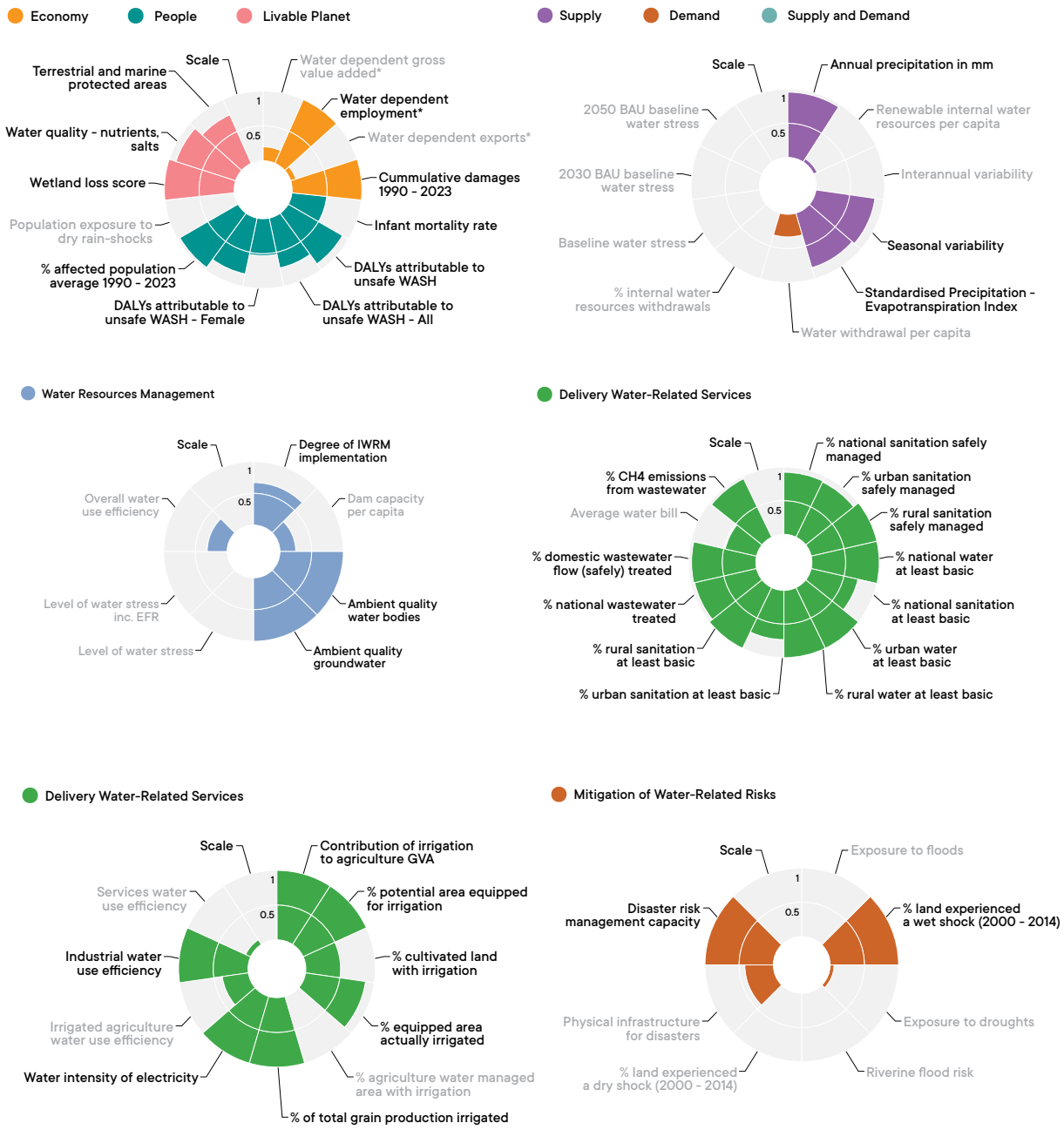
The UAE confronts critically low renewable internal freshwater resources per capita, at just 16 cubic meters annually. The UAE records the third highest per capita water withdrawal (523 cubic meters annually), after Saudi Arabia and Spain, and withdraws unsustainably internal renewable water resources, the second largest after Bahrain. The country faces high water stress, a condition expected to persist through 2030 and 2050 under a business-as-usual scenario.

Benchmarking the UAE against other high-income Middle Eastern and European countries with similar water endowment reveals several areas for improvement:

- **Water demand and pricing:** Demand for water exceeds the renewable supply, yet water utility prices remain low (US$1.74 per cubic meter), compared to US$3.58 in Malta. This disparity underscores the need for better pricing mechanisms to manage demand.
- **Water use efficiency:** Overall water use efficiency is relatively low, generating US$80 per cubic meter, compared to US$215 in Malta and US$184 in Qatar. Improved water use practices and enhanced demand management are critical to addressing this gap.
- **Exposure to dry shocks:** The UAE faces a high proportion of land affected by dry shocks (39.4 percent between 2000 and 2014), compared to just 6.7 percent in Qatar. This indicates that the current approach to land desertification requires substantial improvement.
- **Flood and drought risks:** The UAE faces significant exposure to riverine floods, droughts, and other extreme weather events, compounded by inadequate physical infrastructure to mitigate these risks.

U.A.E

FIGURE 47 UAE water security performance indicators



Source: Water Security Dashboard, World Bank 2024.

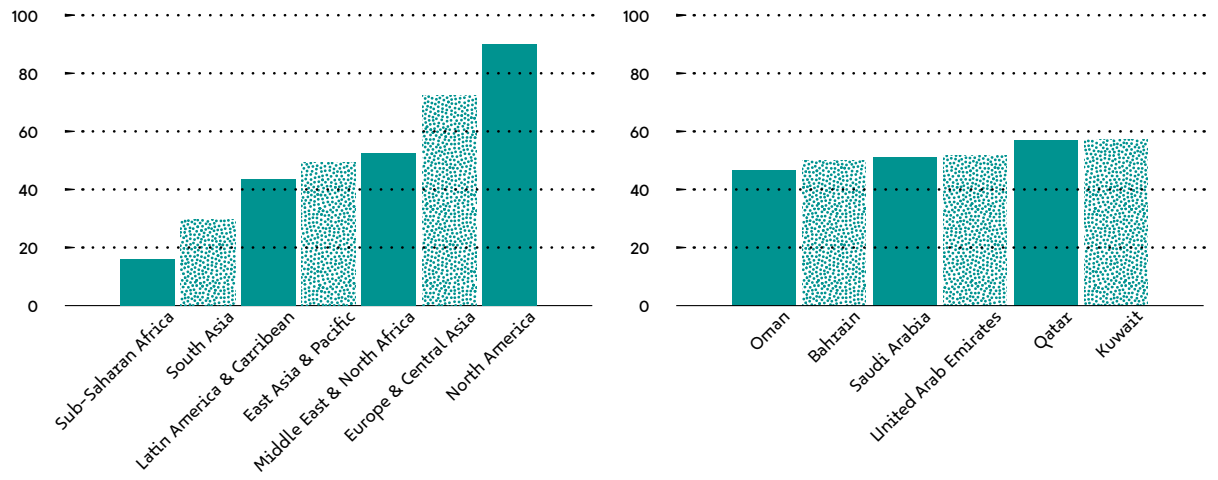
Climate and water risks

Climate change and water pollution are compounding the costs of subtracting, desalinating, and treating water. The over-extraction of groundwater beyond safe yield levels is increasing pollution of existing groundwater aquifers. This is due to the intrusion of saline seawater and the upcoming of brackish and saline water supplies from lower aquifers. Over-abstraction from groundwater aquifers along the coast has resulted in a rapid deterioration of water quality. According to their level of income, GCC countries still face challenges to improve overall water quality (Figure 48).

GCC countries have arid climates and high evaporation rates, leading to high exposure to water scarcity (Figure 49). Rapid urbanization and increasing living standards in these countries further strain water resources. This means that effective drought management is essential to reduce welfare loss (Qureshi 2020). Policymakers must prioritize the development of sustainable water management practices. These include the reuse of treated wastewater and the implementation of efficient irrigation techniques in agriculture, a major consumer of water in the region (Qureshi 2020).

Given the region's dependency on desalination, it is essential to factor in both water and energy usage. GCC countries have limited opportunities to use freshwater supplies, so expanding their utilization of nonconventional water resources (such as desalination and water recycling) can reduce water availability risks. The expansion of wastewater reuse is contingent on a country's financial and development capacity to invest and build water infrastructure that can augment its existing water sources with nonconventional water supplies. However, the GCC region must take decisive actions for future water security amidst climate change. Securing water and energy for the roughly 60 million inhabitants, with escalating temperatures and droughts, is increasingly costly.

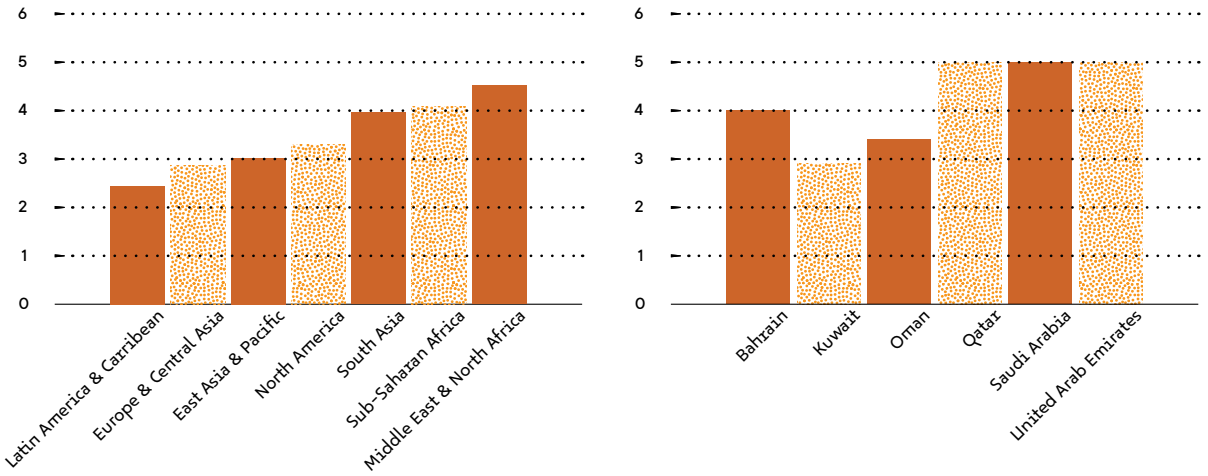
FIGURE 48 Benchmarks of Environmental Performance Index (EPI) of Water Quality



Note: EPI =100 highest water quality. Source: CLEAR Framework, World Bank 2024.

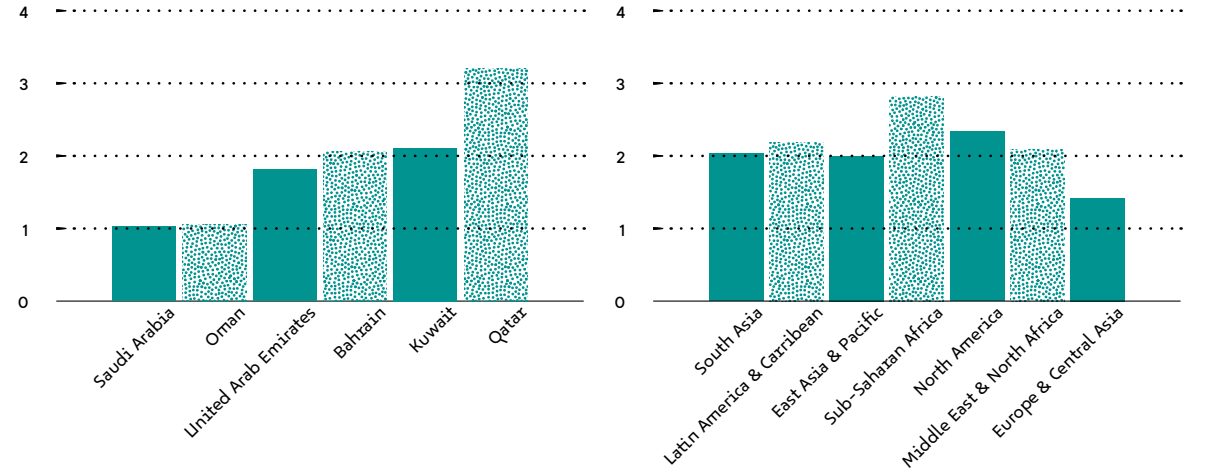
GCC countries could improve the economic return per unit of water used, since temperature increases will reduce the availability of water resources in the future. Compared to other regions that are wetter, GCC countries have similar levels of cost-effectiveness of water use. The ratio of water productivity and water efficiency (in USD per m3) shows that the GCC and the rest of the world have similar economic values against each dollar spent on water (Figure 50). The countries facing constant aridity must have higher values to show water resources are being used in a cost-effective way. This ratio can be especially valuable in water-intensive industries (for example, agriculture or manufacturing) as a measure of sustainable and profitable water use. Overall, this ratio provides a way to evaluate whether investments in water use and conservation are delivering proportional economic value; the GCC has much more potential to increase these ratios.

FIGURE 49 Exposure to drought risk between all regions and GCC countries



Note: 10= highest drought risk exposure. Source: CLEAR Framework, World Bank 2024.

FIGURE 50 Ratio of productivity and water use efficiency ($ / cubic meter)

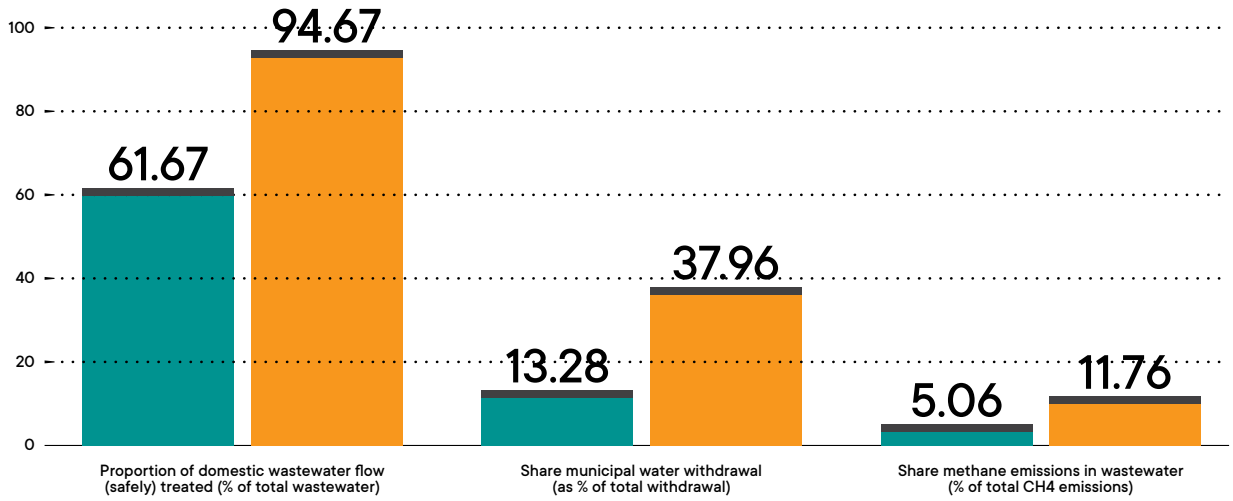


Source: CLEAR Framework. World Bank 2024.

The water withdrawal-to-availability ratio in GCC countries highlights intense competition for scarce freshwater resources, often resulting in unsustainable usage patterns. Groundwater abstraction in the region significantly exceeds natural recharge rates, leading to the depletion of reserves and the deterioration of groundwater quality. This trend underscores the urgent need for sustainable water management practices.

GCC countries, however, stand out for their relatively high rates of wastewater treatment compared to other Asian nations (Figure 51). This difference reflects divergent water use priorities: while many Asian countries allocate more water to agriculture or industry, GCC nations focus heavily on municipal and domestic needs. This prioritization aligns with their socio-economic context and water scarcity challenges.

FIGURE 51 Selected indicators of water resources of GCC countries compared to Asian countries



Note: Green=Asia (China, Indonesia, Philippines, Vietnam), Yellow=GCC average.

Source: CLEAR Framework. World Bank 2024.

Performance and Public Expenditures of Water and Sanitation Services

The GCC countries can be a global leader in promoting technologies, financial reform, and investment to address global water security challenges. Globally, expenditures on water services reaching approximately $164.6 billion. This sum falls significantly short of the funding required to meet the Sustainable Development Goals (World Bank 2024b). Low-income countries face severe shortfalls, with regions like Sub-Saharan Africa needing to increase their spending 17-fold to meet water and sanitation targets. A key challenge for the GCC is to increase the budget execution rate of the water sector. This is a worldwide issue: on average about 28 percent of water budgets globally go unspent annually. Under stressed water resources worldwide, these inefficiencies, along with optimizing utility operations and improving investment execution, could save billions and significantly close funding gaps. Some technologies of water reuse and desalination can help many countries tackle water stress. Moreover, financial reforms in water spending and financing can open up opportunities to implement such technologies in many parts of the world.

All GCC countries have reliable data on water and sanitation services in healthcare facilities (Figure 52), where access to the services is almost universal (WHO-UNICEF 2024). GCC countries have achieved near-universal access to safe drinking water and basic sanitation services to households, schools and health care facilities. This represents a significant accomplishment compared to other regions. Urban areas, in particular, benefit from reliable and high-quality services due to substantial investments in infrastructure. The region has developed sophisticated wastewater treatment facilities. The **UAE** and **Qatar**, for example, treat a high percentage of their wastewater, with much of it meeting tertiary standards.

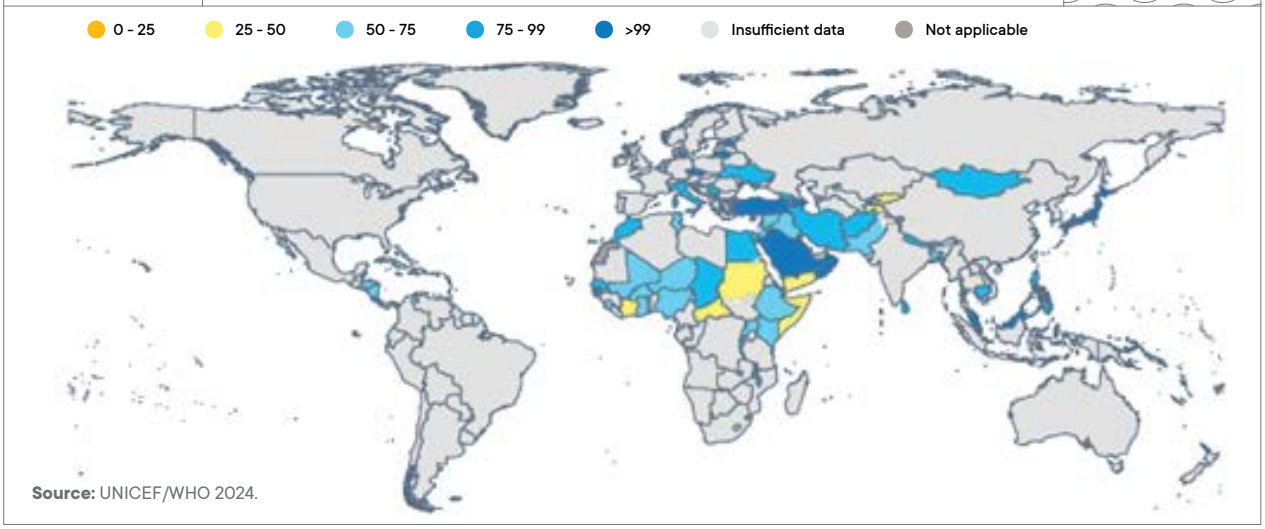
Water and sanitation services in the GCC countries nonetheless face challenges. The GCC has some of the highest per capita water consumption rates globally, driven by subsidies and cultural practices. This exacerbates stress on resources and infrastructure. While wastewater treatment is advanced, reuse rates remain relatively low (averaging about 35 percent), representing missed opportunities for water conservation. In some cases, treated water is discharged rather than reused for agriculture or landscaping.

Water utilities in GCC countries lag in terms of operational efficiency and high non-revenue water (e.g., due to leaks) compared to developed countries. Desalination and water distribution are energy-intensive, contributing to high operational costs and significant carbon footprints. This dependency poses sustainability challenges as energy prices fluctuate. Such challenges may impose restrictions on investments in the sectors or diminish their effectiveness. As such, improving efficiency in public expenditure and expanding private sector engagement for service delivery in GCC countries may reduce budgetary and investment risks.

The total investment in unconventional sources of water supply, like desalination plants, across the GCC has increased over the last few years. Such investments are expanding recently because of the need to secure water supplies in the face of rising demand and dwindling natural resources (Salem et al. 2021). This investment trend is indicative of a broader pattern where GCC governments prioritize water security as part of their national development agenda.

In GCC countries, government spending on water is often influenced by broader economic conditions, particularly the volatility of oil prices, which can impact overall budget allocations (Saxena & Al-Hadrami 2017; Ganguli 2016). As GCC nations seek to diversify their economies away from oil, there is a growing recognition of the need to align water resource management with economic diversification (Saxena & Al-Hadrami 2017; Ganguli 2016). This shift is crucial as it can lead to more sustainable water usage and improved efficiency in water delivery.

FIGURE 52 GCC countries and worldwide estimates of water and sanitation services in health care facilities



Source: UNICEF/WHO 2024.

The water sector's public expenditure in GCC countries is high compared to other regions, but improvements can still be made. GCC countries invest heavily in water infrastructure, particularly in desalination plants, which are essential to supplement their scarce freshwater resources. On a per capita basis, for instance, the GCC on average spends more than double than high-income countries when it comes to water supply and sanitation. Due to arid conditions, supplying water and sanitation is a difficult task.

Many technologies and interventions that are needed to extract and manage water in arid conditions require vast capital investments and high recurrent costs. Part of the reason why the GCC countries' per capita expenditure on water is higher compared to the rest of the world (Table 3) is because desalination accounts for most municipal water supply. But these facilities have high operational and maintenance costs relative to global averages In addition, water supply systems in the GCC are highly subsidized. Tariffs are often far below the production costs, leading to limited cost recovery. This results in financial inefficiencies that are less pronounced in other regions, where water tariffs tend to better reflect operational costs.

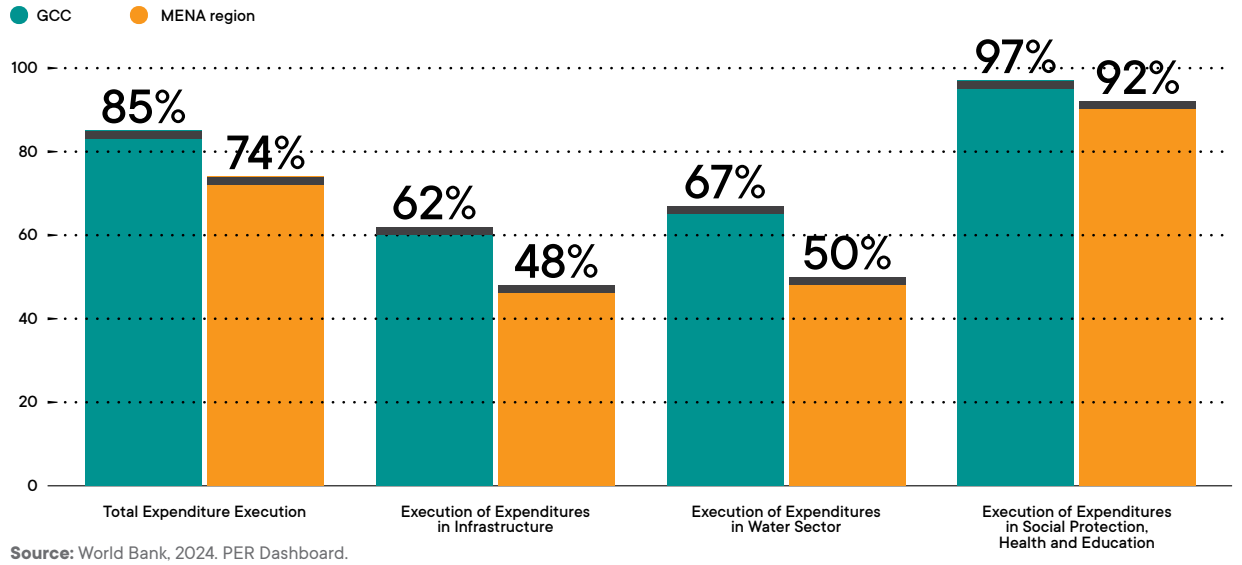
TABLE 3 Comparison of Water Expenditures with other development sectors by region

Regions	Percent of GDP spent on Water and Sanitation Services	Per Capita Expenditure in Water Supply and Sanitation (USD 2017)	Per Capita Expenditure Education (USD 2017)	Per Capita Expenditure in Health (USD 2017)	Ratio of Education to WSS	Ratio of Health to WSS
GCC Countries	0.72%	$104.25	$548.02	$411.44	5.3	3.9
Middle East and North Africa	0.53%	$29.69	$211.98	$189.89	7.1	6.4
High Income (FY25)	0.31%	$42.05	$564.00	$537.82	13.4	12.8
Rest of the World	0.25%	$12.72	$207.98	$143.90	16.3	11.3

Source: World Bank 2024.

Note: GCC data available only for Bahrain, Oman and Saudi Arabia

FIGURE 53 Rates of public sector execution



Source: World Bank, 2024. PER Dashboard.

Compared to water sector expenditures in other regions, GCC countries often spend more per capita on water infrastructure than many developing nations. GCC countries struggle with water sustainability and efficiency. For instance, in regions with more abundant water resources, such as parts of Europe and North America, the focus tends to be on maintaining existing infrastructure and improving water quality rather than on large-scale investments in new technologies.

In any case, the GCC could improve the efficiency of expenditure in water and sanitation. This is because, although on average the overall rate of water sector's execution for GCC countries is higher than the Middle East and North Africa region, it is still far from the rates of execution in sectors like education and social protection (Figure 53)

Increasing spending efficiency in the GCC's water sector can expand investments. With strong private sector funds and involvement, the public sector can maximize the use of expenditures in the sector to deliver water and sanitation services to multiple users. To bridge financing gaps, some examples of innovative financing mechanisms, including blended public-private partnerships (PPPs) and increased private sector involvement from GCC could be valuable for low- and middle-income countries. The **UAE** has implemented several PPP projects in the water sector. The Taweelah Reverse Osmosis Independent Water Project (IWP) in Abu Dhabi is a significant example. This project has involved the construction and operation of a large-scale desalination plant by a private consortium, ensuring a sustainable and reliable water supply for the region. **Oman** has also embraced PPPs in the water sector. The Sohar Independent Water Project is a key initiative where the private sector is involved in the development and operation of a desalination plant. This project aims to meet the growing water demand in the Sohar region through private sector expertise and investment.

PART IV

Policies and innovations to deal with water scarcity

Water scarcity in the GCC countries demands innovative policy interventions. Drawing from global experiences and recent reports, several key areas are identified here to address the region's water challenges. These strategies align with global best practices. They offer an approach that ensures long-term water security in the GCC countries.

Advanced desalination technologies are crucial for sustainable water management in GCC countries. As global leaders in desalination, GCC countries are driving innovation. Energy-efficient technologies, such as forward osmosis and membrane distillation, offer promising avenues to reduce energy consumption in desalination processes. **Saudi Arabia's** NEOM project exemplifies this approach, aiming to produce green hydrogen-powered desalination. The integration of renewable energy sources in desalination plants is also gaining traction, with the **UAE's** Masdar implementing solar-powered desalination pilot projects. To further advance these technologies, GCC countries should invest in research and development, develop regulations promoting renewable energy use in desalination, and establish public-private partnerships for technology development and implementation (Ghaffour et al., 2022).

BOX 5

Energy Consumption and Innovation in Saudi Arabia's Water Sector

Saudi Arabia's water sector faces significant energy challenges, but recent innovations are improving efficiency. In 2023, the total energy consumption for water production and distribution reached 8.7 million megawatt-hours (MWh), which represents approximately 9 percent of the country's total electricity production. Desalination plants accounted for 65 percent of this energy use, consuming about 5.6 million MWh annually, while groundwater pumping consumed an additional 2.1 million MWh, or 24 percent of the total energy utilized within the sector (Saudi Water Authority 2024).

Recent technological advancements are significantly improving energy efficiency in desalination. The latest commissioned desalination plant in **Saudi Arabia**, Shoaibah – 5 with a production capacity of 664,490 per day, have achieved energy consumption rates of 2.34 kWh per cubic meter of water produced with a salinity level of 42500 mg/l, a substantial improvement compared to older facilities that typically consumed between 4 and 5 kWh per cubic meter. Key developments include advanced reverse osmosis membranes that require less pressure and energy, energy recovery devices that capture and reuse pressure from the desalination process, and improved pre-treatment systems that reduce fouling and extend membrane life. Additionally, the integration of renewable energy sources, particularly solar power, is helping to offset grid electricity use.

The Saudi Water Authority has set ambitious targets to enhance sustainability in the water sector. Specifically, there is a goal to reduce energy intensity by 30 percent by 2030 compared to 2019 levels. Achieving this target will require sustained commitment to technological innovation and policy implementation. These advancements not only reduce operational costs but also align with broader sustainability objectives, providing valuable lessons for other water-scarce regions globally.

The circular economy can maximize water efficiency in the GCC region. Expanding the use of treated wastewater in agriculture, industry, and urban landscaping is a key strategy. **Oman's** Haya Water company has successfully implemented a water reuse program, setting an example for the region. Resource recovery from wastewater, such as extracting energy and nutrients, presents another opportunity. **Saudi Arabia's** National Water Company is exploring biogas production from sewage treatment plants, illustrating the potential for value creation from waste streams. To promote circular economy approaches, GCC countries should develop comprehensive water reuse guidelines and standards, implement incentives for water recycling and resource recovery in industries, and launch public awareness campaigns to promote acceptance of recycled water. Despite advanced wastewater treatment capacities, only about 35 percent of treated wastewater is reused in the GCC, reflecting missed opportunities for water recycling. In comparison, other arid regions, such as Aus-

tralia and parts of the United States, achieve higher rates of wastewater reuse for industrial and agricultural purposes

Digital technologies offer significant potential for improving water management in GCC countries. Smart metering systems, such as those implemented by the Dubai Electricity and Water Authority (DEWA), can help detect leaks and reduce non-revenue water. Artificial intelligence and predictive analytics can optimize demand forecasting and infrastructure maintenance. Using such digital investments, Dubai was able to achieve a remarkable non-revenue water of less than 3 percent. **Kuwait's** Ministry of Electricity and Water has implemented AI-powered water network management systems, demonstrating the region's capacity for technological adoption. To fully leverage these technologies, GCC countries should develop national digital water strategies, invest in digital infrastructure and workforce training, and establish robust data sharing protocols and cybersecurity measures (World Bank 2024).

Sustainable agriculture is critical for reducing water consumption in the GCC region. As the largest water consumer in GCC countries, the agricultural sector requires targeted interventions to improve water efficiency. Precision agriculture techniques, including drip irrigation, soil moisture sensors, and crop selection optimization, can significantly reduce water consumption. The UAE's Food Tech Valley initiative promotes water-efficient agricultural technologies, serving as a model for the region. Vertical farming and controlled environment agriculture, such as **Saudi Arabia's** Red Sea Farms project, offer innovative solutions for reducing water use in food production. Policy measures to support sustainable agriculture should include providing incentives for water-efficient irrigation technologies, developing agricultural extension services focused on water conservation, and implementing water pricing reforms to reflect true costs and encourage efficiency (FAO, 2021).

Adopting efficient irrigation systems (like drip irrigation) and climate-smart agriculture can stimulate investment in agricultural technology. This can lead to innovation hubs around water-saving tech, potentially creating job opportunities and economic growth within the sector. Technological advancement and sustainable practices can generate new employment opportunities in agriculture and water management sectors. This helps diversify job markets in countries that may otherwise rely on oil, gas, or other limited sectors.

Technology can contribute to reducing water footprints and waste of the industrial and services sectors in GCC countries. Technology is transforming the GCC's manufacturing sector. With the adoption of advanced technologies, such as artificial intelligence— often referred to as "Industry 4.0" — the sector is becoming more interconnected, more automated and more data-driven than ever before. Currently, industry stakeholders in GCC are adopting technologies like large-scale reverse osmosis (RO) desalination, smart grids, and metering to increase existing supply and production capacity, to create a resilient and sustainable water supply system for the future, which is driven by data efficiency.

Also, groundwater management is essential for long-term water security in GCC countries.

GCC countries face critical water challenges. The combination of arid climate, high temperatures, and rapid economic and population growth exacerbates these challenges, making water resource management a key priority for the region. This is illustrated through the example of **Saudi Arabia**, where the largest proportion of water resources are used for agricultural irrigation sourced from non-renewable groundwater. As shown Figure 54, projections of nonrenewable groundwater withdrawals will increase by 11 percent and 56 percent by 2030 and 2060, respectively, relative to 2015 levels under three management scenarios (World Bank, 2024). Given the large volumes of water used for agriculture, these results highlight that the irrigation sector provides opportunities for substantial reductions in total water withdrawals and nonrenewable groundwater sustainable management, as well as the value of early implementation of groundwater management strategies in helping keep the ability of **Saudi Arabia's** groundwater reserves to provide a long-term water source.

FIGURE 54

Projected total water withdrawals by sector and by source across water resources management scenarios

Nature-based solutions offer sustainable, cost-effective approaches to water management in the GCC. In water-scarce countries such as those in the GCC region, infrastructure for water resources management can be effectively integrated with environmental considerations for managing the water cycle in a more efficient and sustainable way. Accordingly, to address climate change and improve water resources management, GCC countries should adapt approaches that are feasible and offer flexibility by combining built (grey) and natural (NbS: nature-based solutions) infrastructure. This will feasibly enable them to increase the reliability of water supply. Table 4 summarizes some innovation opportunities in using NbS towards sustainability and adaptation in the water sector, by itself or in combination with gray infrastructure.

TABLE 4 Potential application of Nature-based Solutions towards water security and climate adaptation in the water sector

Nature based Solutions (NbS)	Water sector adaptation challenges		
	Water Scarcity		
	River flows	Groundwater recharge	Droughts
Targeted land protection (including land purchase)	■	■	■
Revegetation (including re/afforestation)	■	■	■
Riparian restoration (including riparian buffers)		■	■
Removal of invasive species	■	■	
Natural aquifer recharge	■		
Reconnecting rivers to floodplains		■	
Wetlands restoration / conservation	■	■	■
Construction of artificial wetlands		■	■
Green spaces (bioretention and infiltration)		■	■
Permeable pavements			
Establishing flood bypasses			
Agriculture Best Management Practices (BMP)			
Cover crops			■
Change in crops, crop rotation			■
Reduced use of chemical fertilizers			
Change in pest control methods			
Forestry Best Management Practices (BMP), including forest fuel reduction	■	■	
Ranching / Grazing Best Management Practices (BMP)			

Notes: The shaded boxes indicate that these NbS can play a role in alleviating the relevant water pressure.
Source: adapted from UNEP/DHI, IUCN and TNC, "Green Infrastructure: Guide for Water Management" and TNC, "Beyond the Source".

Regional cooperation is crucial for addressing shared water challenges in the GCC.

In the GCC region, water resources and particularly the nexus between water, energy and food is relevant for the region's sustainability, security, and growth. Countries in this region are arid to semiarid, with many areas already facing water stress and a highly variable precipitation rate due to their geographic and climatic conditions. Nonetheless, they have generally been successful in satisfying their citizens' needs through ambitious dam building, groundwater extraction, leakage reduction, conservation, desalination, not to mention water reuse and water transfers. But per capita supply is declining. This is due to the growing population, increasing urbanization, and extended irrigated agriculture, including highly water-intensive crops. There is also the development of the industrial and the tourism sectors. This decline in per capita supply has increasingly pushed the region to think of ambitious desalination plans to supply water to coastal cities and agricultural areas and to explore the possibility of large transfers of water to the region. These options (desalination, reuse and water transfers) require relatively larger large amounts of energy, mainly electricity. At the same time, agriculture plus the combined effects of population growth, increasing hydrological variability and climate change, are expected to continue to pose major pressures on the region's diminishing water supplies.

This regional context opens up new opportunities for cooperation among GCC countries on water resources management. This cooperation can be focused on such issues as the following: 1) the implications of water reuse — particularly wastewater recycling — as a source of future water supply and its effect on urban services as well as food and energy security; 2) the effects of sudden extreme events or shocks of physical or socioeconomic nature; 3) the repercussions of removing existing distortions (that is, subsidies) in water availability and distribution; and 4) the economic costs of inaction and non-cooperation compared to the potential benefits of cooperation across the region.

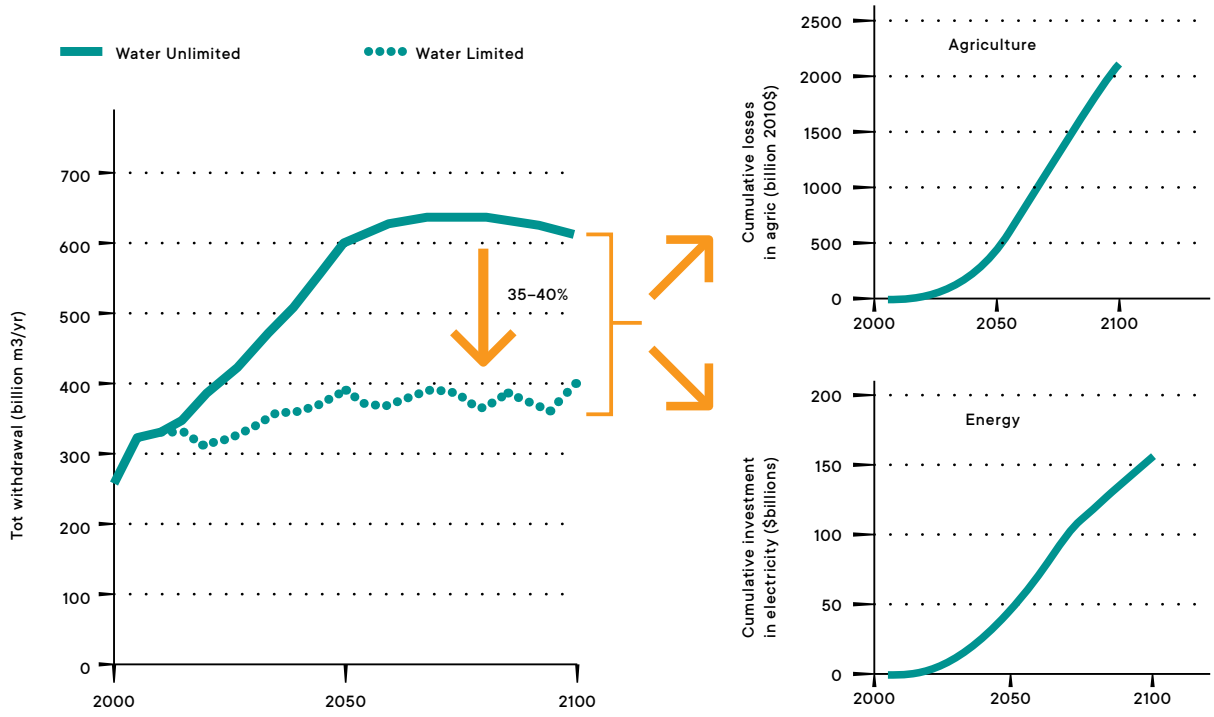
Cooperation may also help quantify tradeoffs in water availability and its impact on major economic sectors, define effective adaptation policies that are necessary to mitigate the impact of climate change on water security, and plan key water investments at regional and country levels. Working together could also engender policies that meet sectoral needs in a manner consistent with regional goals of environmental sustainability.

There is an additional incentive for regional cooperation. Results from a regional study by the World Bank (2018) illustrate the implications of constraining water demand on losses in agricultural export revenues from the region and needed investments in electricity for desalination water supply (Figure 55). There is a clear financial case for GCC countries to cooperate in investments and management of water supply boosting alternatives, particularly wastewater reuse, desalination and water transfers as needed.

Finally, regional cooperation in management of the growing quantities of brine that are a by-product of the desalination processes could generate new markets, investment opportunities and global expertise of GCC countries. The regional cooperation is important as the environmental risk (reducing marine biodiversity due to increased levels of ocean salination) requires collective action and strong commitments to address desalination environmental and economic externalities between and within countries.

FIGURE 55

Implications of reduced demand on agricultural revenue losses and needed investments in electricity



Conclusion

Managing water as a strategic resource in GCC countries requires significant policy shifts and targeted interventions in agriculture. These changes may impact employment and the broader economy but are essential for addressing water security challenges. Ensuring water security involves reducing water stress while meeting human, economic, and environmental needs. Redirecting investments toward more water-efficient sectors that generate employment opportunities could offset the economic costs associated with perpetuating highwater consumption in agriculture.

A critical first step is for GCC countries to invest in water-saving technologies and advanced irrigation systems, such as drip and precision irrigation, to optimize water use in agriculture. Difficult policy decisions in this sector could also help alleviate water stress while preserving employment and economic benefits. For instance, prioritizing less water-intensive crops and high-value agricultural products suited to arid conditions can reduce water demand. Similarly, introducing water pricing mechanisms that reflect the scarcity of water would encourage conservation, particularly among large-scale agricultural producers, while minimizing employment impacts.

Structural reforms in the agriculture sector are also crucial to minimizing the impact on food security. Reducing the scale of water-intensive, export-oriented agriculture and relying more on global markets for food imports could significantly lower the agricultural water footprint of GCC countries. However, balancing this with strategies for food sovereignty is essential. Localizing the production of strategic crops for national food security, rather than focusing on export-oriented farming, represents a feasible medium-term policy shift.

Since addressing water stress in agriculture could reduce employment and economic value added, redirecting investments to other productive sectors is a vital mitigation strategy. Diversifying the economy to reduce dependence on agriculture not only alleviates water stress but also opens new avenues for job creation. For example, investing in industries such as renewable energy, logistics, tourism, and technology—sectors that require less water and generate higher-value jobs—can absorb displaced agricultural labor. Many countries have successfully used small and medium enterprises (SMEs) in non-agricultural sectors to cushion employment losses from agricultural reforms. Reorienting agricultural subsidies to support water-efficient practices and facilitate non-agricultural employment creation is another practical policy option.

The Gulf Cooperation Council countries have certainly put economic diversification at the forefront of their development agenda. And they have been resilient to global disruptions running from energy markets to geopolitical tensions. But as they advance their diversification strategies and strengthen their resilience, water security remains a critical issue that could make or break their progress. Given that these countries are in an arid and semiarid region, water scarcity is a problem already built into their geography. But though there is not much they can do about their geography, there is plenty they can do about their water.

From an efficiency perspective, scaling back export-oriented agriculture is more sustainable for GCC economies due to the unsustainable water footprint of such activities. However, non-economic factors—such as food security, potential welfare losses, and national productivity considerations—may compel governments to maintain these sectors. Export-oriented agriculture could also exacerbate tensions by straining transboundary water resources, a significant concern given the region's limited water endowments.

Since agriculture is the largest water consumer in GCC countries, there is a need to support sustainable agriculture. This support, as already indicated, should include providing incentives for water-efficient irrigation technologies, developing water-conserving agricultural extension services, and implementing water pricing reforms that reflect true costs and encourage efficiency (FAO 2021).

As detailed in this *Gulf Economic Update's* special focus on water, meaningful investments have to be made in finding innovative

solutions and strategic investments to offset certain implications of shifting policies to enhance water security. These solutions include desalination and demand management strategies, strategies that have a proven record of alleviating water stress. As discussed earlier, the GCC countries are already leaders in desalination technologies. Moreover, they have also developed ambitious plans to harvest renewable energy, as exemplified by the Kingdom of Saudi Arabia's aim to achieve net-zero greenhouse gas emissions by 2060, a target that is part of the Saudi Green Initiative. Novel lessons can be drawn from such leadership to meet the current moment of rapid population growth and climate change. there is more to be done to meet the current moment of rapid population growth and climate change. This is especially true when it comes to the promotion of renewable energy use in desalination, or what may be called 'sustainable desalination', the establishment of viable public-private partnerships, and championing cutting-age research and development (Ghaffour et al., 2022).

Finally, besides other interventions such as regional cooperation, which is surely needed to find inclusive water solutions, nature-based solutions are also paramount. This is because, as climate change intensifies, applying solutions that are nature-based could help mitigate water stress while also addressing climate change. Although solutions such as those mentioned here are hardly a panacea, used collectively, they can make a difference. And since water is the new oil, GCC countries have an opportunity to tackle such issues as population growth, rapid urbanization, and climate change in ways that will fuel their economies for ages to come — if they put water at the center of their policy objectives.

References

Recent Developments

Arab Times. (2024, June 5). *Proposal seeks to double citizens in private sector*. URL: https://www.arabtimesonline.com/news/proposal-seeks-to-double-citizens-in-private-sector/

Emirates News Agency. (2022, May 9). *UAE Cabinet increases Emiratisation rate to 2% annually*. URL: https://www.wam.ae/en/details/1395303045347

Kuwait News Agency (KUNA), *Qatar agrees 15-year LNG supply deal with Kuwait*, August 26, 2024, URL: https://www.kuna.net.kw/ArticleDetails.aspx?id=3189996

Ministry of Energy and Infrastructure in UAE. (2023). *UAE Energy Strategy 2050*.

Ministry of Energy, Saudi Arabia. (2024). *Saudi Power Procurement Company (SPPC) signs power purchase agreements for three new solar energy projects with a total capacity of 5,500 MW*. URL: https://www.moenergy.gov.sa/en/MediaCenter/News.

Ministry of Finance and National Economy, Bahrain. (2021). *Economic Recovery Plan*. URL: https://www.mofne.gov.bh/en/project-initiatives/economic-recovery-plan/

Ministry of Human Resources and Social Development, Saudi Arabia. (2024). *Nitaqat Mutawar Program*. URL: https://www.hrsd.gov.sa/en/knowledge-centre/decisions-and-regulations/regulation-and-procedures/832742

Mogielnicki, R. (2024, September 23). *The bread-and-butter issues of jobs and taxes in the Gulf*. Arab Gulf States Institute in Washington. URL: https://agsiw.org/the-bread-and-butter-issues-of-jobs-and-taxes-in-the-gulf/

Nair, V. (2024, October 23). *Expatriate workforce in Oman reaches 1.8mln*. Oman Daily Observer. URL: https://www.zawya.com/en/economy/gcc/expatriate-workforce-in-oman-reaches-18mln-el7rdquk

National Bank of Kuwait. (2024). Kuwait Economic Update: GDP growth and outlook. URL: https://www.nbk.com/dam/jcr%3A16034953-b111-43fb-a1c8-e524d6969beb/NBKEIKuwaitGDP20241105E.pdf

National Centre for Statistics and Information (NCSI), Oman. (2024). *Monthly Statistical Bulletin: October 2024*.URL:https://www.ncsi.gov.om/Elibrary/LibraryContentDoc/bar_bar_Monthly%20Statistical%20Bulletin%20Oct%202024_5f349c50-8f86-4174-9ca0-2fdad56bfdb2.pdf.

National Labor Observatory, Saudi Arabia. (2024). *Infographics*. URL: https://nlo.gov.sa/landing/info-graphics?curent=1&Keywords=&c=&oba=&obd=desc&lang=ar

Muscat Daily. (2024, August 13). *Work visas stopped for select professions for 6 months*. URL: https://www.muscatdaily.com/2024/08/13/work-visas-stopped-for-select-professions-for-6-months/

Oman. (2022). *Ministerial Decision No. 235/2022*. URL: https://qanoon.om/p/2022/mol20220235/.

Qatar Investment Authority (QIA). (October 2024). *QIA to combine QNBN & GBI as part of efforts to enhance Qatar's digital infrastructure ecosystem*.

Saudi Arabia, *Royal Decree No. (M/19)* dated 16/01/1446H (corresponding to July 22, 2024).

`Saudi Aramco. (2024). *Second Quarter and Half-Year Interim Report 2024*. URL: https://www.aramco.com/-/media/publications/corporate-reports/reports-and-presentations/2024/h1/saudi-aramco-h1-2024-interim-report-english.pdf

United Arab Emirates Government. (2024). *Foreign Direct Investment (FDI) in the UAE*. URL: https://u.ae/en/information-and-services/finance-and-investment/foreign-direct-investment/foreign-direct-investment-in-the-uae

United Nations Conference on Trade and Development (UNCTAD). (2024). *World Investment Report 2024*. URL: https://unctad.org/publication/world-investment-report-2024.

Spotlight Section

Aizenman, J., Jinjarak, Y., Nguyen, H. T. K., & Park, D. (2019). Fiscal space and government-spending and tax-rate cyclicality patterns: A cross-country comparison, 1960-2016. *Journal of Macroeconomics*, 60(2019), 229-252.

Alesina, A., Tabellini, G., & Campante, F. R. (2008). Why Is Fiscal Policy Often Procyclical? *Journal of the European Economic Association*, 6(5), 1006-1036.

Ansar, A., Flyvbjerg, B., Budzier, A., & Lunn, D. (2016). Does Infrastructure Investment Lead to Economic Growth or Economic Fragility? Evidence from China. *Oxford Review of Economic Policy*, 32(3), 360-390.

Bashar, O. H., Bhattacharya, P. S., & Wohar, M. E. (2017). The cyclicality of fiscal policy: New evidence from unobserved components approach. *Journal of Macroeconomics*, 53(2017), 222-234.

Bogetić, Z., Naeher, D., & Narayanan, R. (2023). Measuring Untapped Revenue Potential in Developing Countries: Cross-Country Frontier and Panel Data Analysis. *Journal of Public Finance and Public Choice*, 38(1): 89-127.

Bogetić, Z. & Naeher, D. (2024). Is Escaping the Fiscal Pro-Cyclicality Trap Possible? Evidence from the Middle East and North Africa. *World Bank Policy Research Working Paper*, forthcoming.

Bogetić, Z. & Naeher, D. (2024b). Corruption and Government Revenue: Evidence of a Non-linear Relationship Driven by Crises. *Journal of Applied Economics*, 27(1): 1-17.

Bogetić, Z. & Naeher, D. (2024c). The Good, the Bad, and the Ugly: New Evidence on Alternative Views of Corruption. *Applied Economics*, 56(33): 4019-4032.

Chari, V. V., Christiano, L. J., & Kehoe, P. J. (1994). Optimal fiscal policy in a business cycle model. *Journal of Political Economy*, 102(4), 617-652.

Djankov, S., Ganser, T., McLiesh, C., Ramalho, R., & Shleifer, A. (2010). The Effect of Corporate Taxes on Investment and Entrepreneurship. *American Economic Journal: Macroeconomics*, 2(3), 31-64.

Frankel, J. A., Vegh, C. A., & Vuletin, G. (2013). On graduation from fiscal procyclicality. *Journal of Development Economics*, 100(2013), 32-47.

IMF (2018). *Fiscal Monitor: Capitalizing on Good Times*. Washington, D.C.: International Monetary Fund.

IMF (2022). *World Revenue Longitudinal Dataset*. Washington, D.C.: International Monetary Fund. URL: https://data.imf.org/?sk=77413f1d-1525-450a-a23a-47aeed40fe78 (accessed in December 2023).

IMF (2023). *World Economic Outlook*. Washington, D.C.: International Monetary Fund. URL: https://www.imf.org/en/Publications/WEO/weo-database/2023/October (accessed in December 2023).

Marioli, F. A., Fatas, A., & Vasishtha, G. (2023). Fiscal Policy Volatility and Growth in Emerging Markets and Developing Economies. *World Bank Policy Research Working Paper*, No. 10409. Washington D.C.: World Bank.

Naeher, D. & Narayanan, R. (2023). Attracting private capital for development: Are poorer countries less efficient? *International Economics and Economic Policy*, 20(1), 1-26.

Riera-Crichton, D., Vegh, C. A., & Vuletin, G. (2015). Procyclical and Counter-cyclical Fiscal Multipliers: Evidence from OECD countries. *Journal of International Money and Finance*, 52(2015), 15-31.

Talvi, E., & Vegh, C. A. (2005). Tax base variability and procyclical fiscal policy in developing countries. *Journal of Development Economics*, 78(1), 156-190.

Vegh, C. A. & Vuletin, G. (2015). How Is Tax Policy Conducted over the Business Cycle? *American Economic Journal: Economic Policy*, 7(3), 327-370.

Woo, J. (2009). Why Do More Polarized Countries Run More Procyclical Fiscal Policy? *Review of Economics and Statistics*, 91(4), 850-870.

World Bank (2023). *World Development Indicators*. Washington D.C.: World Bank. URL: https://databank.worldbank.org/source/world-development-indicators (accessed in December 2023).

World Bank (2024). *Global Economic Prospects (January 2024)*. Washington D.C.: World Bank.

Outlook and Risks

Al-Sarihi, A., *The GCC and the road to net zero,* Middle East Institute, 2023.

Azure. (2024). *UAE and KSA: Growth and influence along Red Sea*. URL: https://azure-strategy.com/uae-and-ksa-ramp-up-port-investments-along-red-sea/

Chow, E., & Rashad, M. (2024, January 16). *Tankers carrying Qatari LNG change course amid Red Sea tension - data*. Reuters. URL: https://www.reuters.com/markets/commodities/lng-tankers-carrying-qatari-lng-resume-course-data-shows-2024-01-16/

DP World. (2024). *2024 Financial Report*.

Economy Middle East, *GCC sovereign wealth funds deploy $55 billion in first 9 months of 2024: Report*, October 1, 2024, URL: https://economymiddleeast.com/news/gcc-sovereign-wealth-funds-deploy-55-billion-in-first-9-months/

German-Saudi Arabian Liaison Office for Economic Affairs (AHK). (2024). *Hydrogen to play a central role in Saudi Arabia's energy transition*. URL: https://saudiarabien.ahk.de/en/market-information/energy-sector-in-saudi-arabia-bahrain/hydrogen-central-role-saudi-arabia

Global SWF. (2024). *2024 Annual Report*. URL: https://globalswf.com/

IMF (2024, April). *Regional Economic Outlook: Chapter 2*. Washington, D.C.: International Monetary Fund.

IntelliNews. (2024). *Oil shipments from Saudi Arabia and Iraq to Europe delayed amid Red Sea tensions*. URL: https://www.intellinews.com/oil-shipments-from-saudi-arabia-and-iraq-to-europe-delayed-amid-red-sea-tensions-308609/

Korniyenko, Y., et al. (2023). *Gulf Cooperation Council: Economic Prospects and Policy Challenges for the GCC Countries*. IMF Country Report No. 2023/413. International Monetary Fund.

Middle East Institute. (2024). *The Houthi-UAE collision course in the Red Sea*. URL: https://www.mei.edu/publications/houthi-uae-collision-course-red-sea

Oman's Foreign Ministry. (2024). *Oman on course to exceed green hydrogen target by 2030*.

World Bank. (2025). *Global Economic Prospects, January 2025* (Forthcoming). Washington, DC: World Bank.

World Bank. (2024). *Global Economic Prospects, June 2024*. Washington, DC: World Bank.

Special Focus

Abidi, N., El Herradi, M., Yontcheva, B., and Dua, A. 2024. "The Nexus of Climate and Monetary Policy: Evidence from the Middle East and Central Asia," IMF Working Papers 2024/090, International Monetary Fund. https://www.imf.org/en/Publications/WP/Issues/2024/04/26/The-Nexus-of-Climate-and-Monetary-Policy-Evidence-from-the-Middle-East-and-Central-Asia-548364

Al-Badi, A., and I. Al-Mubarak. 2019. "Growing Energy Demand in the GCC Countries." Arab Journal of Basic and Applied Sciences 26 (1):488–96. https://www.tandfonline.com/doi/full/10.1080/25765299.2019.1687396.

Alharthi, M. (2019). Determinants of economic development: a case of gulf cooperation council (gcc) countries. International Journal of Economics and Finance, 11(11), 12. https://doi.org/10.5539/ijef.v11n11p12

Alharthi, M. (2023). Exploring indicators impacting gross domestic product: a case of the gulf cooperation council members. CONFERENCEME, 1(1), 15-27. https://doi.org/10.33422/conferenceme.v1i1.194

Allegretti, G., Montoya, M.A., Talamini, E. (2022) Assessing sectoral water stress states from the demand-side perspective through water footprint dimensions decomposition, Science of The Total Environment, Volume 809, 152216, ISSN 0048-9697, https://doi.org/10.1016/j.scitotenv.2021.152216.

Barrett, C. Carter, M.R., Chavas, J.P. (2018) The Economics of Poverty Traps. NBER. WP 13828. https://www.nber.org/system/files/chapters/c13828/c13828.pdf

Bassi, N., Kumar, S., Kumar, M., Ermen, S., & Campling, P. (2022). Promoting wastewater treatment in india: critical questions of economic viability. Water and Environment Journal, 36(4), 723-736. https://doi.org/10.1111/wej.12810

Borgomeo, E., Jägerskog, A., Talbi, A., Wijnen, M., Hejazi, M., and Miralles-Wilhelm, F. 2018. "The Water-Energy-Food Nexus in the Middle East and North Africa: Scenarios for a Sustainable Future" World Bank, Washington, DC. Link to publication.

Bruno, E.M., Jessoe, K. Designing water markets for climate change adaptation. Nat. Clim. Chang. 14, 331–339 (2024). https://doi.org/10.1038/s41558-024-01964-w

Council of Foreign Relations (CFR) (2023). Water Stress: A Global Problem That's Getting Worse. Policy Summary: https://www.cfr.org/backgrounder/water-stress-global-problem-thats-getting-worse

Damania, R., Desbureaux, S., Rodella, S., Russ, J and Zaveri, E. (2019). Quality Unknown: The Invisible Water Crisis. Washington, DC: World Bank. https://openknowledge.worldbank.org/server/api/core/bitstreams/9f19c149-c22c-503c-b260-87c15e58e452/content

Damania, R., Desbureaux, S., Hyland, M., Islam, A., Moore, S., Rodella, A.S., Russ, J., and Zaveri, E. (2017). Uncharted Waters: The New Economics of Water Scarcity and Variability. Washington, DC: World Bank. doi:10.1596/978-1-4648-1179-1

de Waal, Dominick, Stuti Khemani, Andrea Barone, and Edoardo Borgomeo. 2023. The Economics of Water Scarcity in the Middle East and North Africa: Institutional Solutions. Washington, DC: World Bank. doi:10.1596/978-1-4648-1739-7

Faraloni, C., Touloupakis, E., & Santos, E. (2023). Enhancing nature-based solutions: efficient removal of hydroxytyrosol in olive mill wastewater treatment for value creation. Water, 15(12), 2163. https://doi.org/10.3390/w15122163

FAO (2021). AQUASTAT Database. Food and Agriculture Organization of the United Nations. http://www.fao.org/aquastat/en/

Ghaffour, N., et al. (2022). "Advances in desalination technologies: The state of the art." Desalination, 495, 114659. https://www.sciencedirect.com/science/article/pii/S0011916422001667

Hallegatte, S., Rentschler, J., Rozenberg, J., (2019). Lifelines: The Resilient Infrastructure Opportunity. Sustainable Infrastructure. Washington, DC: World Bank. http://hdl.handle.net/10986/31805

Helal B, Ali M, Ali T, Odeleye IP, Mortula M, Gawai R. 2024. The Impact of Land Use on Water Resources in the Gulf Cooperation Council Region. Land. 13(7):925. https://doi.org/10.3390/land13070925

Hejazi, M., Santos Da Silva, S. R., Miralles-Wilhelm, F., Kim, S., Kyle, P., Liu, Y., Vernon, C., Delgado, A., & Clarke, L. (2023). Impacts of water scarcity on agricultural production and electricity generation in the Middle East and North Africa. Frontiers in Environmental Science, 11, 157. https://doi.org/10.3389/fenvs.2023.1082930

Jägerskog, A., and Barghouti, S. 2022. "Advancing Knowledge of the Water-Energy Nexus in the GCC Countries." World Bank, Washington, DC. https://documents1.worldbank.org/curated/en/099355009132215715/pdf/P1768640ebe4770180b3970bccc84ae2926.pdf

Kompas, T., Che, T.N. and Grafton, R.Q. (2024). Global impacts of heat and water stress on food production and severe food insecurity. Sci Rep 14, 14398. https://doi.org/10.1038/s41598-024-65274-z

Meng, F., Cheng, S., Yu, Y., Chen, J., Chen, Y., Liu, G., ... & Fan, W. (2022). Potential benefits of public-private partnerships to improve the efficiency of urban wastewater treatment.. https://doi.org/10.21203/rs.3.rs-2094474/v1

Nin-Pratt, A. et al. (2018) Agriculture and economic transformation in the Middle East and North Africa: A review of the past with lessons for the future. Washington, DC and Rome: IFPRI and FAO. https://openknowledge.fao.org/server/api/core/bitstreams/6d518e5c-18ca-490e-8aa7-040b0ae4cb86/content

Odnoletkova, N., and Patzek, T.W. (2023). Water resources in Saudi Arabia: trends in rainfall, water consumption, and analysis of agricultural water footprint. npj Sustain. Agric. 1, https://doi.org/10.1038/s44264-023-00006-w

Qureshi, A. (2020). Challenges and prospects of using treated wastewater to manage water scarcity crises in the gulf cooperation council (gcc) countries. Water, 12(7), 1971. https://doi.org/10.3390/w12071971

Saxena, S. and Al-Hadrami, A. S. N. (2017). Do we need a gcc bank to facilitate the economic turnaround of the gcc region?. Digest of Middle East Studies, 26(2), 226-247. https://doi.org/10.1111/dome.12111

Stringer, L. C., Mirzabaev, A., Benjaminsen, T. A., Harris, R. M. B., Jafari, M., Lissner, T. K., Ste-

vens, N., & Tirado-von der Pahlen, C. (2021). Climate change impacts on water security in global drylands. One Earth, 4(6), 851–864. Doi: 10.1016/j.oneear.2021.05.010

Russ, J. (2020) Water runoff and economic activity: The impact of water supply shocks on growth, Journal of Environmental Economics and Management, Volume 101, 102322, ISSN 0095-0696, https://doi.org/10.1016/j.jeem.2020.102322.

Saleem, H. (2023). An overview of wastewater treatment and reuse in the gulf cooperation council countries. Journal of Applied Membrane Science & Technology, 27(3), 19-67. https://doi.org/10.11113/amst.v27n3.274

Saleh, A., Gad, A., Ahmed, A., Arman, H., & Farhat, H. I. (2023). Groundwater hydrochemical characteristics and water quality in egypt's central eastern desert. Water, 15(5), 971. https://doi.org/10.3390/w15050971

Salem, I. E., Abdulqader, A. W., Ismaeel, M. M., & Mijwil, M. M. (2021). A survey: the role of research and development in securing the effective transfer of technology. Asian Journal of Applied Sciences, 9(5). https://doi.org/10.24203/ajas.v9i5.6788

Saudi Water Authority (2024). "Annual Report on Water and Energy Consumption." Riyadh, Saudi Arabia.

Sherif, M., Liaqat, M. U., Baig, F., & Al-Rashed, M. (2023). Water resources availability, sustainability and challenges in the GCC countries: An overview. Heliyon, 9(10), e20543. https://doi.org/10.1016/j.heliyon.2023.e20543

UNESCO (2023). The United Nations World Water Development Report 2023. WWAP/SC-2023/PI/1. https://unesdoc.unesco.org/ark:/48223/pf0000384659

UNICEF/WHO (2024) WASH in health care facilities 2023 data update: special focus on primary health care. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2024. https://creativecommons.org/licenses/by-nc-sa/3.0/igo

UN-Water. Summary progress update (2021) SDG 6 – water and sanitation for all. https://www.unwater.org/sites/default/files/app/uploads/2021/12/SDG-6-Summary-Progress-Update-2021_Version-July-2021a.pdf

van Vliet, M., Flörke, M. and Wada, Y. (2017) Quality matters for water scarcity. Nature Geosci 10, 800–802. https://doi.org/10.1038/ngeo3047

Wang-Erlandsson, L., Tobian, A., van der Ent, R. J., Fetzer, I., te Wierik, S., Porkka, M., Staal, A., Jaramillo, F., Dahlmann, H., Singh, C., Greve, P., Gerten, D., Keys, P.W., Gleeson, T, Cornell, S. E., Steffen, W., Bai, X., Rockström, J., (2022). A planetary boundary for green water. Nature Reviews Earth & Environment. https://doi.org/10.1038/s43017-022-00287-8

Yadav, V., Ibrar, Z. Relationship of Water Stress and Flood Damage for Sustainable Development. Water Resour Manage 36, 1323–1338 (2022). https://doi.org/10.1007/s11269-022-03083-7

World Bank, 2018, The Water-Energy-Food Nexus in the Middle East and North Africa: Scenarios for a Sustainable Future, https://openknowledge.worldbank.org/entities/publication/11ca3b25-d3ab-5c72-829c-9428fd898164

World Bank, 2024, Technical Note: A Quantitative Assessment Approach to

Valuing Water in the Kingdom of Saudi Arabia, Modeling Application for Water Valuation Analysis

World Bank. 2017. Reducing Inequalities in Water Supply, Sanitation, and Hygiene in the Era of the Sustainable Development Goals: Synthesis Report of the WASH Poverty Diagnostic Initiative. WASH Synthesis Report. World Bank, Washington, DC. https://open-

knowledge.worldbank.org/server/api/core/bitstreams/53be894e-9f11-53be-8715-810600e3f582/content

World Bank (2024a). "Water Security in the Middle East and North Africa." World Bank, Washington, DC. https://www.worldbank.org/en/topic/water/publication/water-security-middle-east-north-africa

World Bank (2024b). "Funding a water secure future. Washington D.C. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099050624154572979/p172944100adb1042188ab1d289e7f-2f00b

World Bank (2017a). Water for Prosperity and Development. Washington D.C. https://documents1.worldbank.org/curated/en/920341516598399529/pdf/122882-WP-WaterSectorEngagementNotefinal-PUBLIC.pdf

World Bank. (2016) "High and Dry: Climate Change, Water, and the Economy." Executive Summary. World Bank, Washington, DC. https://openknowledge.worldbank.org/server/api/core/bitstreams/5bf39931-836c-54da-953f-15d8330d87d3/content

World Wildlife Foundation (WWF) (2023). The High Cost of Cheap Water: The True Value of Water and Freshwater Ecosystems to People and Planet. https://wwfint.awsassets.panda.org/downloads/wwf-high-cost-of-cheap-water--final-lr-for-web-.pdf

Zaveri, E., Damania, R., and Engle, N. (2023) Droughts and Deficits The Global Impact of Droughts on Economic Growth. World Bank Policy Paper Series. Washington D.C. https://openknowledge.worldbank.org/server/api/core/bitstreams/8b8659c6-8087-46f2-907e-0d69a0a89d56/content

Zubari, W. K., and Alajjawi, S. M. 2020. "Promoting an EU-GCC Climate Change Agenda: Water Security Priorities." Research paper #7, 2020, The Bussola Institute. https://www.bussolainstitute.org/research/promoting-an-eu-gcc-climate-change-agenda-water-security-priorities.

Annex

ANNEX 1

GCC Summary Statistics Table

GCC Selected Economic Indicators	2021	2022	2023	2024	2025	2026
GCC, Real GDP at Market Price, % growth	4.1	7.2	0.4	1.6	4.0	4.3
GCC, Private Consumption, Contr to Growth %	2.8	2.4	1.8	1.6	1.4	1.4
GCC, Govt. Consumption, Contr to Growth %	0.4	1.5	0.9	0.3	0.9	0.7
GCC, Fixed Investment, Contr to Growth %	1.6	3.3	1.2	1.2	1.2	1.2
GCC, Net Exports, Contr to Growth %	-0.1	2.2	-3.2	-1.8	0.7	1.0
GCC, Current Account Balance, %GDP	8.5	16.1	8.5	7.1	7.7	8.4
GCC, Fiscal Balance, %GDP	-1.1	6.7	0.6	-0.1	-0.1	-0.2

ANNEX 2

Country Summary Tables

Key Economic Indicators

Country Summary Tables

Bahrain

Selected Economic Indicators	2021	2022	2023	2024E	2025F	2026F
Real GDP growth, at constant market prices	4.4	6.0	3.0	3.5	3.3	3.3
Private Consumption	5.8	6.9	4.9	5.1	5.3	4.1
Government Consumption	7.0	2.1	7.3	4.2	4.4	3.5
Gross Fixed Capital Investment	-3.3	18.7	2.1	4.1	5.0	5.5
Exports, Goods and Services	29.5	9.2	-9.1	-6.0	4.2	4.2
Imports, Goods and Services	15.2	11.9	2.6	2.4	3.1	2.7
Real GDP growth, at constant factor prices	4.2	4.5	3.0	3.5	3.3	3.3
Agriculture	7.2	4.4	4.7	2.2	3.1	2.8
Industry	3.9	1.7	-0.4	2.4	3.9	4.1
Services	4.5	6.7	5.4	4.3	2.9	2.8
Inflation (Consumer Price Index)	-0.6	3.6	0.1	1.3	1.5	2.0
Current Account Balance (% of GDP)	6.4	14.6	5.9	7.3	6.7	5.5
Net Foreign Direct Investment, Inflow (% of GDP)	-4.2	0.0	-12.4	-2.6	-2.7	-2.7
Fiscal Balance (% of GDP)	-10.6	-5.4	-10.4	-7.8	-7.4	-7.7
Revenues (% of GDP)	20.1	22.5	22.1	20.7	19.3	18.0
Debt (% of GDP)	127.0	117.4	123.2	128.4	130.0	130.9
Total GHG emissions (ktCO2e)	1.7	4.9	2.9	3.9	4.3	3.1

Source: World Bank, Macro Poverty Outlook, Fall 2024

Kuwait

Selected Economic Indicators	2021	2022	2023	2024E	2025F	2026F
Real GDP growth, at constant market prices	1.8	6.3	-3.6	-1.0	2.5	2.7
Private Consumption	3.2	1.8	1.1	1.8	2.5	2.4
Government Consumption	2.9	3.9	1.2	1.5	2.4	2.5
Gross Fixed Capital Investment	3.9	2.2	0.6	2.9	2.6	2.6
Exports, Goods and Services	2.2	12.0	-3.6	-2.5	2.9	3.0
Imports, Goods and Services	5.7	6.3	5.7	2.8	2.9	2.6
Real GDP growth, at constant factor prices	1.8	6.3	-3.6	-1.0	2.5	2.7
Agriculture	0.5	1.1	0.1	0.5	1.2	1.2
Industry	2.2	7.9	0.1	0.7	2.9	2.6
Services	1.4	4.2	-8.8	-3.6	2.1	3.0
Inflation (Consumer Price Index)	3.4	4.0	3.6	3.1	2.7	2.5
Current Account Balance (% of GDP)	23.9	32.4	26.2	21.6	20.2	17.8
Net Foreign Direct Investment, Inflow (% of GDP)	-2.5	-2.0	-2.2	-2.3	-2.4	-2.5
Fiscal Balance (% of GDP)	-7.2	12.5	-4.8	-5.8	-8.1	-7.9
Revenues (% of GDP)	44.8	55.0	43.5	47.9	49.1	51.2
Debt (% of GDP)	8.6	2.3	11.5	12.7	16.1	14.3
Total GHG emissions (ktCO2e)	6.4	3.9	0.4	3.4	6.2	6.8

Source: World Bank, Macro Poverty Outlook, Fall 2024

Oman

Selected Economic Indicators	2021	2022	2023	2024E	2025F	2026F
Real GDP growth, at constant market prices	2.6	9.6	1.3	0.7	2.7	3.2
Private Consumption	1.7	9.0	2.8	2.4	3.3	3.1
Government Consumption	5.3	4.0	1.7	2.1	2.3	2.1
Gross Fixed Capital Investment	-15.7	2.5	3.1	3.7	4.2	4.4
Exports, Goods and Services	12.2	16.5	1.1	0.7	3.3	3.0
Imports, Goods and Services	13.3	19.6	3.8	3.3	3.7	3.3
Real GDP growth, at constant factor prices	2.7	9.6	1.7	0.7	2.7	3.2
Agriculture	9.5	-8.5	6.9	-4.5	1.5	1.4
Industry	1.2	9.4	0.1	-2.3	2.1	2.3
Services	4.2	10.8	3.4	4.5	3.5	4.2
Inflation (Consumer Price Index)	1.7	2.5	0.9	1.0	1.4	1.6
Current Account Balance (% of GDP)	-5.5	5.1	1.4	1.7	2.7	2.3
Net Foreign Direct Investment, Inflow (% of GDP)	4.2	3.9	5.6	3.5	3.6	3.8
Fiscal Balance (% of GDP)	-3.2	10.1	6.6	4.9	2.7	3.2
Revenues (% of GDP)	33.3	40.5	32.9	32.1	29.1	29.0
Debt (% of GDP)	61.3	40.1	36.5	35.6	35.0	34.7
Total GHG emissions (ktCO2e)	6.6	6.3	4.7	3.4	4.3	0.5

Source: World Bank, Macro Poverty Outlook, Fall 2024

Qatar

Selected Economic Indicators	2021	2022	2023	2024E	2025F	2026F
Real GDP growth, at constant market prices	1.6	4.2	1.2	2.0	2.7	5.5
Private Consumption	3.4	5.2	1.8	3.5	3.5	4.3
Government Consumption	2.8	4.1	1.2	1.2	1.8	2.3
Gross Fixed Capital Investment	2.3	3.1	1.4	2.2	2.1	2.4
Exports, Goods and Services	2.4	4.7	2.0	2.7	3.6	7.2
Imports, Goods and Services	4.7	6.5	4.1	4.7	3.9	3.8
Real GDP growth, at constant factor prices	1.6	4.2	1.2	2.0	2.7	5.5
Agriculture	0.5	6.7	1.5	2.1	2.4	2.9
Industry	0.7	4.2	1.2	2.0	3.3	7.0
Services	3.5	4.1	1.3	2.0	1.3	2.4
Inflation (Consumer Price Index)	2.3	5.0	3.0	1.3	1.9	1.9
Current Account Balance (% of GDP)	14.6	26.8	17.1	14.5	14.1	15.5
Net Foreign Direct Investment, Inflow (% of GDP)	-0.7	-1.0	-0.1	-0.7	-0.6	-0.5
Fiscal Balance (% of GDP)	0.2	10.4	5.6	4.2	4.6	6.0
Revenues (% of GDP)	29.7	34.7	32.8	27.8	28.5	29.5
Debt (% of GDP)	58.6	42.5	44.2	37.1	35.7	32.2
Total GHG emissions (ktCO2e)	1.4	3.3	0.9	1.9	2.2	4.0

Source: World Bank, Macro Poverty Outlook, Fall 2024

Saudi Arabia

Selected Economic Indicators	2021	2022	2023	2024E	2025F	2026F
Real GDP growth, at constant market prices	5.1	7.5	-0.8	1.1	4.8	4.7
Private Consumption	9.5	4.9	5.3	3.3	3.0	3.1
Government Consumption	0.8	9.3	5.7	0.7	4.9	3.5
Gross Fixed Capital Investment	10.5	21.3	5.3	5.0	5.0	5.0
Exports, Goods and Services	5.6	20.5	-6.5	-5.5	6.5	6.3
Imports, Goods and Services	8.3	12.4	9.9	4.3	5.0	4.0
Real GDP growth, at constant factor prices	4.6	8.2	-1.4	1.1	4.8	4.7
Agriculture	2.2	4.0	4.1	2.0	2.0	2.0
Industry	1.7	12.4	-6.0	-3.4	3.4	3.2
Services	7.6	4.5	2.9	5.1	6.1	6.0
Inflation (Consumer Price Index)	3.1	2.5	2.3	2.1	2.3	2.2
Current Account Balance (% of GDP)	4.8	13.7	3.2	2.5	4.3	6.0
Net Foreign Direct Investment, Inflow (% of GDP)	3.2	2.4	2.1	1.1	1.1	1.1
Fiscal Balance (% of GDP)	-2.2	2.5	-2.0	-2.9	-2.2	-2.8
Revenues (% of GDP)	29.5	30.5	30.3	30.4	30.5	30.4
Debt (% of GDP)	28.6	23.8	26.2	28.7	29.0	31.1
Total GHG emissions (ktCO2e)	3.1	3.6	4.4	-2.1	0.1	3.1

Source: World Bank staff estimates

United Arab Emirates

Selected Economic Indicators	2021	2022	2023	2024E	2025F	2026F
Real GDP growth, at constant market prices	4.4	7.9	3.2	3.3	4.1	4.1
Private Consumption	5.0	9.0	5.1	5.5	3.9	4.0
Government Consumption	1.4	3.5	3.0	3.5	3.0	2.8
Gross Fixed Capital Investment	9.6	6.0	5.9	4.3	3.5	3.3
Exports, Goods and Services	6.8	8.4	3.6	3.5	4.6	4.6
Imports, Goods and Services	8.8	7.4	5.3	4.8	4.1	4.1
Real GDP growth, at constant factor prices	4.4	7.9	3.2	3.3	4.1	4.1
Agriculture	3.8	3.4	3.5	3.5	3.0	3.0
Industry	1.3	8.8	1.2	1.2	4.6	4.5
Services	7.4	7.1	5.1	5.2	3.7	3.8
Inflation (Consumer Price Index)	-0.1	4.8	1.6	2.2	2.1	2.0
Current Account Balance (% of GDP)	11.5	11.7	9.2	7.5	7.4	7.3
Fiscal Balance (% of GDP)	3.5	10.8	5.1	4.9	4.7	4.5
Revenues (% of GDP)	30.2	33.6	30.8	30.8	30.0	29.7
Debt (% of GDP)	35.1	31.4	29.6	27.9	26.5	25.3
Total GHG emissions (ktCO2e)	2.5	3.7	-0.8	0.7	0.6	1.0

Source: World Bank, Macro Poverty Outlook, Fall 2024

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP