



World Bank Group  
Middle East and North Africa

# Climate Action Plan

2016-2020



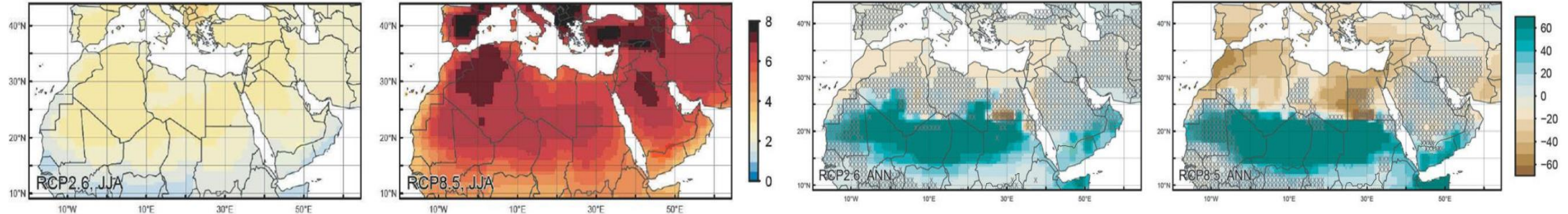
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Middle East & North Africa



# Climate change will hit hard a region already experiencing multiple vulnerabilities

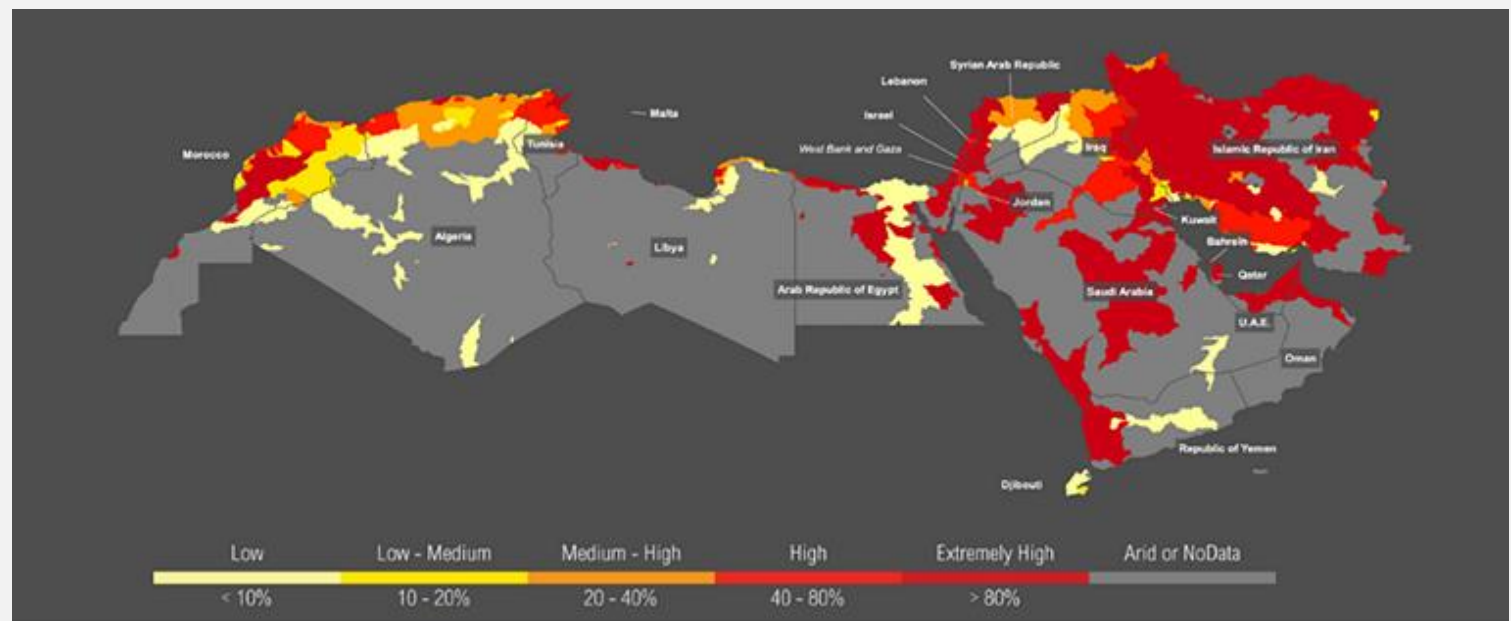
Mean warming will be higher than global average

With longer, deeper and more frequent droughts



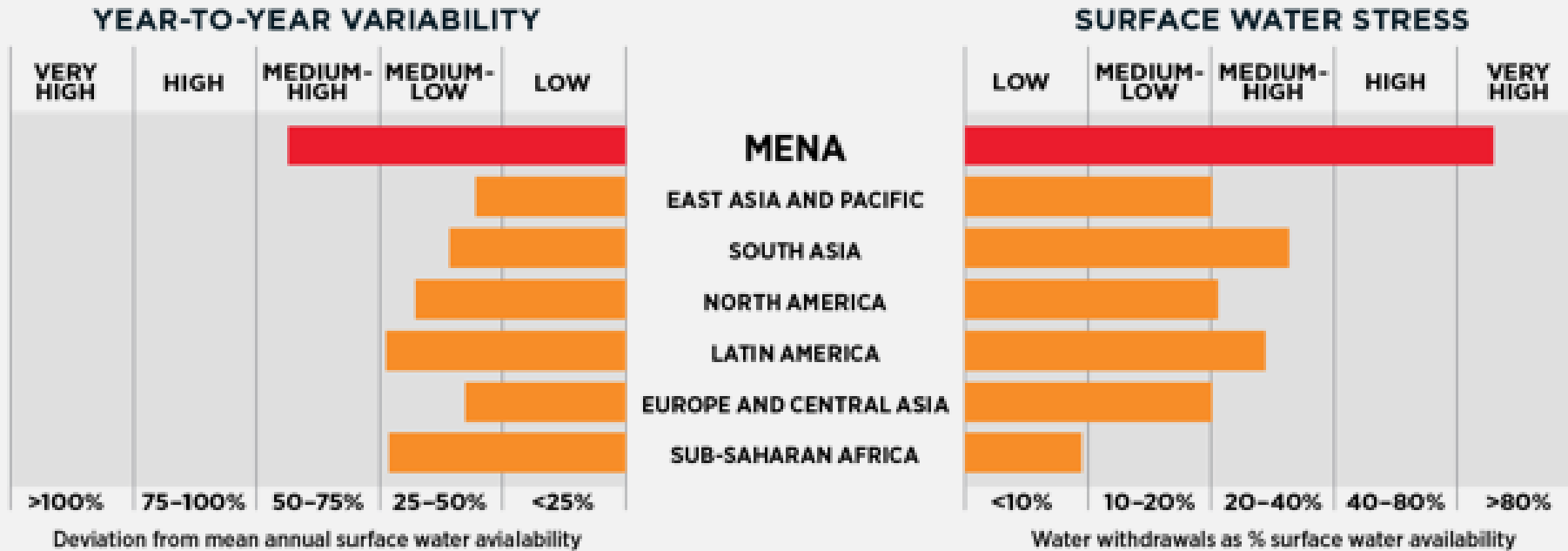
Source: World Bank 2014, Turn Down the Heat: Confronting the New Climate Normal

MENA is already the most water stressed region

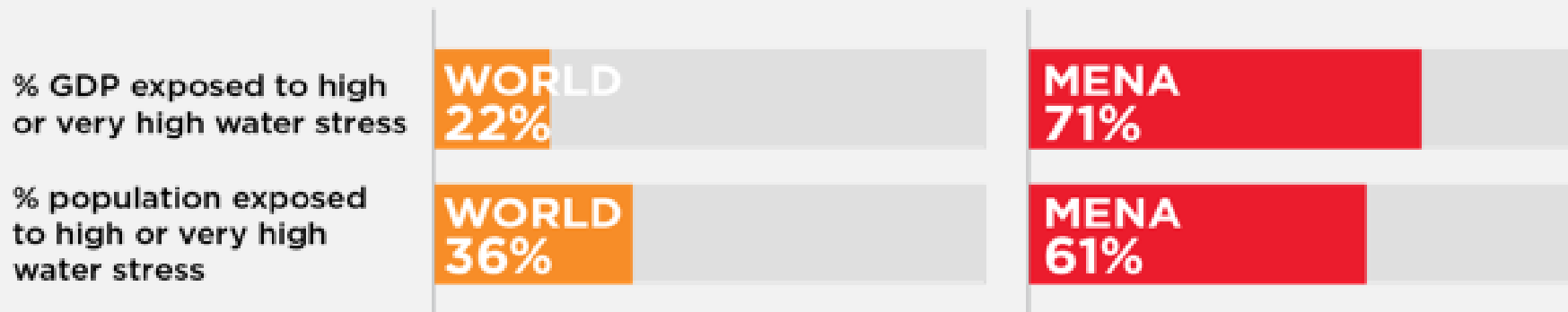


Source: World Resources AQUEDUCT

# Models project that climate change will hit hard an already water stressed region...



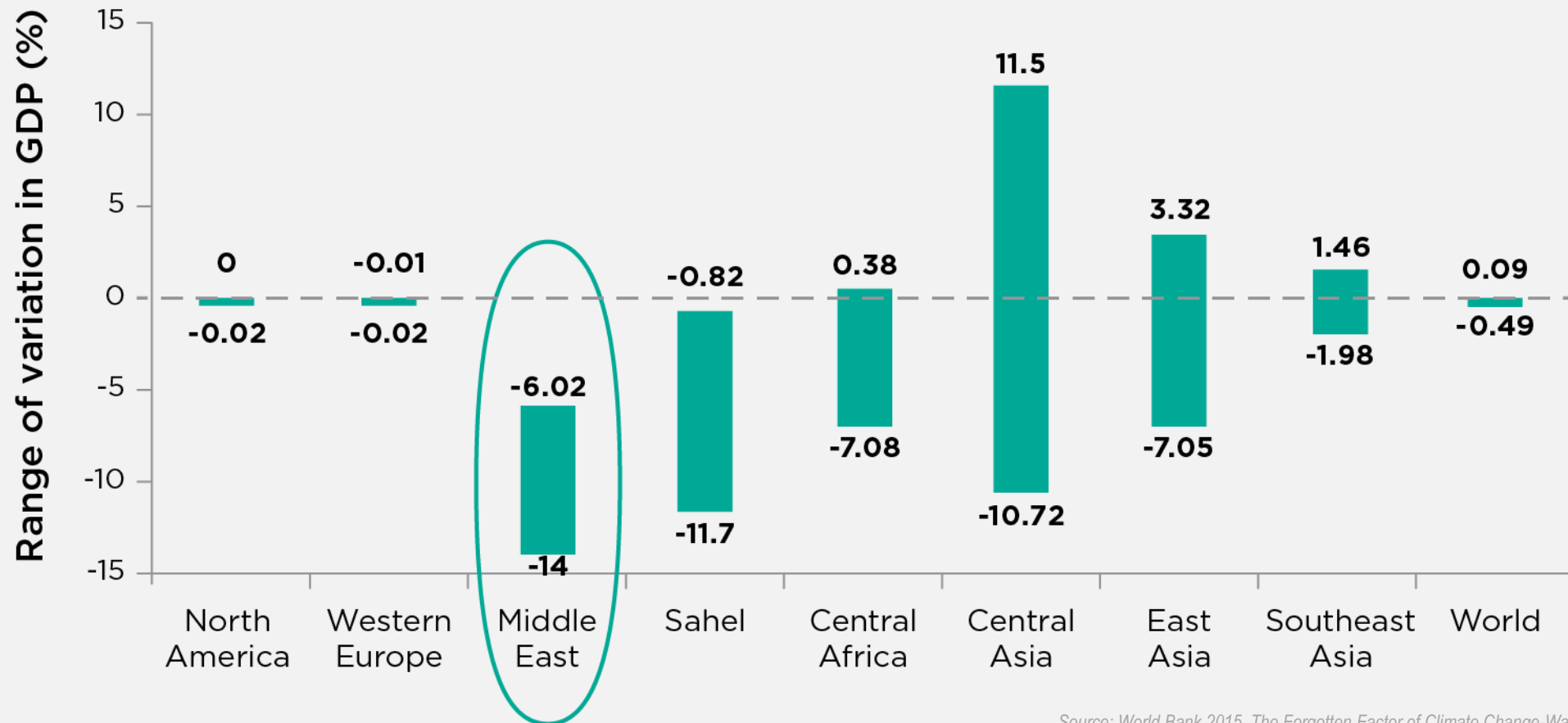
## Translating in high exposure of economies and population



Source:  
 Top: World Resources Institute for MENA and IFPRI/Veolia (2011) for World averages  
 Bottom: World Bank with data from World Resources Institute

...and its growth prospects...

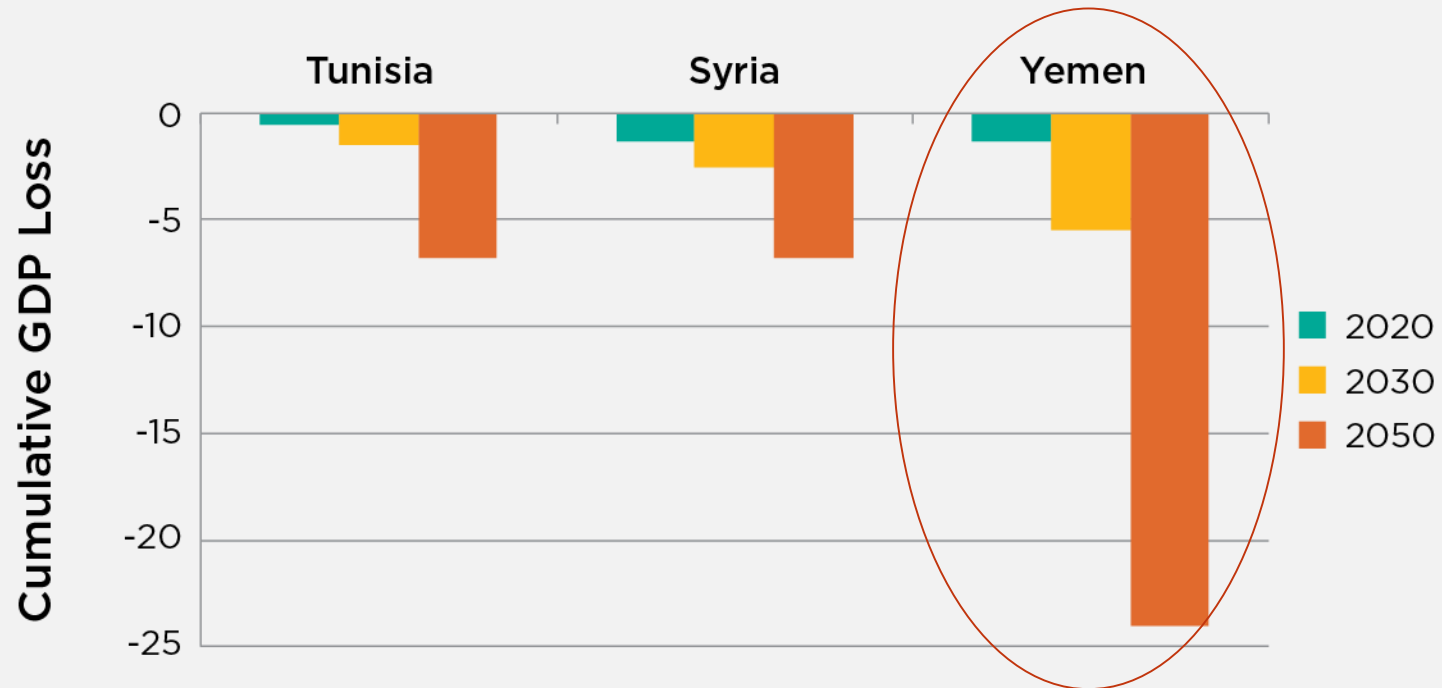
### Disproportionate, negative impact of water scarcity on GDP growth



Source: World Bank 2015, *The Forgotten Factor of Climate Change-Water: Technical Papers*, as cited in World Bank 2016, *High and Dry High and Dry: Climate Change, Water, and the Economy*.

...its poorest countries...

## Cumulative GDP Losses Due to Climate Change, 2012



## ...and its most vulnerable people, particularly in rural areas

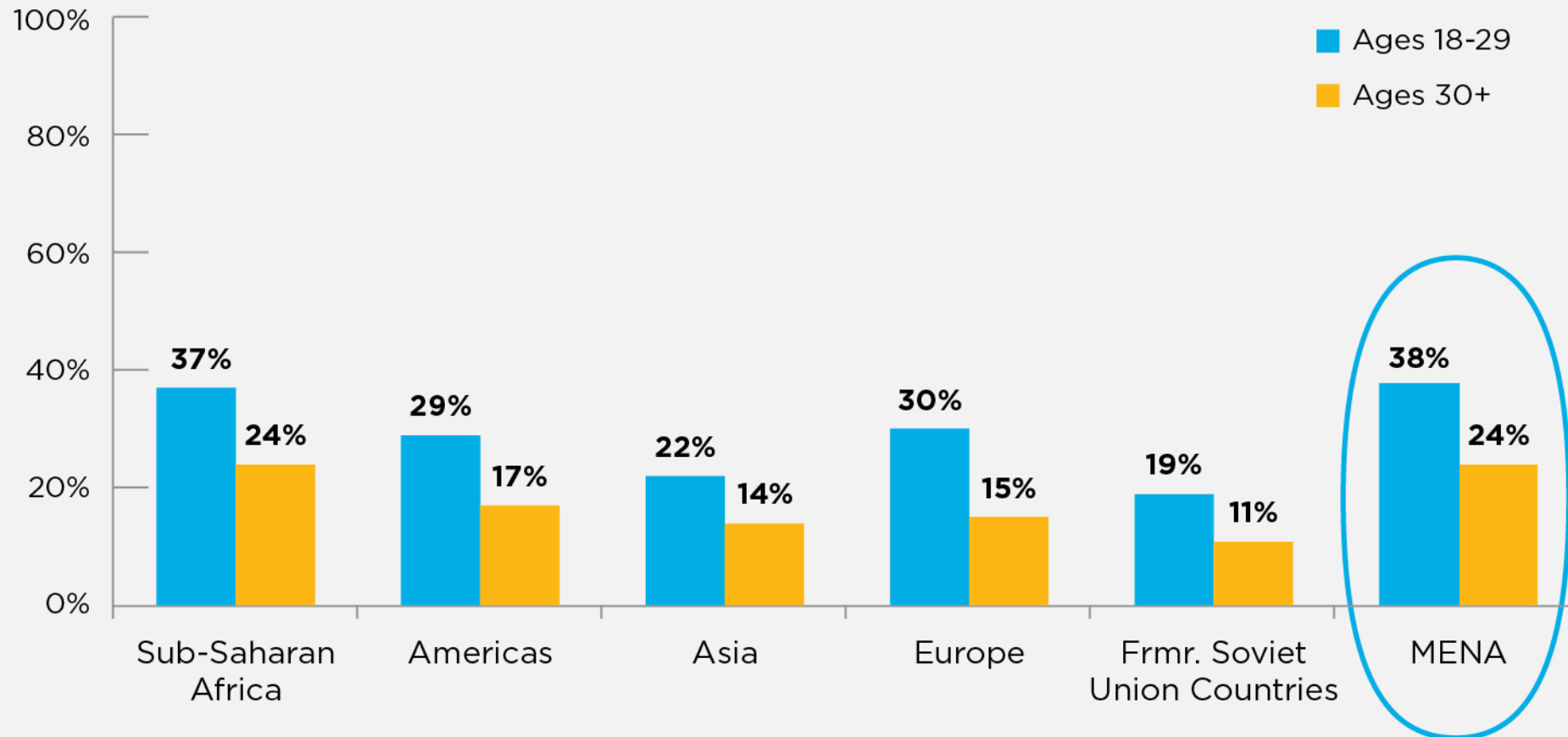
*(Percentage reporting economic impacts from weather shocks)*

<b>Percent</b>	<b>Quintiles</b>					<b>All</b>
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	
<b>Lost income</b>	46	44	43	29	21	37
<b>Lost crops</b>	58	62	62	49	42	55
<b>Lost livestock or</b>						
<b>Cattle</b>	24	25	30	23	15	23
<b>Less fish caught</b>	10	10	9	10	5	9

*Note:* Households from five countries in the region are asked to report impacts from weather shocks in the last 5 years.

# MENA's high levels of rural and youth underemployment will add to the challenge...

**Percentage of 18- to 29-year-olds and those 30 and older from each region who are underemployed**  
(currently working less than 30 hours per week and want a full-time job)



Source: Silatech and Gallup 2013, <http://silatech.com/docs/default-source/publications-documents/silatech-index-brief-underemployment-in-the-mena-region.pdf?sfvrsn=6>, Accessed October 2016



...fueling further rural to urban migration



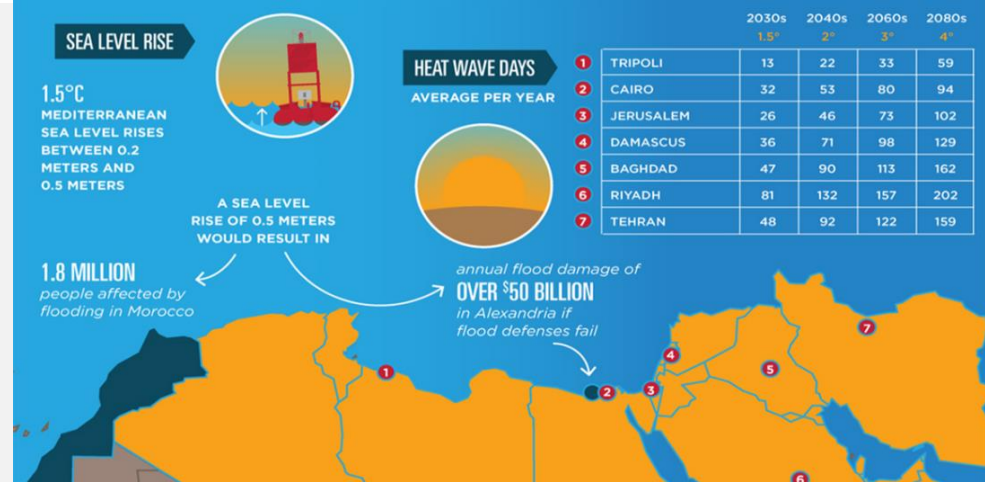


MENA's population is highly urbanized...



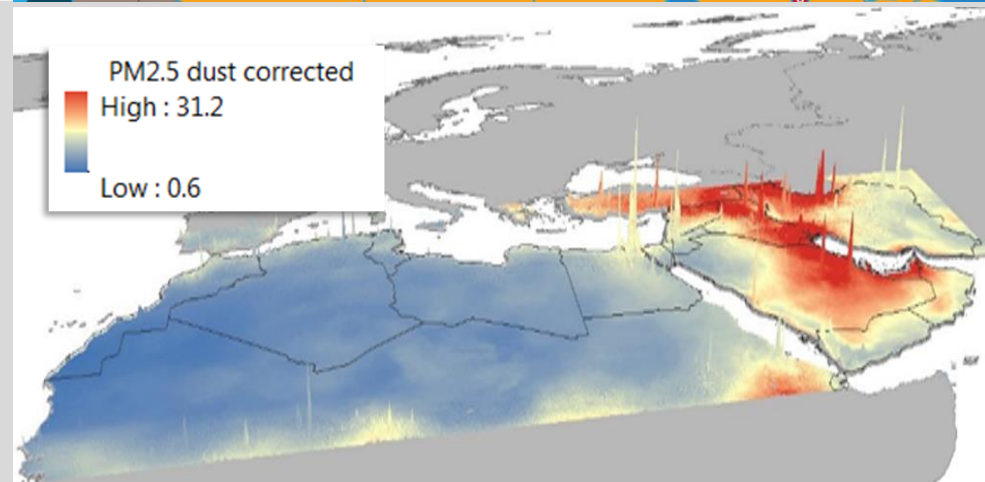
Source: DMSP-OLS satellite program, NOAA, 2012.

...and is imperiled by sea level rise...



Source: Infographic developed for the World Bank 2014, Turn Down the Heat: Confronting the New Climate Normal

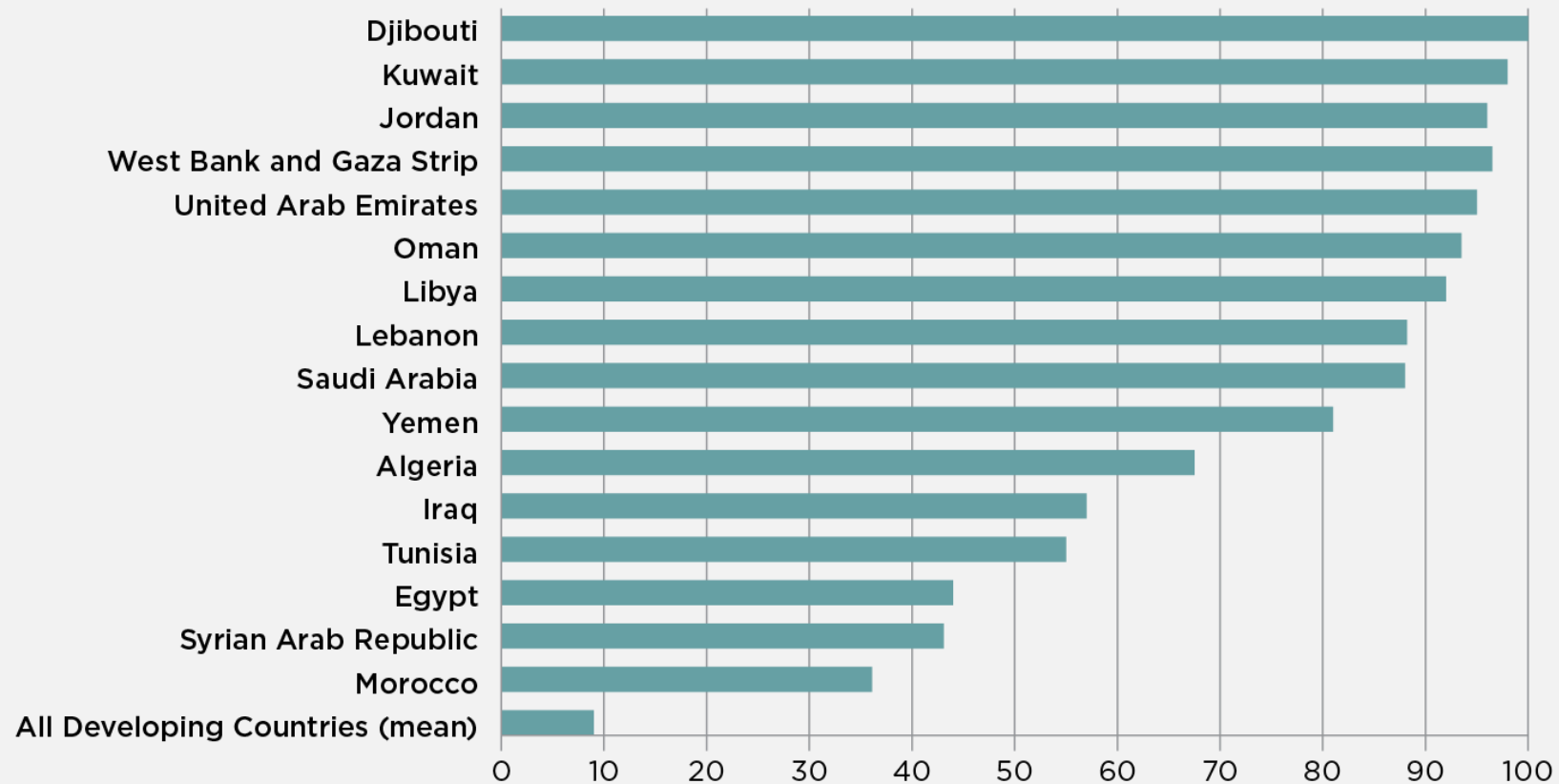
...with high air pollution in these increasingly congested urban areas



Source: van Donkelaar, et al. 2016. Environmental Science & Technology

# MENA is the most food import dependent region...

## Cereal Imports Dependency (%)

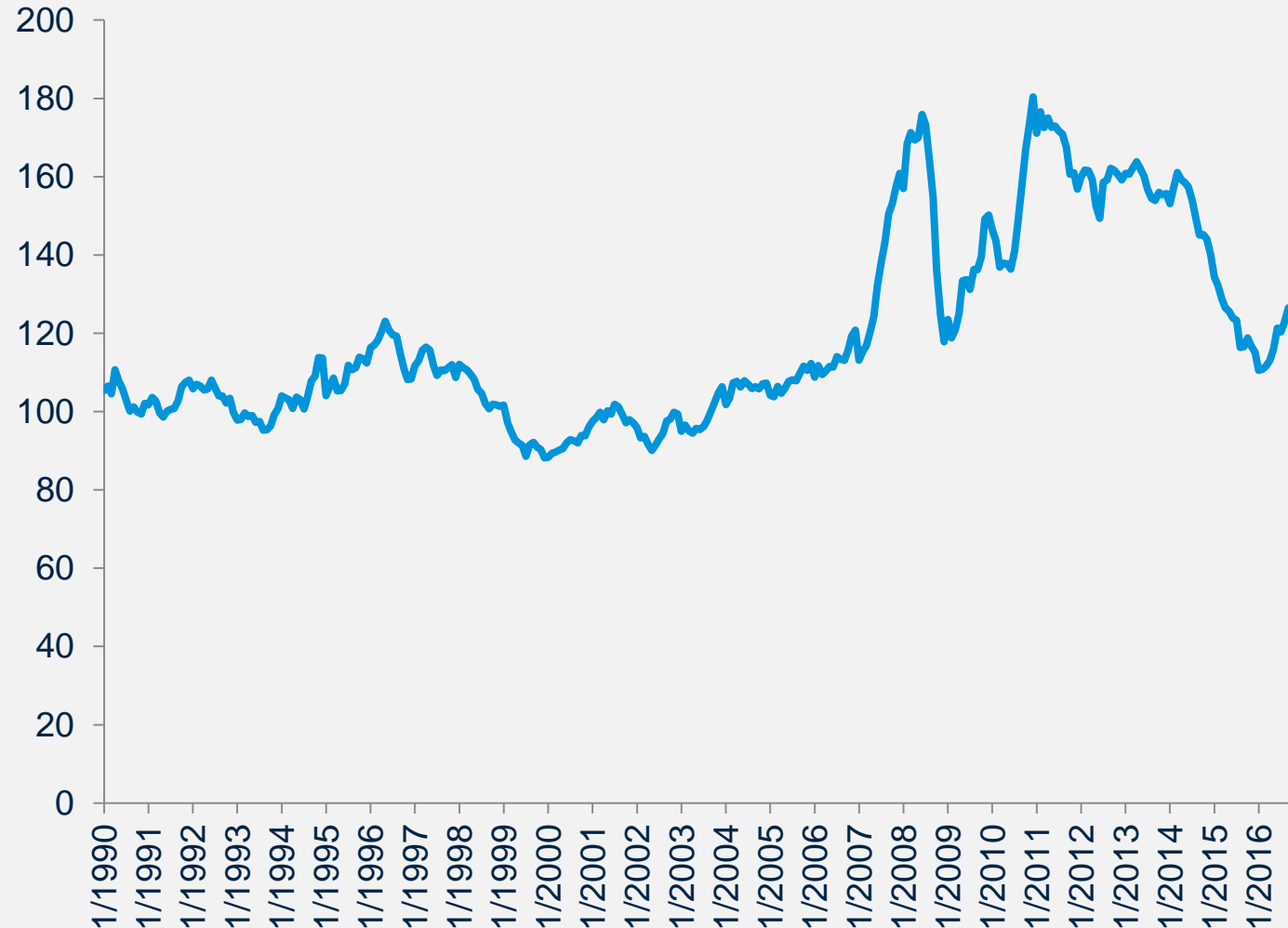


# ...already exposed to global price shocks

Climate change will contribute to higher and more unstable global food prices...

...making it necessary to develop climate smart food security policies, such as responsive safety nets, resilient agriculture, higher water productivity, and improved logistics to secure the access to, and income to buy food

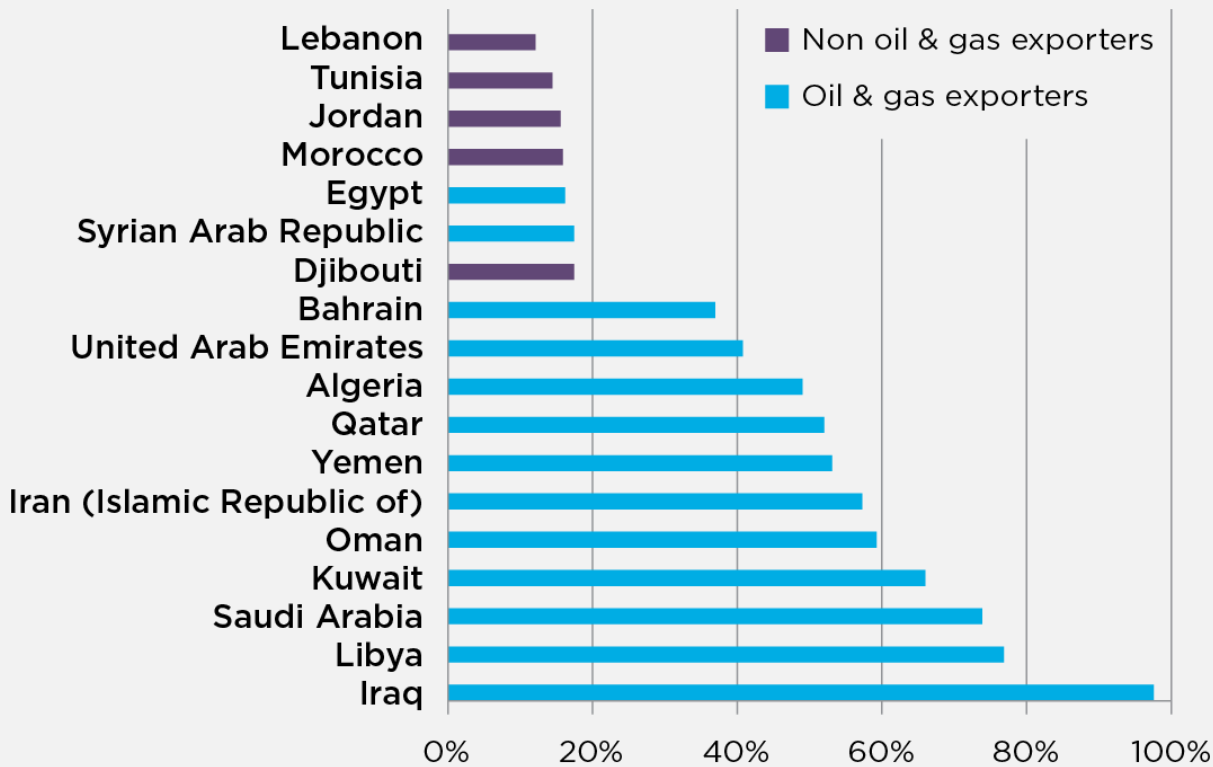
### Monthly Real Food Price Index





# Oil & gas dependent economies face a new class of climate policy risks

## Value of Oil and Gas as Percent of Total Exports



Herfnidahl Index.  
Source: World Bank, MENA Chief Economist Office 2016

A

Overreliance on energy exports has exposed oil and gas export dependent economies to external shocks

B

Energy subsidies have further stymied economic diversification

C

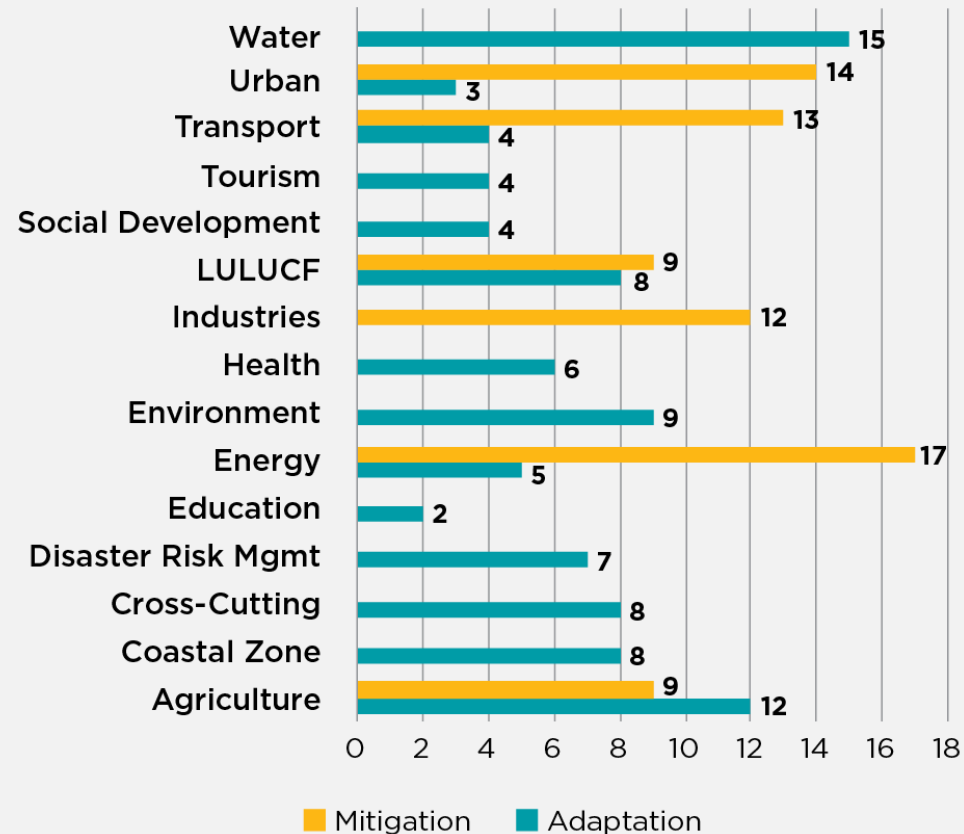
Low carbon transition by the world's largest energy importers will create additional risks in the form of reduced demand for oil & gas, and possible border adjustment policies.

D

To hedge effectively against these new class of risks these economies need to move beyond carbon intensive product diversification to asset based diversification

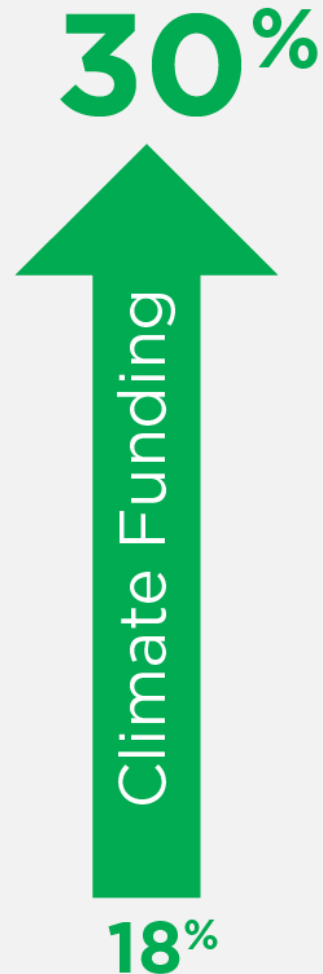
# MENA countries are aware, committed to taking action, and already acting

## Number of Countries with INDCs Submitted by Sector



- All MENA countries (except for Syria) have submitted INDCs
- As of November 8, 2016, 8 MENA countries had ratified the Paris Agreement (Algeria, Jordan, Malta, Morocco, Palestine, Saudi Arabia, Tunisia, and UAE)
- Good practices are already taking root across the region

# Commitment #1: By 2020, 30% of WBG finance to MENA will go towards climate



WBG to capitalize on its comparative advantages to strengthen the physical, social, and economic resilience of MENA countries through its:

- Policy & strategic advice
- Convening power
- Mobilization of climate finance
  - WBG balance sheet
  - Partnerships
  - Leverage of global climate funds



# Commitment #1: By 2020, 30% of WBG finance to MENA will go towards climate



WBG support to be a country-driven process, as expressed in countries' NDCs, through:

- The NDC Partnership: advisory services to support the design and implementation of NDCs and integration of NDCs in national development policies
- Financial support for NDC implementation

# Commitment #1: By 2020, 30% of WBG finance to MENA will go towards climate

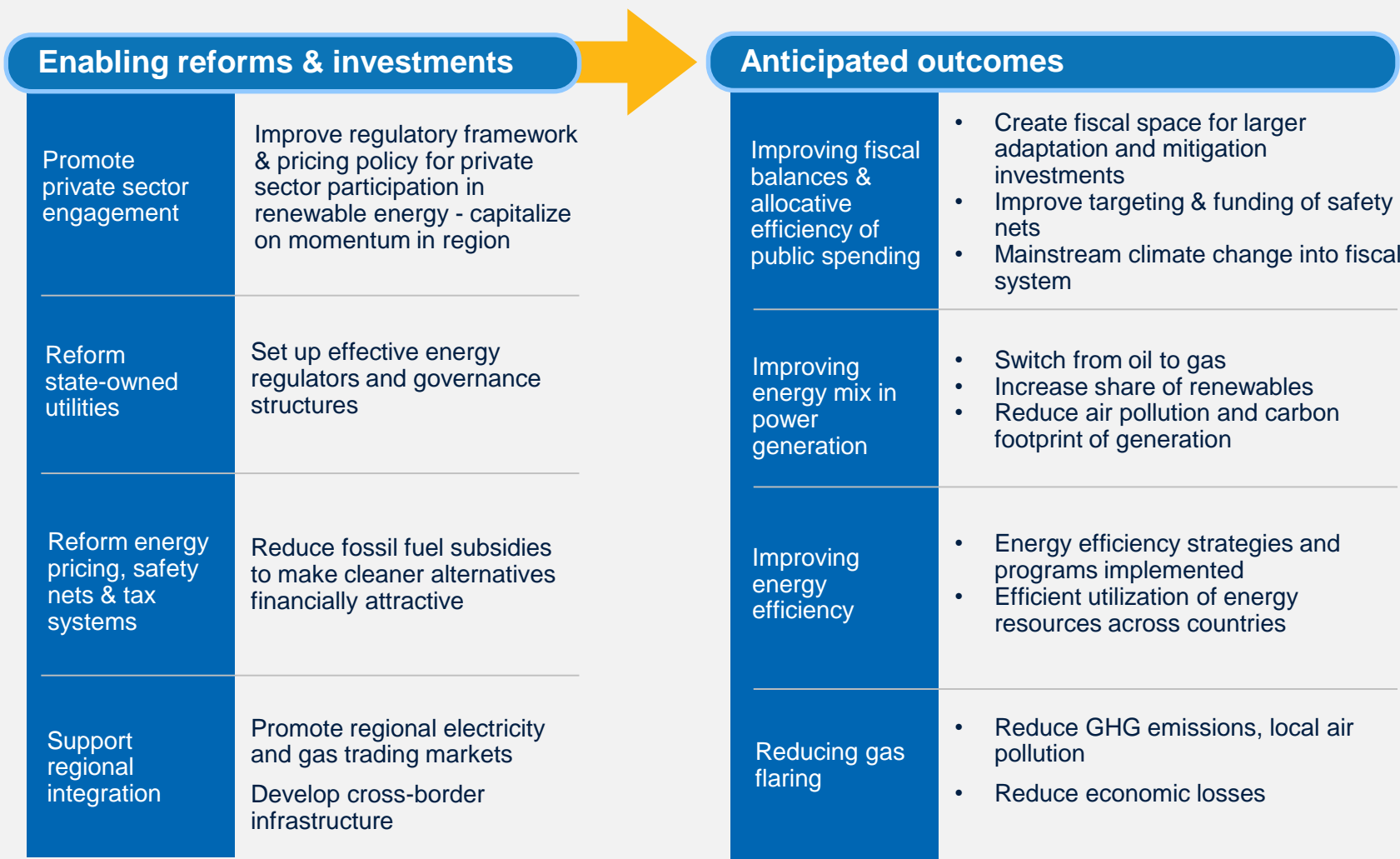
Based on our own analysis, and country demands emerging from INDCs and development priorities, the WBG will focus its advisory and financial support in three priority areas of engagement:



1. Foster water & food security
2. Support sustainable, resilient & connected cities
3. Encourage the low carbon transition

In all three of these priority areas, protecting the most vulnerable will remain a key theme

# The WBG will continue to support the energy transition in the MENA region

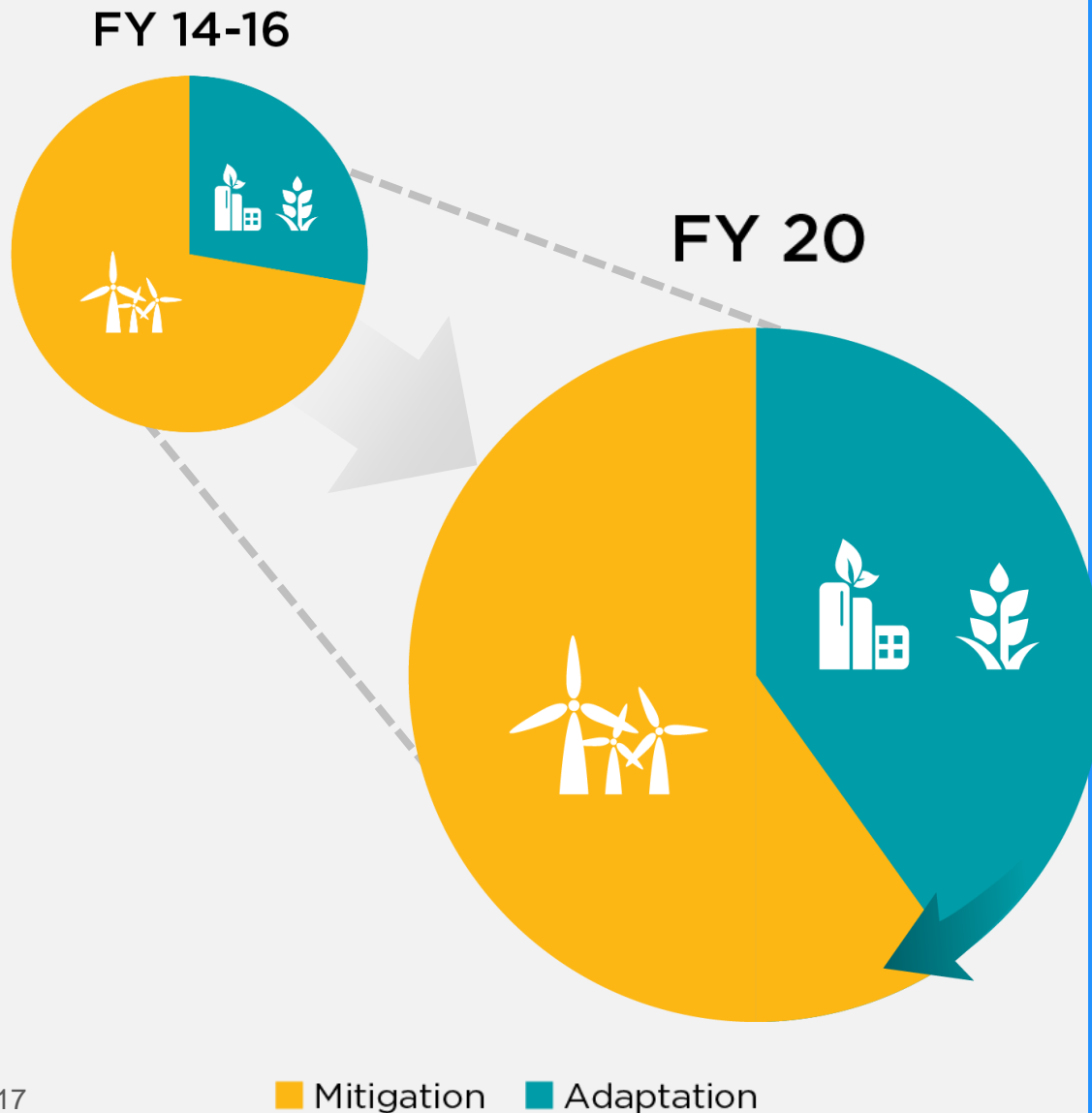


## Examples

- Egypt, critical reforms in the nexus of energy, macro-fiscal management, and social protection through improvements in the energy mix and improved energy efficiency through subsidy reforms and private sector engagement
- Saudi Arabia, power sector sustainability to help achieve the country's 2030 vision
- Morocco, renewable energy as part of Morocco's Solar Plan, which is expected to be developed under an IPP scheme with hybrid CSP-PV technology and an installed capacity of up to 900 MW, while contributing to its NDC commitment
- Jordan, critical reforms in energy & water to improve the energy mix and energy efficiency through subsidy reforms, utility reform, and private sector engagement
- Iraq, critical reforms in energy & macro fiscal-management to improve in the energy mix and energy efficiency through subsidy reforms and reduced gas flaring



# Commitment #2: Significantly increase the share of adaptation financing



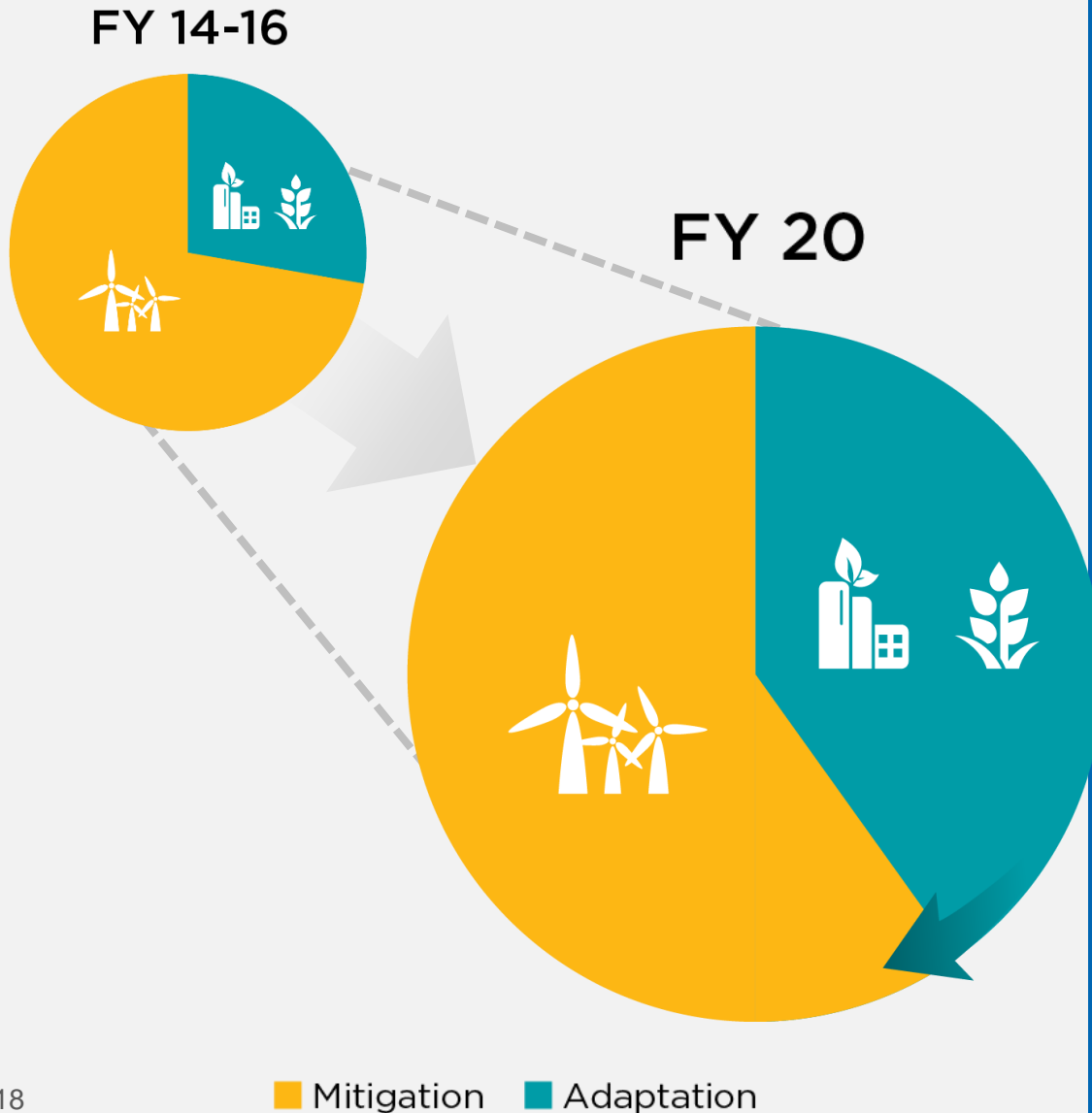
## Foster Water and Food Security

- Promote efficiency and improve water allocation across sectors
- Increase availability of water (de-salination; re-use; de-pollution)
- Reduce over-exploitation of groundwater
- Support integrated Urban Water Management
- Support resilient and inclusive value chains and infrastructure
- Support technological innovation and climate smart agriculture, such as the AAA initiative

## Examples from MENA

- Morocco and Egypt, strengthening of institutions for sustainable, conjunctive management of surface and groundwater resources for irrigation modernization
- Lebanon, Bisri dam construction to help meet Beirut's water needs in a context of declining snow pack and groundwater depletion
- Jordan, Tunisia, Saudi Arabia, mobilizing private financing for desalination facilities
- Tunisia and Palestine, wastewater reuse
- Palestine, Lebanon, Iraq and Yemen, rebuilding critical services and introducing innovative approaches to urban water management that combine infrastructure investment, utility reforms, and water resources management
- Morocco and Tunisia, agricultural sector dialogues to tackle the links between agriculture & poverty, jobs, gender, and climate change
- Morocco, road vulnerability/risk assessment methodology

# Commitment #2: Significantly increase the share of adaptation financing



## Develop sustainable and connected cities

- Mainstream DRM across sector investments
- Climate proof urban planning & municipal investments
- Invest in resilient and low carbon transport infrastructure
- Reduce pollution (air & water)

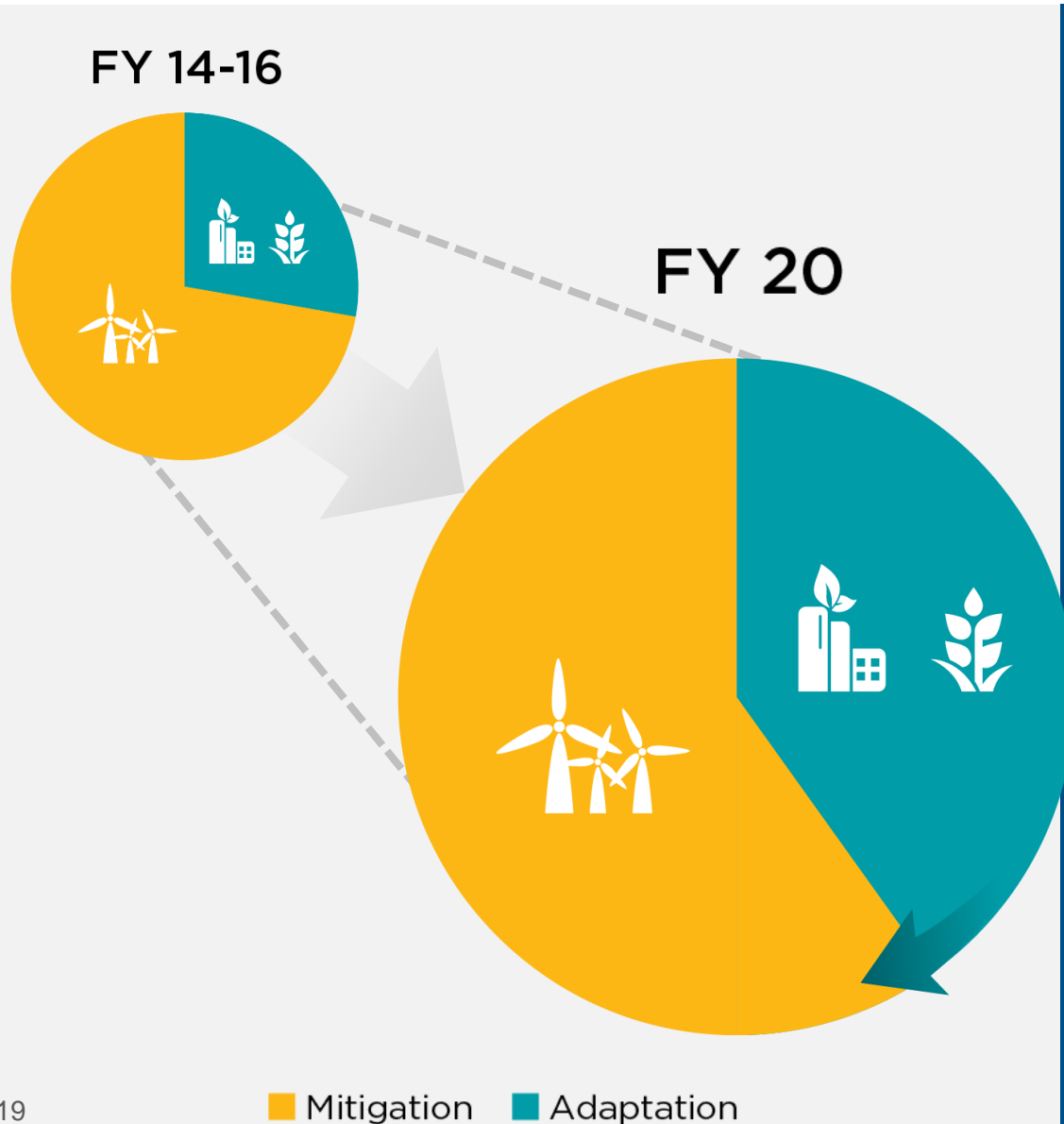
## Examples from MENA

- West Bank and Gaza, integrated cities and urban development
- Morocco, integrated urban planning and management
- Saudi Arabia, urban spatial development
- Jordan, emergency services and social resilience
- Morocco, integrated disaster risk management and resilience Program-for-Results to improve the institutional framework to finance disaster risk reduction activities and strengthen resilience
- Lebanon, comprehensive urban resilience master plan for the City of Beirut
- Morocco, urban transport Program-for-Results
- Egypt, taxi scrappage and recycling program for Cairo
- Morocco Egypt, Saudi Arabia, and Bahrain, urban energy efficiency programs

## Good practices from other regions

- China, Program-for-Results to reduce air pollutants and carbon emissions through energy efficiency and clean in energy sector, and other key sectors (industry, agriculture) in Beijing-Tianjin-Hebei regions

# Commitment #2: Significantly increase the share of adaptation financing



## Protect the most vulnerable

- Improve resilience of eco-systems and livelihoods in lagging or most vulnerable regions
- Invest in building climate-sensitive and adaptive social safety nets, including contingency and financing plans to respond to shocks
- Improve coastal zone management & landscape management

## Examples from MENA

- Tunisia, improve job and economic opportunities and resilience to climate change in the lagging North West and Center West regions
- Tunisia and Jordan, pilot GEF-funded projects to improve climate resilience and economic opportunities in oasis ecosystems
- Morocco, pilot GEF-funded project that implements integrated coastal zone management plans and practices in the
- Egypt, support the establishment of a participatory coastal zone management plan in the Governorate of Alexandria, and pilot innovative, constructed wetland water sanitation technology in Lake Mariout

## Good practices from other regions

- China, control desertification and degradation and protect key farmland and infrastructure in Ningxia Hui autonomous region
- Sahelian countries, green wall initiative combining land restoration, livelihood programs and flexible safety net programs
- India, integrated coastal zone management



# Commitment #3: Support policy reform

Policy support operations: remove distortions and reform regulations, open up fiscal space, and catalyze private investments

## MOROCCO

Morocco Inclusive Green Growth DPL: US\$ 600 Million support to a package of adaptation and mitigation policy reforms

Morocco Integrated Disaster Risk and Resilience PforR: US\$ 200 million support for policy reform on disaster risk management and insurance for 5.85 million people

Investment in Identification & Targeting System for Social Protection

## ALGERIA

Technical and Advisory support on moving towards low carbon growth and economic diversification in oil dependent economies such as Algeria

## ARAB REP. OF EGYPT

Energy and social protection reforms supported by US\$ 1,000 Million DPL reducing emissions by 11-21% through fuel switching, energy efficiency and renewable energy

Egypt Feed in Tariff Program: World Bank and IFC technical assistance and investments allowing for a significant share of the 2,000 MW of projects to reach financial closure

## JORDAN

Water and energy reforms, supported by US\$ 250 Million DPL will save approx. 23.5 Million tCO<sub>2</sub>eq through fuel switching and renewables, facilitating subsidy and social protection reforms and optimizing water allocation

Building a Unified Registry and expanding social safety nets

## IRAQ

Energy reforms supported by US\$ 1,200 Million DPL (2015) will reduce emissions by 5% (9.3 Million tCO<sub>2</sub>eq p.a.) through fuel switching and reduced gas flaring



# Commitment #3: Support policy reform

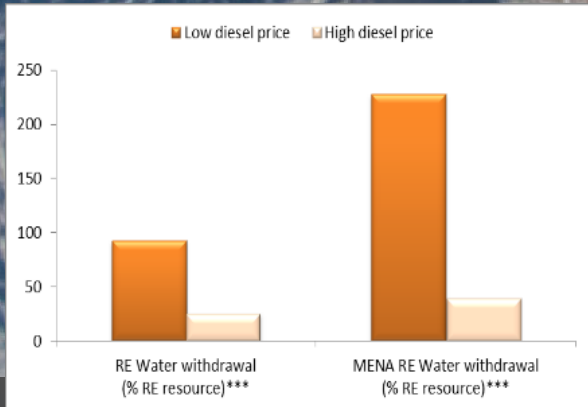
## Technical Cooperation in GCC countries through RAS to support subsidy reforms, PPPs, and sectoral strategies

### GCC countries have engaged in unprecedented reforms

Pioneering subsidy reforms launched by UAE in July 2015, followed by reforms in fuel, electricity and water reforms in Saudi Arabia, Bahrain, Oman and Qatar

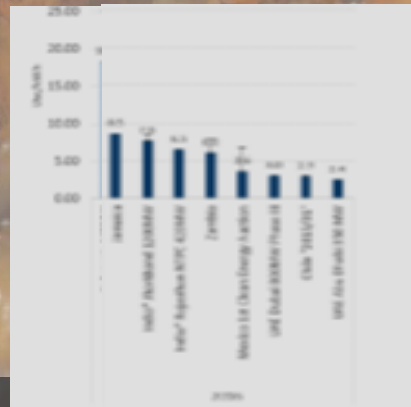
Bahrain and Oman have recently signed the zero routine gas flaring reduction global initiatives launched the Bank

### Fuel subsidy reforms expected to reduce aquifer depletion



Source: Commander, Nicoloski and Vagliasindi (2015)

### New price records for renewable energy were broken by the UAE globally



Source: World Bank elaboration

### REGIONAL

Support to GEPAP a regional initiative consisting of national activities in the GCC member states and a regional phase in partnership with the GCC Secretariat General with the goal of promoting long-term sustainable development for the region and its waterways.

Support to the development of the GCC Railway Project which will link all the GCC Member States with a regional, integrated and interoperable railway to cater for both freight and passenger transport

Pilot engagements are proposed for the Regional Energy Trade Initiative and Regional Water Security Initiatives.

### SAUDI ARABIA

Support to the Saudi Energy Efficiency Program on innovative financing framework for a Super ESCO

Cooperation to Saudi Arabia contributed to the Kingdom's decision to stop its local wheat production saving inefficient water use and consumption for low value crops.

Support to several municipalities (Riyadh, Makkah, Jeddah, Madinah) in the area of urban development and climate change resilience at the city level,

### BAHRAIN

Support to Bahrain's National energy efficiency strategy with an overall target of 20% reduction in electricity consumption by 2030.

### OMAN

Support to sustainable fisheries through technical expertise, bringing international good practices and engaging stakeholders on building a shared vision to boost the sustainable livelihoods and prosperity of fishing communities

# **Commitment #4:** Crowd in private finance by leveraging the whole WBG, including IFC and MIGA



## **Pipeline: Cornerstone Green Bond Program (IFC and GCF)**

- Invest in green bonds to be issued by financial institutions from 20 emerging markets. Goal is to catalyze private sector capital flows to support climate smart investments and transition to green economies in more than 20 countries



## **Green Growth Infrastructure Facility (WBG & the Ithmar Fund)**

- Proposed facility to Support PPPs across the African continent in clean energy and access to energy, low-carbon transportation and logistics, and water, wastewater and solid waste management.



## **Private capital mobilization in adaptation & mitigation (IFC, MIGA, IBRD/IDA)**

# Commitment #4: Crowd in private finance by leveraging the whole WBG, including IFC and MIGA

## Examples of WBG crowding in private investments:



- **Policy reforms that catalyze investments:** Feed in Tariff (Egypt DPLs), Jordan and Iraq DPLs that catalyze private investment in RE & EE
- **44% of IFC's FY16 MENA investments** in climate related projects
- **Strong investments & mobilization across RE & EE projects** (~1,200MW) in Jordan with lower costs (first private wind farm; first privately financed grid connected solar PV; pipeline ACWA Zarqa IFC/MIGA combined cycle gas-fired thermal power plant) & Iraq (MGES CCGT project)
- **Sustainable Energy Finance (SEF) through financial intermediaries** in Lebanon & Egypt (supported >\$300M SEF lines); pipeline Morocco Green Bond to be first local bank green bond to be issued in hard currency in MENA
- **Climate friendly PPPs:** First solid waste management project in West Bank & Gaza (IBRD, IFC)
- **De-risking instruments** for Adaptation



# Commitment #5: Enable Collective Action

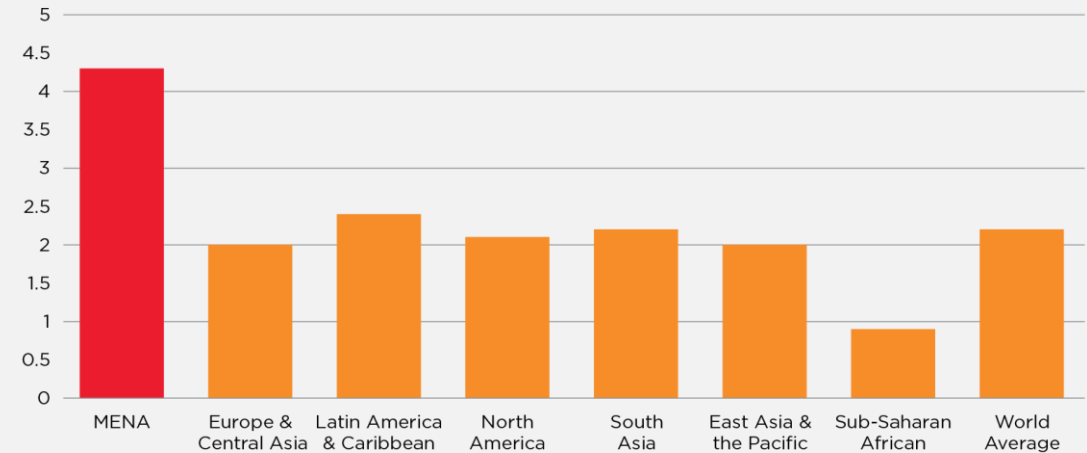
## Regional Water Security Initiative

- Build stakeholder consensus for action on water security in MENA
- Modernize of urban and agricultural water supply systems
- Share technology and policy innovations
- Support water security benchmarking and investment programs
- Partners: League of Arab States and FAO

## Pan-Arab Regional Energy Trade Platform

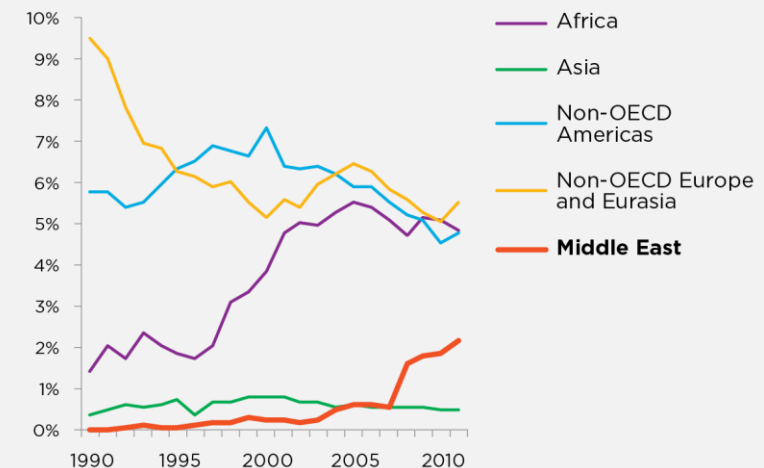
- Facilitate better integration of renewable energy
- Enable higher supply-side energy efficiency
- Improve gas utilization
- Establish legal and regulatory frameworks
- Support investment schemes for energy trade
- Partner: League of Arab States

## Most Water Stressed Region in the World



Source: World Bank, with data from World Resources Institute

## Only 2% of produced electricity is traded in the region



# Climate action is key to MENA's economic prospects & the WBG's strategy in MENA



Economic and Social Inclusion for  
Peace and Stability in MENA

Renewing the social contract

Regional cooperation

Resilience to IDP/refugee shocks

Recovery and reconstruction

**Thank you**



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