

Economic and Social Commission for Western Asia

Implementation of activities under the ESCWA programme of work and of recommendations made by the Committee on Water Resources at its 13th session

Committee on Water Resources
14th Session
Beirut, 29-30 September 2021



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Contents

- Implementation of activities under the ESCWA programme of work since June 2019
- Implementation of Recommendations made by the Committee on Water Resources at its 13th Session (Beirut, 27-28 June 2019)



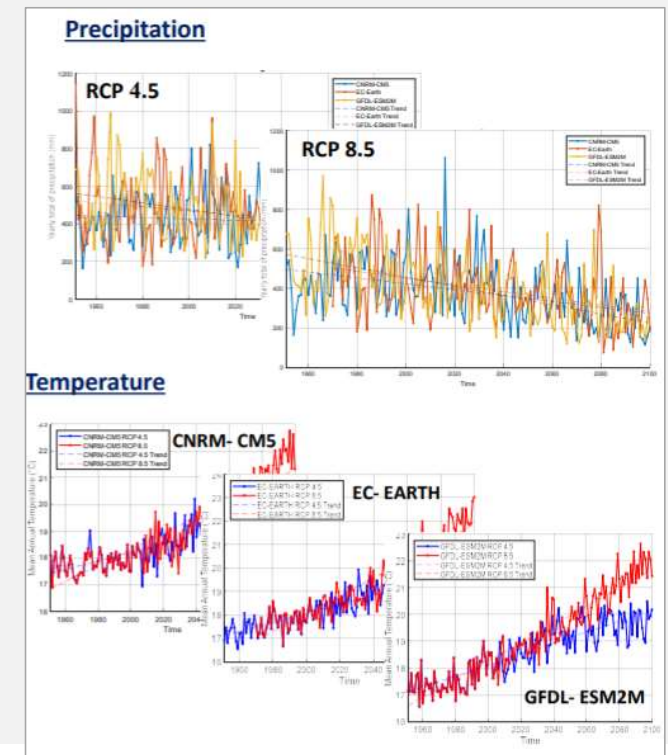
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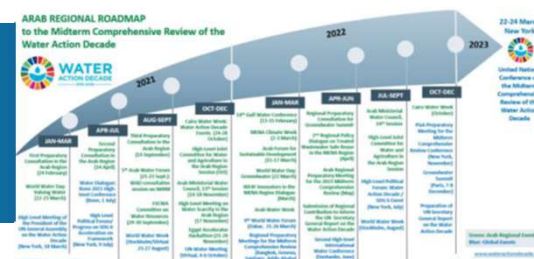
Implementation of activities under the ESCWA programme of work

Groundwater analysis towards enhanced water security in the Arab region

- **Mashreq Waters Knowledge Series:** Workshop 3 on Disruptive Technologies for Improved Groundwater Management (Virtual, June 2020)
- **Draft Abstraction Guidelines:** Expert Group Meeting (March 2021) & Working Paper
- **Case Study:** Climate change on the Beni-Amir Aquifer (Tadla Complex, Morocco)



Accelerating work toward the achievement of the SDG 6 – and water-related goals



- **Regional Reporting** on SDG 6.5.1 & SDG 6.5.2 in 2019 and 2021 (in progress)
- **Workshop/Expert Group Meeting** to support monitoring/reporting and advancement on transboundary water cooperation (SDG 6.5.2)
- **Youth Engagement** through WWD Competitions for Lebanese Youth, Young Water Professional Forums with ICID during Cairo Water Week since 2018
- **Water Action Decade (2018-2028)** – regional & global preparations for midterm comprehensive review
- **World Urban Forum** – on scarcity with GWOPA



Integrated Water Resources Management (IWRM) to achieve water security across the Arab region

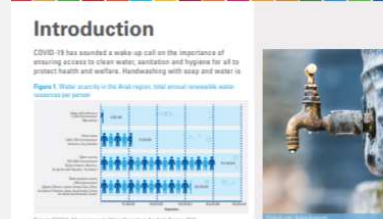
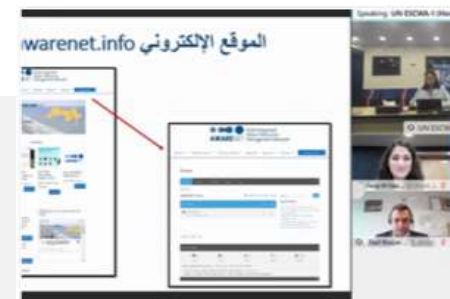


- **Mashreq Waters Knowledge Series:**

- Workshop 1 on Accessing Disruptive Technologies for Improved Water Resources Management under Climate Change (Beirut, January 2020)
- Workshop 2 on Economic Implications of Climate Change and Water Scarcity in the Mashreq Region (Virtual, December 2020)

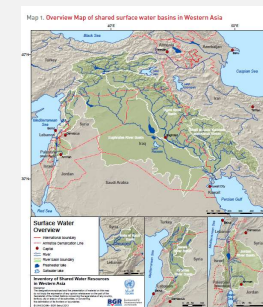
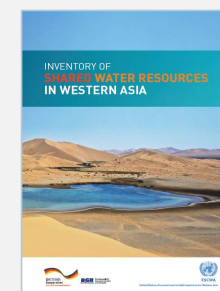
- **COVID-19 brief on the Water-Scarce Arab Region**

- **AWARENET Training Series on Groundwater Resource Management from IWRM perspective (11 modules, in Arabic) [AWARENET Registration @ https://awarenet.info](https://awarenet.info)**



Support to member States with the management of transboundary water resources – and transboundary risks due to water and climate security risks

- Arab Ministerial Water Council **guidance principles** for shared water cooperation
 - **Workshop** on enhancing transboundary cooperation (March 2020)
 - **Training on negotiation skills** to better manage transboundary water (Virtual, 10 December 2020 – 11 January 2021) – 8 interactive modules, in Arabic
- Linked to SDG 6.5.2 reporting and Mashreq Waters Knowledge Series
- Linked to work on climate security risk & ESCWA Regional Risk Assessment Framework (ViEWS-ESCWA model)

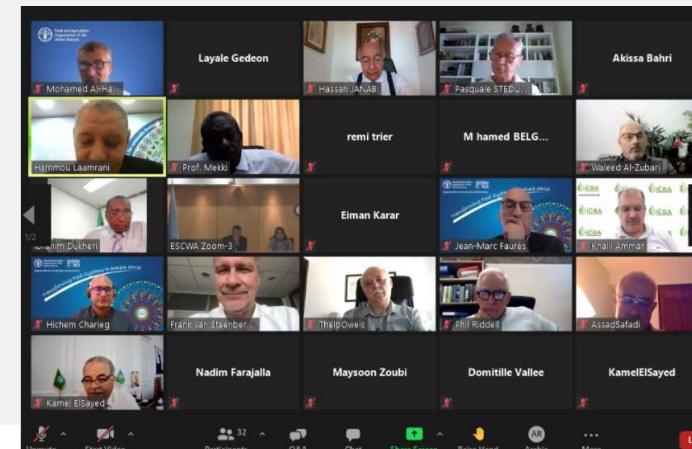


Advancing a Water-Energy-Food Nexus Approach at the Arab regional level: Policy



Joint Water-Agriculture Ministerial Council for Arab States and its technical High-level Joint Committee on Water-Agriculture

- April 2019 - Cairo Declaration issued at first ministerial meeting
 - Oct 2019 – 1st meeting of the joint committee
 - Oct 2020 – 2nd meeting of joint committee/Action Plan drafted
 - Jan 2021 – consultations on action plan (2021-2025)
 - Oct 2021 – meetings on sidelines of CWW
- Preparation of Voluntary Guidelines for Improved Water Allocation for Agriculture & Expert Group Meetings to consult on draft regional guidelines



Advancing a Water-Energy-Food Nexus Approach at the Arab regional level: Projects



REGEND: Regional Initiative to Promote Small-Scale Renewable Energy Applications in Rural Areas of the Arab Region (2018-2021)

- Installing RE and training on green technologies for small enterprises in rural areas, including for water distribution and agro-food industries, with particular focus on women
- Jordan, Lebanon and Tunisia



- Advancing Water and Food Security in a Climate Change Context (2020-2021)
- Promoting Food and Water Security through Cooperation and Capacity Development in the Arab Region (Dec 2014-Dec 2019)

Support Arab Water Security Strategy for Sustainable Development (2010-2030) and Arab Agricultural Development Strategy for the Decades (2005-2025)

findings of assessment reports

Rainfed wheat yield in Morocco is projected to decrease between 9 and 26 %	Irrigated tomato yield in Iraq is projected to decrease about 7 %	Rainfed Sorghum yield in Sudan is projected to decrease between 7 and 11 %
Irrigated wheat yield in Yemen to decrease between 4 and 7 % and rainfed Sorghum yield to decrease between 8 and 16 %	Irrigated potato in Palestine yield is projected to decrease about 3 %	Yield of supplementary irrigated wheat is projected to increase 4- 17% in Lebanon
Rainfed wheat yield in Jordan to increase by 34 to 48% due to the shift in rainfall towards the mid-wheat growing season	Rainfed wheat in Tunisia to decrease by 7.0% while irrigated wheat yield will not vary much	In Egypt important amounts of water saved (up to 40%) through deficit irrigation for wheat and Maize, minor changes in crop productivity

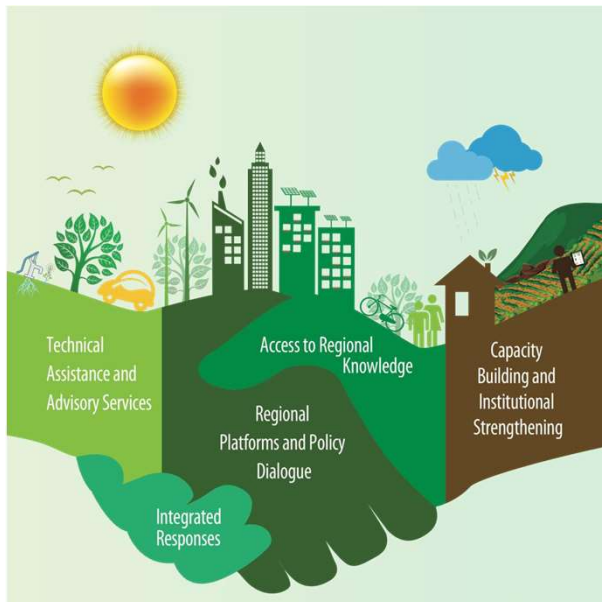




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Water and Climate Change



- Capacity development for climate change adaptation at the Arab regional level
- Supporting the generation and access to Arab regional climate analysis
- Advancing disaster risk reduction (DRR) in the Arab region
- Supporting mobilization and access to climate finance in the Arab Region
- Enhancing Arab regional capacity for progress on the Paris agreement and towards the achievement of SDG 13

Pursuing cooperation and climate action through the Arab Centre for Climate Change Policies

Regional Initiative for the Assessment of Climate Change Impacts on Water Resources & Socio-Economic Vulnerability in the Arab Region

Objective

To assess the impact of climate change on freshwater resources in the Arab Region through a consultative and integrated regional initiative that seeks to identify the socio-economic and environmental vulnerability caused by climate change impacts on water resources based on regional specificities.

RICCAR aims to provide a common platform for assessing, addressing and informing response to climate change impacts on freshwater resources in the Arab region by serving as the basis for dialogue, priority setting and policy formulation on climate change at the regional level



Water



Biodiversity
and Ecosystems



Agriculture



Infrastructure
and Human
Settlements



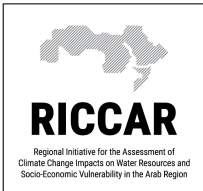
People

Assessment

Adaptation

Mitigation

Negotiations



RICCAR Partners



SWEDISH INTERNATIONAL
DEVELOPMENT COOPERATION AGENCY

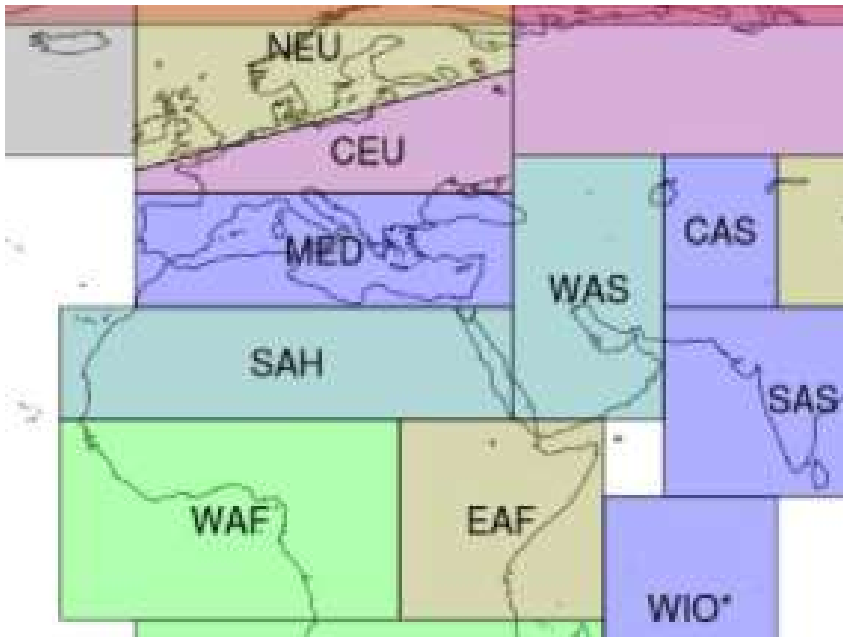


*CORDEX-MENA Domain hosted by
The Cyprus Institute*

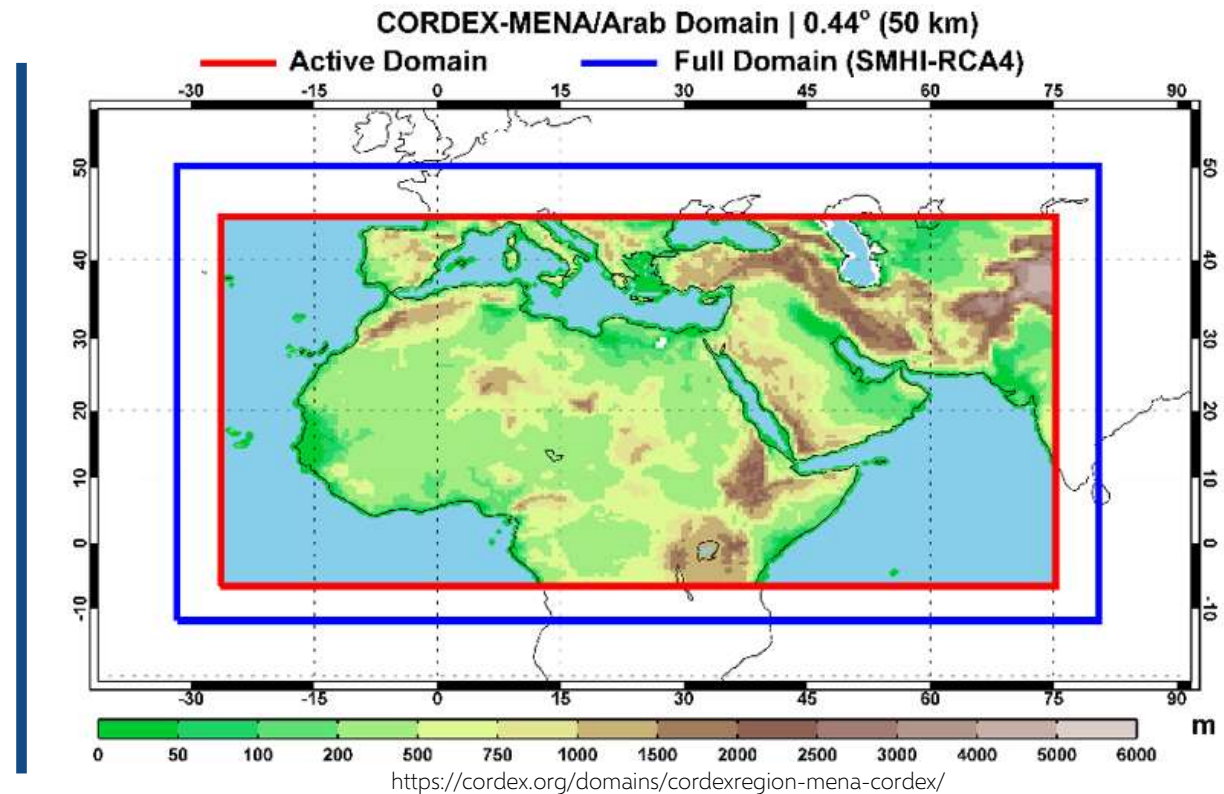
www.riccar.org

Supporting Science-informed Climate Policies and Plans

Figure 1: Spatial boundaries of the geographical reference regions used in the IPCC 5th Assessment Report (AR5)



https://www.ipcc-data.org/guidelines/pages/ar5_regions.html



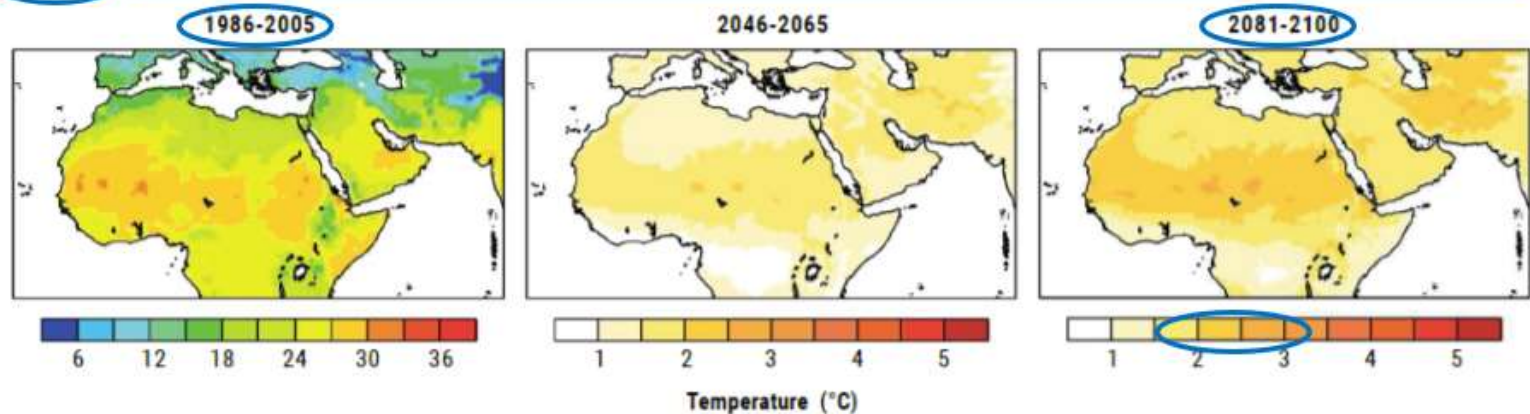
*First Arab Declaration on Climate Change in Dec 2007 by CAMRE
RICCAR launched in 2009 - reports to Arab Ministerial Water Council
Coordinated by ESCWA under the Arab Centre for Climate Change Policies*

Projections @ 50 km² grid for RCP 4.5 & 8.5 through 2100

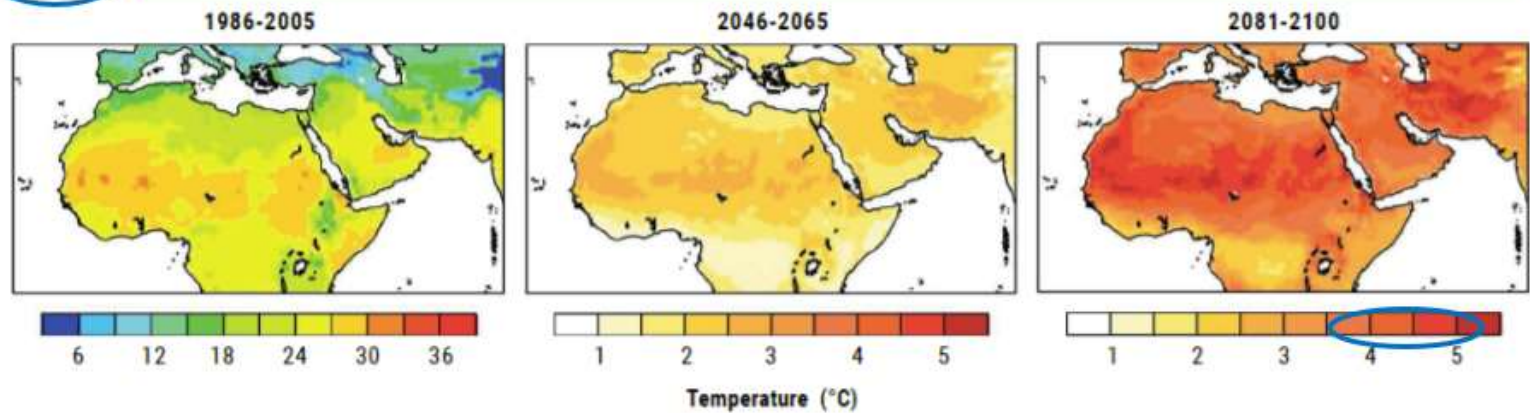
www.riccar.org

Arab Region is no stranger to High Temperatures, but Mean Temperature in Arab/MENA Domain projected to significantly increase

RCP 4.5

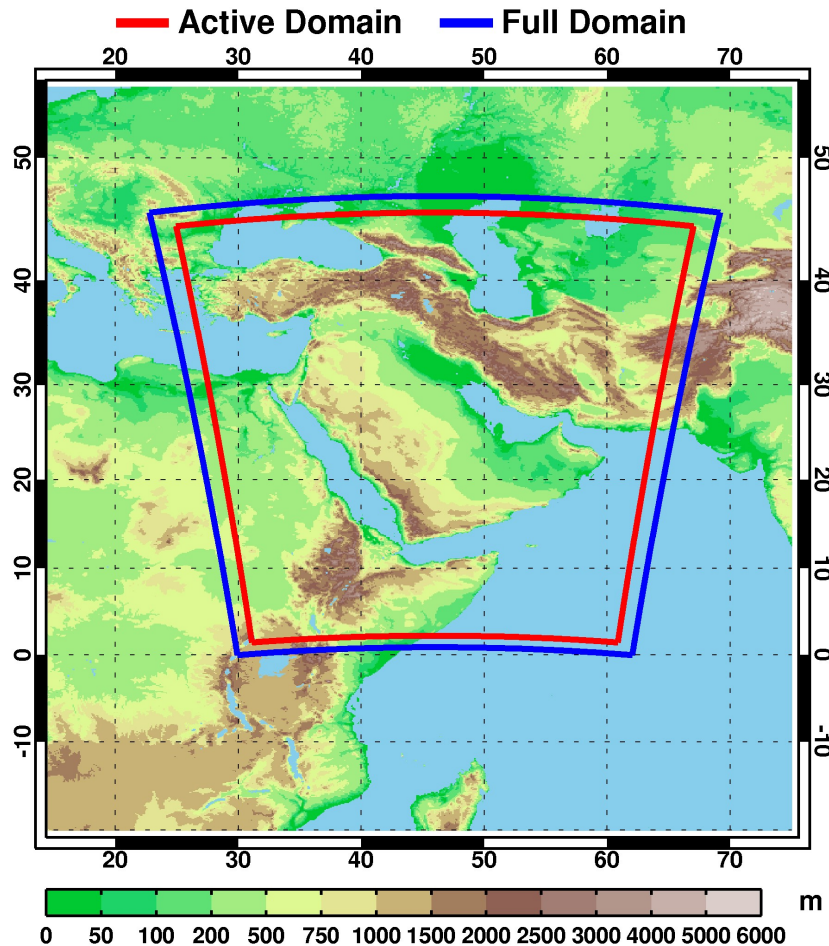


RCP 8.5



Mashreq Domain

RICCAR Mashreq Domain | 10km | MSH-10
HCLIM-ALADIN (SMHI)



- New projections completed in July 2021
- 10 km² grid
- SSP5-8.5 (AR6 scenario) to mid-century (2070)
(shared socio-economic pathway 5 with continued fossil fuel development (SSP5) for AR6 largely equivalent to representative concentration pathway (RCP) 8.5 from AR5)
- SMHI-ALADIN RCM nested in 6 GCMs

ALADIN: Aire Limitée Adaptation dynamique Développement InterNational

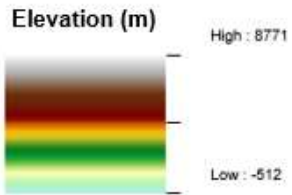
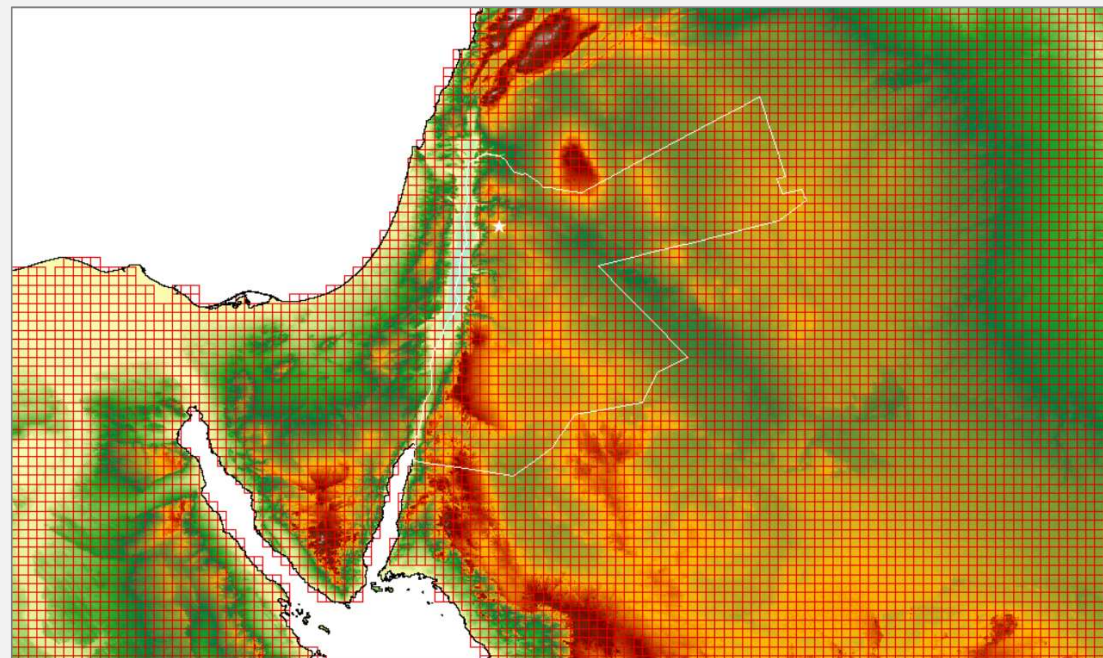
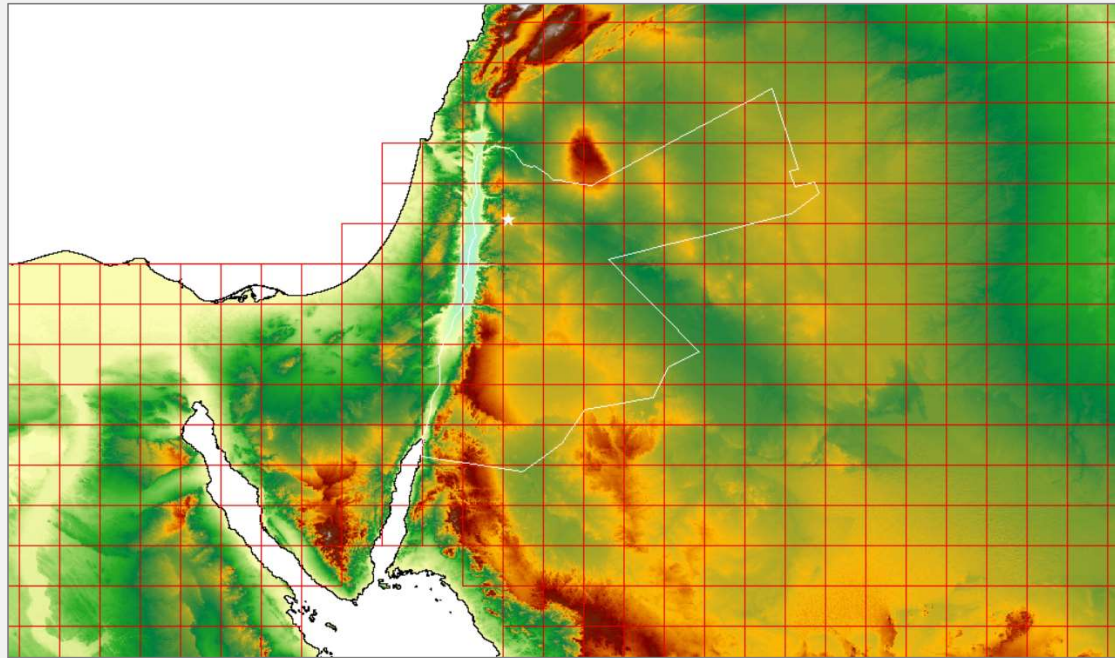




New high-resolution Mashreq Domain projections just completed

50 km²

10 km²



Six-member ensemble for SS-RCP 8.5 through 2070 at 10 km²

Climate & Water Project: Case Studies	Country 1	Country 2	Ministry	Partners	Start Date	Due Date
Version: 27 Sept 2021						
1-Water and Food Security in a Climate Change Context						
Lead: ESCWA; Donor: Sida (Jan 2019 - Dec 2021)						
Al-Kabir Shared Basin	Lebanon	Syria	MEW, MWR	ACSAD	Aug-21	14-Dec
Euphrates Shared Basin	Iraq	Syria	MWR, MWR	ACSAD	Aug-21	14-Dec
Al-Dammam Aquifer	Iraq		MWR	ACSAD	Aug-21	14-Dec
Eocene Aquifer	Palestine		PWA	ACSAD	Aug-21	14-Dec
<u>Training</u>						
* CWW/Young Water Professionals	Africa	Mashreq	MWR	ICID / ACSAD	Apr-21	01-Oct
* Iraq Training on RICCAR & AquaCrop	Iraq		MWR	ACSAD	Aug-21	14-Dec
* Supporting dialguge between Ag and Met Services	Arab Region					14-Dec
* ICARDA / Small Scale Farmers Forecasting Tools	Iraq	Morocco	<i>& Lebanon or Jordan</i>	ICARDA	Sep-21	14-Dec
2-Increasing Watershed Resilience to Climate Change						
Lead: FAO; Donor: Sida (May 2021 - April 2022)						
Al-Kabir Watershed	Lebanon	-	MEW	ACSAD	May-21	Mar-22
l'Algérois (le bassin 02 a)	Algeria	-	MRESH, MADR	ACSAD	May-21	Mar-22
<u>Training</u>						
* Webinar on VA Methodology	Arab	-		ACSAD (tbd)	Nov-21	Dec-21



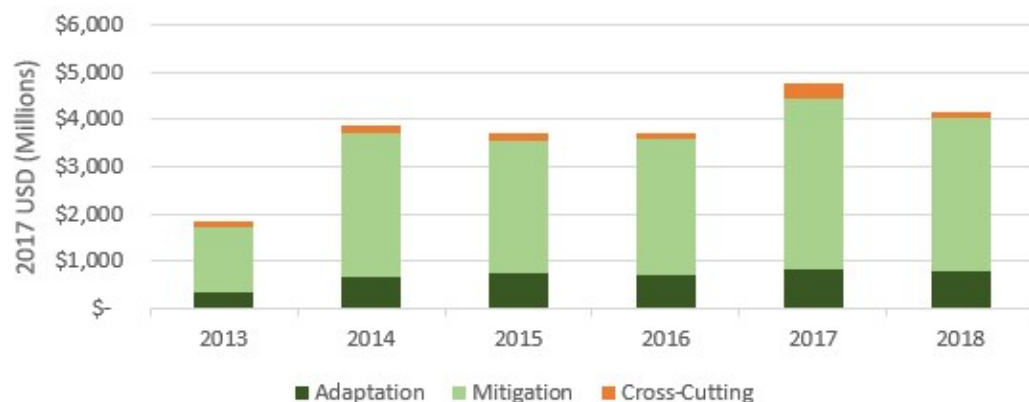
Climate & Water Project: Case Studies	Country 1	Country 2	Ministry	Partners	Start Date	Due Date
3-Rapid Vulnerability Assessment for Jordan						
Lead: ESCWA; Donor: ESCWA/RPTC (June 2021 - Dec 2021)						
Mapping of Climate Change Projects	Jordan		MoPIC, MoE, MWR, MoEMR,MoAg		Jun-21	Nov-21
Rapid Vulnerability Assessment	Jordan		MoPIC, MoE, MWR, MoEMR,MoAg		Jul-21	Dec-21
4-Increasing the resilience of both displaced persons and host communities to climate change-related water challenges in Jordan & Lebanon						
Lead: UN-Habitat; Donor: Adaptation Fund						
Temp, rainfall, stormwater, drought, agriculture	Lebanon	Jordan		UN-Habitat	Oct-21	Feb-22
GIS risk mapping	Lebanon	Jordan		UN-Habitat	Oct-21	Feb-22
5-Earth Observations to Monitor Disasters and Build Resilience in the Nile Basin and the North Coast of Egypt						
Lead: ESCWA; Donor: Google Earth Engine (GEE) & Group on Earth Observation (GEO)						
Nile Delta	Egypt		CAPMAS	GEO	Jun-20	Jun-22
6-RICCAR Regional Knowledge Hub						
Lead: ESCWA						
GCF Project: RICCAR Training on Mashreq Domain outputs	Bahrain			UNEP/AGU	tbc	tbc
Homepage Visualizations of CC over time	Arab	-	-	ESCWA/ITCD	Jul-21	Oct-21
Mashreq Domain Data Portal	Mashreq	-	-	ESCWA/ITCD	Sep-21	Dec-21
Data Requests: Demand Driven	Met/Oman	RSS/Jordan	Germany		continuous	
7-Transboundary Climate Risk Assessment supporting NAPs						
Lead: UNEP						
Transboundary Climate Risk Assessment	Iraq	Syria		UNEP	Mar-21	tbc

Regional initiatives & projects supporting Knowledge Generation & Regional Dialogue on Water, Climate Change & Adaptation

- ❖ **RICCAR:** Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (benefiting from Sida support)
- ❖ **REGEND:** Regional Initiative to Promote Small-Scale Renewable Energy Applications in Rural Areas of the Arab Region (Sida supported)
- ❖ **ArabCOF:** Arab Climate Outlook Forum session – twice a year – often jointly convened with GCC COF and MED COF – to generate seasonal forecasts and enhance capacity of Arab Met Services to forecast and predict extreme events, sand and dust storms, climate change (benefiting from Sida supported)
- ❖ **Mashreq Waters Knowledge Series** - twice a year on technical topics to foster regional exchange
- ❖ **Disaster Risk Reduction** collaboration with UNDRR on DRR and climate change intersection, and RDDR
- ❖ **NEW:** Increasing the resilience of both displaced persons and host communities to climate change-related water challenges in Jordan and Lebanon (Adaptation Fund, led by UN-Habitat)
- ❖ **NEW:** Improved Water Security in Arab States – with focus on groundwater, groundwater digital platform and assessments of climate change impacts on water resources (UN Development Account, led by ESCWA)

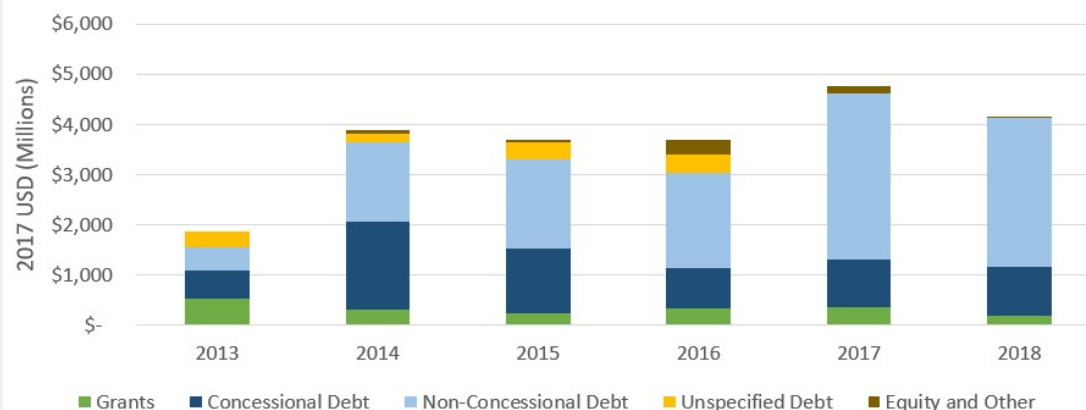
Climate Finance needed for Water Security

Public International Climate Finance Flows to the Arab Region by Purpose



Funding to region skewed towards mitigation

Public International Climate Finance Flows to the Arab Region by Type



Loans significant exceed grants to Arab States

Climate Finance for Water, Climate Change & Adaptation

- ❖ **Needs-based Climate Finance (NBF) Project** – prepared a Technical Annex reviewed through 3 regional consultations, with Needs-based Climate Finance Strategy for Arab States under preparation (UNFCCC, LAS, ESCWA)
 - CAMRE Session – 14 November 2021 / Cairo
 - MENA Climate Week with Climate Mainstreaming and Investment Forum: 2-3 March 2022 / Dubai
- ❖ **Climate/SDG Debt Swap Mechanism / Donor Nexus Initiative** – for increasing access to climate finance, with focus on adaptation; countries have identified water and agricultural as top
- ❖ **Increasing Watershed Resilience to Climate Change** – aim to prepare climate-proof watershed management design and resilience package for specific basins in Algeria and Lebanon that provides a pipeline of projects for enhancing watershed resilience (under FAO WePS project funded by Sida)
- ❖ **LAKI**: Capacity development for climate change adaptation expert group meetings within the framework of the Lima Adaptation Knowledge Initiative – to identify project pipelines for regional coordination - and linked to ESCWA Water & Food Security in Climate Change Context Project (with UNFCCC, ESCWA, UNEP: Dec 2020, March 2021, 5 May 2021)



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Implementation of Recommendations made by the Committee on Water Resources at its Thirteenth Session

Recommendation (a)

Continue providing technical support to member States, including advisory services, studies, events, training programmes and regional and national workshops, to overcome the challenges they face in achieving the **water-related SDGs**; and support Arab countries in exchanging expertise and documenting successful experiences;

Mashreq Waters Knowledge Series: Disruptive Technologies for Improved Groundwater Management workshop (para. 4)

Second meeting of the Drafting Group on the Guide to Reporting under the Water Convention and on SDG indicator 6.5.2 (para. 9)

World Water Day and youth-focused activities on water (para. 13)

World Urban Forum – session on SDG 6 and water security with the Global Water Operators' Partnerships Alliance (para. 10)

Workshop on Enhancing transboundary water cooperation in the MENA region – progress, challenges and opportunities (para. 21)

Workshop on Accessing Disruptive Technologies for Improved Water Resources Management under Climate Change (para. 14)

Three extrabudgetary projects on water and climate change (para. 43)

Arab Forum for Sustainable Development (AFSD) 2021 (para. 60)

Status Report (2019) and Second Regional Report (2021) on the Implementation of Integrated Water Resources Management in the Arab Region (para. 18, 19)

ESCWA Climate/SDGs Debt Swap Initiative (para. 53)

Recommendation (b)

Intensify efforts to transform knowledge produced by the ESCWA secretariat through studies and reports into practical interactive tools and platforms, to be used by countries in policymaking and decision-making.

Recommendation (c)

Continue building Arab countries' capacity to face challenges related to groundwater and surface water, including shared/transboundary water resources, by preparing reports and holding training sessions and meetings;

RICCAR Regional Knowledge Hub (para. 15)

RICCAR webinar series on climate change analysis using GIS tools (para. 33)

Arab Centre for Climate Change Policies (para. 30)

Mashreq Waters Knowledge Series (para. 4, 14, 15)

Working paper on guiding principles for the management of groundwater abstraction in the Arab region (para. 6)

EGM to Review the Draft Abstraction Guidelines (para. 5)

Assessment of Climate Change Impacts on Groundwater Resources using RICCAR Data in the Beni-Amir Aquifer (para. 7, 8)

Second meeting of the Drafting Group on the Guide to Reporting under the Water Convention and on SDG indicator 6.5.2 (para. 9)

Workshop on monitoring and implementation of the SDGs in the Arab region: transboundary water cooperation SDG 6 indicator 6.5.2 (para. 11)

Training on groundwater resources management from an IWRM perspective (para. 16)

Status Report (2019) and Second Regional Report (2021) on the Implementation of IWRM in the Arab Region (para. 18, 19)

Support for guidance principles for shared water cooperation (para. 20)

Workshop on enhancing transboundary water cooperation in the MENA region – progress, challenges and opportunities (para. 21)

Training on negotiation skills to better manage transboundary water (para. 22)

Recommendation (d)

Build the capacity of the State of Palestine to defend the **water rights of the Palestinian people**.

Recommendation (e)

Promote understanding of the **energy-water-food security nexus** and of how to integrate it in national policies by preparing analytical studies, disseminating pioneering experiences, and facilitating the exchange of expertise.

Training on negotiation skills to better manage transboundary water (para. 22)

Training Palestinian officials on the use of AquaCrop to support the management of water uses for agricultural purposes (para. 32)

Support to the Joint High-level Committee for Water and Agriculture in the Arab Region (para. 23, 24)

Workshop on Access to Finance for Municipalities – Nexus Thinking and Decentralization of Subnational Governments (para. 25)

Two extrabudgetary projects on water, agriculture and climate resilience (para. 43)

Recommendation (f)

Ensure that water-related regional priorities are integrated into global and **regional monitoring mechanism for the 2030 Agenda**, and in efforts to support the implementation of the Paris Agreement, the Sendai Framework, and the Addis Ababa Action Agenda emanating from the Third International Conference on Financing for Development.

Arab Centre for Climate Change Policies (para. 30)

Support to regional and global coordination mechanisms on Disaster Risk Reduction (para. 48)

Needs-Based Climate Finance Project in the Arab Region (para. 51)

Expert group meeting on climate mainstreaming (para. 52)

Enhancing Arab regional capacity for progress on the Paris Agreement and towards the achievement of SDG 13 (para. 54-59)

ESCWA Climate-SDGs Debt Swap Initiative (para. 53)

Arab Forum for Sustainable Development (AFSD) 2021 (para. 60)

Recommendation g

Continue providing technical support to monitor the implementation of **SDG 6 and prepare reports thereon**, while taking into account national and regional specificities, **especially water scarcity**; and support member States in preparing mechanisms to integrate SDG 6 targets and indicators in national strategies and plans on water resources, and support related institutional frameworks;

Second meeting of the Drafting Group on the Guide to Reporting under the Water Convention and on SDG indicator 6.5.2 (para. 9)

Arab Forum for Sustainable Development (AFSD) 2021 (para. 60)

Status Report (2019) and Second Regional Report (2021) on the Implementation of Integrated Water Resources Management in the Arab Region (para. 18, 19)

Development of regional risk assessment framework that considers water, food and climate security risks (para. 50)

World Urban Forum – session on SDG 6 and water security with the Global Water Operators' Partnerships Alliance (para. 10)

Recommendation (h)

Continue developing the outcomes of the Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (**RICCAR**), including **climate forecasts**; and support the establishment of disaster loss databases and link them to **disaster risk reduction** measures resulting from **extreme weather events, such as torrents, floods, and sand and dust storms**;

Assessment of Climate Change Impacts on Groundwater Resources using RICCAR Data in the Beni-Amir Aquifer (para. 7)

Preparation of two case studies on the impacts of climate change on groundwater resources in the State of Palestine and Iraq (para. 8)

New high-resolution climate modelling outputs the Mashreq subdomain (para. 42, 43)

Coordination of regional climate forecasts through the ArabCOF (para. 44, 45)

Webinar on Enhancing Understanding and Expanding Inter-regional and Regional Cooperation on Sand and Dust Storms (para. 46, 47)

Contribution to the Regional Assessment Report on Disaster Risk Reduction (para. 48, 49)

Recommendation (i)

Assist member States in preparing proposals for **climate change projects** for presentation to donors so as to receive the necessary funding for their implementation;

Recommendation (j)

Collaborate with the United Nations Office for Disaster Risk Reduction in preparing a **regional assessment report on disaster risk reduction** and in monitoring under the Sendai Framework to support Arab countries;

Lima Adaptation Knowledge Initiative (LAKI) supported proposals to close climate change adaptation knowledge gap (para. 27)

Increasing Watershed Resilience to Climate Change

Contribution to the Regional Assessment Report on Disaster Risk Reduction (para. 48, 49)

Engagement in regional work towards progress in achieving the Sendai framework objectives at the Arab regional level (para. 48)

Recommendation (k)

Support member States in their work under the **International Decade for Action "Water for Sustainable Development" 2018-2028**, participate in **Cairo Water Week** and in other regional events related to climate change and water, and **encourage youth participation**;

Recommendation (l)

Urge member States to periodically report to the secretariat on their efforts to implement the **water-related SDGs**, and improve communication with member States to inform them of secretariat activities in the water and climate change fields.

Three regional consultations to prepare for the 2023 Midterm Comprehensive Review of the Water Action Decade, in addition to supporting Egypt with Cairo Water Week event (para. 12)

Coordination of Arab Regional contributions to the midterm comprehensive review report and regional preparatory meeting for the global conference through Arab Ministerial Water Council, UN-Water and Regional Collaborative Platform (para. 12)

Status Report (2019) and Second Regional Report (2021) on the Implementation of Integrated Water Resources Management in the Arab Region (para. 18, 19)

Three extrabudgetary projects on water and climate change (para. 43)

Arab Forum for Sustainable Development 2021 (para. 60)

Climate/SDG Debt Swap Mechanism – pilot in Jordan (para. 53)



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Thank you