

**Economic and Social Commission for Western Asia (ESCWA)**

Committee on Water Resources
Thirteenth session
Beirut, 27-28 June 2019



Item 11 of the provisional agenda

Implementation of activities under the ESCWA programme of work**Summary**

Since the twelfth session of the Committee on Water Resources, held in Amman from 22 to 24 March 2017, the Economic and Social Commission for Western Asia (ESCWA) has carried out a series of activities related to water resources under subprogramme 1 of the ESCWA strategic framework on the integrated management of natural resources for sustainable development. These activities include publications, expert group meetings, capacity-building, advisory services, technical assistance and field projects. They were implemented to assist member States in developing appropriate water policies in three main areas of work, namely integrated water resources management in support of sustainable development goals; regional cooperation on transboundary water resources and the water-energy-food security nexus; and climate change and disaster risk reduction.

The present document provides an overview of those activities, presented under the relevant expected accomplishments set out in the relevant ESCWA strategic framework. Technical cooperation and advisory services delivered since the last session are organized into two clusters: support related to the water-energy-food security nexus, and support on climate change and disaster risk reduction. The Committee on Water Resources is invited to take note of these activities and provide comments and suggestions on future areas of work.

CONTENTS

	<i>Paragraphs</i>	<i>Page</i>
Introduction	1-4	3
<i>Chapter</i>		
I. IMPLEMENTATION OF THE PROGRAMME OF WORK FOR THE BIENNIUM 2016-2017 IN THE FIELD OF WATER RESOURCES.....	5-44	3
A. Expected accomplishment (A).....	6-16	3
B. Expected accomplishment (B).....	17-21	6
C. Expected accomplishment (C).....	22-44	7
II. IMPLEMENTATION OF THE PROGRAMME OF WORK FOR THE BIENNIUM 2018-2019 IN THE FIELD OF WATER RESOURCES.....	45-89	13
A. Expected accomplishment (A).....	46-57	13
B. Expected accomplishment (B).....	58-69	16
C. Expected accomplishment (C).....	70-89	18
III. TECHNICAL COOPERATION AND ADVISORY SERVICES.....	90-107	23
A. Water-Energy-Food Security nexus	91-95	23
B. Climate change and disaster risk reduction	96-107	24

Introduction

1. The Sustainable Development Policies Division (SDPD) of the Economic and Social Commission for Western Asia (ESCWA) is responsible for implementing subprogramme 1 on the integrated management of natural resources for sustainable development of the strategic framework for the Economic and Social Commission for Western Asia (ESCWA).
2. The objective of subprogramme 1 for the bienniums 2016-2017 and 2018-2019 is achieving the integrated management of natural resources leading to improved water, energy and food security and enhanced resilience to climate change, and mainstreaming sustainable development goals into regional and national policy processes.
3. The activities implemented by the ESCWA secretariat since the [twelfth session of the Committee on Water Resources](#) (Amman, 22-24 March 2017) cover part of the biennium 2016-2017 and part of the biennium 2018-2019. These activities support the achievement of expected accomplishments (a) (b) and (c) of the subprogramme of work for the biennium 2016-2017, and expected accomplishments (a), (b) and (c) of the subprogramme of work for the biennium 2018-2019, in addition to technical cooperation and advisory services provided by ESCWA to member States.
4. Publications, expert group meetings, capacity-building activities, advisory services, technical studies and field projects on water resources and climate change have been implemented to assist member States in developing policies and exchanging experiences at the regional level. The overall aims are to strengthen integrated water resources management (IWRM) in the light of sustainable development goals; foster regional cooperation through transboundary water issues and a water-energy-food security nexus approach; and develop coordinated responses to address climate change challenges and disaster risk reduction.

I. IMPLEMENTATION OF THE PROGRAMME OF WORK FOR THE BIENNIUM 2016-2017 IN THE FIELD OF WATER RESOURCES

5. The following are the main water resource-related activities undertaken by ESCWA since March 2017 in support of the expected accomplishments of subprogramme 1 for the biennium 2016-2017.

A. EXPECTED ACCOMPLISHMENT (A)

Member States mainstream appropriate goals related to sustainable development into national multisectoral strategies and action plans for the integrated management of natural resources, including tools for measuring, monitoring and reporting.

1. *Studies and reports*

Working paper on subsidy reform and environmental sustainability in the Arab region
([E/ESCWA/SDPD/2017/Technical Paper.8](#))

6. The paper examines water and energy subsidies within the context of efforts to advance environmental sustainability in the Arab region. The paper highlights that subsidy reforms need to be introduced gradually in a transparent and participatory manner in complementarity with long-term comprehensive reform planning that also considers social safety nets and mitigating measures. The paper informed the drafting of the *Rethinking Fiscal Policy in Arab Countries*.¹

¹ [E/ESCWA/EDID/2017/4](#).

Wastewater: An Arab Perspective
(E/ESCWA/SDPD/2017/Booklet.1)

7. The booklet was launched at a 2017 World Water Day event focused on the theme of wastewater and sustainable development. The booklet builds on the Arab chapter included in the 2017 World Water Development Report entitled *Wastewater: The untapped resource*, and highlights how wastewater is being increasingly viewed as a water resource by Arab countries to help overcome water scarcity constraints.

2. Meetings and workshops

Expert group meeting on methodologies for meeting the water-related Sustainable Development Goals at the global, regional and national levels
(Amman, 22-23 March 2017)

8. The expert group meeting was organized by ESCWA, the League of Arab States and the Arab Countries Water Utilities Association (ACWUA) to follow-up on the consultations conducted on the MDG+ Initiative indicators and how they relate to SDG6. The workshop solicited the views of member States on next steps for monitoring and reporting on SDG6 indicators in the Arab region. Several UN-Water partners contributing to the UN-Water Global Integrated Monitoring Initiative for SDG6 (GEMI) participated to the meeting and helped to inform discussions on how countries could build upon the experience gained from implementing the MDG+ Initiative to structure monitoring and reporting on the SDG6 targets and indicators across water-related institutions at the country-level engaged in water supply, sanitation, wastewater treatment, water scarcity and transboundary water cooperation.

World Water Day
(Amman, Jordan, 22 March 2017)

9. ESCWA, in collaboration with the Ministry of Water and Irrigation of Jordan, the Government of Sweden, ACWUA and the Cairo Office of the United Nations Organization for Education, Science and Culture (UNESCO), organized a regional event to celebrate World Water Day in Amman on 22 March 2017. The event featured the regional launch of the joint 2017 World Water Development Report entitled *Wastewater: The untapped resource* and an ESCWA booklet entitled *Wastewater: An Arab Perspective*. The event also included a panel showcasing efforts to advance wastewater treatment and reuse, which comprised speakers from Kuwait, Jordan, the League of Arab States, ACWUA, ESCWA and UNESCO, with an opening statement by the Ambassador of Sweden to Jordan.

10. Preparations for the 2017 World Water Development Report were led by the UNESCO World Water Assessment Programme (UNESCO/WWAP) in collaboration with UN-Water, which supports the issuance of the annual World Water Development Report. ESCWA prepared the Arab chapter in the report, which highlights the main challenges facing wastewater collection, treatment and use in the region and figures generated under the MDG+ Initiative in partnership with Arab countries, the League of Arab States and ACWUA.

3. Substantive input to global and regional forums and interagency meetings

Arab Water Week 2017
(Dead Sea, Jordan and Amman, 19-23 March 2017)

11. ESCWA contributed to and organized several meetings at the 2017 session of the Arab Water Week, which is organized every two years by ACWUA. ESCWA, ACWUA, the Swedish International Development Cooperation Agency (Sida) and the League of Arab States organized a special session to launch the Arabic language edition of the *2016 Report of the MDG+ Initiative* (Dead Sea, Jordan, 21 March 2017). The session shared lessons learned for informing the water-related Sustainable Development Goals (SDGs). The Sida representative highlighted how the MDG+ Initiative had enhanced water cooperation in the region. The MDG+

national focal points from the State of Palestine and Tunisia emphasized the importance of cross-sectoral coordination among ministries and utilities responsible for managing water supply, sanitation and wastewater treatment, and of engaging in monitoring efforts with those responsible for national statistics. ACWUA, the League of Arab States, ESCWA and United Nations Human Settlement Programme (UN-Habitat) also delivered interventions. ESCWA also contributed to other sessions, including those that focused on water scarcity, women's empowerment in the context of water scarcity, coordination on regional water projects, climate change, and water governance.

UN-Water

12. ESCWA participated in the twenty-seventh meeting of senior programme managers of UN-Water, held in Stockholm on 25 and 26 August 2017. The meeting gathered members and partners of UN-Water to discuss issues related to the 2030 Agenda, relevant intergovernmental and interagency processes, and progress in monitoring SDG 6. ESCWA and the Economic Commission for Latin America and the Caribbean (ECLAC) reported on the work of the Task Force on Regional-Level Coordination of UN-Water, including efforts to establish regional coordination mechanisms on water.

4. Field projects

Arab Integrated Water Resources Management Network

13. ESCWA continued to serve as the secretariat of the Arab Integrated Water Resources Management Network (AWARENET) and its online platform (<https://awarenet.info>). It supported AWARENET working groups and engaged AWARENET members in several regional activities, including supporting the participation of several AWARENET members in the [High Level Conference on Climate Change Assessment and Adaptation in the Arab Region](#) (Beirut, 26-28 September 2017). ESCWA and AWARENET also jointly organized a session on the theme “[Role of regulatory water agencies in efficient water management](#)” at the [twelfth Gulf Water Conference of the Water Sciences and Technology Association \(WSTA\)](#) (Bahrain, 28-30 March 2017). Presentations were delivered by AWARENET members on the importance of regulatory frameworks for good water governance in the region, including presentations on the role of water regulatory authorities delivered by representatives from the State of Palestine and the United Arab Emirates. AWARENET also facilitated a consultation among members and experts to explore opportunities for further collaboration.

MDG+ Initiative

14. In March 2017, Sida extended until 31 December 2018 the implementation period for a project entitled “Establishing a regional mechanism for improved monitoring and reporting on access to water supply and sanitation services in the Arab region” under the MDG+ Initiative. The aim of the MDG+ Initiative follow-up phase was to build upon lessons learned, experiences gained and data gathered during the initiative to inform regional preparations and efforts to achieve the 2030 Agenda, particularly its water-related SDGs.

15. The Arabic version of the 2016 Report of the MDG+ Initiative was launched at Arab Water Week (Dead Sea, Jordan, 21 March 2017). An expert group meeting was organized by ESCWA, ACWUA and the League of Arab States (Amman, March 2017) to build upon data gathered and lessons learned from the MDG+ Initiative to inform monitoring and reporting on SDG 6 indicators in the Arab region.

16. ESCWA facilitated the participation of MDG+ National Monitoring Teams in the first Global Workshop for Integrated Monitoring of Sustainable Development Goal 6 on Water and Sanitation (the Hague, the Netherlands, 21-23 November 2017). The meeting was hosted by the Ministry of Infrastructure and Water Management of the Netherlands and UN-Water. ESCWA and ACWUA delivered a joint presentation on “Linking national, regional and global reporting on SDG 6” and demonstrated how lessons learned from the MDG+ Initiative could support monitoring and reporting on SDG 6. They also facilitated working group

discussions among Arab experts attending the workshop, including representatives from Algeria, Egypt, Jordan, Lebanon, the State of Palestine, Morocco, Tunisia, Saudi Arabia and Yemen.

B. EXPECTED ACCOMPLISHMENT (B)

Member States adopt platforms and resolutions on regional cooperation on shared water resources, energy networks and environmental sustainability to improve food, water and energy security.

1. *Meetings and workshops*

Expert group meeting on pursuing improved shared water resources management within the framework of global and regional agreements
(Cairo, 29-30 November 2017)

17. ESCWA organized the meeting² in collaboration with the technical secretariat of the Arab Ministerial Water Council of the League of Arab States. The meeting was attended by senior officials from ministries responsible for shared water management in Arab countries and associated stakeholders. The meeting supported member States in pursuing transboundary cooperation for the implementation of the 2030 Agenda. During the first day of the meeting, participants discussed the challenges and opportunities of transboundary cooperation to achieve sustainable development in the context of water scarcity and existing legal frameworks in the Arab region, including data collection for SDG 6.5.2 on transboundary water cooperation. The second day of the meeting was limited to government officials and meeting organizers to allow for discussions on the draft guidelines on shared water cooperation among Arab countries, in accordance with a resolution adopted by the Arab Ministerial Water Council requesting the League of Arab States and ESCWA to support the organization of consultations between Arab countries.

2. *Assistance to intergovernmental bodies*

Fifteenth session of the Technical Scientific Advisory Committee of the Arab Ministerial Water Council
(Cairo, 2-4 July 2017)
and
Ninth session of the Arab Ministerial Water Council
(Cairo, 6 July 2017)

18. ESCWA reported to the fifteenth session of the Technical Scientific Advisory Committee on the implementation of resolutions adopted by the Arab Ministerial Water Council. This included reporting on ESCWA contributions to implementing the Action Plan of the Arab Water Security Strategy for Sustainable Development 2010-2030 related to follow-up on the Millennium Development Goals and the water-related SDGs, climate change and shared water resources. ESCWA also reported on the activities of its project of food and water security in the Arab region, which supports an initiative on the energy-water-food nexus in the Arab region.

19. The ninth session of the Arab Ministerial Water Council subsequently adopted a resolution requesting ESCWA to coordinate with ACWUA to support regional preparations for the 2018 session of the High-Level Political Forum on Sustainable Development, which included a focus on SDG 6. The resolution included the establishment of a working group, which ESCWA coordinated and worked with to develop a roadmap for the Forum's preparations.³ To this end, ESCWA organized a meeting of the working group with the League of

² www.unescwa.org/events/meeting-shared-water-resources-management-framework.

³ The working group included representatives from the secretariat of the League of Arab States, the Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD), the Arab Organization for Agriculture and Development (AOAD), the United Nations Environment Programme (UNEP), the Food and Agriculture Organization of the United Nations (FAO), the Arab Water Council (AWC), the Centre for Environment and Development for the Arab Region and Europe (CEDARE) and the Arab Network for Environment and Development (RAED), and was coordinated by ESCWA in collaboration with ACWUA.

Arab States and ACWUA (Cairo, 28 November 2017) to discuss the draft work plan and inform the concept note that would be submitted for consideration at the subsequent session of the AMWC Technical Committee in January 2018. The roadmap included a proposal to organize a regional consultation on water in March 2018 to inform the Forum, and to assist in the drafting of a working paper on target SDG 6.4 related to water scarcity. The Council also requested that ESCWA continue providing support on climate change, food security, and shared water resources management, including supporting Arab country consultations on the draft guiding principles for shared water resources in the Arab region.

3. *Field projects*

*Developing the capacity of ESCWA member States to address
the water-energy nexus for achieving the Sustainable Development Goals
(United Nations Development Account project)*

20. This United Nations Development Account project on the water-energy nexus was completed in December 2017. In 2017, ESCWA issued three operational modules mandated under the project on resource efficiency,⁴ renewable energy,⁵ and technology transfer.⁶ The modules served as the basis for the second and third operational workshops conducted by ESCWA under the project, held in Beirut on 11 and 12 July 2017, and in Aman on 30 and 31 October 2017, respectively.

21. The project closed with a final regional policy workshop⁷ convened in Beirut on 11 and 12 December 2017. The workshop reviewed lessons learned, challenges and opportunities for the operationalization of the water-energy nexus at the regional level. Members of the ESCWA Committee on Water Resources and the ESCWA Energy Committee were invited to participate in this meeting or designate representatives. At the workshop, the technical and financial feasibility analysis outcomes of three water-energy nexus pilot initiatives were presented based on criteria agreed at the first policy workshop held under the project in October 2016.

C. EXPECTED ACCOMPLISHMENT (C)

Member States develop coordinated policies, strategies and frameworks for climate change mitigation and adaptation and for disaster risk reduction to enhance resilience and respond to the impact of natural and human-induced disasters.

1. *Studies and reports*

*Arab Climate Change Assessment Report
(E/ESCWA/SDPD/2017/RICCAR/Report)*

22. The *Arab Climate Change Assessment Report*⁸ was launched by ESCWA and its 10 RICCAR implementing partners and co-authors⁹ at the [High Level Conference on Climate Change Assessment and Adaptation in the Arab Region](#) (Beirut, 26-28 September 2017). The report presents the findings of the region-specific integrated assessment conducted within the framework of RICCAR, which include regional climate projections and associated hydrological projections for assessing the impact of climate change on freshwater

⁴ [E/ESCWA/SDPD/2016/TOOLKIT.1.](#)

⁵ [E/ESCWA/SDPD/2017/TOOLKIT.2.](#)

⁶ [E/ESCWA/SDPD/2017/TOOLKIT.3.](#)

⁷ www.unescwa.org/events/final-regional-policy-workshop-water-energy-nexus.

⁸ [E/ESCWA/SDPD/2017/RICCAR/Report.](#)

⁹ The League of Arab States, ACSAD, FAO, the German Agency for International Cooperation (GIZ), UNEP, UNESCO, the United Nations University Institute for Water, Environment and Health (UNU-INWEH), the Swedish Meteorological and Hydrological Institute, the United Nations Office for Disaster Risk Reduction (UNDRR) and the World Meteorological Organization (WMO).

resources in the region until 2100. These impact assessment outputs informed the preparation of an integrated vulnerability assessment and identification of vulnerability hotspots related to five sectors, namely water availability, ecosystems, agriculture, human settlements and people, as well as associated subsectors. The publication also presents findings on extreme climate indices and of case studies focused on drought, floods, health and the agricultural sector. A technical annex¹⁰ complements the main report.

ESCWA Water Development Report 7
(E/ESCWA/SDPD/2017/3)

23. The seventh issue of the *ESCWA Water Development Report: Climate Change and Disaster Risk Reduction in the Arab Region* examines differences in terminologies and methodologies used in the climate change adaptation (CCA) and disaster risk reduction (DRR) communities, in an effort to bridge the two communities of practice. The report draws upon RICCAR outputs generated through regional climate modelling and support provided through RICCAR for disaster loss databases in cooperation with UNDRR. The report also reviews Arab regional strategies and action plans related to climate change and natural disaster risks, and informs CCA and DRR measures at the regional and national levels and in climate change negotiations at the global level.

24. The report advances the integration of climate change modelling and disaster loss databases for the development of a comprehensive risk assessment process, drawing upon data generated and analysis completed under RICCAR. The report also recommends establishing a regional scientific platform for jointly addressing adaptation and DRR, and underscores the clear identification of the roles and responsibilities of national institutions and stakeholders with respect to risk assessment, risk management and the implementation of DRR and adaptation policies and actions. Moreover, it highlights need to access financing and relevant technology to deliver on those recommendations.

2. *Meetings and workshops*

Expert group meeting on coordinating responses to climate change and disaster risk reduction in the Arab region
(Beirut, 19-20 December 2017)

25. ESCWA organized the workshop¹¹ jointly with UNDRR to build bridges between the climate change and DRR communities. Arab experts engaged in both sectors participated to exchange views and perspectives. ESCWA and ACSAD delivered presentations on RICCAR findings, and UNDRR highlighted its work on disaster loss databases, including its RICCAR technical report entitled *Disaster Loss Data and Linkage to Climate Change Impacts for the Arab Region*.

3. *Assistance to intergovernmental bodies*

Meeting of the Arab Permanent Committee for Meteorology
(Cairo, 24-26 April 2017)

26. ESCWA presented a report on progress achieved in relation to meteorological services and modelling provided by RICCAR, and progress in establishing the Arab Climate Outlook Forum and the RICCAR Regional Knowledge Hub.

¹⁰ E/ESCWA/SDPD/2017/RICCAR/Report/Annex.

¹¹ <https://www.unescwa.org/events/meeting-responses-climate-change-disaster-risk-reduction>.

4. *Substantive input to global and regional forums and interagency meetings*

World Water Week (Stockholm, 30 August 2017)

27. ESCWA organized a joint side event with ACSAD, the German Agency for International Cooperation (GIZ), the International Centre for Biosaline Agriculture and Sida at World Water Week 2017 on the theme “Adapting to climate change: assessment, vulnerability and action”. ESCWA delivered two presentations, one focused on moving from climate change assessment to adaptation in the Arab region, and another on capacity-building for Arab climate negotiators.

Cooperation meeting between the United Nations and the League of Arab States (Cairo, 23-25 October 2017)

28. ESCWA participated in a sector coordination meeting organized between United Nations and League of Arab States organizations, which in 2017 focused on the water sector. The meeting resulted in a recommendation that more work was needed to monitor and measure the number of people facing water scarcity, in accordance with target SDG 6.5. Participants also recommended the establishment of a working group on water under the Regional Coordination Mechanism (RCM) in the Arab region, and tasked ESCWA to coordinate with the League of Arab States to draft and circulate for comment draft terms of reference for such a working group. Moreover, participants developed list of areas for potential collaboration among United Nations and League of Arab States organizations with regard to climate change, the water-energy-food nexus the SDGs and water scarcity. The proposal for a working group on water was subsequently submitted and approved by RCM based on the finalized terms of reference in November 2017.

Twenty-third session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (Bonn, Germany, 6-17 November 2017)

29. ESCWA contributed to four side events at the Conference. It collaborated with the National Institute for Agronomic Research of Morocco and the National Meteorological Service of the Sudan on a side event on the theme “Role of climate services in supporting climate risk management related to drought, particularly in agriculture” (9 November 2017). The event highlighted the role of national meteorological services in the African and Arab regions to set up climate risk management and early drought warning systems. ESCWA delivered a presentation on RICCAR findings with a focus on extreme climate indices, and how they can inform early warning systems for climate risk management and disaster risk reduction.

30. ESCWA also organized a side event on the theme “Mainstreaming climate change in regional and national policies in the Arab region” (10 November 2017), in partnership with the League of Arab States, UNESCO and the Arab Group of climate negotiators. The event featured presentations on RICCAR findings, capacity-building services provided to Arab negotiators, successful experiences from the Arab region in accessing the Green Climate Fund, and key developments related to the ongoing climate negotiations.

31. ESCWA served as a panellist in a side event organized by the Iraqi Government, UNDP and the League of Arab States (15 November 2017) on the theme “Vulnerability to climate change in the Arab region”. ESCWA reviewed its experience in building upon scientific outcomes generated through RICCAR to inform national strategies on climate change adaptation.

32. ESCWA, in collaboration with the four other United Nations regional commissions, organized a high-level joint event on nationally determined contributions (16 November 2017). The event explored the role that regional commissions can play in scaling up climate action. ESCWA contributed through an intervention on Arab climate change priorities, assessment outputs and plans to strengthen climate change engagement in the region.

Fourth Arab Water Forum
(Cairo, 26-28 November 2017)

33. ESCWA, in collaboration with the National Water Research Centre in Egypt, organized a side event on the theme “Climate change and water: impacts and adaptation measures”. The session shared findings, lessons learned and experience gathered from the implementation of RICCAR, as well as national strategies and measures for climate change adaptation developed by Egypt towards achieving the 2030 Agenda. ESCWA also contributed to a session organized by the Food and Agriculture Organization of the United Nations (FAO) on the SDGs and the Regional Knowledge Platform, which will host the RICCAR Regional Knowledge Hub, and to a World Bank panel on water security in the region.

5. *Field projects*

RICCAR

34. ESCWA organized the High-level Conference on Climate Change Assessment and Adaptation in the Arab Region, which was hosted by the 11 RICCAR implementing organizations in Beirut from 26 to 28 September 2017. The conference marked the completion of the main phase of the Sida-funded project supporting RICCAR, and served as the closing meeting of the GIZ-led project on Adaptation to Climate Change in Water Sector in the MENA Region (ACCWaM). The meeting launched the RICCAR *Arab Climate Change Assessment Report* and the associated RICCAR publication series, and a training manual on climate change adaptation by applying integrated water resources management tools in the Arab region.

35. The conference was attended by over 250 experts from line ministries in Arab countries and regional and international organizations. The conference featured ministerial statements and interventions on climate change from five ministers responsible for water and the environment from Egypt, Iraq, Lebanon, the State of Palestine and Tunisia. The conference included presentations on RICCAR findings and case study findings related to extreme climate events, and the agriculture and health sectors. The findings of an integrated vulnerability assessment of different sectors, including the water, agriculture, ecosystems, human settlements and people sectors, were also presented, which built upon the RICCAR findings. The conference also showcased work on climate change adaptation developed under the ACCWaM project with GIZ support.

RICCAR publication series

36. A RICCAR publication series was launched at the RICCAR High-level Conference on Climate Change Assessment and Adaptation in the Arab Region (Beirut, 26-28 September 2017), with additional publications issued shortly thereafter. ESCWA coordinated this publication series, co-authored several of the outputs, and completed the final editing and design of all publications, including those substantively prepared by other RICCAR partners. The publication series currently includes two main reports and an executive summary, two technical notes, one training manual, six technical reports and a booklet, which are all available at www.riccar.org and are listed below:

- ESCWA and others, *Arab Climate Assessment Report: Main Report* (E/ESCWA/SDPD/2017/RICCAR/Report);
- ESCWA and others, *Arab Climate Assessment Report: Technical Annex* (E/ESCWA/SDPD/2017/RICCAR/Report/Annex);
- ESCWA and others, *Arab Climate Assessment Report: Executive Summary* (Beirut, 2018);
- Swedish Meteorological and Hydrological Institute, *Regional Climate Modelling And Regional Hydrological Modelling Applications in the Arab Region* (E/ESCWA/SDPD/2017/RICCAR/TechnicalNote.1);
- ESCWA, ACSAD and GIZ, *Integrated Vulnerability Assessment: Arab Regional Application* (E/ESCWA/SDPD/2017/RICCAR/TechnicalNote.2);

- ACSAD, GIZ and ESCWA, *Training Manual on the Integrated Vulnerability Assessment Methodology* (E/ESCWA/SDPD/2017/RICCAR/Manual);
- United Nations University Institute for Water, Environment and Health, *Climate Change Impacts on Health in the Arab Region: a Case Study on Neglected Tropical Diseases* (E/ESCWA/SDPD/2017/RICCAR/TechnicalReport.1);
- FAO, GIZ and ACSAD, *Climate Change and Adaptation Solutions for the Green Sectors in the Arab Region* (2017);
- United Nations Office for Disaster Risk Reduction, *Disaster Loss Data and Linkage to Climate Change Impacts for the Arab Region* (E/ESCWA/SDPD/2017/RICCAR/TechnicalReport.3);
- ACSAD, *اتجاهات تغيير المناخ في المنطقة العربية وأثرها على الموارد المائية* (2017);
- ACSAD and ESCWA, *Impact of Climate Change on Extreme Events in Selected Basins in the Arab Region* (E/ESCWA/SDPD/2017/RICCAR/TechnicalReport.5);
- ESCWA and others, *Arab Climate Change Assessment Report: Snapshot of Key Findings* (Beirut, 2017).

First meeting of the Arab Climate Outlook Forum (ArabCOF-1)
(Beirut, 29 September 2017)

37. The Technical and Scientific Committee of the Arab Climate Outlook Forum (ArabCOF) convened its first meeting at the United Nations House in Beirut on 29 September 2017. The meeting gathered representatives from Arab meteorological institutions who discussed the establishment of a temporary technical task force led by Egypt, with members from Morocco, Oman, Saudi Arabia and Tunisia. The task force agreed to prepare the terms of reference for the Management Group of the Arab Climate Outlook Forum. The meeting also requested the Secretary-General of WMO to provide support to the Forum, along the same lines of support provided to other regional outlook forums.

Regional Knowledge Hub

38. The Regional Knowledge Hub (RKH) has been managed by ESCWA and ACSAD since 2014. The Arab Ministerial Water Council, at its ninth session (Cairo, 6 July 2017), adopted resolution 2 of item 1 formalizing the mandate and institutional structure of RKH as follows: *Considering that the RICCAR RKH is the resource centre charged with the collection and dissemination of information on climate change and water in the Arab region. Reconfirming that the Technical and Scientific Advisory Committee of the Arab Ministerial Water Council will serve as the Governing Board of the Centre. In this regard, the joint secretariat comprised of the Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD) and the Economic and Social Commission for Western Asia (ESCWA) will provide regular reports on the work of the Centre, with FAO technical support for the data portal.* ESCWA thus reports to the Committee on Water Resources at every session on technical assistance and data provided by RKH to Arab countries. The dedicated online interface of RKH continued to be developed in 2017, with financial support provided through the GIZ/ACCWaM project and Sida project support for RICCAR.

**Developing the Capacities of the Arab Countries for Climate Change Adaptation
Using Integrated Water Resources Management Tools**

(United Nations Development Account project)

39. A training manual on developing capacities for climate change adaptation by applying integrated water resource management (IWRM) tools, developed within the framework of the aforementioned United Nations

Development Account (UNDA) project that closed in December 2016, was formally launched at the High-level Conference on Climate Change Assessment and Adaptation. The manual comprises five stand-alone modules developed by lead partners and finalized by ESCWA on agriculture (ACSAD/GIZ), the environment (UNEP), health (World Health Organization/Centre for Environmental Health Activities), human settlements (ACWUA) and economic development (ESCWA). ESCWA also prepared an introductory chapter for the manual, and a booklet.¹² These materials are available on the RICCAR RKH Regional Knowledge Node on Adaptation (<http://riccar.org/adaptation-0>).

Project on Adaptation to Climate Change in the Water Sector in the MENA Region

40. The field project on Adaptation to Climate Change in the Water Sector in the MENA Region (ACCWaM) was led by GIZ with funding from the German Federal Ministry of Economic Cooperation and Development, and implemented in partnership with the League of Arab States, ACSAD and ESCWA. The GIZ-ESCWA agreement in support of the project ended on 31 December 2017, and the GIZ-League of Arab States component of the project ended on 30 June 2018. Following a request by GIZ, the RICCAR Regional Knowledge Hub Node on Adaptation has become a repository for all ACCWaM publications.

41. GIZ-ESCWA collaboration under ACCWaM was largely directed towards supporting RICCAR and a UNDA project on Developing the Capacities of the Arab Countries for Climate Change Adaptation by Applying IWRM Tools. With respect to RICCAR, this included supporting the development of the vulnerability assessment methodology and preparing a training manual on the integrated vulnerability assessment methodology, which was first issued in 2015 and then updated as part of the RICCAR publication series in 2017.¹³ The manual provides step-by-step guidance for conducting an integrated vulnerability assessment that draws upon regional climate and hydrological modelling outputs, as well as sensitivity and adaptive capacity indicators, on a sector basis for identifying integrated vulnerability assessment hotspots by applying geospatial and statistical tools. The project also supported the High-level Conference on Climate Change Assessment and Adaptation in the Arab Region.

42. GIZ/ACCWaM also provided financial and technical support for the preparation of the RICCAR technical report entitled “Climate change and adaptation solutions for the green sectors in the Arab region”, led by ACSAD and FAO and finalized by ESCWA. The report draws on RICCAR projections, hotspots and datasets and AquaCrop to examine the impact of climate change on agricultural productivity. GIZ/ACCWaM, ACSAD with ESCWA also supported the Lebanese Ministry of Agriculture of Lebanon in preparing a case study entitled “Integrated vulnerability assessment application on the Lebanese agricultural sector” drawing from the green sector methodology. This included organizing a national consultation on the draft report (Beirut, June 2017) and supporting the Ministry to present the report’s findings at the Third Arab Water Conference (Kuwait, 3 May 2018). The case study is now being issued as a RICCAR technical report. The methodology tested and applied in this case study provided the basis for a pillar of work focused on the development of crop-specific country case studies in a Sida-funded field project being implemented by ESCWA in collaboration with the FAO and ACSAD on food and water security in the Arab region.

43. On climate change adaptation, the GIZ/ACCWaM “Guidelines for climate proofing water investments in the MENA region”, prepared in 2014, informed the drafting of an introductory chapter and economic development module prepared by ESCWA as part of the training manual on climate change adaptation using integrated water resources management tools. Collaboration on nexus-related meetings was also organized under this work cluster.

44. The final evaluation mission of the ACCWaM project was conducted by GIZ in October 2017. The GIZ evaluation mission’s “Final assessment: summary report” states: “The most visible impact that the project has

¹² E/ESCWA/SDPD/2017/BOOKLET.2.

¹³ E/ESCWA/SDPD/2017/RICCAR/Manual.

achieved is clearly the wealth of data (e.g. data stored on the cloud) and information that was generated for the elaboration of the Arab Climate Change Assessment Report”. The summary also states: “The mission notes that without the cooperation with ESCWA the project would not have been able to complete the Arab Climate Change Assessment report...The preparation of such a comprehensive report was only possible by cooperating with ESCWA, ACSAD and FAO as part of the RICCAR project, which also benefitted from the extensive support provided by the Swedish International Development [Cooperation] Agency (Sida)”.

II. IMPLEMENTATION OF THE PROGRAMME OF WORK FOR THE BIENNIUM 2018-2019 IN THE FIELD OF WATER RESOURCES

45. The following sections review water and climate change-related activities undertaken by ESCWA in support of the expected accomplishments of subprogramme 1 for the biennium 2018-2019.

A. EXPECTED ACCOMPLISHMENT (A)

Increased alignment of member States’ national plans with the Sustainable Development Goals by through drawing upon the water-energy-food nexus

1. *Studies and reports*

Moving Towards Achieving Water Security in the Arab Region (E/ESCWA/SDPD/2019/2)

46. The report presents a conceptual framework for achieving water security in the region. It considers the regional systemic conditions of water stress and scarcity, shared water and climate change that hinder the achievement of water security, through the perspective of sustainable development, where water is central to advancing the three dimensions – economic, social and environmental – of sustainable development. This is combined with a human rights-based approach to examining the implications of water security at all levels, including community and household, to ensure water security is grounded in efforts that leave no one behind. It does so in view of an enabling environment based on a set of means of implementation. The means of implementation addressed examine the interdependent mix of governance, regional cooperation, finance and investment, research and technology development, resilience and capacity-building required to achieve water security.

47. The report recommends a people-centred, participatory and human-rights approach to water security, while emphasizing the importance of considering local contexts, water resource availability and regional specificities when pursuing water security, particularly water scarcity and dependency on shared water resources. It recommends that water security be considered a priority in development planning and that integrated approaches should be pursued to encourage policy coherence across water-dependent sectors at the national and regional levels and in light of climate change challenges. The report also highlights the critical role that women play in achieving water security at all levels, and the importance of building the capacity for research, development and innovation in the water sector in the region, which can be supported through increased access to financing and improved transparency and accountability to foster an effective enabling environment.

Working paper on the implementation of integrated water resources management in the Arab region: a regional report of SDG indicator 6.5.1 on IWRM implementation (E/ESCWA/SDPD/2019/WP.2)

48. ESCWA supported and coordinated the preparation of this working paper in collaboration with the UNEP-DHI Centre on Water and Environment in Denmark, which led the preparation of the global report on SDG 6.5.1. The working paper reviews regional progress towards SDG 6.5.1 implementation with the aim of

fostering dialogue and exchange on IWRM in the region. Consultations on the working paper's findings were undertaken with Arab Governments and members of the AWARENET Working Group on IWRM. A final report will be issued following consultations with member States.

ESCWA Water Development Report 8
(under preparation)

49. The eighth edition of the Water Development Report will be issued in 2019. The publication examines monitoring and implementation of the water-related SDGs targets that can support water security in the Arab region. It will also introduce innovative approaches to cope with water scarcity at the regional and national levels by integrating SDG targets and goals in regional action plans and national water resources strategies, and by developing the required institutional setups to achieve this integration.

2. Meetings and workshops

Regional preparatory meeting on water issues for the 2018 Arab Forum on Sustainable Development and High-level Political Forum
(Beirut, 28-29 March 2018)
and
2018 Arab Forum on Sustainable Development
(Beirut, 24-26 April 2018)

50. A regional preparatory meeting on water issues for the 2018 Arab Forum on Sustainable Development (AFSD) and the High-level Political Forum (HLPF) on Sustainable Development¹⁴ was organized by ESCWA in partnership with the League of Arab States and FAO and in cooperation with the members of the HLPF Working Group,¹⁵ which was established pursuant to a Arab Ministerial Water Council resolution issued in June 2017. The meeting consolidated regional views and priorities on water-related issues facing the Arab region, and was organized as part of a joint work plan approved by the Executive Bureau of the Arab Ministerial Water Council in January 2018.

51. The preparatory meeting was attended by senior representatives from Arab countries, regional and national organizations, and civil society organizations. All members of the ESCWA Committee on Water Resources were invited to participate, as well as selected AWARENET members. At the meeting, representatives from Egypt, Jordan, Lebanon, Morocco and the State of Palestine, which were among the eight Arab countries committed to presenting their voluntary national reviews to HLPF in July 2018, shared their national experiences in monitoring and reporting on SDG 6. FAO presented a working paper on a draft SDG 6.4.3 indicator methodology for measuring and monitoring efforts to half the number of people facing water scarcity, as per the SDG 6.4 target related to water scarcity. The meeting resulted in the issuance of a joint outcome document based on consultations conducted prior and during the preparatory meeting.

52. The outcome document was submitted to and discussed at a special session focused on SDG 6 at the 2018 Arab Forum for Sustainable Development (Beirut, 24-26 April 2018), which was organized in partnership with all HLPF Working Group members. The outcome document was also presented by ESCWA at the tenth session of the Arab Ministerial Water Council (Kuwait, 2 May 2018), which approved the document. The document informed regional inputs to HLPF (New York, 9-18 July 2018).

¹⁴ www.unescwa.org/events/arab-preparatory-meeting-water-issues-2018.

¹⁵ The Working Group comprises representative of the League of Arab States, ACSAD, ACWUA, RAED, AOAD, the Arab Water Council, CEDARE, FAO, UNEP and ESCWA.

Symposium on women and water security for peacebuilding in the Arab region
(Beirut, 9-10 May 2018)

53. The symposium¹⁶ was organized by United Nations Department of Economic and Social Affairs, ESCWA and the Pacific Water Research Centre at Simon Frazier University in Canada. The meeting allowed for the exchange of experiences from Jordan, Lebanon, the State of Palestine, the Sudan, the Syrian Arab Republic and Yemen on ways to integrate women and water security programmes and policies at the local, national and regional levels, so as to support efforts to improve the contribution of women to peacebuilding in the water sector. A joint policy brief on women, water security and peacebuilding in the Arab region was subsequently prepared and issued based on the meeting outcomes.

Regional consultation on climate change for the 2019 Arab Forum on Sustainable Development and High-Level Political Forum
(Beirut, 21-22 March 2019)
and
2019 Arab Forum on Sustainable Development
(Beirut, 9-11 April 2019)

54. Since SDG13 on climate action is among the six SDGs of focus at the 2019 High-level Political Forum, a regional consultation on climate change for the 2019 AFSD and HLPF¹⁷ was organized in partnership with the League of Arab States to consolidate regional views on climate change issues and priorities facing the region. Over 120 representatives from member States, regional and national organizations, scientific institutions, civil society and youth groups engaged in the consultation, including members of the ESCWA Committee on Water Resources and the ESCWA Committee on Energy. Based on e-consultations prior to the meeting and working group discussions at the meeting, a joint outcome document was prepared on regional priorities related to climate change impacts, policy interlinkages, technology transfer, climate finance and capacity-building. A World Water Day special event was organized in collaboration with UNESCO at the meeting to launch the 2019 World Water Development Report focused on ‘leaving no one behind’, and to distribute promotional material prepared by ESCWA on the same topic. An interactive exhibit showcasing ESCWA work on climate change and water was also featured.

55. The finalized outcome document was presented at the 2019 AFSD and included as an annex to the AFSD meeting report, which informs the 2019 session of the High-Level Political Forum. An AFSD special session on the theme “SDG13: Advancing climate action in the Arab region” was convened at the 2019 AFSD, which drew upon the outcome document’s findings and facilitated an open dialogue on climate change, resilience and vulnerable groups, including countries facing conflict. The session was organized by ESCWA in partnership with the League of Arab States, UNDP, UNDRR, UNESCO, UN-Habitat, UNICEF, UNOPS, and the Government of Sweden. The session can be viewed at: www.youtube.com/watch?v=bJ46EDKvUOI&feature=youtu.be.

3. Field projects

AWARENET

56. ESCWA hired the services of a website management expert in January 2019 to support the updating of the AWARENET website, and to ensure the renewal of the network’s website domain (<https://awarenet.info>). Analysis of traffic metrics on the site informed improvements to the functionality of the website.

¹⁶ <https://sustainabledevelopment.un.org/?page=view&nr=2709&type=13&menu=1634>.

¹⁷ www.unescwa.org/events/regional-consultation-climate-change-2019-AFSD-HLPF.

57. An AWARENET working group on SDG 6.5.1 was launched in 2018 to support the review of the working paper on SDG 6.5.1 on IWRM implementation. Over 40 network members expressed their interest in joining the working group via its online platform.

B. EXPECTED ACCOMPLISHMENT (B)

Increased engagement by member States in regional and subregional processes in support of agreements, strategies and standards related to water, energy, food and the environment.

1. *Studies and reports*

*Overview of shared water resources management in the Arab region
for informing progress on SDG 6.5*

([E/ESCWA/SDPD/2017/Technical paper.13](#))

58. The paper supports the formulation of draft guidance principles for cooperation on shared water resources in the Arab region. It examines key international laws on the use of shared water resources and assesses their applicability to the Arab region. The paper also highlights the importance of effective cooperation mechanism for the achievement of SDG targets related to shared water resources. The report was issued in January 2018.¹⁸

*Progress on shared water resources management in the Arab region:
regional baseline for SDG indicator 6.5.2*

([E/ESCWA/SDPD/2018/WP.1](#))

59. The working paper presents a baseline for SDG indicator 6.5.2 for the Arab region and explores ways to improve transboundary water cooperation at the regional level. The paper draws upon information collected by the Economic Commission for Europe and UNESCO, within the framework of the global reporting exercise on cooperation on shared surface and/or groundwater resources under the Global Monitoring Initiative on SDG6 of UN-Water. The paper emphasizes the importance of enhancing Arab countries' participation in the second round of reporting, as only a small number of countries submitted data for inclusion in the first report. It also provides recommendations for improving reporting and regional cooperation on shared water resources in the region.

2. *Meetings and workshops*

*Expert group meeting on improving shared water resources cooperation
within the framework of global and regional agreements*

(Beirut, 6-7 December 2018)

60. ESCWA convened the meeting in collaboration with the League of Arab States. The meeting enhanced the capacity of ESCWA member States to improve transboundary cooperation on shared water resources in support of 2030 Agenda implementation at the Arab regional level. The meeting was attended by representative of Arab Governments. The first day of the meeting entailed examining opportunities and challenges for cooperation on shared water resources, taking into consideration Arab region particularities. The second day consisted of a closed meeting attended by invitation only from the League of Arab States and dedicated to discussions on the draft guidance principles for shared water cooperation, pursuant to an Arab Ministerial Water Council resolution requesting support from ESCWA and the League of Arab States in organizing this intergovernmental consultation.

¹⁸ [E/ESCWA/SDPD/2017/Technical Paper.13](#).

3. Assistance to intergovernmental bodies

*Sixteenth and seventeenth sessions of the Technical Scientific Advisory Committee
of the Arab Ministerial Water Council*

(Cairo, 24-25 January 2018; Kuwait, 29 April – 1 May 2018)

and

Tenth session of the Arab Ministerial Water Council

(Kuwait, 2 May 2018)

61. ESCWA contributed to the sixteenth and seventeenth sessions of the Technical, Scientific Advisory Committee of the Arab Ministerial Water Council, and delivered presentations and interventions on follow-up related to the services delivered by the RICCAR Regional Knowledge Hub and ESCWA member State requests asking to establish an Arab Centre for Climate Change Policies; support provided for consultations on the water-related SDGs and shared water resources management; and support provided to revise the Arab Water Security Strategy action plan and the Arab Initiative on the Energy-Water-Food Nexus in the Arab Region. ESCWA also presented the outcomes of a regional preparatory meeting on water-related issues for the 2018 AFSD and HLPF to the tenth session of the Arab Ministerial Water Council.

4. Substantive input to global and regional forums and interagency meetings

Third Arab Water Conference

(Kuwait, 2-3 May 2018)

62. The Ministry of Electricity and Water of Kuwait hosted the Third Arab Water Conference alongside the 2018 session of the Arab Ministerial Water Council. The conference featured a high-level panel comprising ministers of water from Algeria, Bahrain, Iraq and Kuwait, and the First Undersecretary of the Ministry of Water Resources and Irrigation of Egypt. ESCWA organized a session on the theme “The effect of climate change on water resources”, featuring presentations on RICCAR by ACSAD, FAO and ESCWA, and case studies from Lebanon and the State of Palestine.

UN-Water

63. ESCWA participated in the twenty-ninth meeting of the senior programme managers of UN-Water (Stockholm, 24-25 August 2018) and contributed to interagency discussion on water, climate change and regional cooperation. ESCWA also served as a panellist at the round-table discussion on the theme “Internal advocacy – promoting water and sanitation in your own organization”.

64. ESCWA also participated in the thirtieth meeting of the senior programme managers of UN-Water (Rome, 31 January – 1 February 2019). ESCWA reported on the achievements of the ad hoc Task Force on Regional Level Coordination of UN-Water, which it co-chairs with the Economic and Social Commission for Asia and the Pacific (ESCAP), and on the completion of its terms of reference. A permanent expert group on regional level coordination led by ESCWA and ESCAP was proposed, with members and partners of UN-Water invited to express their interest in joining the group and support the preparation of its terms of reference.

65. In tandem, ESCWA contributed to the UNESCO-WWAP-led World Water Development Report 2018, which focused on nature-based solutions for water. ESCWA contributed case studies featuring success stories about the revival of *hima* land and water conservation approaches in Jordan, and the efficient application of constructed wetlands for the treatment of wastewater in Egypt and Lebanon.

RCM Working Group on Water

66. Drawing upon consultations undertaken by the Task Force on Regional Level Coordination of UN-Water and on the thirteenth sectoral meeting of the United Nations and the League of Arab States and their specialized agencies on cooperation for the preservation and management of water resources in the Arab region

(Cairo, 23-25 October 2017), and their associated recommendations, RCM established the Working Group on Water in November 2017. ESCWA organized the first meeting of the Working Group, held in Cairo held on 28 to 29 November 2018, which involved nearly a dozen organizations. The League of Arab States was elected as Chair of the working group and UNESCO was elected Vice-chair. ESCWA serves as the permanent secretariat of the working group.

Fifth Arab Water Week
(Dead Sea, Jordan, 3-7 March 2019)

67. ESCWA chaired and contributed to presentations at several sessions of the Fifth Arab Water Week, which was organized by ACWUA. This included providing an intervention during the plenary session on water and peace led by the Geneva Water Hub; contributing to the UN-Water session focused on SDG 6 monitoring and reporting; presenting nature-based solutions for water in the region at a session led by UNESCO/WWAP; chairing a water security session organized by ACWUA; and delivering a presentation on RICCAR at a climate change session also organized by ACWUA.

Near East and North Africa Land and Water Days 2019
(Cairo, 31 March – 4 April 2019)

68. ESCWA contributed to the preparation and implementation of the 2019 Land and Water Days organized by FAO, by serving on panels and delivering presentations on climate change and food security. ESCWA also organized two marketplace exhibitions on food security and climate change, which featured the RICCAR Regional Knowledge Hub and an ESCWA-led project on food and water security in the Arab region, including the launching of a case-study series assessing the impact of climate change on agricultural productivity of certain crops.

69. ESCWA also collaborated with League of Arab States, FAO and AOAD to organize a joint meeting of ministers of agriculture and water resources on 4 April 2019. The meeting resulted in a Cairo Declaration that paves the way for institutionalizing coordination mechanism between the water and agriculture sectors, integrated planning, innovative financing mechanism, and a roadmap for progress follow-up and monitoring.

C. EXPECTED ACCOMPLISHMENT (C)

Strengthened resilience of member States and of vulnerable communities to climate change and natural disasters.

1. *Meetings and workshops*

Thirtieth ESCWA session – side event
(Beirut, 25-28 June 2018)

70. ESCWA organized a side event on the theme “Climate change in the Arab region: technological tools and methods to inform climate change policy” (Beirut, 27 June 2018) at the thirtieth session of the ESCWA session. The side event showcased how regional climate modelling, hydrological modelling and an integrated vulnerability assessment for the Arab region were made possible by using high-performance computing capacities and geographic information systems. The event also fostered discussion on how RICCAR scientific findings are informing climate change negotiations, policies and adaptation planning. The RICCAR Regional Knowledge Hub website was also launched at the event. The event also helped inform consultations leading to the ESCWA resolution [329 \(XXX\)](#) on the establishment of the Arab Centre for Climate Change Policies in the Arab region.

2. Assistance to intergovernmental bodies

Nineteenth meeting of the Arab Negotiations Group on Climate Change (Cairo, 4-5 February 2018)

71. ESCWA attended the nineteenth meeting of the Arab Negotiations Group. The Arab Group convenes under the auspices of the Council of Arab Ministers Responsible for the Environment (CAMRE). ESCWA is a member of the joint secretariat of the Joint Committee on Environment and Development in the Arab Region that technically advises CAMRE. ESCWA presented the latest developments achieved under RICCAR. Participants discussed various issues, such as adaptation and mitigation measures related to climate change.

Third meeting of the subcommittee on the weather and climate risk information (Cairo, 15 February 2018)

72. At the third subcommittee meeting on weather and climate hazard information management of the Arab Permanent Committee on Meteorology (APCM), ESCWA reported on meteorological services delivered under RICCAR. Participants expressed interest in the findings of the ESCWA Water Development Report 7 on linking climate change to disaster risk reduction in the Arab region to better understand the connection between the indicators of extreme climate events developed under RICCAR and factors determining disaster losses.

Second session of the Council of Arab Ministers for Meteorology and Climate Affairs (Cairo, 26 April 2018)

73. ESCWA attended the session, which focused on boosting the effectiveness and capacity of meteorological services. Participants agreed develop an Arab meteorology strategy and prepare an associated implementation plan. APCM noted its appreciation for the training provided on sand and dust storms, facilitated by WMO and ESCWA and hosted by the Egyptian Meteorological Authority in February 2018.

Twenty-second meeting of the Arab Negotiations Group on Climate Change (Cairo, 5-7 February 2019)

74. ESCWA participated in the twenty-second meeting of the Arab Negotiation Group, and informed negotiators on activities conducted through the Arab Centre for Climate Change Policies. Participants agreed on the date, venue and agenda items for inclusion in the twelfth Regional Training Workshop on Capacity Development for Climate Change Negotiations for the Arab Countries, which ESCWA will organize in coordination with the League of Arab States and in collaboration with UNEP and UNESCO.

3. Substantive input to global and regional forums and interagency meetings

Thirteenth Gulf Water Conference (Kuwait, 12-14 March 2019)

75. ESCWA participated in the thirteenth Gulf Water Conference of WSTA, which was hosted by the Kuwait Institute for Scientific Research (KISR). ESCWA delivered presentations on the impact of climate change on water resources in the Arab region. A technical workshop on the RICCAR integrated assessment methodology was held after the workshop and attended by conference participants and KISR researchers. The workshop focused on climate change assessment tools, data access and analysis, and the application of the integrated assessment using geographic information system tools.

4. Field Projects

RICCAR

RICCAR phase II consultation (Beirut, 30-31 May 2018)

76. The meeting gathered RICCAR partners and representatives of member States to conceptualize a next phase of RICCAR activities. Participants discussed prospective pillars of work related to generating further analysis of climate change impacts on water resources and socioeconomic vulnerability; improving the capacity of individuals and institutions in assessing and adapting to climate change; and facilitating access to scientific knowledge for informing policymaking and action. Partnership and operational arrangements for building upon the RICCAR regional knowledge base were also discussed.

RICCAR publication series

77. Additional reports were added to the RICCAR publication series in 2018, including the *Arab Climate Change Assessment Report: Executive Summary*¹⁹ and the following two technical reports: the ACSAD-authored report entitled “Climate change trends in the Arab region and their impacts on water resources”,²⁰ which was updated and issued in Arabic in 2018; and a report entitled “Impact of climate change on extreme events in selected basins in the Arab region”,²¹ which was prepared by ACSAD in collaboration with ESCWA.

78. Additional documents are being designed and finalized within the framework of the RICCAR publication series by ESCWA and ACSAD for issuance in 2019, including a technical note entitled “Guidelines for accessing CORDEX projections”,²² and a technical report entitled “Integrated vulnerability assessment applications on the Lebanese agricultural sector” prepared in cooperation with the Ministry of Agriculture of Lebanon. The Arabic translations of the *Arab Climate Change Assessment Report* and its executive summary will also be issued in 2019.

Regional Knowledge Hub

79. Following a request from the Water Resources Research Institute of Egypt, ESCWA and ACSAD organized a national training workshop on the application of climate change impact and vulnerability assessments at the Water Resources Research Institute (Cairo, 11-15 March 2018) within the framework of services delivered by the Regional Knowledge Hub. A total of 22 researchers from the Ministry of Water and Irrigation participated in the training, half of which were women.

80. In 2018 and 2019, requests for RICCAR-related datasets, specialized maps and presentations were received and delivered to government officials, researchers and modellers at the Ministry of Water and Irrigation of Egypt, the Ministry of Water and Irrigation of Jordan, the Ministry of Agriculture of Lebanon, the Agency for International Development in the United States of America, the International Committee for the Red Cross, the International Centre for Agricultural Research in the Dry Areas, Aria Technologies in France, Mohamed VI Polytechnic University in Morocco, and George Washington University in the United States. A request form has been developed to help respond to such requests and is available on the RICCAR website. Nine country case studies on the impact of climate change on the agricultural productivity of specific crops, which were prepared by national teams supported by ACSAD and FAO under the ESCWA-led project on food and water security in the Arab region project, also drew upon RICCAR datasets to conduct their analysis.

¹⁹ [E/ESCWA/SDPD/2017/RICCAR/Summary](#).

²⁰ [E/ESCWA/SDPD/2017/RICCAR/TechnicalReport.4/rev.1](#).

²¹ [E/ESCWA/SDPD/2017/RICCAR/TechnicalReport.5](#).

²² [E/ESCWA/SDPD/2018/RICCAR/TechnicalNote.3](#).

81. The RICCAR Regional Knowledge Hub dedicated website (www.riccar.org) was launched at the thirtieth ESCWA session. ESCWA and FAO finalized an agreement in 2018 for FAO to develop and host the data portal component of the RKH. All RICCAR datasets were sent to FAO based on a jointly agreed classification scheme and are being used to populate the site, amounting to nearly 1 terabyte of data. The test version of the RKH data portal was launched at the Land and Water Days organized by FAO in April 2019, and is available via the RICCAR website and <https://rkh.apps.fao.org>. ESCWA currently consolidates RKH advisory services, training requests and data provision under the umbrella of the Arab Centre for Climate Change Policies, which was first requested by the ESCWA Executive Committee in May 2017 and then established in June 2018 pursuant to a resolution issued at the thirtieth ESCWA session.

Second meeting of the Arab Climate Outlook Forum (ArabCOF-2)
(Cairo, 13-14 February 2018)

82. ESCWA coordinated the meeting in collaboration with the League of Arab States, WMO and the Egyptian Meteorological Authority. Representatives from meteorological authorities in the Arab region highlighted the need to enhance understanding of climate projection sources, and the importance of conducting climate assessment and monitoring on a regular basis. It was agreed that the Forum should organize and deliver training on climate data use by decision makers in concerned sectors. The Forum is supported by ESCWA through Sida support for RICCAR and is an organ of APCM.

*International Conference on Adaptation Metrics and Techniques for Water,
Agriculture and Resilient Cities*
(Benguerir, Morocco, 26-27 October 2018)

83. ESCWA and RICCAR partnered with the University Mohammed VI Polytechnic to organize the conference. Representatives from government institutions, local authorities and climate negotiators from Africa discussed state of the art techniques, metrics and monitoring tools for adaptation in the fields of water, agriculture and resilient cities. The conference was preceded by advanced courses on the theme “[Adaptation metrics and techniques for agriculture and water](#)” (Morocco, 24-25 October 2018), which were also supported by ESCWA and RICCAR, to improve technical skills in the fields of climate change assessment, adaptation and metrics for monitoring adaptation measures, with a focus on the agriculture and water sectors.

Third meeting of the Arab Climate Outlook Forum (ArabCOF-3)
(Cairo, 26-30 November 2018)

84. A third meeting of the Arab Climate Outlook Forum was organized by the League of Arab States, WMO and ESCWA, and hosted by the Egyptian Meteorological Authority. The meeting was organized in tandem with the eleventh session of the Mediterranean Climate Outlook Forum, the twentieth session of the South East European Climate Outlook Forum, and the thirteenth session of the Climate Outlook Forum for Northern Africa. Consensus on a seasonal forecast was generated at the meeting, which also fostered exchanges on the work of other climate outlook forums covering parts of the region.

External evaluation

85. An external evaluation of the core Sida project funding period for RICCAR, extending from December 2010 to December 2017, was completed on 1 June 2018. Excerpts of the evaluation report’s core findings are provided below:

- “The project is very well documented and provides numerous publications, reports and useful products of high quality in addition to e-tools released for the first time for the Arab region. The project is found to be highly relevant at the regional level. It falls in line with the 2030 Agenda for Sustainable Development and with ESCWA’s mandate to address the issues of climate change and water which are of high priority for ESCWA’s Subprogramme on integrated management of natural resources for sustainable development.”

- “The project was highly effective, as on its completion date, it had achieved most of its expected outputs: a regional knowledge hub for climate and water resource information and modelling in the Arab region is available; awareness about climate change impacts on water resources in the Arab region has been raised; geo-spatial maps are available to help convey technical material in accessible and policy relevant formats; and project information and documentation are available in hard copy form as well as through electronic and web-based media.”
- “The project’s objective was satisfactorily achieved since a consultative and integrated methodological framework was established for the region to identify the socio-economic and environmental vulnerability caused by climate change impacts on water resources, including the analysis of extreme weather events. In accordance with expectations, the project provided the member States involved with useful information and tools to improve the success rate of predictions and projections and the study of extreme weather events and climate-related disasters. The project provided a common platform to examine and address climate change impacts on the freshwater resources and their related sectors in the Arab region by serving as the basis for dialogue, setting priorities and formulating policies regarding the adaptation to climate change at the regional level. The initiative created a new synergy for exchange of experiences and views related to the impacts of climate change on water in the Arab region between ministries, specialized institutions such as meteorological institutions and so on, and created a suitable framework for the exchange of information and knowledge on water and climate change and related issues.”
- “Considering its long life-cycle, since it was initially launched in 2010, the project is found to be likely sustainable at this stage on condition that a new phase is launched to: 1) take advantage of the current momentum, 2) consolidate the results already achieved (provide operational access to the regional knowledge hub and ensure its regular updating, and empower the Arab Climate Outlook Forum), and 3) conduct additional studies such as integrated assessments and analyses of climate change and extreme events at the regional, country, basin and sector levels, and capacity building and institutional boosting activities. The project is considered to be institutionally sustainable thanks to the good ownership of the regional initiative by the policymakers of the member States involved. A further sign of sustainability is the request, and resolution adopted by ESCWA member States in 2017, to establish an Arab Climate Change Policy Centre at ESCWA.”
- “The project played a significant role in producing knowledge and information about climate change impacts on water resources available in the Arab region. Its impact is rated likely if a new phase is put in place to consolidate its achievements and to make further progress.”

86. The external evaluation also includes recommendations at the strategic and operational levels for ensuring the sustainability of the Regional Knowledge Hub and informing the way forward. These will be taken into consideration when implementing the extension period and next phase of activities.

Food and water security in the Arab region

87. ESCWA has been implementing the Sida-funded project on food and water security in the Arab region since 2015. The project supports the Arab Initiative for the Energy-Water-Food Nexus in the Arab Region and is regularly reported upon to the Arab Ministerial Water Council.

88. In 2018 and 2019, the project increased its focus on the impact of climate change on agricultural productivity, drawing upon RICCAR regional climate modelling outputs and AquaCrop. This included a series of regional workshops implemented in partnership with ACSAD and FAO, including a training workshop on the use of AquaCrop for assessing the impact of climate change on crop productivity (Beirut, 26-28 February 2018) held for 24 participants (6 women) from Iraq, Jordan, Lebanon and the State of Palestine; a training workshop on the use of AquaCrop for assessing the impact of climate change on crop productivity (Beirut, 1-3 March 2018) held for 27 participants (9 women) from Bahrain, Egypt, Morocco, the Sudan, Tunisia and Yemen.

89. The project also supported the first Joint Meeting of Ministers of Agriculture and Water, which was convened in partnership with the League of Arab States, the Arab Organization for Agricultural Development and FAO in Cairo on 4 April 2019, as a closing intergovernmental component of the FAO-led Land and Water Days. This inter-ministerial and intergovernmental mechanism is expected to support integrated policy formulation and action related to the water and agricultural sectors. The project also supports training and development of good agricultural practices in the region, which promotes water use efficiency; and food security assessments at the regional and country levels.

III. TECHNICAL COOPERATION AND ADVISORY SERVICES

90. A series of technical cooperation activities and advisory services have been provided to ESCWA member States on a demand-driven basis since March 2017. These are summarized below in two thematic clusters, with one focused on support provided to enhance water, energy and food security in the region, and the second focused on climate change and disaster risk reduction. A regional adviser on food security and a regional adviser on geographic information systems for climate change analysis were recruited in 2018 and 2019 to better respond to requests received from ESCWA member States in those areas.

A. WATER-ENERGY-FOOD SECURITY NEXUS

91. ESCWA met with representatives of the Syrian Ministry of Electricity, the Ministry of Water Resources, the Ministry of Foreign Affairs, and the International Cooperation Commission (Damascus, 19-21 February 2018) to discuss areas of technical cooperation in support of national policy and strategy formulation for the water and energy sectors. A follow-up technical cooperation meeting was organized (Damascus, 4 June 2018), which also included representatives from ministries responsible for agriculture and environment. Training on climate change and shared water resources management are among the areas where services are being delivered.

92. The Ministry of Agriculture of Lebanon requested training and support on climate change vulnerability assessment using geographic information system (GIS) tools and AquaCrop. Based on a request by the Speaker of the Lebanese Parliament, ESCWA met with the Litani River Authority in February and May 2019 to discuss capacity-building and technical support to the Authority. In addition, ESCWA met with the Lebanese Minister of Agriculture in May 2019 to discuss technical requests related to agriculture technologies, developing a new agriculture strategy, and agriculture insurance. An action plan for 2019-2020 is being developed by focal points to start implementation in July 2019.

93. As a follow-up to these consultations, Lebanese officials from several water and agricultural agencies, including the Ministry of Agriculture of Lebanon and the Litani River Authority, and Syrian officials representing ministries of water and agriculture, participated in an introductory workshop on GIS tools for climate change analysis (Beirut, 26-28 March 2019), organized by ESCWA and ACSAD within the context of delivering technical cooperation and RKH services to member States.

94. Following a request from the Ministry of Agriculture of Jordan, ESCWA is providing multidisciplinary technical advisory services to develop an integrated framework for planning and monitoring the implementation of a national food security strategy within the context of the SDGs, which considers water use and agricultural productivity. This included the organization of two workshops in Amman (10-11 December 2018; 29-30 April 2019). During an ESCWA mission to Amman in March 2019, related support was also provided to the National Agriculture Research Centre affiliated with the Ministry on developing a new five-year strategy. The strategy was endorsed by the board in April 2019 and a capacity-building workshop was organized on 24 and 25 April 2019 to help the senior team transfer strategy priorities into concept notes tailored to promote specific SDGs and food security.

95. Following a request from the Sudan, ESCWA is consulting with the Ministry of Agriculture and Forests and national counterparts to promote a value chain approach in agriculture projects, to support monitoring and evaluation of agriculture production, storage and post-harvest services, and to strengthen the awareness

services of the directorate of agriculture associations in the Ministry. A consultation mission was conducted from 25 to 29 March 2019. Requests for assistance on water and food security have also been received from Iraq, Mauritania, Morocco and Tunisia, and are in the process of elaboration.

B. CLIMATE CHANGE AND DISASTER RISK REDUCTION

96. ESCWA support to member States on climate change was expanded through the establishment of the Arab Centre for Climate Change Policies, pursuant to ESCWA resolution 329 (XXX). Technical cooperation and extrabudgetary activities related to climate change implemented after 1 July 2018 are thus reported upon as part of the activities of the Centre in a separate parliamentary document. The below sections therefore report on support provided to member States based on activities and capacity-building processes initiated and implemented prior to the establishment of the Centre.

1. *Support to Arab climate change negotiators*

97. The eighth, ninth, tenth, eleventh and twelfth regional training workshops on capacity development for climate change negotiations for the Arab countries were organized by the League of Arab States in collaboration with UNEP and UNESCO (Beirut, 10-13 April 2017); (Cairo, 9-12 October 2017); (Kuwait, 3-5 April 2018); (Cairo, 13-15 November 2018) and (Beirut, 7-8 April 2019).

98. The eighth workshop discussed the outcomes of the 2016 United Nations Climate Change Conference, the means of implementation outlined in the Paris Agreement, the transparency framework, and the engagement of Arab countries with the Green Climate Fund. The ninth workshop focused on climate finance and technology, the implications on emissions resulting from the expected withdrawal of the United States from the Paris Agreement, and associated legal and financial challenges. The tenth workshop addressed the 2018 Facilitative Dialogue and issues related to agriculture as a new item for negotiation, trade and response measures, in addition to nationally determined contributions and international cooperation. The eleventh workshop focused on response measures, carbon markets and the global goal on adaptation, as well as the Paris Agreement Work Program leading to the 2018 United Nations Climate Change Conference. The twelfth workshop discussed the Katowice climate package, and integrating response measures and co-benefits actions in compliance and transparency mechanisms and climate finance.

2. *Support to Arab meteorological services*

99. At the request of the League of Arab States and the Egyptian Meteorological Authority, which chairs APCM, ESCWA and WMO organized a [training workshop on sand and dust storms in the Arab region](#) (Cairo, 10-12 February 2018) in partnership with UNEP. The workshop was hosted by the Egyptian Meteorological Authority and conducted in collaboration with the European Organization for the Exploitation of Meteorological Satellites, the State Meteorological Agency of Spain and the Barcelona Supercomputer Centre. The meeting provided a better understanding of the multi-dimensional impact of sand and dust storms and their contribution to socioeconomic and ecosystem vulnerability. The 58 workshop participants (10 of whom were women) agreed on a set of coordinated activities to support future work at the regional level.

3. *Support to ESCWA member States*

100. At the request of the Environment Public Authority of Kuwait, ESCWA contributed to a seminar on climate change organized by the Authority (Kuwait, 2 April 2018). Over 30 experts from the Authority, KISR, research institutes and universities participated in the national seminar. Presentations and ensuing discussions focused on climate modelling and hydrological modelling projections and their associated socioeconomic vulnerability assessment at the Kuwaiti national level.

101. Following a request from the Ministry of Health and Environment of Iraq, ESCWA contributed to a workshop on the preparedness project of the Green Climate Fund in Iraq (Baghdad, 10-12 June 2018).

Discussions addressed the establishment of the Iraqi National Designated Authority, and its associated roles, responsibilities and operational guidelines. Issues and steps for the preparation of Iraqi nationally determined contributions were also discussed. Official requests were made for ESCWA support, in coordination with the Cairo Office of UNISDR, to deliver capacity-building and training on Sendai indicators reporting and new DesInventar methodologies regarding DRR parameters and linkage to climate change extreme indices developed by RICCAR.

*4. Selected requests for training and technical support implemented
under the Arab Centre for Climate Change Policies*

102. Based on a request from UNESCO, ESCWA participated in a regional meeting on climate change ethics (Cairo, 25 September 2018), and delivered presentations on RICCAR outputs related to climate change ethics, the establishment of the Arab Climate Change Policy Centre and RICCAR pillars of work.

103. Based on a request from the Higher Planning Council and the Oman Water Society, ESCWA and ACSAD contributed to the Fourth Symposium on Tropical Cyclones and Flash Floods (Muscat, 8-9 October 2018), and presented RICCAR climate change projections for the Arab region. At the meeting, representatives from Ministry of Environment and Climate Affairs and the Sultan Qaboos University expressed interest in cooperating with ESCWA on climate change work by building upon information, tools and methodologies developed under RICCAR.

104. At the request of the Ministry of Agriculture of Lebanon, ESCWA and ACSAD conducted an advanced national training workshop on the application of climate change impact and vulnerability assessments (Beirut, 26-30 November 2018) to support integrated vulnerability assessments related to specific crops. This activity was also conducted within the framework of technical support provided by RKH.

105. At the request of the Ministry of Health and Environment of Iraq, and in partnership with UNDRR, ESCWA hosted and co-organized a national workshop on Sendai framework monitor and national disaster loss accounting system and linkage of climate change and disaster risk reduction for Iraq (Beirut, 18-21 December 2018).²³

106. At the request of the Ministry of Water and Irrigation of Egypt, a half day training on climate change assessment and adaptation was delivered to young professionals who are members of the International Commission for Irrigation and Drainage, at Cairo Water Week (Cairo, November 2018).

107. In response to a follow-up request received from the Oman Water Society, ESCWA participated in the Oman Energy and Water Conference on Addressing the Energy-Water Nexus through Integrated Approaches and Regional Cooperation (Muscat, 22-24 April 2019). ESCWA delivered two seminars, one on water security and the nexus, and a second on the RICCAR integrated assessment and its findings, with a focus on case study outputs for Oman.

²³ <http://www.unescwa.org/events/sendai-framework-disaster-loss-climate-iraq>.