

Regional Cooperation for Climate Change Adaptation in the Arab Region

6th Beirut Water Week, Beirut 27- 29 March 2017

Economic And Social Commission For Western Asia



UNITED NATIONS

الاسكوا

ESCWA

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Outline

- Climate Change Impact and Vulnerability Assessment
- Climate Change Adaptation
- Supporting Arab States in Climate Change Negotiations
- Governance for Climate Change Adaptation

UN & LAS Inter-Governmental Resolutions calling for Climate Change Assessment in the Arab Region

**Arab Ministerial
Declaration
on Climate
Change
CAMRE
2007**

**Arab
Economic and
Social Summit
Resolution on
Water & Climate
Change Project
2009**

**Arab
Permanent
Committee for
Meteorology
Resolutions
2012, 2013,
2014, 2015,
2016**

**ESCWA
Ministerial
Session
Resolutions on
Climate Change,
Rio+20 follow-up
2008, 2012,
2014**

**Arab
Ministerial
Water Council
Resolutions
2010, 2011,
2012, 2013,
2014, 2015, 2016**

**ACSAD
Agricultural
Board of
Directors
Resolution
2013, 2014,
2015**

Environment

Foreign Affairs
& Planning

Water

Met

Agriculture

DRR

Climate Change Assessment

Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR)

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.

Assessment

Adaptation

Mitigation

Negotiations

RICCAR Partnerships

Implementing Partners



LAS



United Nations
Educational, Scientific and
Cultural Organization

Cairo Office



UNITED NATIONS
UNIVERSITY
UNU-INWEH



Donors



SWEDISH INTERNATIONAL DEVELOPMENT
COOPERATION AGENCY



Research Institutes supporting Climate Ensemble

- Center of Excellence for Climate Change Research/ King Abdulaziz University (CECCR/KAU) - KSA
- King Abdullah University of Science and Technology (KAUST) - KSA
- Climate Services Center (CSC) - Germany



SMHI



LAS

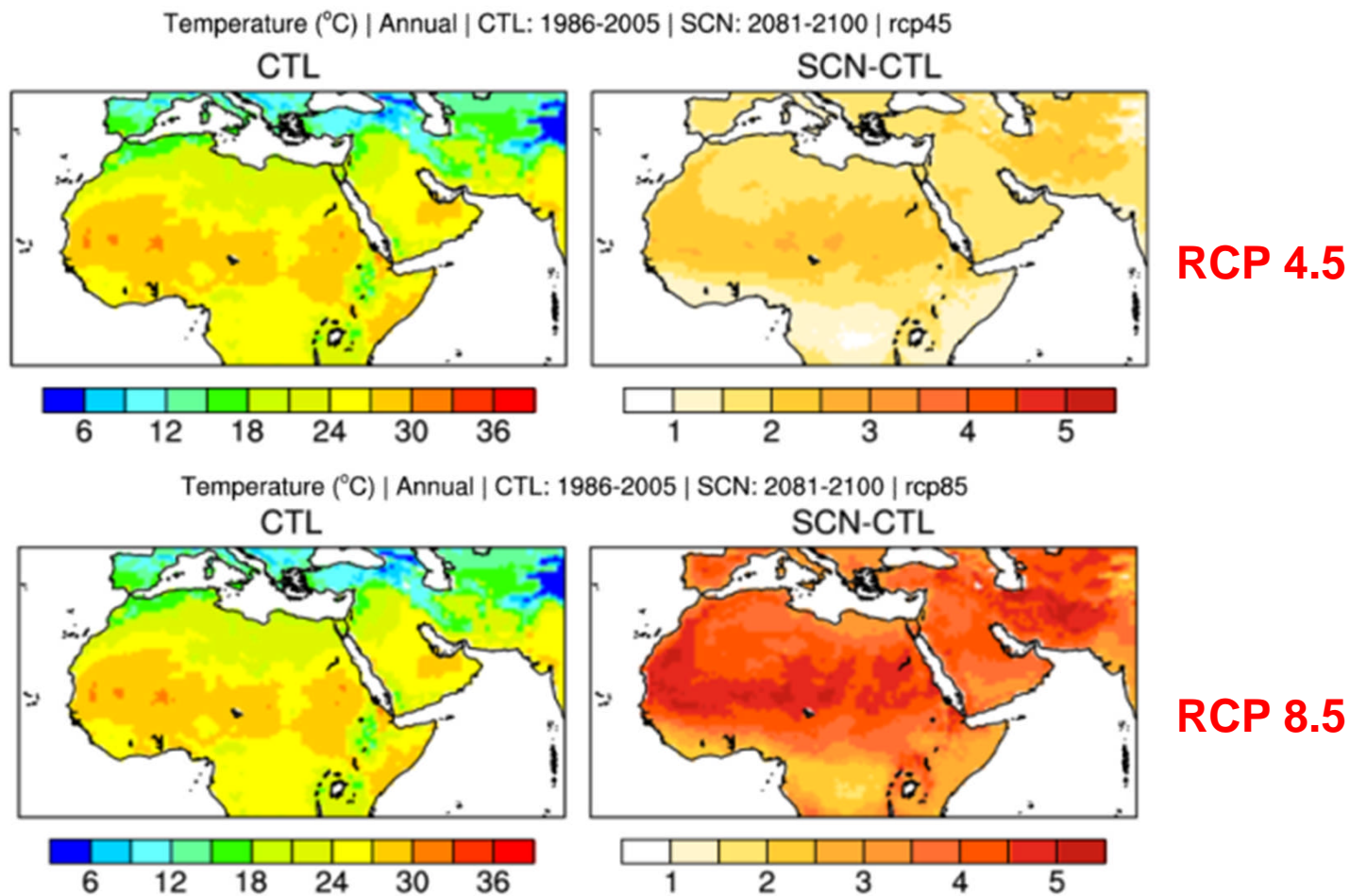


ACSAD



RICCAR

Changes in Temperature by End Century (2081-2100) Compared to Reference Period (1986-2005)



- The general change of temperature towards the end of the century shows an **increase between 1 to 3°C in RCP 4.5 and 2 to 5°C with RCP 8.5.**
- The areas showing higher increase are in the Sahara area in North Africa and East Africa, including Morocco and Mauritania.



SMHI



LAS



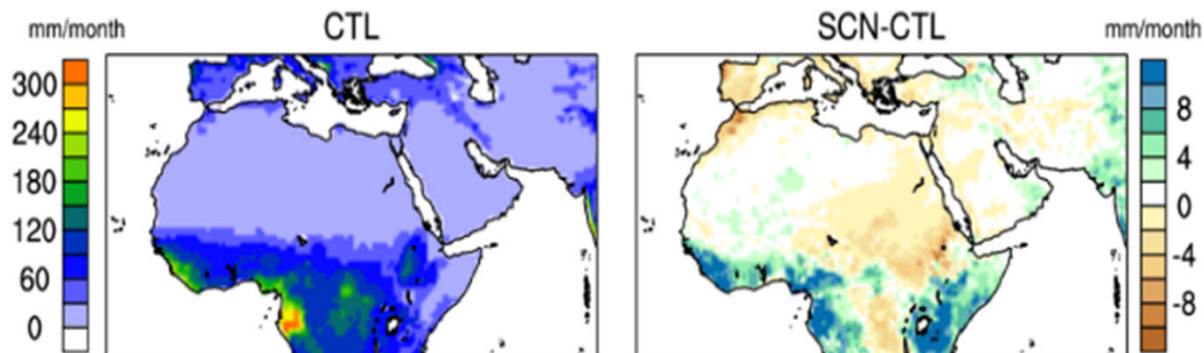
ACSAD



RICCAR

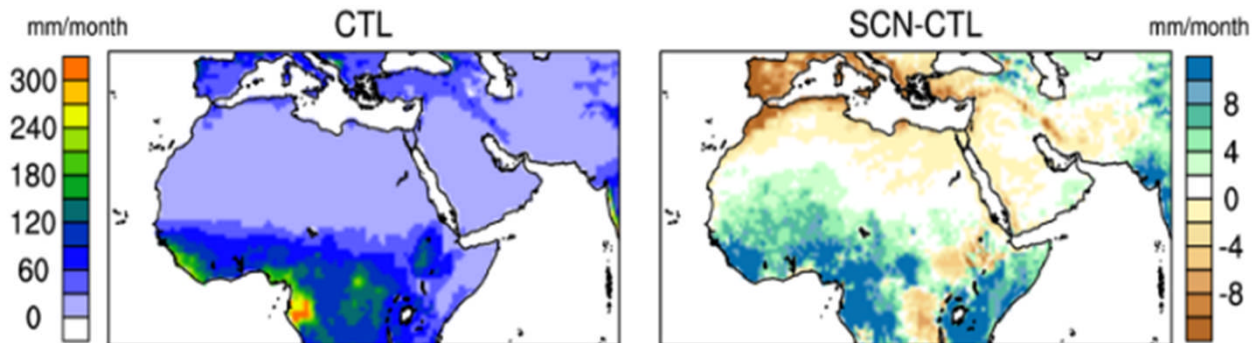
Changes in Precipitation by End Century (2081-2100) Compared to Reference Period (1986-2005)

Precipitation | Annual | CTL: 1986-2005 | SCN: 2081-2100 | rcp45



RCP 4.5

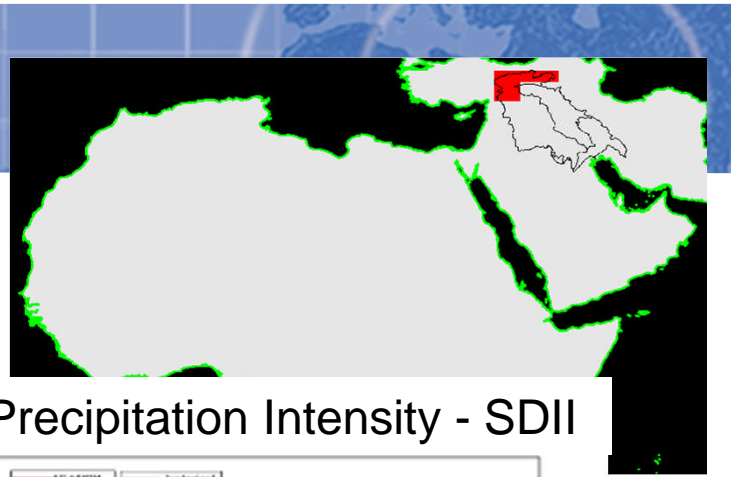
Precipitation | Annual | CTL: 1986-2005 | SCN: 2081-2100 | rcp85



RCP 8.5

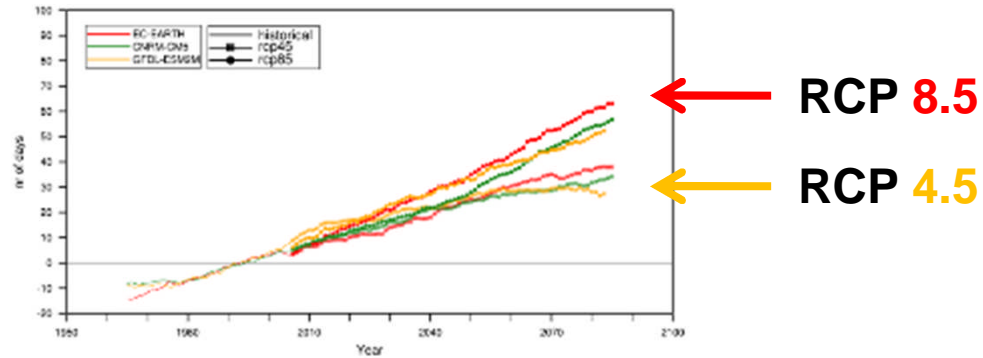
- Both scenarios show a **reduction in average precipitation reaching 8-10 mm per month in the coastal areas** of the Arab/MENA Domain
- Reduction is mainly observed around the Atlas Mountains in the West and the upper Euphrates and Tigris River Basin in the East.

Upper Euphrates River

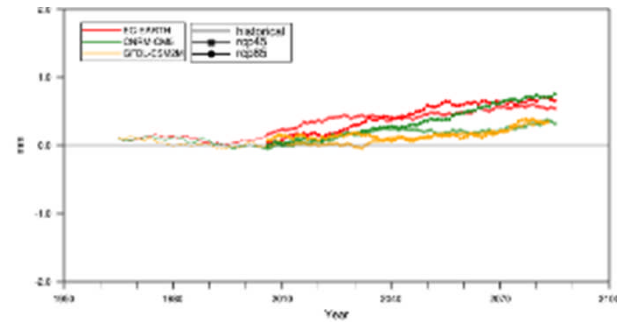


Temperature

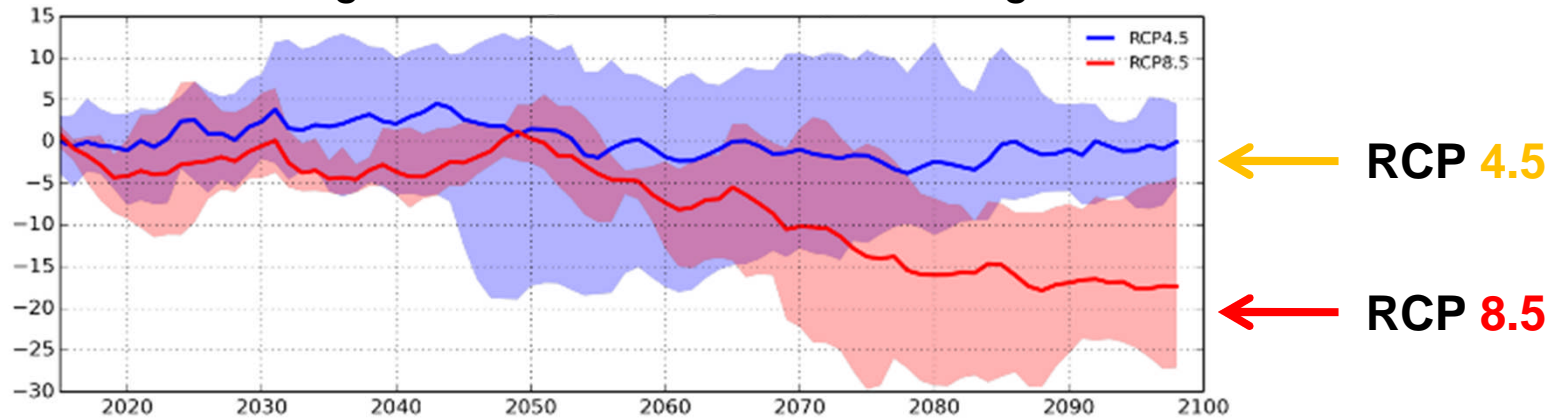
Change in number of days > 35°C



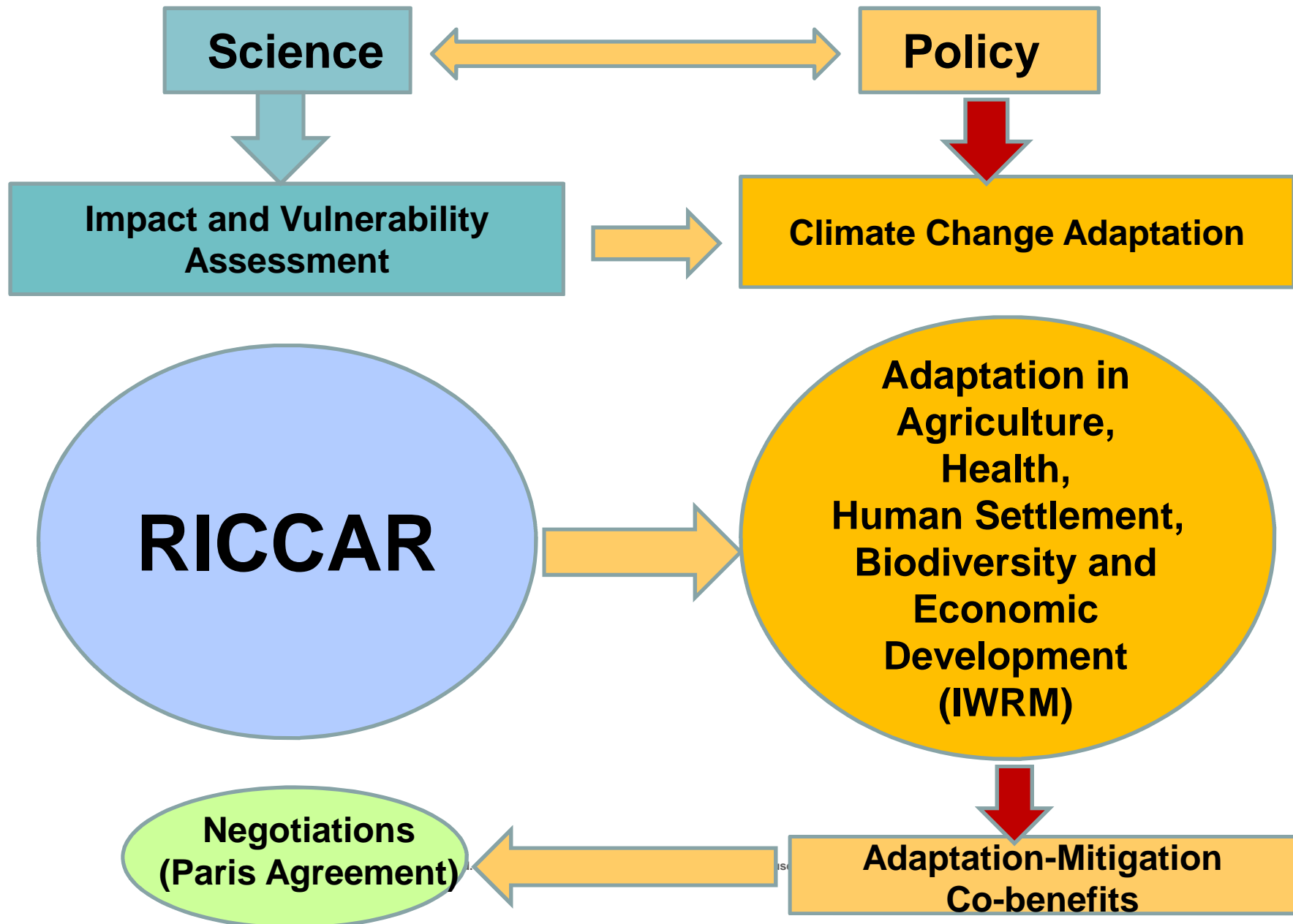
Precipitation Intensity - SDII



% Change in mean annual river discharge



Linking Climate Science to Policy, Adaptation and Mitigation



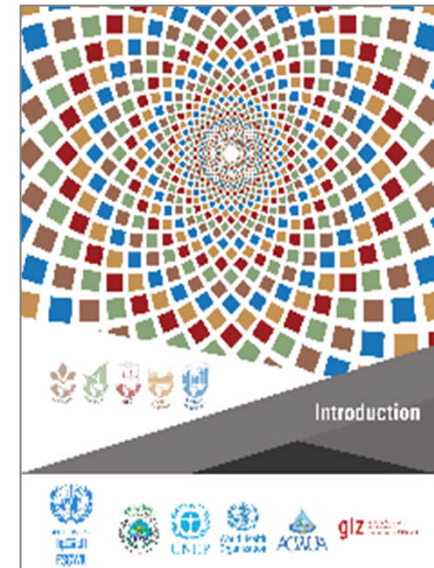
Climate Change Adaptation through IWRM

United Nations Development Account Project on Developing the Capacities of the Arab Countries for Climate Change Adaptation by Applying Integrated Water Resources Management Tools

Five sector modules were developed :

1. Agriculture module by ACSAD/GIZ;
2. Environment module by UNEP/ROWA;
3. Health module by WHO;
4. Human settlements (water supply and sanitation) by ACWUA;
5. Economic module by ESCWA as well as an introductory chapter for the manual.

Five workshops were held with stakeholders from each sector to review respective modules



Supporting Arab States in Climate Change Negotiations

Regional Training Workshops on Capacity Development for Climate Change Negotiations for the Arab Countries (since 2013)

Workshop 1: Amman (22-24 October 2013)

Workshop 2: Amman (26-28 May 2014)

Workshop 3: Kuwait (11-13 November 2014)

Workshop 4: Doha (19-21 May 2015)

Workshop 5: Cairo (17-19 November 2015)

Workshop 6: Cairo (3-6 April 2016)

Workshop 7: Rabat (25-29 September 2016)

Workshop 8: Beirut (10-13 April 2017)

These workshops examine: (1) the legal implications of the Paris Agreement, (2) enhance understanding of the UNFCCC financial mechanism, (3) discuss how to access finance through the Green Climate Fund (GCF) and (4) provide technology assistance through the Climate Technology Centre and Network (CTCN), with a view to helping States to meet the targets set out in their Nationally Determined Contributions (NDCs).



Supporting Arab States in Climate Change Negotiations

COP 21 and COP 22 RICCAR Side Events



Governance for Climate Change Adaptation

Good governance enables adaptation to climate change and relies on formal rules and procedures to:

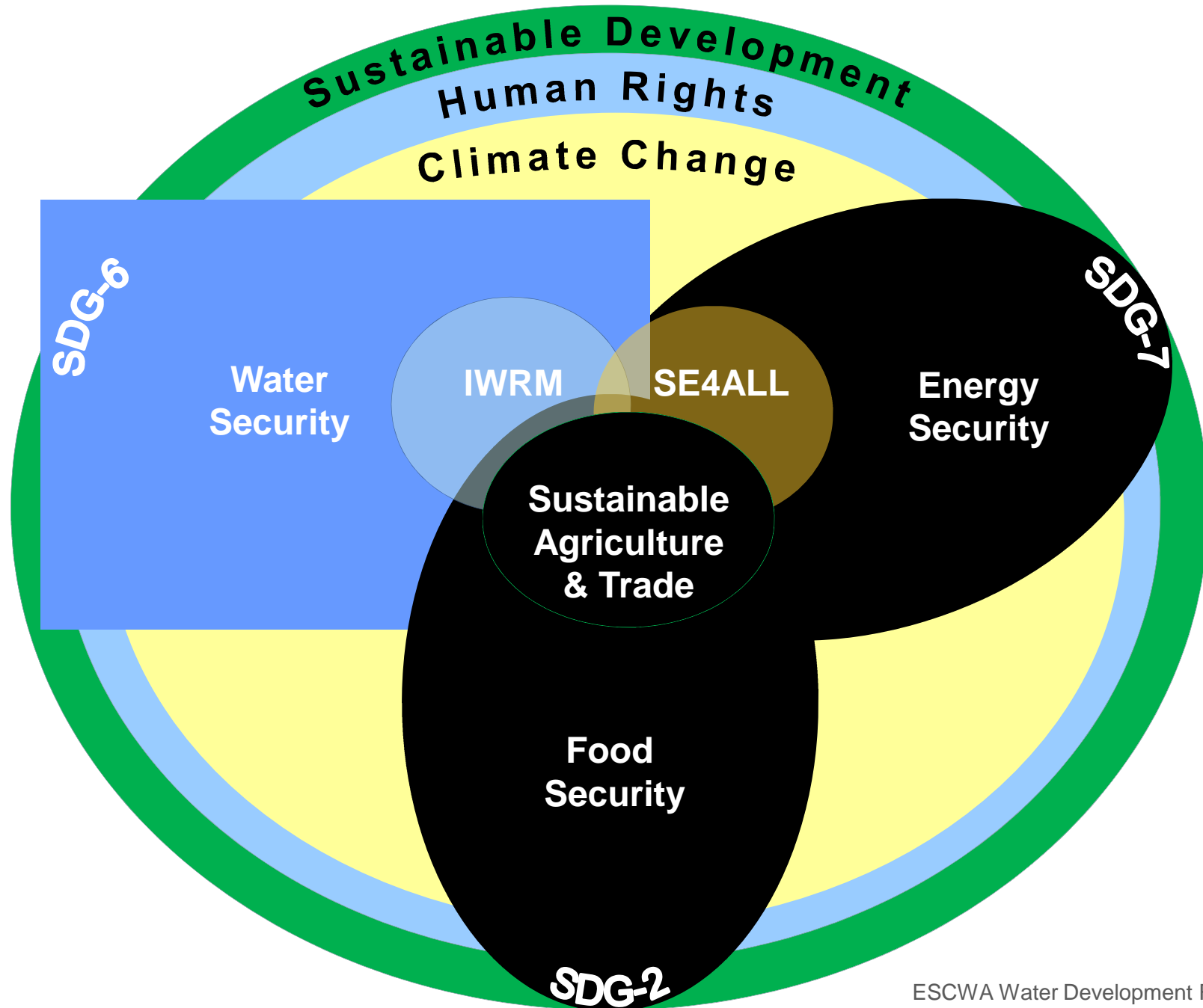
(1) Evaluate necessary decisions in light of national needs and vision. This requires:

- ✓ **transparency of information** (enhanced by formal reporting requirements, and mandated scrutiny by local stakeholders) to help identify hot spots
- ✓ **participatory environment** to ensure that adaptation measures apply to local needs and conditions
- ✓ **national strategies** that incorporate national priorities, local knowledge and experience.

Governance for Climate Change Adaptation

(2) Implement policy over time, and across the various economic sectors. This needs to be carried out with a long-term outlook, whereby resources are allocated among various sectors, subsequent to consultation with relevant stakeholder groups

(3) Maintain technical, managerial and negotiations competencies of staff, where new skills are needed to understand the impact and vulnerability assessment on national priority sectors as means for ensuring science-based decision-making related to climate change adaptation, mitigation and negotiations.



THANK YOU

www.unescwa.org/our-work/climate-change

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