Nexus Knowledge and Awareness Raising
Module 1
30/10/2016

Ziad Khayat
First Economic Affairs Officer
Water Resources Section
Sustainable Development Policies Division (SDPD)

Regional Policy Workshop on the Water-Energy Nexus
Amman, 30-31 October 2016
**Table of Contents**

Developing the capacity of ESCWA Member Countries to address the Water-Energy Nexus for achieving sustainable development goals

The Nexus

The Water-Energy-Food Security Nexus in the Arab region

Regional strategies and initiatives for operationalizing the nexus

Managing the Nexus

Dialogue and conflict resolution among stakeholders for resource allocation

Key Messages
Developing the capacity of ESCWA Member Countries to address the Water-Energy Nexus for achieving sustainable development goals
Defining regional priority areas for the Nexus

- In order to initiate intersectoral and intergovernmental dialogue on the nexus in the region, ESCWA organized an intergovernmental consultative meeting in June 2012.

- Participants included members of the ESCWA Energy Committee and the ESCWA Committee on Water Resources.

- The meeting resulted in the identification of seven priority areas:

  1) Knowledge and awareness raising on the nexus
  2) Policy coherence
  3) Examining the water-energy security nexus
  4) Improving efficiency
  5) Informing technology choices
  6) Promoting renewable energy
  7) Addressing climate change and natural disasters
Developing the capacity of ESCWA Member Countries to address the Water-Energy Nexus for achieving SDGs

- ESCWA secured funding from the United Nations Development Account to implement a project on developing the capacity of ESCWA member countries to address the water and energy nexus for achieving sustainable development goals.

The project aims to:

- Build the capacity of ministries and public service providers who are responsible for water and energy in the region, so that they adopt the nexus approach and address water and energy issues in an integrated manner.

- Assist ESCWA member States in bringing the nexus approach to the sustainable development goals in the 2030 Agenda development framework.
Developing the capacity of ESCWA Member Countries to address the Water-Energy Nexus for achieving SDGs

- The project is being pursued through 2 complimentary capacity building interventions:
  - High level officials in Ministries
  - Preparation of a regional policy toolkit
  - Regional Policy workshop
  - Three pilot activities
  - Regional knowledge exchange workshop
  - Public service providers
  - Preparation of 3 technical toolkits
  - Resource efficiency
  - Technology transfer
  - Renewable energy
  - Training workshop
## Regional Policy toolkit

- The Regional Policy toolkit is composed of 7 modules corresponding to the priorities identified by ESCWA committee members

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge and awareness raising on the nexus</td>
</tr>
<tr>
<td>2</td>
<td>Policy coherence</td>
</tr>
<tr>
<td>3</td>
<td>Examining the water-energy security nexus</td>
</tr>
<tr>
<td>4</td>
<td>Improving efficiency</td>
</tr>
<tr>
<td>5</td>
<td>Informing technology choices</td>
</tr>
<tr>
<td>6</td>
<td>Promoting renewable energy</td>
</tr>
<tr>
<td>7</td>
<td>Addressing climate change and natural disasters</td>
</tr>
</tbody>
</table>
The Nexus
The Water-Energy Nexus

Water Resources in the Arab Region

Arab region includes some of the most water scarce countries in the world. At least 13 of these countries suffer ‘absolute’ water scarcity.
Energy Demand of Water in the Arab Region

Groundwater is the major source of water in most of the Arab countries.

- Jordanian water sector accounts for \( \sim 15\% \) of total annual electricity generated
- Saudi Arabia: Groundwater pumping accounts for 10\% of total fuel consumption
- Libya: Groundwater pumping accounts for 14\% of total fuel consumption
- Bahrain: 30\% of total energy use is for desalination


Not all data are for the same year. Surface water withdrawal for Egypt was calculated based on the difference between total freshwater withdrawal and groundwater withdrawal.
Energy Resources in the Arab Region

- The region contains:
  - 55% of the world’s oil reserves
  - 27% of the world’s natural gas reserves
  - Abundant renewable energy potential

- Great divergence:
  - Energy resources endowments
  - Consumption patterns

- Rural electrification remains a challenge

- Water demand for energy sector:
  - Oil and Gas sector
  - Hydropower
  - Cooling

<table>
<thead>
<tr>
<th>Cooling Type</th>
<th>Water Withdrawal</th>
<th>Water Consumption</th>
<th>Capital Cost</th>
<th>Plant Efficiency</th>
<th>Ecological Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once-Through</td>
<td>Intense</td>
<td>Moderate</td>
<td>Low</td>
<td>Most efficient</td>
<td>Intense</td>
</tr>
<tr>
<td>Wet Cooling</td>
<td>Moderate</td>
<td>Intense</td>
<td>Moderate</td>
<td>Efficient</td>
<td>Moderate</td>
</tr>
<tr>
<td>Dry Cooling</td>
<td>None</td>
<td>None</td>
<td>High</td>
<td>Less efficient</td>
<td>Low</td>
</tr>
</tbody>
</table>
Water for Energy: Hydropower

- On the Euphrates River Basin, 8,580 MW installed capacity.

- On the Nile River Basin, hydropower potential is ~20 GW, only 26% is currently used.
Water for Energy: Oil sector

Extraction/Processing of fuels
• 16.7 to 46 litres of water per barrel of extracted oil
• 2.6 to 4 barrels of water to produce one barrel of oil from oil shale
• Processing requires 200 to 800 litres of water per ton of crude oil

Produced water
• Oman has highest water-oil ratio of between 6:1 and 10:1
• UAE has the lowest water-oil ratio of 0.35:1
The Nexus concept

- Various approaches touch on different aspects of the nexus:
  - Sustainable development
  - IWRM
  - Sustainable agriculture
  - Green economy
  - Sustainable production and consumption frameworks

- The Nexus materialized as a conceptual framework that highlights interdependencies between the water, energy and food sectors, and the need to pursue integrated management across all three sectors

- A nexus approach aims to reduce trade-offs and build synergies by considering interactions and dependencies at all stages, it enhances the efficiency of the entire system rather than increasing productivity of a specific sector often at the expense of others

- Traditionally, Nexus relationships have addressed bilateral interdependencies

- More recently, they have addressed links between at least three sectors, mainly water-energy-food, emphasizing resource management and services delivery
Selected frameworks for illustrating the natural resources nexus

Source: ESCWA, 2015
The Water-Energy-Food Security Nexus in the Arab region
ESCWA Water Development Report 6 (2015), addresses:

- ESCWA’s vision for a water-energy-food security nexus for the Arab region within the context of sustainable development
- The Nexus from a shared basin perspective
- Energy and water interdependencies for improved services
- Water and energy for food security
- Recommendations for improved integrated natural resources management

Available at: [https://www.unescwa.org/our-work/water](https://www.unescwa.org/our-work/water)
The WEF Security Nexus in the Arab Region

Elaborating a Water-Energy-Food security nexus

• Achieving water security, energy security, and food security is essential for sustainable development and requires an integrated natural resources management approach.

• Any Nexus must consider the dynamic implications of climate change.

• Operationalizing the nexus largely depends on the availability of institutions and institutional mechanisms that facilitate an integrated approach in planning and policy making.
The WEF Security Nexus in the Arab Region

**A WEF security nexus within the context of sustainable development in the Arab Region**

The formulation of a nexus conceptual framework in a 2030 Development Agenda context for the Arab region requires close consideration of the following factors:

- Scale and scope of analysis
- The institutional and policy framework for pursing a water-energy-food security nexus
- Contextualizing technology and efficiency in the nexus
The WEF Security Nexus in the Arab Region

Scale and scope of analysis

**Global level**
- Development Priorities, SDGs
- Climate Change
- Trade flows, financial regimes
- Technology Transfer

**Regional level**
- Regional specificities
- Natural resource endowments
- Geopolitics, refuge flows
- Arrangements to foster regional integration and inter-state cooperation

**National and local level**
- Balance between national security imperatives and policy dictates to satisfy WEF needs of the citizens
- Special attention to non discrimination and ensuring the right to water, food and sustainable energy for development across communities
The WEF Security Nexus in the Arab Region

**A WEF security nexus within the context of sustainable development in the Arab Region**

The formulation of a nexus conceptual framework in a 2030 Development Agenda context for the Arab region requires close consideration of the following factors:

- Scale and scope of analysis
- The institutional and policy framework for pursuing a water-energy-food security nexus
- Contextualizing technology and efficiency in the nexus
The WEF Security Nexus in the Arab Region

The institutional and policy framework for pursing a water-energy-food security nexus

• The main challenge lies in defining the WEF security nexus within an institutional framework that has divergent definitions of what constitutes security at the regional, national and sectoral levels.

➢ A human rights-based approach can provide a common set of principles on which policy deliberations and positions can be based across institutions and sectors.
The WEF Security Nexus in the Arab Region

The policy framework for pursing a WEF security nexus

• The WEF security nexus from a people-centered approach is consistent with efforts to promote a human rights-based approach to development as adopted by the United Nations, which stipulates that the

• “human rights standards contained in, and principles derived from, the Universal Declaration of Human Rights and other international human rights instruments guide all development cooperation and programming in all sectors and in all phases of the programming process”
The WEF Security Nexus in the Arab Region

The policy framework for pursing a WEF security nexus: The Right to Food

• The United Nations General Assembly in the Universal Declaration of Human Rights (1948):
  • “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control”

• United Nations Committee on Economic, Social, and Cultural Rights (1999):
  • “The right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement”

• Human Rights Council (2008):
  • “… reaffirms the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger, so as to be able to fully develop and maintain his or her physical and mental capacities”
The WEF Security Nexus in the Arab Region

The policy framework for pursing a WEF security nexus: The Right to Water

• The United Nations Water Conference (Mar del Plata, Argentina, 1977) was the first world conference to declare that:
  • “all peoples, whatever their stage of development and social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs”

• United Nations General Assembly resolution 64/292 (July 2010):
  • “Recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights”

• United Nations Human Rights Council resolution 15/9 (October 2010):
  • “Affirms that the human right to safe drinking water and sanitation is derived from the right to an adequate standard of living and inextricably related to the right to the highest attainable standard of physical and mental health, as well as the right to life and human dignity”
The WEF Security Nexus in the Arab Region

The policy framework for pursing a WEF security nexus: The Right to Development

• General Assembly’s Declaration on the Right to Development (1986)

• The declaration focuses on establishing development as an inalienable human right that covers economic, social, cultural and political development,

• Article 8 asserts: “
  • States should undertake, at the national level, all necessary measures for the realization of the right to development and shall ensure, inter alia, equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income. Effective measures should be undertaken to ensure that women have an active role in the development process. Appropriate economic and social reforms should be carried out with a view to eradicating all social injustices”
The WEF Security Nexus in the Arab Region

The policy framework for pursing a WEF security nexus: Human Rights and Climate Change

• The United Nations Human Rights Council (2014) has adopted a resolution on the links between human rights and climate change

• “emphasizing that the adverse effects of climate change have a range of implications, both direct and indirect, for the effective enjoyment of human rights, including, inter alia, the right to life, the right to adequate food, the right to the enjoyment of highest attainable standard of physical and mental health, the right to adequate housing, the right to self-determination, the right to safe drinking water and sanitation and the right to development, and recalling that in no case may a people be deprived of its own means of subsistence”
The WEF Security Nexus in the Arab Region

**The policy framework for pursing a WEF security nexus: The Arab Region**

The Arab Charter on Human Rights entered into force in 2008. The Charter refers to the rights to water and food specifically in the following two articles:

- Article 38: “Every person has the right to an adequate standard of living for himself and his family, which ensures their well-being and a decent life, including **food**, clothing, housing, **services** and the right to a healthy environment. The State Parties shall take the necessary measures commensurate with their resources to guarantee these rights;”

- Article 39 in parts 2.e and 2.f: “The measures taken by States shall include the following: Provision of **basic nutrition and safe drinking water for all**” and “Combating environmental pollution and providing proper sanitation systems”
The WEF Security Nexus in the Arab Region

The policy framework for pursing a WEF security nexus: The National level

• Several Arab countries have recognized the right to water and food in their constitutions

• Morocco (2011), article 31:
  “The State, the public establishments and the territorial collectivities work for the mobilization of all the means available to facilitate the equal access of the citizens to conditions that permit their enjoyment of the right: – to the access to water and to a healthy environment”

• Tunisia (2014), article 44:
  “The right to water shall be guaranteed”

• Egypt (2014), article 79:
  “Each citizen has the right to healthy, sufficient amounts of food and clean water”
Elaborating a WEF security nexus within the context of sustainable development

The WEF security nexus within the context of human rights and the SDGs

As a visionary aim, this approach to the nexus considers food, water, sanitation, and energy as inalienable rights that should be prioritized during policy formulation processes drawing upon a nexus analytical framework, and extended to the planning, implementation and monitoring of the Sustainable Development Goals (SDGs) in the 2030 Development Agenda.

The right to water

The right to food

The right to development (requires access to energy)
Elaborating a WEF security nexus within the context of sustainable development

The WEF security nexus within the context of the SDGs

• 2030 Agenda for Sustainable Development include 17 SDGs and 169 targets

• SDGs:
  • Universal
  • Integrated and indivisible
  • People-centered
  • Seek to achieve gender quality and empowerment of all women and girls
  • Balance the 3 dimensions of sustainable development: the economic, social and environmental

• It was declared in the 2030 Agenda that:
  • “interlinkages and integrated nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new agenda is realized”

• The integrated nature of the SDGs matches well a nexus approach that specifically considers the numerous links between sectors
The WEF Security Nexus in the Arab Region

The WEF security nexus within the context of the SDGs: The core SDGs

2. **ZERO HUNGER**
- End hunger, achieve **food security** and improved nutrition and promote **sustainable agriculture**

6. **CLEAN WATER AND SANITATION**
- Ensure availability and **sustainable management** of water and sanitation **for all**

7. **AFFORDABLE AND CLEAN ENERGY**
- Ensure access to **affordable, reliable, sustainable** and **modern energy** **for all**
The WEF security nexus within the context of the SDGs

• Several connections exist beyond the three core WEF SDGs and their targets

• A Nexus lens helps identify these connections

• Governing bodies can use a nexus framework to ensure the interdependencies among SDGs and sectors are accounted for in strategy and policy formulation

• The water-energy-food nexus approach may also provide a cross-check on how progress in some thematic targets affects others
The WEF Security Nexus in the Arab Region

**A WEF security nexus within the context of sustainable development in the Arab Region**

The formulation of a nexus conceptual framework in a 2030 Development Agenda context for the Arab region requires close consideration of the following factors:

- Scale and scope of analysis
- The institutional and policy framework for pursuing a water-energy-food security nexus
- Contextualizing technology and efficiency in the nexus
The WEF Security Nexus in the Arab Region

Contextualizing technology and efficiency in the nexus

• Technology can help to expand the available natural resource base in order to achieve WEF security.

• Technology presents an important factor for increasing resource availability through efficiency improvements, the application of new knowledge or investments in new ways of doing business.

• The evaluation of technology options to achieve efficiency improvements within the WEF security nexus should not only aim at achieving efficiency gains, but be aligned with the human rights-based approach articulated in the SDGs.
The WEF Security Nexus in the Arab Region

Climate change and the WEF security nexus

- ESCWA is coordinating the Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR) which is being implemented in partnership with the League of Arab States and 11 regional and international organization and three climate research institutes.

- The effects of climate change do not hit a particular sector and country, but much rather resonate across a wide spectrum.

- The WEF security nexus approach has the potential to effectively harmonize these interactions across sectors and countries.
Regional strategies and initiatives for operationalizing the nexus
The institutional and policy framework for pursing a WEF security nexus in the Arab Region: Water Security

• In 2011, the Arab Ministerial Water Council (AMWC) of the League of Arab States adopted the Arab Strategy for Water Security in the Arab Region to Meet the Challenges and Future Needs for Sustainable Development 2010-2030.

• The main goal is to meet the sustainable development challenges by means of a work plan that tackles several aspects of water resources management, such as capacity building, research and development, provision for drinking and irrigation water services, unconventional water resources, and IWRM.
Regional strategies and initiatives for operationalizing the nexus

The institutional and policy framework for pursing a WEF security nexus in the Arab Region: Food Security

• In 2007, the Riyadh Arab Summit approved the **Strategy for Sustainable Arab Agricultural Development** for the Upcoming Two Decades (2005-2025), which was adopted by the ministers of agriculture in the Arab region with the support of the Arab Organization for Agricultural Development (AOAD).

• The strategy’s main objective is agriculture development characterized by effective resource utilization capable of achieving **food security** while securing **sustainable livelihoods** in the agricultural sector.
Regional strategies and initiatives for operationalizing the nexus

The institutional and policy framework for pursing a WEF security nexus in the Arab Region: Energy Security

• The third Arab Economic and Social Development Summit in Riyadh in January 2013 approved and ratified the Pan-Arab Strategy for the Development of Renewable Energy Applications: 2010-2030

• The strategy’s main objectives are:
  • Maximizing the utilization of abundant renewable energy,
  • Diversifying of energy sources to improve energy security,
  • Availing the required energy resources and services necessary to support development,
  • Improving longevity of regional oil and gas reserves, and,
  • Reducing the environmental impacts associated with traditional oil and gas usage
Regional strategies and initiatives for operationalizing the nexus

Arab Initiative on the Water, Energy and Food Security Nexus

• Pursuing a regional initiative on the nexus, the League of Arab states, with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), organized a dialogue during the 2014 South-South Arab Development Expo which outlined components of a regional initiative on the nexus

• This led to resolutions by the Arab Ministerial Water Council (AMWC) and the Arab Ministerial Council of Electricity (AMCE) inviting the League of Arab States, GIZ and ESCWA to solicit funding to implement nexus-related activities and studies in support of the regional initiative, and to organize meetings for Arab experts on nexus-related priorities

• Under this initiative, GIZ initiated a project to prepare policy briefs on the water, energy and food nexus, these were launched in 2016
Regional strategies and initiatives for operationalizing the nexus

Promoting food and water security through cooperation and capacity development in the Arab region

• Within the context of the regional Arab initiative, ESCWA is implementing the project entitled “Promoting food and water security through cooperation and capacity development in the Arab region” with regional partners and the financial support of the Swedish International Development Cooperation Agency (Sida)

• The project supports cross-sectoral dialogue among water and agricultural stakeholders
Regional strategies and initiatives for operationalizing the nexus

**Promoting food and water security through cooperation and capacity development in the Arab region**

i. Enhance national capacities of the agriculture and water sectors in the area of impact assessment of climate change on water and agricultural production

ii. Support the development of an institutional mechanism to enhance coordination between the agriculture and water sectors at the regional level

iii. Support the development of an institutional framework for an Arab-GAP, with the aim to improve food production, safety, and trade

iv. Support the development of a monitoring system for food security in the Arab countries, taking into account global processes, like the 2030 Agenda for Sustainable Development, and the SDGs
Managing the Nexus
Managing the Nexus

• Several Arab countries have existing institutions that manage two or more sectors such as Bahrain, Kuwait, Lebanon, Morocco, Qatar, Saudi Arabia, Sudan, etc…

• However, the challenge is cross-sectoral integrated planning which requires political commitment and scientific backing

• Keys to a nexus approach success:
  • Participatory approach
  • Solid understanding of the sectoral linkages
  • Bridging the planning divide between sectors
  • Unified and coherent agenda
  • Strong commitment to the nexus paradigm at practice level
Managing the Nexus: Identifying areas of cooperation

• Develop a shared decision-making process for nexus issues based on a common national vision or set of goals

• The SDGs for example are common values that can solicit agreement
Managing the Nexus:
Bridging the Sectors Gap

- Senior officials to **set an example**, visibly working together to establish a collaborative culture across sectors

- Senior officials **committing to action**, availing themselves, or necessary staff time and resources, as part of nexus planning

- **Identify counterparts** with similar duties in other sectors, and establish working groups. Intersectoral institutional mapping may be needed at least at functions level

- Organize **regular scheduled meetings** to discuss intersectoral issues or present updates

- Implement intersectoral **staff exchange programmes**, where staff from different sectors visit each other’s institution to learn of opportunities for cooperation

- Arrange for **intersectoral training programmes** of interest to people from the various sectors. This provides an opportunity to interact and improve knowledge of nexus links
Managing the Nexus: Bridging the Information Gap

• Lack of:
  • Water accounting in Energy sector
  • Energy accounting in Water sector

• Information and data must be:
  • Of good quality
  • Available and accessible
  • At an appropriate resolution

• A clear data management plan or protocol increases confidence between nexus parties
Managing the Nexus: Bridging the Information Gap

• Scientific community to produce timely knowledge that addresses regional and national issues in a manner useful to policymakers

• Policymakers must effectively share relevant information with scientific community

• Build common understanding of priorities

• Reliable information → useful knowledge → good policy making
Managing the Nexus:
Nexus Programming Process
Managing the Nexus:
Regional nexus knowledge hub

• Regional nexus knowledge hub

• Requires:
  • Physical structure
  • Sustainable institutional set-up for continuity
  • Resources for collecting information and follow-up

• Possible platform for a community of practice on the nexus
Managing the Nexus:
Raising awareness on the nexus

• Raise awareness to **garner support** for nexus plans, policies and initiatives
• Raising awareness within sectors and government institutions:
  • **Capacity-building activities**, such as workshops, conferences, education and e-learning
  • **Staff knowledge sharing** between and within sectors
• Involve the education sector at all levels
  • Schools: curriculum material
  • Universities: interdisciplinary programmes
  • Vocational levels: specialized programmes
• With the industrial, commercial and agricultural sectors
  • Targeted programmes with **specialized messages**
  • Visible pilot projects and outreach programmes relaying the benefits, preferably economic
• For the public
  • Awareness campaigns with **tangible messages** that are interesting to the consumer
  • Nexus messages, combined water and energy saving campaigns
• Regularly reinforce any awareness activity
• Gradual build-up of awareness:
  • Simplify initial messages and work to build knowledge after acceptance has been secured
Dialogue and conflict resolution among stakeholders for resource allocation
Dialogue and conflict resolution among stakeholders for resource allocation

- Political, socioeconomic and security realities faced by countries often complicate the implementation of nexus solutions.

- Knowing how to negotiate these obstacles with appropriate tactics and strategies can help policymakers overcome zero-sum perspectives and increase the chances of unified nexus policies.

- Negotiation within the water-energy nexus is a matter of balancing the competing inputs and uses of water and energy resources to achieve mutually acceptable and sustainable management policies.

- Negotiations are important to the success of the water-energy nexus and should be considered integral to the policymaker toolkit.

- Develop common standards, particularly around data, and establish standards prior to entering negotiations, to build trust.
Basic negotiation terms

<table>
<thead>
<tr>
<th>Adversaries or parties</th>
<th>actors involved in conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>implicit or explicit standpoints or objectives towards which all tactics and strategies are directed</td>
</tr>
<tr>
<td>Interests</td>
<td>an actor’s true, core objectives</td>
</tr>
<tr>
<td>Options</td>
<td>alternative acceptable agreements that can be used as bargaining</td>
</tr>
</tbody>
</table>

- **Adversaries**, or **parties**, discuss distinct **positions** with one another to advance and secure their **interests** in a mutually acceptable manner.

- **Options**, or alternative agreements, allow **adversaries** to make acceptable trade-offs to achieve their core **interests**.

- An effective negotiator must evaluate his or her counterpart’s **positions** and **interests** from the outset to determine whether **options** are realistic and achievable.
Conflict management approaches

<table>
<thead>
<tr>
<th>Prevention</th>
<th>active planning to identify potential causes of conflict, and attempting to neutralize or minimize them</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance</td>
<td>reaction in which parties do not address the core causes of conflict and instead, agree upon incompatible or non-substantive positions; perhaps because no solutions are apparent or for psychological reasons</td>
</tr>
<tr>
<td>Settlement</td>
<td>aims to alter the symptoms as opposed to the root causes of a conflict, significantly increasing the likelihood of the conflict resurfacing; often arbitrated by a third party</td>
</tr>
<tr>
<td>Resolution</td>
<td>mutually acceptable and sustainable agreement that confronts and solves the root causes of the conflict, typically in one of two ways: legal obligations or informal channels</td>
</tr>
</tbody>
</table>

- Ultimate goal of negotiation is to achieve either resolution or, if this proves unfeasible, settlement, other possible outcomes include prevention and avoidance.

- A common way to prevent conflict is agreement on common values such as human rights to water, food and development or the achievement of the SDGs.

- Policy incentives (typically economic) are also highly effective at preventing conflict.

- Develop common standards, particularly around data, and establish standards prior to entering negotiations, to build trust.
Preparation, strategy and tactics

• The most important stage of negotiations is the preparation done beforehand to articulate interests, develop a **strategy** and formulate **tactics**

• **Tactics** are smaller manoeuvres focused on short-term objectives

• **Strategy** is the broad, overarching and stable set of goals directed to advance the party’s interest

• Preparation for negotiations takes place at three levels:
  • **Policy**: for instance at the resource department of a ministry, authorities define the institution’s core interests and communicate them to a negotiating team
  • **Team**
  • **Individual**
Preparation, strategy and tactics

• At policy level, six recommended steps that policymakers should complete when preparing for negotiations

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Compile and analyze your counterpart’s positions and interests</td>
</tr>
<tr>
<td>2</td>
<td>Review relevant water and energy resources information</td>
</tr>
<tr>
<td>3</td>
<td>Evaluate options and scenarios based on above assessments</td>
</tr>
<tr>
<td>4</td>
<td>Nominate a skilled and reliable head of delegation and other members, including technical and legal advisors when necessary</td>
</tr>
<tr>
<td>5</td>
<td>Convert overall policy and interest into a negotiation strategy</td>
</tr>
<tr>
<td>6</td>
<td>Ensure members of the term know the adversary’s language (often overlooked)</td>
</tr>
</tbody>
</table>
Preparation, strategy and tactics

• **At the team level:**
  • Ensure the strategic objectives have been *clearly communicated* to all members
  • All team members have been *adequately trained*

• **For the head of delegation:**
  • Understands what is expected of her or him
  • A written mandate

• Some questions that the head of delegation should address prior to negotiations:
  • What are the top, middle and low priority objectives of the adversary?
  • How do your party’s tactics match with the above?
  • How can you get relevant information and how does this data compare with that of your adversary?
  • What is the expected timeline; yours and that of your adversary?
  • When and how will you mobilize your team to rehearse roles and tactics?
  • What kind of information-loop will be designed among team members?
  • Does the adversary have experienced negotiators?
  • Where is a neutral, agreeable venue for negotiations to take place?
Deadlock

In case of Deadlock:
• Address the smaller, less contentious issues
• and/or introduce a neutral third party
• Prepare for the possibility of a deadlock by developing a best alternative to a negotiated agreement (BATNA), or the optimal result expected if negotiations break down

BATNA is helpful because it establishes a defined baseline of what is acceptable. Anything less than that minimum would justify walking away.

The four steps to evaluating a BATNA include:
• List alternatives
• evaluate these alternatives
• create the BATNA based on these alternatives
• and calculate the reservation value, or the lowest-valued deal acceptable

Reservation value options:
• Value of the deal < the reservation value → reject the offer → choose the BATNA
• Value of the deal > the reservation value → accept the offer
Key Messages

• The 2030 Agenda is well supported by the water-energy-food security nexus approach

• A people-centred approach to development, guided by human rights on access to water, food and development, and the adverse effects of climate change on the enjoyment of these rights, can provide the basis for a nexus framework in the Arab region

• The success of a nexus approach hinges on establishing clear dialogue between sectors, backed by political will based on common values such as achieving sustainable development. This can be supported by raising awareness

• Policies and plans must be based on clear scientific evidence that necessitates greater efforts to use nexus specific data

• A regional nexus knowledge hub can serve as a nucleus for a community of practice on the nexus

• Synergies and trade-offs are normal with any nexus framework

• Dialogue is crucial among the various water-energy-food security nexus partners

• The level of coordination and collaboration between the water and energy sectors in all stages of planning and implementation must be increased

• Negotiation skills and team-building must not be overlooked as tools for resource allocation within the nexus framework
Thank you

Ziad Khayat
First Economic Affairs Officer
Water Resources Section
Sustainable Development Policies Division (SDPD)