

**The 6th ESCWA Technology Centre (ETC)
Technical Committee Meeting (Expert
Group Meeting)**

Amin Shaban

National Council for Scientific Research,
Beirut, Lebanon

**Amman, Jordan,
2-3 October 2018**

The National Council for Scientific Research (CNRS)

- It has been established in 1962, and assigned to formulate national science and technology policy and initiating scientific research programmes.
- It is reported directly to the President of the Council of Ministers.
- The main goal is to encourage scientific research and support human resources development along the general scientific policies adopted by the government. It is also committed to keep the scientific community in Lebanon connected with advances achieved worldwide, at the same time dedicate its resources to meet local development objectives.

Mission and Purpose of CNRS

- **Draw the general outline of a national science and research policy.**
- **Advise the government on any issue concerning science and national science policy.**
- **Carry out surveys and inventories of on-going research.**
- **Formulate work programs in cooperation with the concerned ministries and the private sector.**
- **Initiate and encourage scientific research in the theoretical and applied aspects of basic, social and behavioral sciences.**

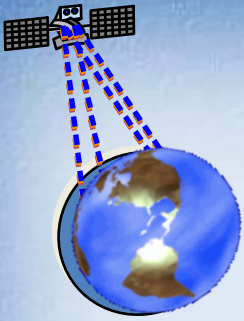
The National Council for Scientific Research (CNRS)

- **In 2006, the Science, Technology and Innovation Policy (STIP) was launched by CNRS and adopted by the Presidency of the Council of Ministries.**
- **STIP identified some of the most pressing social needs and formulated priority scientific research programmes; linking together and stressing partnerships within identified socio-economic needs and with qualified human resources.**
 - ◆ *National Center for Marine Sciences*
 - ◆ *National Center for Geophysics*
 - ◆ *National Center for Remote Sensing*
 - ◆ *Lebanese Atomic Energy Commission*

CNRS Programs and Activities

In parallel, the CNRS supports national, regional and international research in Lebanon through the following programs & activities:

- Grant Research Program**
- Associated Research Units Program**
- Regional Grant Research Programs**
- PhD Scholarship Program**
- Undergraduate Scholarship Program**
- CNRS Awards for Research Excellence & Research Career Excellence**
- International Collaboration, Projects and Platforms**
- Publications and Visibility (Lebanese Science Journal – LSJ, CNRS Books, & CNRS-L Bulletin)>**



Remote Sensing Center

Systems

Sectors

Satellite Image Processing

GIS

GPS

Training Rooms

Soil

Water

Geology

Natural Hazards

Operational Room (Monitoring System)

Agriculture

Environment

Biodiversity

Available data and Instruments at RSC

**Satellite
Images**

**Image
Processing and
GIS softwares**



Aerial photos

**Differential
GPSs**

**Topographic Maps
(Digital & HC)**



**Plotters &
Digitizers**

**Geologic and Soil
Maps
(Digital & HC)**



**Land Cover/ Use Maps
(Digital & HC)**

**ASD-Spectro-
radiometer**



**Water Testing
Sondes**

**Meteorological
stations**

**Hydrologic &
Climatic Records**

Projects on Water Resources

Project Title	Dates	Partners	Source of Funds
Airborne Thermal Infrared Survey to Identify Submarine Springs along the Northern Coastline of Lebanon	1997-2000	CNRS, GORS, Ministry of Water Resources	Ministry of Water Resources
Assessment of Natural Resources in the Karstic Coastal Mediterranean	1998-2001	Mediterranean countries	European Commission
Application of Remote Sensing in Studying the Hydrogeology of Occidental Lebanon	2000-2002	CNRS, GORS,	CNRS, GORS,
Design a Co-operative Ecosystem Management Protocol for the Sustainable Development of the Akkar Watershed of Lebanon and Syria	2001-2003	IDRC, CNRS, GORS	IDRC
Sustainable Management of Scarce Resources in the Coastal Zones	2002-2006	Mediterranean countries	European Commission
Ecosystem Approach to the Sustainable Management of the Litani Watershed	2003-2007	IDRC, CNRS, LRA, DSA	IDRC

Projects on Water Resources

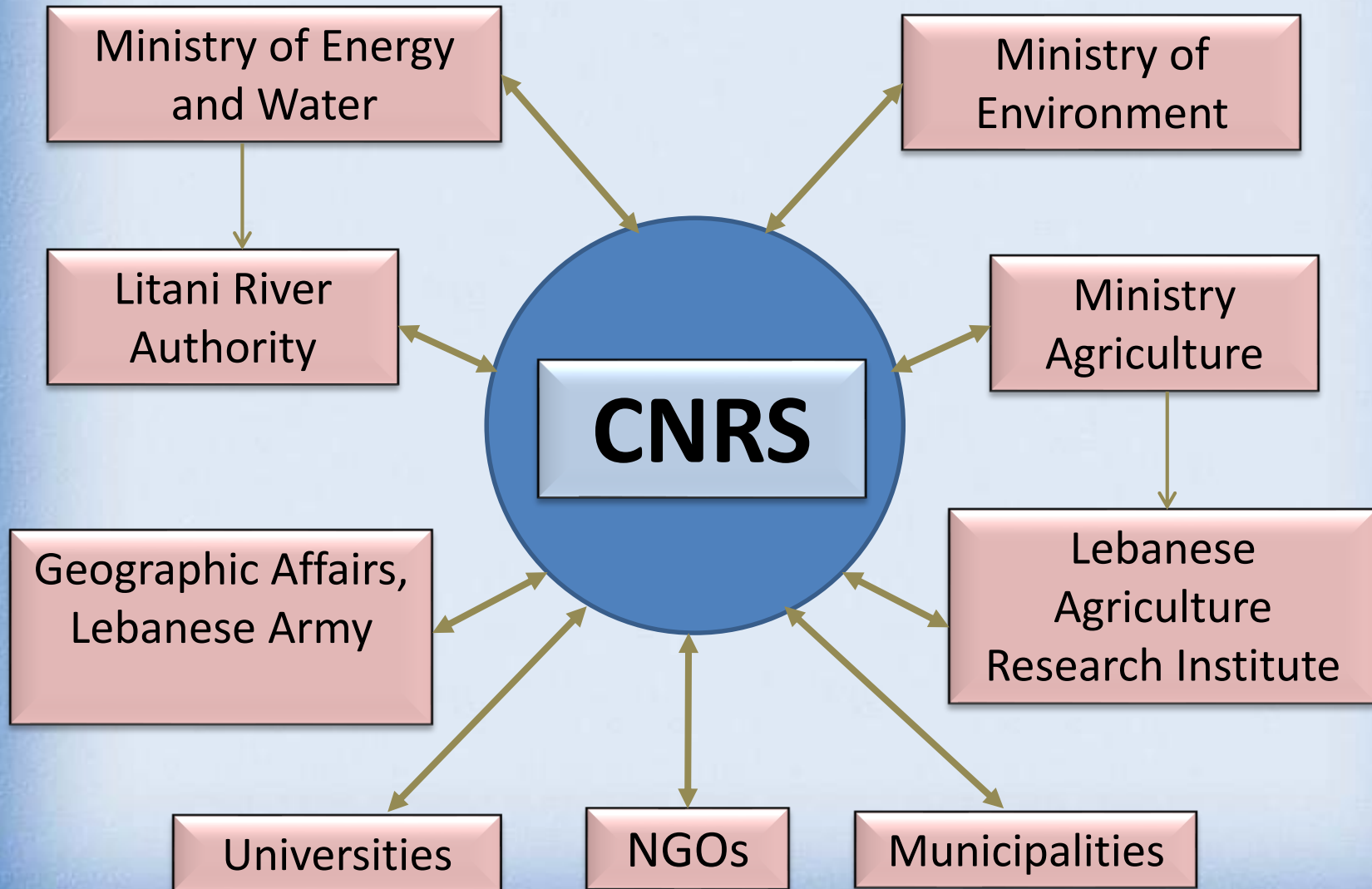
Project Title	Dates	Partners	Source of Funds
Mapping Watersheds for Sustainable Management in Lebanon	2007-2012	CNRS	CNRS
Using Satellite Images to Monitoring Snow Cover Dynamics on the Lebanese Mountains	2010-2017	CNRS	CNRS
In-Situ Investigation to Measure Snow Water/Equivalent in Mount Lebanon	2010-to date	CNRS, CESBIO, USJ	CNRS, CESBIO, USJ
Investigation of Climatic & Hydrological Trends in Lebanon: Implication with Water Resources Management	2011-to date	CNRS, Istituto di metodologie per l'analisi ambientale (CNR), Italy	CNRS, CNR
Regional Coordination on Improved Water Resources Management and Capacity Building	2010-to date	CNRS, Jordan, Egypt, Morocco, Tunisia, NASA	GEF, WB, Arab Water Council , Arab partners

+ Activities

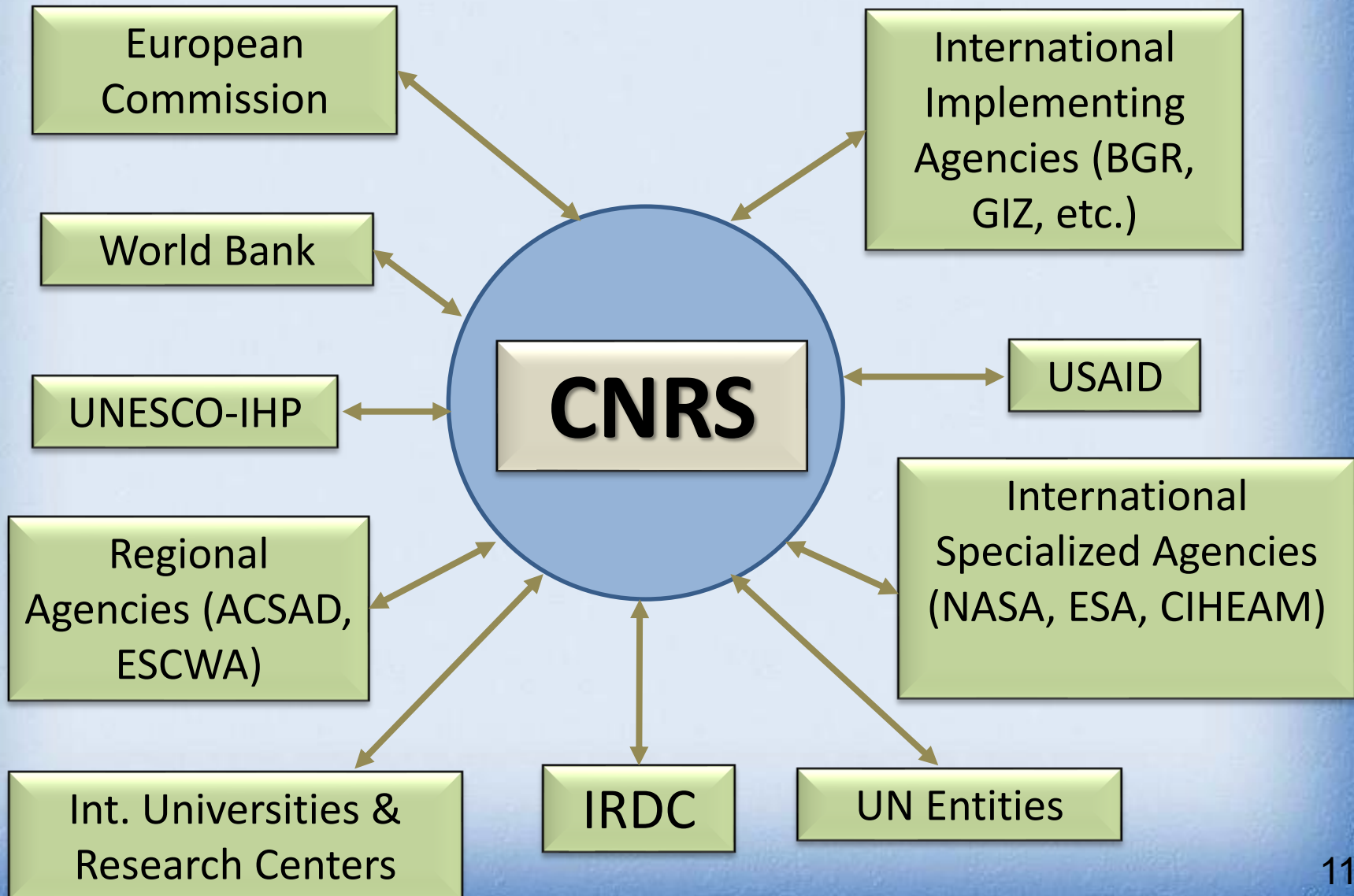
□ In fact, there several projects and researches that have been done/ and still under study by CNRS where different technologies are used. Most of these studies treat directly or indirectly:

- ◆ Assessment of natural resources (water and agriculture)
- ◆ Ecosystems and biodiversity
- ◆ Environmental sustainability
- ◆ Green energy sources
- ◆ Natural risk reduction
- ◆ *SDGs (Our recommendation for UN-Water to emphasis on WEF nexus and green technology)*

CNRS Local Cooperation



Regional and International Cooperation



Opinion about the session topic

- The 5th session on: Policies to Support Green Technology Implementation, would be much more subjective if it is entitled as “Actions Needed to support ...” instead of “Policies to support GTI”.
- In order to propose these actions or policies, the aspects of needed green technologies must be primarily identified, because they differ from one country to another, and this depends on natural and man-made influencers.
- The implementations to be taken (for green technology) are a function of several enablers such as the availability of funding, expertise, priority of needs, etc.

Our vision towards ETC

- Our presence here is good step; however, we look forward to keep us updated by ETC achievements where we can utilize from the applications done. Besides, we can be a supportive tool for ETC as well.

Recommendations

- There is a need to have an Inventory on the existing technology/research (or related innovation) in the ESCWA Region centers.
- It is utmost important to learn lessons on GT from other regions (& sometimes from the ESCWA counties).
- A joint activity under the leadership of ETC would a good commitment that assemble all partners and make them with frequent interaction.
- The annual meetings of the ETC should be under defined Title in order to put emphasis on the priority issues.