

Lebanon CNRS – Remote sensing department

Expectations

- Review current local capacities, current projects, institutional and regional tangible programs and discovering the common trends and prospecting possible cooperation
- Needs and opportunities for north-south and south-south cooperation. Review gaps, problems and perspectives.
- Capacity building on the use of remote sensing for the monitoring of water resources including **the snow cover** where applicable and for the management of water resources including the shared **surface and groundwater resources**.
- Use of remote sensing for the **assessment of vegetation index, land surface temperature and leaf area index to monitor vegetation health and drought impact for the development of adaptation strategies**.
- Use on integrated approach incorporating radar data, topographic, geologic, soil, vegetative cover and land cover into algorithm. Focus on the use of active radar images in conjunction with Genetic Programming (GP) or other modeling tools in small and large scales watersheds with fragmented land uses to create best selective nonlinear regression models of soil moisture in terms of multiple independent variables. The purpose is **mapping and monitoring soil moisture content** and assessing **the impact of CC on agriculture and the vulnerability of forest fires**.
- Explore the possible capacity building on the use of advanced computation approach for fast and effective measurement of soil moisture from the space of large areas with significant spatial variability.
- Integrated use of ground and remotely sensed climatic data together with seawater (and ocean if necessary) surface water temperature to assess **the risks and predict the possible changes in the hydrologic regime and water flux** within a given watershed to provide **early warning system from recurrent flush floods**.

I hope we can discuss the role of remote sensing centers and their cooperation with the Ministries of Water and bilateral and multilateral cooperation for potential joint projects and fund raising through proposals submission to regional and international programs.