The National Unit for Environmental Research and Services (NUERS)

A window to facilitate and develop scientific environmental researches
Director: Dr. Hussain Bahbahani, Kuwait University
A service unit at Kuwait University.

Under the umbrella of both the Research sector and Faculty of science.
Goals and objectives

Original goal

Current goals
- Mediate scientific environmental researches in Kuwait University.
- Assess and understand the urgent environmental issues in Kuwait.
- Help external academic organizations to develop their environmental research field.
NUERS Services

- Extraction – Soxhlet, Microwave and Separatory Funnel
- GC- Aliphatic, Aromatic, Total Petroleum Hydrocarbons, Pesticides, PCBs
- Basic Tests - pH, Conductivity, Salinity, Turbidity
- Freeze Drying, Calorific Value
- Determination of Nutrients by Lachat Instrument
- Metals by ICP-OES
- CHNS, Particle Size Analysis, TDS, TSS
- Total Organic Carbon

NUERS
NUERS and the emerging environmental issues
National project: Massive fish death off Kuwait Coast in 2017

NUERS

Sea Water Characterization; pH, Conductivity, Salinity, Metals

Fish Dissected – Analyzed Metal contents, TPH

Soil / Sediment Metals, TPH
Oil uptake by plant-based sorbents and its biodegradation by their naturally associated microorganisms

Narjes Dashti, Nedaa Ali, Majida Khanfer, Samir S. Radwan

Microbiology Program, Department of Biological Sciences, Faculty of Science, Kuwait University, PO Box 5969, Safat 13060, Kuwait

Scientific environmental researches at Kuwait University
Objectives: Assess the ability of plant-waste products to remediate and biodegrade spilled oil using their microbial communities.

Funding body: Kuwait University, Research sector

**Objectives:** Bivalve bioassay for environmental toxicity monitoring.

**Principle Investigators:** Dr. Salim Y. Al–Mohanna and Dr. Amani S. Al–Zaidan, Dept. of Biological sciences, Kuwait University.

**Funding body:** Kuwait Foundation for Advancement of Science (KFAS).
• **Project title**: Internal waves climate and turbulence mixing on the continental shelf of the Northwestern Arabian Gulf, off the Kuwait coast.

• **Objectives**: Understanding the climate and dynamics of internal waves of the Northwestern Arabian Gulf.
  - quantify the IW–associated energy flux.
  - …etc

• **Principle Investigator**: Dr. Fahad Al–Senafi, Dept. of marine sciences, Kuwait University.

• **Collaborator**: Texas A&M University, USA.

• **Funding body**: Kuwait Foundation for Advancement of Science (KFAS).
Objectives: Determine candidate genomic regions and variants associated with the adaptation of African cattle to the local African environment.

Principle Investigator: Dr. Hussain Bahbahani, Dept. of biological sciences, Kuwait University.

Collaborator: Uni. Of Nottingham (UK) and International Livestock Research Institute (ILRI), Kenya.

Funding body: Kuwait University and the Wellcome Trust (UK).
Project title: Geochemical Characterization of Prince William Sound and Copper River Sediments: A Proxy Development to Assess Climate-Driven Variations in a High Resolution Sedimentary Record

• Objectives: Understanding the effect of climate variation and the associated contamination on the sedimentary record to help in developing future decisions and regulations.

• Principle Investigator: Dr. Joshua R. Williams, Virginia Institute of Marine Science.

• Collaborator: Dr. Mohammad Al Mukaimi, Dept. of marine science, Kuwait University

• Funding body: National Science Foundation, USA
The National Unit for Environmental Research and Services (NUERS) is a research and services facility under the management of Kuwait University Research Sector. The unit is housed on the second floor of the A wing of Prof. Faiza Al-Khurafi building. Being a research and services unit, NUERS offers a wide-range of analytical services in the field of environmental research to both the university researchers and external clients.

Located within a hundred to three hundred metres of all departments of the Faculty of Science, NUERS is poised to serve the University’s research community effectively. As part of NUERS’ mandate, the unit actively encourages graduate students and their supervisors to avail themselves of the analytical facilities provided in NUERS for research.

The procedures adopted for analyses of samples in NUERS are according to the approved International Standard Methods (USEPA, MOOPAM, ASTM), consistent with the practices as previously carried out by the previous ISO-certified management (CEL). The unit operates with a core of experienced and competent staff. Presently, NUERS is vigorously pursuing the re-certification of the laboratory for the ISO-17025; a process that is at an advanced stage.

Website: http://nuers.ku.edu.kw/
Thanks for your attention