

"People are of two types:
either a brother of you in religion,
or an equivalent of you in creature".

Imam Ali bin abi Talib

Letter of gratitude from the Research and Development Directorate



MSC has received a letter of gratitude and appreciation from the Directorate of Research and Development in the Ministry of Higher Education and Scientific Research for publishing the Arabic version of MSC newsletter Towards the Gulf, which is issued on a weekly basis.

Intrusive fishes in the Iraqi Southern Water Flats: A seminar

On February 23, Dr. Falah Maarof Mutleg, a researcher from the MSC Department of Aquaculture and Fisheries, held a seminar entitled 'Types of Intrusive Fishes in the Iraqi Southern Water Flats'.



Dr. Mutleg presented the recording of 12 types of intrusive fishes in the mentioned area. The dangers of such fishes were presented, highlighting that such fishes represent one of the factors of biodiversity in the aquatic environment which lead in turn to an opposite change in the environmental system, potential extinction of the dominant local species, competition for habitat and food, proliferation of disease, and migration. These findings were reached throughout previous scientific studies.

As mentioned by Dr. Mutleg, the main reasons for the invasion of such fish are: environmental disturbances, pollution, draining of marshes, and lack of observation of water flats in the south of Iraq.

The council of the University of Basrah conducting its 10th meeting on MSC Research Vessel 'Naseem Al-Basrah': February 25, 2015



An ambiguous phenomenon observed in Shatt Al-Arab River

On February 24th, a field trip was conducted by a scientific team from the MSC Department of Marine Biology, consisting of Prof Dr. Talib Abbas Khalaf, Dr. Imad Jasim Muhammed, Dr. Khalid Khassaf, and Assist. Lecturer Ahmed Jerri. The trip aimed to collect zooplankton and benthic samples, particularly mollusks from Shatt Al-Arab River in the Qurna, and Al-Mdaina areas. In their investigation, the team observed anomalous accumulations of gastropod and bivalve shells on the two sides of the river in Qurna and Sinbad Island.



Dr. Khalaf has identified this ambiguous phenomenon as one that requires further investigation to identify the cause of such deaths in such large quantities. Currently, the data does not identify if this is a chronic issue. He also suggested forming a specialized scientific team for studying the area from all aspects, particularly chemical contamination (highlighting environmental pollution, and toxins and pesticides in particular).

MSC Team Investigates the Decrease in Water Level of Sawa Lake

A survey was conducted on Sawa Lake by MSC staff to study the geology, chemistry, and biology of this natural site of global interest. The MSC team (from the Department of Marine Sedimentology) was accompanied by researchers from Al-Badyia Studies Centre (in the University of Al-Muthanna) and from the University of Thi-Qar on February 17th, 2015. Sawa lake is located in Al-Muthanna governorate in Middle of Iraq.



In their empirical report, the team verified recent reports of decreasing water levels in Sawa Lake. The aerial extent of the lake was surveyed using GR3 and Total Station.

Sediment and water samples were collected and chemical and physical parameters recorded.

The MSC researchers were the first to investigate Sawa Lake through scientific diving and video-recording. These investigations identified cavernous water outlets that support the lake with significant water replenishment.

Assessing the Environmental Impact of the Final Development Plan: West of Qurna project/ Stage 2

On February 1st and 2nd 2015, a workshop entitled "Assessing the Environmental Impact of the Final Development Plan: West Qurna Project/ Stage 2" was organized for associated oil companies by MSC. The workshop was held under the patronage of MSC Director General, Prof. Ali AZ. Douabul and was attended by representatives from the Russian company Luk Oil Mid-East Ltd, the Iraqi Ministry of Environment, and the Iraqi South Oil Company.



The representative from Luk Oil Mid-East Ltd presented the activities of his company and a summary of their primary arrangements for studying the environmental and humanitarian aspects in the West Qurna fields, particularly pollution issues that are related to air, water, noise, radiation, and biodiversity.

It is worth noting that MSC staff have been conducting environmental field studies within the aquatic environment for Luk Oil Mid-East Ltd since 2010.

Environmental Education: Philosophy and Objectives: A seminar

On Monday, February 16, Lecturer Dr. Seta Aaram Kurik, from the MSC Department of Marine Chemistry presented a seminar entitled "Environmental Education: Philosophy and Objectives". The researcher discussed the significance of including the topic of environmental awareness in all the educational curricula to enforce the methods of protecting the local environment.



Dr. Kurik showed that raising environmental awareness in learners does not depend merely on memorizing the information presented, as it is about being aware of the environmental threats and their negative impacts on individuals and the society in general. She also focused upon conducting field research in environmental education programs to achieve the environmental awareness of the population which leads in turn to a clean and healthy environment for all.

Iraqi Soft Fur Beaver: Again in the Iraqi Marshes

The Iraqi southern marshes are considered an ideal environmental habitat for many aquatic mammals, including the 'Otter' (or water dog).

In Iraq, there are two types of beavers; the Eurasian beaver "Lutra lutra Linnaeus", which inhabits various areas within Iraq in rivers, lakes, reservoirs, and marshes, and the Iraqi soft fur beaver 'Lutragola perspicillata maxwelli' which now exists only in the southern Iraqi marshes. Being rich with fish and invertebrates, the environment of the marshes creates an ideal habitat, and the thick aquatic plants provide protection and suitable conditions for propagation.



Draining of marshes in Iraq between 1991- 2003 caused critical damage to the environment which led in turn to a serious decrease in the beaver population. Studies showed that beavers populations decreased to less than 30% during the last 30 years. This is attributed to construction projects such as hydropower energy units, agriculture, decrease of prey, pesticide contamination, hunting, and marsh environment



destruction.

Between 2005 and 2012, an intensive project was started by Canada-Iraq Marshland Initiative CIMI, Nature-Iraq, and the Iraqi Ministry of Environment for the observation of marsh biota. As an environmental indicator species, beavers were observed with a priority. The results of the survey proved the existence of the beaver in the southern marshes and other regions of Iraq.

On February 4, 2015, a female Iraqi soft fur beaver was found in the Sallal-Al-Mashab marsh, in an area previously un-inhabited by these beavers, a sign which gives hope that recovery is eminent.

Original Arabic article is written by Lecturer Dr. Mustafa S. Faddag

Oil pollution and methods of combating it: Workshop

MSC organized a workshop on 'Oil pollution and methods of combating it' on March 2-4, 2015. The workshop came in response to a discussion of advanced scientific and technical skills in the field of environmental protection from oil pollution with International Tanker Owners Pollution Federation Limited (ITOPF).



The themes of the workshop were:

1. Combating oil by oil dispersion
2. Emergency plans
3. Methods of collecting and analyzing oil samples

The workshop presented methods of analyzing oil pollution using chromatography technology.

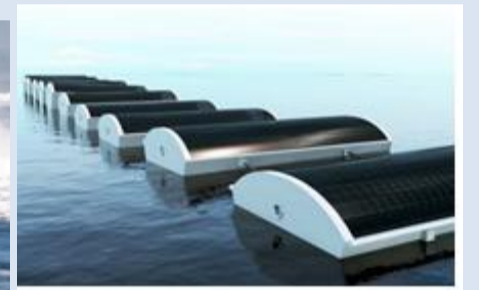
Assessments of renewable energy resources in the coastal water of Iraq

Energy present in the seas and oceans is represented by waves, currents and the generated energy from differences in temperature and salinity in the aquatic medium. Such types of energy can be invested in the production of electric power.



The sources and proportion of renewable energy can be classified as follows:

1. Marine current power: 45%
2. Wave power: 45%
3. Ocean thermal energy: 9%
4. Tidal power: 0.8%
5. Osmotic power: 0.1%



Tidal energy within the Khor Al-Zubair and Khor Abdullah is to be studied where a three m differential exists between high and low tide. Preliminary measurements of available energy can be calculated using modern methods of marine studies such as the kinetic energy flux model, particularly in the narrow areas found among the large water masses. Detailed studies are required in such areas as well as giving special interest to the geomorphological status, particularly erosion and deposition processes in order to put a strategy for defining the suitable locations for dams.

This article is written by Prof. Dr. Basim Mijbil Al-Rumadhan

Pharmacy Drugs sank in the Marine tough Waves! MSC 6-4 College of Pharmacy: A football match



In the five a side Football University Championship organized by the Sport and Technical Directorate, the MSC football team won over the College of Pharmacy with a 6-4 victory. The match took place on February 17th at the South Oil Sport Club. MSC staff wish the best and more achievements to MSC Football Team.

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----- Contributions -----

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