

# **Curriculum Vitae**

## Professor Tariq Hasan Ahmad Al-Najjar

The University of Jordan/ Aqaba, Faculty of Marine Sciences Department of Marine Biology.

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### **Personal Data**

Date of Birth: May 10, 1965

Place of birth: Irbid Nationality: Jordanian

Married, family, boy 14 years, boy five year and girl 10 years

Languages: Arabic

English

**Education:** 

2000 : Ph.D in Science

Bremen University Bremen- Germany

Major: Marine biology and Ecology/ Plankton Ecology

1991 : M.Sc. in Biology

Yarmouk University

Irbid-Jordan

Major: Ecology & Marine Biology

1988: B.Sc. in Biology

Yarmouk University

Irbid-Jordan

Major: Biology & Environmental Science

1983: General Secondary Education

Irbid Secondary School

Irbid-Jordan

## **Working Experience**

August 2013 – till now: Dean, Faculty of Marine Sciences,

Jordan University/ Agaba Branch

December 2012-August 2013: Professor of Marine Biology and Ecology

Head of Marine biology department,

Faculty of Marine Sciences Jordan University/ Aqaba Branch

2010-2011 Director of Marine Science Station

Aqaba-Jordan

2000 till August 2007: Assistant Research, the University of Jordan

Marine Science Station, Aqaba- Jordan.

August 2007- 2009: Associated Research, The University of Jordan

Marine Science Station, Agaba- Jordan.

2009 – December 2012: Associated professor of Marine Biology and Ecology

Faculty of Marine Sciences

The Jordan University/ Agaba Branch

Summer, 2006 visiting researcher, Hamburg University, Germany

Summer, 2005 visiting researcher, Stanford University, USA

Summer, 2008 Teaching Advance course in phytoplankton Taxonomy,

Naples-Italy

1992-2000: Research Assistant, The University of Jordan

Marine Science Station, Aqaba-Jordan

1988-1991: Teaching Assistant, Yarmouk University

Irbid-Jordan

## **Teaching experience:**

1- General Biology 101: Faculty of Marine Sciences

Jordan University/ Agaba Branch

2- Red Sea Environment Faculty of Marine Sciences

Jordan University/ Agaba Branch

- 3- Marine Invertebrates (MB 251): Jordan University/ Agaba Branch
- 4- Phytoplankton, sea grass and Algae: Jordan University/ Agaba Branch
- 5- Environmental sciences: Jordan University/ Aqaba Branch
- 6- Biological Oceanography: Jordan University/ Aqaba Branch
- 7- Animal physiology lab: Yarmouk University
  - 8-Comparative vertebrate anatomy lab B 213: Yarmouk University
  - 9-Advance plant physiology lab B 529: Yarmouk University

## PhD supervising:

- 1- Astrid Corniles (2005): Seasonal dynamics of the Copepod Population in an Oligotrophic Environment the Northern Gulf of Aqaba (Red Sea). Ph.D thesis, Bremerhaven, Germany.
- 2- Fatih Sahin (2010): Seasonal dynamics of phytoplankton in the Gulf of Aqaba. Ph.D thesis, Synops, Turkey.

## Master student supervising:

- 1- Abd El-Wahab Al-Shiyab (2004): Heterotrophic nutrition of Giant clam (Tridacnidae) from the Jordanian coast of the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University, Irbid Jordan
- 2- Jamal bany Fawwaz (2005): plankton as possible Bioindicator for trace metals pollution in the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University, Irbid Jordan
- 3- Yousef, Mohammad Abu-Karma (2006): Algae and seagrass as Bioindicators for trace metals pollution along the Jordanian coast of the Gulf of Aqaba. Master thesis, Yarmouk University,Irbid Jordan
- 4- Tawaha Mohamad (2006): Sea Urchen Diadema setosum as possible bioindicator for trace metal pollution in the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University,Irbid Jordan.

- 5- Jessica Luo, M.S. (2007): Dominance of seasonal fluctuations over local variability on zooplankton in the Gulf of Aqaba. Master thesis, Stanford University, Stanford, USA. pp 97.
- 6- Ibrahim Abd Al-Hadi Saleh (2007): Age, Growth and Shell Morphometrics of the Gastropod *Thais savignyi* (Mollusca: Neogastropoda: Muricidae) from the Gulf of Aqaba, Red Sea. Master thesis, Hashemite University, Zarka, Jordan.
- 7- Raid Jawasreh (2008): zooplankton and chlorophyll *a* relation to other environmental pollution parameters in King Talal Dam and Gulf of Aqaba, Jordan. Master thesis, Yarmouk University, Irbid Jordan
- 8- Khatameen Ahmad (2008): Seasonal variations of gastropods species from the Intertidal zone along the Jordanian coast of the Gulf of Aqaba. Master thesis, Yarmouk University, Irbid Jordan.
- 9- Hosam Al-Omarey (2008): Determination of Natural and Anthropogenic Radionuclides in sediment of the Gulf of Aqaba. Yarmouk University, Master thesis, Irbid Jordan.
- 10-Motasem Al-Sayed (2008): Levels of trace metals in some Carnivorous fish of Gulf of Aqaba, Red Sea. Master thesis, Hashemite University, Zarka-Jordan.
- 11-Maen batayneh (2010): Levels of trace metals in some Herbivorous fish of Gulf of Aqaba, Red Sea. Master thesis, Hashemite University, Zarka-Jordan.
- 12-Neveen Ahmad (2008): Identification of fish parasites in the intestine of stone fish from the Gulf of Aqaba, Red Sea. Master thesis, Hashemite University, Zarka-Jordan.
- 13-Ali Al-Zgool (2008): Levels of Trace metals in food chain of some carnivores fishes (Family: Carangidae) collected from the Gulf of Aqaba, Red Sea. Master thesis, Hashemite University, Zarka-Jordan.
- 14- Mustafa Al-Shaby: Sea cucumber as possible bioindicator for trace metal pollution in the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University, Irbid Jordan.
- 15-Rawashdeh Omar (2013): levels of trace metals in Tuna fish from the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University, Irbid Jordan.

#### **Master student members:**

- 1- Khaled Al-Sokhny (2001): Biogeochemical cycles of nutrients and Chlorophyll *a* in relation to coastal currents in Jordanian waters of the Gulf of Aqaba, Red Sea. Master thesis, Yarmouk University, Irbid Jordan
- 2- Omer Bany Awwad (2002): coral larvae recruitments in the Gulf of Aqaba, Jordan. Master thesis, Yarmouk University,Irbid Jordan.
- 3- Abu- Al-Haija Mahmoud (2008): Nutrient and selected heavy metals in water, suspended matter and sediments of King Talal Dam. Yarmouk University, Irbid Jordan.

## List of publications

- 1. Al-Najjar, TH (1991) Levels of 8 trace metals in freshwater fishes of Azraq Oasis, Jordan. Master Thesis, Yarmouk University, Jordan.
- **2. Al-Najjar** TH (2000) The seasonal dynamics and grazing control of Phyto- and mesozooplankton in the northern Gulf of Aqaba, Ph.D Thesis, Bremen University, Bremen-Germany.
- **3. Al-Najjar** TH, 2002. Pelagi copepod diversity in the Gulf of Aqaba (Red sea).lebanese Science Journal Vol.3, No. 1, 3-16
- 4.Sommer U, Ulrike GB Ruth BS, Astrd C, Wilhelm H, Thomas H, **Al-Najjar** TH, Anton P, Sigrid S Herwig Sdorthea S, Stephen W 2002. Grazing during early spring in the Gulf of Aqaba and northern Red Sea. Mar Ecol Prog Ser. Vol. 239: 251-261
- **5. Al-Najjar** TH, Badran M, Al-Zibdeh M. 2003. Seasonal cycle of surface zooplankton biomass in relation to the chlorophyll *a* in the Gulf of Aqaba, Red Sea. Abath , al-Yarmouk Basic Science and Engineering Vol 12, No.1: 109-118.
- 6. Abu-Hilal AH & **Al-Najjar** TH 2004 Litter pollution on the Jordanian shores of the Gulf of Agaba. Marine Environmental Research, Vol 58, Issue 1, 39-63
- **7. Al-Najjar** TH, (2004) Spatial and Temporal variations in surface zooplankton biomass distribution >150um in the Gulf of Aqaba, Red Sea. lebanese Science Journal Vol.5, No. 1, 17-23

- **8. Al-Najjar** TH, 2004. Quantitative distribution of surface zooplankton biomass in the coastal water of the Gulf of Aqaba, Red Sea. Dirasat, Jordan University 31(2): 115-122
- **9. Al-Najjar** T. H. 2005. Seasonal and spatial variations in mesozooplankton biomass in the most northern part of the Gulf of Aqaba during 2003. Zoology in the Middle East Journal vol 34: 87-92.
- 10. Mohammad I. B, Rasheed, M, Manasrah, R, and **Al-Najjar** T. (**2005**). Nutrient flux fuels the summer primary productivity in the oligotrophic waters of the Gulf of Aqaba, Red Sea. Oceanologia, 47(1): 47-60.
- **11. Al-Najjar** T. H. and Rasheed. M. **(2005).** Annual cycle of phytoplankton community structure in the Gulf of Aqaba detected by HPLC analysis of pigments. Dirasat, pure science, vol 32 (2): 199-202.
- **12. Al-Najjar TH** and Rasheed M (**2005**). Zooplankton biomass in the most northern tip of the Gulf of Aqaba, a case study. Lebanese Science Journal, 6(2): 3-10.
- **13 Al-Najjar** TH, Badran M, Richter C, Meyerhofer M, Sommer U (**2007**): Seasonal dynamics of phytoplankton in the Gulf of Aqaba, Red Sea. Hydrobilogia.579:69-83.
- 14. Cornils A, Schnack-Schiel SB, **Al-Najjar T**, Richter C **(2007).** Feeding of Clausocalanids (Calanoida, Copepoda) on natural occurring particles in the northern Gulf of Aqaba (Red Sea). Marine Biology, 151:1261-1274..
- 15 Cornils A, Schnack-Schiel SB, Badran M, Rasheed M, Manasreh R, **Al-Najjar T,** Richter C **(2007)** The seasonal cycle of the epipelagic mesozooplankton in the northern Gulf of Aqaba (Red Sea). Journal of Marine System, 68:278-292.
- 16. Cornils A, Niehoff B, Richter C, **Al-Najjar T**, Badran M, Schnack-Schiel **(2007).**Seasonality of the Abundance and Reproduction of the Clausocalanid Copepods of the Northern Gulf of Aqaba (Red Sea). Journal of Plankton Research, 29(1); 57-70.
- **17. Al-Najjar** T, Bani Fawaz J and Abu-Hilal A. **(2007).** Heavy metals in zooplankton from the Gulf of Aqaba, Red Sea. Abhath Al-Yarmouk Basic Sciences and Engineering, 16(2):163-173.
- 18. Manasrah r, Zibdah M, Ougaily F, Najem Y and **Al-Najjar T, (2007).** Seasonal Changes of water properties and current in the northernmost Gulf of Aqaba, Red Sea. Ocean Science Journal, 24(2): 103-116.
- 19. Luo, J Y., Paytan, A., **Al-Najjar**, T. **(2007).** Using Carbon and Nitrogen Stable Isotopes and Trace Metal Concentrations in Zooplankton to Determine Seasonal and Anthropogenic Influences in the Gulf of Aqaba, Red Sea. *Fall AGU meeting*. OS11A-0192.
- 20. Ahmad Abu-Hilal, Rasheed M and **Al-Najjar** T. H. **(2008).** Dissolution of raw phosphate (apatite) in sea water of the Gulf of Aqaba: 1. Magnitude and potential environmental impact. Chemistry and Ecology. 24(1):51-59.

- 21. Ahmad Abu-Hilal and **Al-Najjar** T. H **(2008).** Marine litter in coral reef areas along the Jordan Gulf of Aqaba, Red Sea. Journal of Environmental Managements xxx: 1-7.
- 22. Al-Zibdah M, Oqaily F, **Al-Najjar T** and Manasrah R. (2008). Neighboring Cage Dish Farming Affecting Water and Seabed Quality of the Jordanian Northern Gulf of Aqaba, Red Sea. Ocean Science Journal, 34(1): 9-16.
- **23. Al-Najjar T. H** and El-Sherbiny M. M. (2008): Spatial and Seasonal Variations in Biomass and Size Structure of Zooplankton in coastal Waters of the Gulf of Aqaba. Jordan Journal of Biological Sciences, 1(2): 55-59.
- **24. Al-Najjar T. H.**, Bani Fawaz, J., Manasrah R., Al-zibdah M and Abu-Hilal A (2009). Variations of heavy metals concentration in suspended matter and physiochemical properties in the coastal surface water of the Gulf of Aqaba. Jordan Journal of Biological Sciences, 1(4): 153-158.
- 25. Ahmad,H Abu-Hilal and **T. H, Al-Najjar (2009)**. Plastic pellets on the beaches of the northern Gulf of Aqaba, Red Sea. Aquatic Ecosystem Health and managements, 12(4):1-10.
- **26. Al-Najjar T**; AbdelWahab S; Sayeeda M, M. Al-Zibdeh and Abu-Hilal A (**2010**). Heterotrophic nutrition of Giant clams from the Jordanian coast of the Gulf of Agaba, Red Sea. Dirasat, 37(1): 51-59.
- 27- Zaid Q. Ababneh, Husam Al-Omari, Mohamad Rasheed, **Tariq Al-Najjar**, Anas M. Ababneh (**2010**). Assessment of gamma-emitting radionuclides in sediment cores from the Gulf of Aqaba, Jordan. Radiation Protection Dosimetry. 1–10. doi:10.1093/rpd/ncq182.
  - 28- Rasheed M; **Al Najjar T**; Mohamad G. Al-Masrib; Mian S (2011). Experimental degradation of oil in permeable sand from the Gulf of Aqaba, Red Sea. Chemistry and Ecology, iFirst, 1–9
  - 29- Al-Najjar T., Rasheed M., Ababneh Z., Ababneh A and Al-Omary H. (2011). Heavy metals pollution in sediment cores from the Gulf of Aqaba, Red Sea Natural Science, Vol.3, No.9, 775-782.
  - 30-Tariq Al-Najjar and Abd Al-Wahab Al-Shiyab (2011). Marine litter at (Al-Ghandoor area) the most northern part of the Jordanian coast of the Gulf of Aqaba, Red Sea Natural Science, Vol.3, No.11, 921-926.
  - 31- Rasheed M., **Al-Najjar T**., Damhoureyeh S (2011). Distributions of pigments in reef sediments, contribution of phytoplankton to organic matter budget in coral reef. Natural Science, **Vol.3**, **No.5**, **344-350**.
  - 32- **Al-Najjar T**., Khalaf N., Allawi M., Disi A.(2012). Levels of Trace Metals in Two Fish Species *Caesio varilineata* and *Caesio lunaris* of the Family Caesionidae from the Gulf of Aqaba, Red Sea. Fresenius Environment Bulletin. 21(5): 1152-1157.
  - 33-Maroof A. Khalaf, Tariq Al-Najjar, Mahmoud Alawi, Ahmad A. Disi. (2012). Levels of Trace Metals in Three Fish Species *Decapterus macrellus, Decapterus*

- macrosoms and Decapterus russelli of the Family Carangidae from the Gulf of Aqaba, Red Sea/Jordan. Natural Science. .4(.6): 362-367 (2012).
- 34-Basem M. Jaber\*<sup>1</sup>, Rola Al-Silawi<sup>1</sup> and Tariq Al-Najjar<sup>2</sup> (2012). Isolation and Molecular Identification of *Ascomycetes* in Sediments and Waters of the Gulf of Aqaba, Red Sea. Natural Science. 4(8): 555-561.
- 35-Majduleen Sbaihat, Shadeya Reyati and Tariq Al-Najjar 2013 Levels of heavy metals in Ophoroidea (*Ophiocoma scolopendrina*) from the Gulf of Aqaba, Red Sea, Fresenius Environment Bulletin. Vol 22 (12):
- 36-Maroof A. Khalaf, Mahmoud Alawi, Ali Al-Zgool, Tariq Al-Najjar 2013: Levels of Trace Metals in the Bigeye hound Deep Sea Shark *Iago Omanensis* from the Gulf of Aqaba, Red Sea Fresenius Environment Bulletin. Vol 22 (12): 3534-3540.

#### **Committee member:**

- 1- Committee member of Environment deterioration Board of ASEZA.
- 2- Committee member of Jordanian Biodiversity research group.
- 3- Committee member of Jordanian National Ballast Water Managements team
- 4- Committee member of Agaba Marine Bark
- 5- Technical committee member of gas terminal megaproject, ADC, Aqaba, 10-17/July 2013.
- 6- Technical committee member of seawater standards in the Gulf of Aqaba, ASEZA, 2013
- 7- Technical committee member of (LPG) liquid petroleum Gas Terminal megaproject, ADC, Aqaba, 13-21/August 2013.
- 8- Technical committee member of (NPG) Natural petroleum Gas Terminal megaproject, ADC, Agaba, 13-21/October 2013.

#### Scientific activities

- **1994**: -Adhoc Expert Group Meeting on Marine Hydrographic Surveying Nautical Charting, 8-12 May (Ammanm: Jordan)
- 1995: -Microwave Digestion, Ashing and Moisture/ Solid Deetermination, By Scientific & medical supplies, Milestone Microwave Technology, 22 April (Amman; Jordan)
- 1996: Training Cource in beach management in the Mediterranean and Black Sea, by FEuro- Mediterranian Centre on Insular Coastal Dynamics (ICOD), Foundation for International Studies, 11-17 May (University of Malta).
  - Training Course in Coastal zone Management as Sustainable Process, by International Ocean Institute Operational Centre, 1-31 October (India).
  - UNESCO Course on Utilization of Remote Sensing Technology in Coastal-Marine Research and Management, 21-26 December (King Abdelaziz University, Jeddah, Saudi Arabia).
- **1997**: Visit to Central of Tropical Marine Ecology (ZMT) for Literature Surveay and Regestration in Bremen University as Ph.D Student, 4 June- 18 July, Bremen.
  - Red Sea Program (RSP), Junior Course, (Eilat), 12-21 March.
- **1998**:-Visit to Marine Potany Department, for training on HPLC for pigment analysis and GC for Fatty acid analysis,1-28 March (KIEL), Germany.
  - Third general assembly ,Red Sea Program on Marine Science,10-15 March Bremen, Germany.
  - Training on zooplankton identification, 18-28 April, Suez (Egypt).
  - Red Sea Program research cruise: Molecular function controlling the ecology of marine microorganisms in the Red Sea :Nitrogen fixation among marine phytoplankton, 31 May –9 June., Eilat.
- 1999: Visit to the Institute for Marine Science (ifm), Kiel, for completion of Ph.D work.
- **2001**:- International workshops on the Marine Biodiversity in Islamic Countries, Algiers, October 22-24, 2001.
- 2002:- Symposium and Workshop of the Butterfly fish, 19-20, June 2002, Aqaba-Jordan
- 2003: Third international zooplankton symposium, 20-23-May, 2003. Gegion, Spain
  - Frontiers of science and engineering, September 21-23, KOC University, Istanbul, Turkey.
  - Workshop on beach replashment, 15-17-December, 2003.
  - Workshop on the solid wast managements and biogas production, 22-24 December, 2003.

#### 2004:

- Coordinator of the Jordanian Coordinated National Monitoring Program
- Committee member of Environmental Impact Assessment Board of ASEZA.
- 4<sup>th</sup> international conference on hazardous materials, Aqaba 8-10 June, 2004

#### 2005:

- Visiting Schoolar research in Stanford University department of Geophysics, Stanford, California, USA for period of three months June to August 2005.
- **2006:** Global Energy Solution project (EIA) project discussion, 18 April 2006 Movenpick hotels Aqaba-Jordan.
  - The Environmental impact of industry in the Aqaba Special Economic Zone Authority workshop, Jordan Environment Society, 6 March 2006, Aqaba-Jordan.
  - Lunch events for Interaction Mosaic and Customized your curricula, 18 April 2006 Movenpick hotels Aqaba-Jordan.
  - Visiting Schoolar research in Hamburg University department of Geology, Hamburg, Germany for period of two months 17 July to 17 September 2006.

#### 2007:

- -Middle East frontires of Science and Engineering, March, 19-21 Seville, Spain.
- Information Seaway Workshop towards Aqaba the smart Gulf. Inter Continental Aqaba Resort, Jordan, Aqaba, 18 April 2007.
- International conference in (Rapid Urbanization and land use conflicts in coastal cities) 30 October-01 November 2007, Agaba-Jordan.
- Jordan Stakeholder workshop on National program action for protection of the marine environment from land-base acrivities, Aqaba marine park 11 th November, 2007

#### 2008:

- -Advanced Phytoplankton Course Taxonomey (APC), Stanza Zoologica, Italy Napole 5-26 April 2008.
- International conference in (Middle Eastern Biodiversity congress) 20-23 October 2008, Aqaba-Jordan.
- International Ballast water management workshop. November 2008, Aden, Yemen.

- **2009:-** Training in the Fundamentals and theory of SeaSonde operation, 27-1 May 2009, Mountain View, USA.
- PCBI Project preparation workshop Jordan mediterranean Sea Basin ENPI CBC Programme 2007-2013. Aqaba 18-May 2009.

**2010**:- National workshop on Balast water management 14-16 february 2010, Aqaba-Jordan

- Visiting Internationa lcairo book festival, Cairo 27- 4 February 2010.
- Bio vision Alexandria 2010 New life Science: Future Prospects 11-15 April 2010, Alexandria Egypt: <a href="https://www.bibalex.org/biovisionalexandria">www.bibalex.org/biovisionalexandria</a>.
- Balast water workshop, 18 April 2010, Aqaba-Jordan.
- Embrylogy of Marine Invertebrates, 4-21 July 2010, Syberia, Russia
- Taxonomy workshop 16 September -2 October 2010, Izmir-Turkey

### 2011:

- Meeting of working group of Dead Red canal visibiltiy study, March, 2011/ Venice Italy.
- Winter school in water quality and esting, 2-8 April, 2011/Aqaba-Jordan.
- Summer scholl of Columbia University, 2-23 June 2011
- Aqaba.

### 2012:

- First workshop of the potanica Garden, 12 Jan 2012 Amman.
- 1<sup>st</sup> regional Training workshop National Council for Scientific Research –CNRS Beirut, Lebanon, 25 26 January 2012.
- Extensive Two-day Training Workshop on:
  Understanding the Science of Environmental Governance and Building Capacity of Skills of Development of Environmental Policies and Strategies Related to Implementation of Rio Conventions in Jordan and Integration of Conventions' Provisions into National Development Planning. Developing Policy-relevant Capacity for Implementation of the Global Environmental Conventions in Jordan "CB-2" Project.
  Ministry of Environment & UNDP, 25-26 February 2012 Crown Plaza hotels, Amman, Jordan.
- The 2<sup>nd</sup> Regional Meeting on the Status od Elasmobranchs in the Red Sea and Gulf of Aden, 23-24 August 2012, Jeddah, KSA.
- First workshop on developing policy-oriented research, Amman, 20-21, March 2012
- National Training workshop on IMO OPRC Level 2 and updating the national oil spill and HNS contingency plan Jordan-Aqaba, 8-11 April 2012.

- Training workshop on Compliance Monitoring and enforcement of Ballast Water Management. Aqaba, Jordan: 28-29 May 2012.
- The 6<sup>th</sup> Jordanian Environmental conference in Amman, 4-6 June 1012.
- Adaptation of biodiversity with climate changes workshop, Amman, Alfanar hotel 14-6-2012.

#### 2013:

- Integrated coastal zone management training course phase 4, Aqaba 27 January till 7 February, Aqaba 2013.
- Managing the Environmental Sustainability of Port for a Durable Development., Aqaba 26-3-2013, Kempinski hotel.
- National workshop on Specialized Environmental Inspection in the Coastal Zone Jordan university Aqaba branch 10-11/6/2013.
- CUSTOM MED international conference, Kempinski, Aqaba 16-6-2013 , 9-5-2013 Movenpick hotel Aqaba المتراب -

## 2014

- Kick of Meeting for the project: Inclusive Governance for sustainable Mediteranean coastal Metropolis (MEDSEATEDS). Mercelia, France 20-21 January.

- International conference on Marine Invasive Species: Management of Ballast water and other vectors, Oman, MasKat 17-19 February 2014.

### **Current research Activities:**

- 1996-present: Monitoring of the Marine Environment in front of the Industrial Complex. Funded by Industrial Complex in Agaba.
- 2001-present: Monitoring of the environmental quality of the Jordanian coast of the Gulf of Aqaba, National Monitoring Program. Funded by Aqaba Special Economic Zone Authority (ASEZA).
- 2004-2006: The Red Sea Marine Peace Park (RSMPP); Fast Track Project. Collaboration with ASEZA Funded by USAID.
- 2004-2007: Environmental assimilative capacity of coastal habitats and green mariculture of high revenue low environmental burden species on the Jordanian sector of the Gulf of Aqaba. Funded by the Higher Council For Science and Technology-Jordan.
- Monitoring natural and anthropogenic aerosol pollution and its impact on ecosystem in the Gulf of Aqaba November 2006-November 2009. NATO funded project No: SFP. 982161.
- The Protection the Gulf of Aqaba from the anthropogenic and natural stress in the face of Global climate changes. Aqaba Anthropogenic Stress. 2007-2012

- Real time surface current measurement to protect the Gulf of Aqaba against intentional or accidental toxic and oil spills. 2006-November 2009. NATO funded project No: Sfp. 982220.
- Assessment of heavy metals, Natural and anthropogenic radionucleiotides pollution in the Gulf of Aqaba. Funded from Yarmouk University. January -December 2008.
- Assessment of zooplankton community structure in the most northern part of the Gulf of Aqaba (new port area): An introduction for ballast water managements. 2010-2011.
- Managing the environmental sustainability of ports for a durable development-(MESP), ENPI-CBC funded project. 2011-2014
- Inclusive Governance for sustainable Mediterranean coastal Metropolis (MEDSEATEDS), ENPI-CBC funded project. 2014-2016.

### Field of interest:

The main interest of mine is focusing on the study of Oceanography of the Gulf of Aqabain general, specificly plankton research in the Gulf of Aqaba in which the following titels could be covered:-

- 1- Phytoplankton dynamics in the water column in relation to the water stratification phytoplankton groups will be identified by using a marker pigment analysis (HPLC) study.
- 2- Seasonal distribution of Plankton (Phyto and zooplankton) in the Gulf of Aqaba, and the effect of physical variability on the zooplankton population dynamics in the Gulf of Aqaba.
- 3- Studing of the Physico-chemical environment of the Gulf water.
- 4- Fossil coral reefs as paleo-hydrological archives: Examples from buried and elevated reefs in the Gulf of Aqaba.
- 5- Monitoring natural and anthropogenic-induced pollution in the Gulf of Aqaba.
- 6- Protection of Gulf of Aqaba against anthropogenic stress during climate changes.
- 7- Gut-content analysis of zooplankton mainly the copepods to give us information about grazing of zooplankton on the phytoplankton in the Gulf of Aqaba as well as information about the feeding rhythm of zooplankton in the oligotrophic waters.
- 8- Fatty acid analysis of Plankton (Phyto-zooplankton) in order to evaluate the feeding cabability.
- 9- Studing the Molluscan Planktonic larvae in the Gulf of Aqaba.

- 10- Nutrition of the Giant clam.
- 11- Trace metal bioaccumulation by marine zooplankton.
- 12- Trace metal bioaccumulation by sea grass and marine algae.
- 13- Trace metal accumulation in Gatropod species in the Gulf of Aqaba, A possible using it as bioindicator for trace metal pollution.
- 14- Trace metal accumulation in Sea cucumber species in the Gulf of Aqaba, A possible using it as bioindicator for trace metal pollution.
- 15- Trace metal accumulation in fish species in the Gulf of Aqaba, A possible using it as bioindicator for trace metal pollution.
- 16- Natural and anthropogenic radionucleiotides pollution in the Gulf of Aqaba.
- 17- Ballast water managments