

**Personal information**

First name **Abed El Rahman**  
Surname **Hassoun**  
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Nationality Lebanese  
Date of birth 01/01/1988  
Gender Male

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**Current position(s)**

**Scientist** (since February 2022)  
GEOMAR Helmholtz Centre for Ocean Research Kiel  
Marine Biogeochemistry  
Düsterbrook Weg 20  
D-24105 Kiel, Germany  
<https://www.geomar.de/en/ahassoun>

**Research Associate** (since April 2015)  
National Council for Scientific Research (CNRS-L),  
National Centre for Marine Sciences (NCMS),  
Beirut, Lebanon  
[www.cnr.edu.lb](http://www.cnr.edu.lb)

**Founder and chair of the Ocean Acidification Mediterranean Hub (OA Med-Hub):**  
[http://www.goa-on.org/regional\\_hubs/mediterranean/about/introduction.php](http://www.goa-on.org/regional_hubs/mediterranean/about/introduction.php)

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**Previous position(s)**

\*June-August 2022: Scientific writer for the [Ocean Frontier Institute](#)/Dalhousie University, Canada to help in writing the scientific strategy of a Canada First Research Excellence Fund (CFREF) proposal. Contact person: Anya Waite, [Anya.Waite@dal.ca](mailto:Anya.Waite@dal.ca)

\*September 2016-June 2022: Lecturer at the Lebanese University (since September 2016): [www.ul.edu.lb](http://www.ul.edu.lb)  
-Course “Methodologies of Analysis in Biology” in the Faculty of Public Health;  
-Course “Ecology” in the Faculty of Sciences.

\*September-December 2021: Consultant for the Ocean Frontier Institute, Canada to help in developing and designing a North Atlantic Ocean Carbon Observatory ([NACO](#)) in collaboration with GOOS. Contact person: Anya Waite, [Anya.Waite@dal.ca](mailto:Anya.Waite@dal.ca)

\*October 2021-January 2022: Consultant for the [OA-ICC/IAEA](#), Monaco, to report on the ocean acidification status and trends in the Mediterranean Sea. Contact person: [A.Bantelman@iaea.org](mailto:A.Bantelman@iaea.org)

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**Personal pages**

[Google Scholar](#) ; [ResearchGate](#) ; [LinkedIn](#) ; [Academia](#) ; [ORCID iD](#)

**Degrees****Date 2014****Ph.D. in Oceanology**

Defended on the 29<sup>th</sup> of September 2014 in co-direction between:

- The University of Perpignan Via Domitia, IMAGES laboratory, 52 avenue Paul Alduy, 66860 Perpignan cedex, France,
- The National Council for Scientific Research in Lebanon, National Centre for Marine Sciences, B.P. 534, Batroun, Lebanon.

**Thesis entitled: *Analysis and Modeling of the Acidification in the Mediterranean Sea***

Thesis online:

<https://tel.archives-ouvertes.fr/tel-01083406v1>

Abstract & résumé of the thesis in:

- <http://www.theses.fr/2014PERP1187>
- <http://www.sudoc.abes.fr/DB=2.1/SRCH?IKT=12&TRM=181507005>

**Date 2010**

Title of **Master in “Management and Conservation of Natural Resources”/Biodiversity (M2)**

awarded -Title of Master thesis: the effects of the organic pollution on the phytoplankton populations in the middle part of the Lebanese coast, during the spring period.  
-Lebanese University / Faculty of sciences.

**Date 2009**

Title of **Master in Earth and Life Sciences/Biodiversity and Environment (M1)**

awarded -Lebanese University / Faculty of sciences

**Date 2005-2008**

Title of **Bachelor of Earth and Life Sciences/Biology**

awarded -Lebanese University / Faculty of sciences

**Projects**

2022

**EuroSea**

Responsible of the Task 1.5 in WP1 since February 2022

2021-present

**NANO Global Project (NANO-DOAP). A global study of Deoxygenation, Ocean Acidification and Productivity at selected sites**

Co-PI of the Lebanese time-series sites

2019

**IMAP (Integrated Monitoring and Assessment Programme)**

Responsible of the Ecological Objective 5 (Eutrophication) monitoring

2010-present

**Monthly monitoring of the entire Lebanese coast**

Sampling and data analysis

2016-present

**First survey of the carbonate system in the Lebanese seawater**

Chief scientist

2018-present

**Evaluation of the Lebanese Marine Environment: A multidisciplinary study (ELME)**

Biogeochemical scientist

2019-present

**IAEA Coordinated Research Project K41018, entitled ‘Evaluating the Impact of Ocean Acidification on Seafood – a Global Approach’**

Chief scientist

2020-present

**The LEbanese Submarine CANYon System connecting the shelf with the deep sea: physico-chemical-biological characterisation (LESCAS)**

Chief scientist in Lebanon

## Curriculum Vitae

Abed El Rahman HASSOUN

2018	<b>The “ACCOBAMS Survey Initiative” (ASI)</b> Observer scientist
2014-2015	<b>M<sub>3</sub>-HABs (Risk Monitoring, Modelling and Mitigation of benthic Harmful Algal Blooms along Mediterranean coasts)</b> Sampling, identification and counting on microscope
2013	<b>Mediterranean Sea Acidification in a changing climate – MedSea project</b> ( <a href="http://www.medsea-project.eu">www.medsea-project.eu</a> ) within the FP7 Cooperation program Sampling, data analysis and data treatment of the biogeochemical data
2010-2012	<b>Observation and monitoring of cetaceans in Lebanon/ACCOBAMS</b> Observer scientist

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## Supervision of

### Masters

2016	“La qualité de l’eau côtière à Tripoli” for Ms. Gloria Saba, Faculty of Public Health, Lebanese University, Tripoli, Lebanon.
2017	“The first survey of the carbonate system in the Lebanese seawater” for Ms. Najlaa Raad, Faculty of Sciences, Université de Saint-Joseph, Beirut, Lebanon.
2019	“Estimation du CO <sub>2</sub> anthropique dans les eaux libanaises” for Mr. Mohamad Al Kheir, Faculty of Public Health, Lebanese University, Tripoli, Lebanon.  “Estimation du flux air-mer en CO <sub>2</sub> dans les eaux libanaises” for Ms. Mariame Tannous, Faculty of Sciences, Chemistry Department, Lebanese University, Fanar, Lebanon.
2020	“The quantity and quality of phytoplankton populations in the Lebanese seawater in the context of climate change” for Mr. Salim Kabbara, Faculty of Public Health, Lebanese University, Tripoli, Lebanon.  “Est-ce qu'il y a des effets du changement climatique sur la production primaire dans la mer libanaise ?” for Mr. Helios Yasmine, Faculty of Sciences, Chemistry Department, Lebanese University, Fanar, Lebanon.
2021	“Primary production in the Levantine Sub-basin-Mediterranean Sea” for Mr. Hasan Khalifeh, Faculty of Sciences, Biology Department, Lebanese University, Hadath, Lebanon.

### Ph.D.

2019-present	“Evolution and Adaptation of Coccolithophores to Recent Environmental Changes in the Mediterranean Sea” for Mr. Majd Habib, between the National Council for Scientific Research in Lebanon-National Center for Marine Sciences (Lebanon) and CNRS-CEREGE- Université Aix Marseille (France): <a href="https://www.cerege.fr/fr/climat/theses-climat">https://www.cerege.fr/fr/climat/theses-climat</a>
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## Membership & Committees

1. Founder and chair of the Mediterranean Ocean Acidification Hub (OA Med-Hub) affiliated to GOA-ON: [http://goa-on.org/regional\\_hubs/mediterranean/about/introduction.php](http://goa-on.org/regional_hubs/mediterranean/about/introduction.php)
  2. Co-champion of the OARS (Ocean Acidification Research for Sustainability) *outcome 6*: [GOA-ON : OARS](http://goa-on.org/regional_hubs/mediterranean/about/introduction.php).
  3. Member and scientific member in the Global Ocean Acidification Observing Network (GOA-ON) Executive Council: [http://goa-on.org/about/executive\\_council.php](http://goa-on.org/about/executive_council.php)
  4. Member of the Gender and Diversity Board of the EuroSea Project: [Gender and Diversity Board – EuroSea](http://goa-on.org/about/executive_council.php)
  5. Member in the network of Mediterranean Experts on Climate and environmental Change (MedECC): <http://www.medecc.org/>
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6. Member in the NF-POGO (Nippon Foundation and Partnership for Observation of the Global Ocean) Alumni Network for Oceans (NANO): <http://www.ocean-partners.org/nano>

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## Oceanographic

### Expeditions

#### 2012-2013

- CANA expeditions offshore the Lebanese coast. Multiple cruises were conducted during this period to study the hydrographic and chemical conditions of the Lebanese waters, to collect plankton samples and to monitor marine cetaceans as well.

#### 2013

- The 2013 MedSeA oceanographic cruise (which is an essential part of the European project “Mediterranean Sea Acidification in a changing climate – MedSeA” ([www.medsea-project.eu](http://www.medsea-project.eu)), within the FP7 Cooperation program) along the Mediterranean Sea, on the research vessel Ángeles Alvariño of the Instituto Español de Oceanografía (IEO), between May 2<sup>nd</sup> and June 2<sup>nd</sup>, 2013. During this cruise, I collected samples intended to measure the total alkalinity, total dissolved inorganic carbon, isotopes and other parameters : <http://medseaoceancruise.wordpress.com/the-team/>

#### 2016

- OCEANA Deep-Sea Lebanon expedition, October 16<sup>th</sup>-20<sup>th</sup> 2016. During this expedition, I participated in the identification of deep-sea species, in the CTD data interpretations and in the sediments sampling: <http://eu.oceana.org/en/our-work/expeditions/deep-sea-lebanon-2016/overview>

#### 2018

- MSM72 oceanographic cruise conducted in the Mediterranean Sea aboard the R/V Maria S. Merian, between the 2<sup>nd</sup> of March and the 3<sup>rd</sup> of April 2018: <https://www.ldf.uni-hamburg.de/merian/wochenberichte/wochenberichte-merian/msm71-msm74/msm72-scr.pdf>. During this cruise, I was one of the “carbonate system” team, involved in the sampling and measurements of the total alkalinity, total dissolved inorganic carbon, pH, and calcium carbonates.

#### 2019-2020

- 15 oceanographic cruises for **ELME** (Evaluation of the Lebanese Marine Environment: A multidisciplinary study) and **IMAP** (Integrated Monitoring and Assessment Programme) projects.

#### 2022

-TalPro 2022 cruise in the Western Mediterranean Sea aboard R/V Belgica between 16 and 26 May 2022. [TAIPro2022: the Tyrrhenian Sea & Algero-Provencal component of the Med-SHIP programme – Eurofleets – An alliance of European marine research infrastructure to meet the evolving needs of the research and industrial communities.](#)

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## Trainings, Workshops, Technical meetings &

### talks

#### 2010

-International courses for training on the marine taxonomy, from the 20<sup>th</sup> of September till the 2<sup>nd</sup> of November 2010, in Turkey (Istanbul-Izmir), organized by INOC (Inter-Islamic Network on Oceanography): <http://www.inoctr.org/>

#### 2011

-An international workshop entitled “Environmental impacts know no boundaries”, June 5<sup>th</sup>-19<sup>th</sup> 2011, in LA Spezia/Italy, organized by ENEA ([www.santateresa.enea.it](http://www.santateresa.enea.it)) and Environmental Ocean Team ([www.ocean-team.org](http://www.ocean-team.org)).

-Member of the organizing committee of the INOC/CNRS International Conference entitled “Land-Sea Interactions in the Coastal Zone, LANDSI- 2012”, in Byblos/Lebanon,

## Curriculum Vitae

**Abed El Rahman HASSOUN**

- 2012** November 6<sup>th</sup>-8<sup>th</sup> 2012. During this event, I displayed an oral presentation on the “Effects of Continental Input on Marine Environment in the Lebanese Coastal Waters “. INOC: <http://www.inoctr.org/> , CNRS: [www.cnrs.edu.lb](http://www.cnrs.edu.lb).
- 2013** -The GreenSeas summer school entitled “Global plankton data: ecosystems, monitoring and modelling in an era of global warming”, between the 28<sup>th</sup> of January and the 2<sup>nd</sup> of February 2013, in the University of Cape Town/Cape Town/South Africa: <http://www.greenseas.eu/content/greenseas-summer-school>
- The 6<sup>th</sup> international SOLAS summer school entitled “Surface Ocean-Lower Atmosphere Study”, between the 23<sup>rd</sup> of August and the 2<sup>nd</sup> of September 2013, at the State Key Laboratory of Marine Environmental Science/Xiamen University/China: <http://mel.xmu.edu.cn/solassummerschool/>
- The Sino-German summer school on Marine Sciences entitled “Dynamics in Atmosphere and Ocean Coupling”, held by the Center for Sino-German Cooperation in Marine Sciences (SGMS), September 2<sup>nd</sup>-13<sup>th</sup> 2013, in Qingdao/China. Contributing universities and institutions were: the Ocean University of China (OUC), the Zhejiang University, the Second Institute of Oceanography (State Oceanic Administration), the University of Kiel (CAU), the University of Bremen, the University of Hamburg and the Leibniz Institute of Baltic Research, Warnemünd Marine Research (AWI): <http://www2.ouc.edu.cn/sgms/>
- The International Conference on Oceanography and Sustainable Marine Production entitled “A Challenge of Managing Marine Resources in a Changing Climate-ICOSMaP–2013”, October 29<sup>th</sup>-31<sup>st</sup> 2013, in Kuantan/Malaysia. During this event, I presented a study on the “Inter-annual variations of water and air temperatures in Lebanese coastal waters (2000-2012)”: <http://inoctr.org/files/ICOSMAP2013.pdf>
- The 20<sup>th</sup> annual international LAAS conference entitled “New Frontiers in Sciences”, March 27<sup>th</sup>-29<sup>th</sup> 2014, jointly organized by LAAS, EDST-LU and CNRS in the Lebanese University/Hadath/Lebanon. During this conference, I presented an oral presentation entitled “Anthropogenic CO<sub>2</sub> and acidification in the Mediterranean Sea during May 2013”: <http://www.biotech.ul.edu.lb/laas20/program.html>
- 2014** -The 3<sup>rd</sup> annual congress for the Ph.D. students of the Université De Perpignan Via Domitia, May 15<sup>th</sup>-16<sup>th</sup> 2014, at the Université De Perpignan Via Domitia/Perpignan/France. During this congress, I presented an oral presentation entitled “Analysis and Modeling of acidification in the Mediterranean Sea”: <http://upvdoc.univ-perp.fr/programme.pdf>
- The ESA conference entitled "Earth Observation for Ocean-Atmosphere Interactions Science 2014", October 28<sup>th</sup>-31<sup>st</sup> 2014, co-organised by ESA (European Space Agency), SOLAS and EGU in the European Space Agency/ESRIN/Frascati/Italy: <http://eo4oceanatmosphere2014.info/>
- 2015** -Training entitled “Ostreopsis isolation cells and maintenance of Cultures” in the Università Politecnica Delle Marche (UNIVPM), Ancona/Italy, for two months (September-October 2015) in the context of a European project: <http://m3-habs.net/about-m3-habs/>
- 2016** -Mares Conference, Marine Ecosystems Health and Conservation, February 1<sup>st</sup>-5<sup>th</sup> 2016, Olhão, Portugal. Organized by Mares Conference Coordination Office, Ghent University/Belgium and Centre of Marine Sciences (CCMAR), University of Algarve/Portugal. I participated in two studies presented during this event: 1- What is the acidification level in the Mediterranean Sea? 2- Average pH variations in the Mediterranean Sea surface waters: ISBN 9789461973559. <http://www.maresconference.eu/>



-The 3<sup>rd</sup> Global Ocean Acidification Observing Network Science Workshop (GOA-ON ; [www.goa-on.org](http://www.goa-on.org) ), May 8<sup>th</sup>-10<sup>th</sup> 2016, Hobart, Tasmania, Australia.

**2017**

-Co-chair in the Science Policy Interface and Ecosystem Approach Coordination Group Joint Meeting on IMAP Scale of Monitoring and Assessment and QSR, held on 27-28 April 2017 in Nice, France, organized jointly by Plan Bleu and the CU/MED POL of UN Environment/MAP: <http://planbleu.org/en/event/invitation-joint-workshop-science-policy-interface-spi-strengthening-and-ecosystem-approach>

-“Sustainable Blue Growth in Mediterranean and Black Sea Countries” summer school, held in Trieste from 10 to 19 of July 2017 (<http://summerschool.inogs.it/>).

-The 10<sup>th</sup> International Carbon Dioxide Conference (ICDC10: <http://www.icdc10.unibe.ch/>) held between 21<sup>st</sup> and 25<sup>th</sup> of August 2017 in Interlaken, Switzerland. Poster: Acidification and carbonate system trends in the Eastern Mediterranean Sea.

-“Blue Mission” Training Course on blue growth in the Mediterranean with the focus on the maritime transport sector and ports, 13-17 November 2017 in Piran, Slovenia, organized by the EMUNI (Euro-Mediterranean University: <http://www.emuni.si/en/bluemission>).

**2018**

-POGO fellowship program for Ship-board Training. During this program I have spent one month (February) at the IEO in A Coruña, Spain at Marta Alvarez’s lab. to prepare for the cruise and being familiar with the carbonate system equipment, and one month (May) in GEOMAR in Kiel, Germany at Toste Tanhua’s lab. for data post-cruise data processing and data treatment. In March, I participated in the MSM72 cruise conducted in the Mediterranean Sea.

-Lecture about “The power of marine algae in the context of the Blue Growth Initiative” for the participants of the 2018 EMUNI-OGS Summer School, at the Euro-Mediterranean University, in Piran, Slovenia, on the 22<sup>nd</sup> of June 2018: [http://www.emuni.si/sites/default/files/Files\\_EN/Attachments/Blue\\_Growth.pdf](http://www.emuni.si/sites/default/files/Files_EN/Attachments/Blue_Growth.pdf)

-Organization of the “ACCOBAMS Training Course on Photo-ID and Databases for Experts”, 1-5 October 2018, Byblos, Lebanon.

-Technical Meeting on the Management, Analysis and Quality Control of Ocean Acidification Observation Data, 22-26 October 2018, in the IAEA laboratories, Monaco: <https://news-oceanacidification-icc.org/2018/11/07/oa-icc-and-go-a-on-organize-advanced-data-analysis-and-management-workshop-in-monaco/>

**2019**

-1<sup>st</sup> MedECC Assessment Report Lead Authors meeting, 4-7 March 2019, in Milan, Italy: <http://www.medecc.org/1st-medecc-assessment-report-mar1-authors-meeting-4-7-march-milan-italy/>

-The 4<sup>th</sup> Global Ocean Acidification Observing Network (GOA-ON) International Workshop, 14-17 April, 2019 in Hangzhou, China. Plenary Oral Presentation: “First quantification of the carbonate system in the Lebanese Seawater, Levantine Sub-basin, Eastern Mediterranean Sea”: [http://www.goa-on2019.com/file/\[FINALIZED\]%20Workshop%20Daily%20Program.pdf](http://www.goa-on2019.com/file/[FINALIZED]%20Workshop%20Daily%20Program.pdf)

-Technical Meeting on the Development of Practical Guidelines for Ocean Acidification Measurements and their Associated Uncertainties (EVT1804704), 29-31 May 2019 in the

## Curriculum Vitae

## Abed El Rahman HASSOUN

IAEA Environment Laboratories, Monaco: <https://news-oceanacidification-icc.org/2019/06/03/oa-icc-holds-back-to-back-meetings-on-future-activities-and-practical-guidelines-for-ocean-acidification-research/>

- First Research Coordination Meeting on Evaluating the Impacts of Ocean Acidification on Seafood – A Global Approach as a scientific partner, 26-30 August 2019 in Kristineberg Marine Station, Sweden: <https://www.iaea.org/newscenter/news/iaea-supports-new-research-on-the-impacts-of-ocean-acidification-on-seafood>

-“Indian Ocean Regional Ocean Acidification” workshop as an invited expert and representative of the GOA-ON network, 28-29 October 2019 in Stone Town, Zanzibar-Tanzania: <https://www.iaea.org/newscenter/news/supporting-ocean-acidification-initiatives-in-the-western-indian-ocean>

- 2<sup>nd</sup> MedECC Steering Committee meeting and Coordinating Lead Authors meeting, 11-13 December 2019, in Marseille, France: <https://www.medecc.org/medecc-steering-comitee-meeting-and-coordinating-lead-authors-meeting-11-13-december-2019-marseille/>

### 2020

-Talk entitled "Regional perspective of Ocean Acidification science and observation" during the HLPF side-event "Developing capacity to address ocean acidification for a sustainable ocean future" on the 8th of July 8-9 am (New York Time) as a part of the Communities of Ocean Action within the High Level Political Forum 2020: <https://sustainabledevelopment.un.org/hlpf/2020>

-Organization and participation in the Ocean Acidification Week (#OAW2020) that took place between 8 and 10 September 2020, mainly in the Mediterranean session as a chair of the Ocean Acidification Mediterranean Hub (OA Med-Hub). The session is published on YouTube: <https://www.youtube.com/watch?v=9wH7JLIURS0>

- Participation in the plenary consultation on the draft Summary for Policymakers (SPM) of the MedECC report, 22 September 2020 (Marseille and online), **as a Corresponding Lead Author (CLA)** in the chapter 4 ‘Ecosystems’: <https://www.medecc.org/plenary-consultation-on-the-draft-summary-for-policymakers-spm-of-the-medecc-report/>

- Gave a talk about ‘climate change effects in the Mediterranean basin’ in an international event entitled: "Assessing Climate and Environmental Stresses in the Arab and Mediterranean Regions: Scientific Evidences and Socio-economic Impact", 27 October 2020, organized by the Center for Mediterranean Integration.

- Gave a talk entitled “Seawater monitoring systems and parameters in the context of climate change” during the First national meeting on MSP and Blue Economy held on 6 and 13 November 2020, and organized by UNESCO-IOC: [http://www.mspglobal2030.org/wp-content/uploads/2020/11/MSProadmap\\_Presentation\\_Lebanon\\_20201106.pdf](http://www.mspglobal2030.org/wp-content/uploads/2020/11/MSProadmap_Presentation_Lebanon_20201106.pdf)

-Gave a talk entitled "Biogeochemical studies in the context of climate change in Lebanon-Eastern Mediterranean Sea" during the seminar of the group ‘Laboratoire des Bio-Indicateurs Actuels et fossiles (LPG-BIAF)’, département de Géologie, UMR-CNRS in the Université Angers, on the 11<sup>th</sup> of December 2020.

### 2021

- Main speaker of a webinar presented to Moroccan students from the Master "Conservation of Marine Biodiversity» of the Faculty of Sciences at the Université Abdelmalek Essaadi in Tétouan, Morocco. The webinar, featured on the 15th of April 2021, was entitled « Le

changement climatique en Méditerranée: tendances, méthodologies, et études au Liban » : <https://www.youtube.com/watch?v=u2TNGa9Wxvg>

- Organization and participation as a moderator in a webinar on Ocean Acidification in the Mediterranean organized in the framework of the Monaco Ocean Week 2021 and entitled "Future Priorities for Addressing Ocean Acidification in the Mediterranean: from research to policy". The session was held on March 24<sup>th</sup> 2021 and organized by the IUCN and OA Med-Hub with the collaboration of the Fondation Prince Albert II de Monaco: <https://www.youtube.com/watch?v=YiQ5tBguD3c>

- Participation in a workshop entitled "Ocean Acidification: SDG indicator 14.3.1 methodology – revisited" that was held in 12-13 April 2021 and organized by the IOC-UNESCO.

- Participation as an advisory member in the 'Online Advisory Committee Meeting' held in the 16<sup>th</sup> of April 2021 to discuss the process for the elaboration of the "Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region" (Post-2020 SAP BIO), organized by the UN SPA-RAC: [www.spa-rac.org](http://www.spa-rac.org)

- Organization and participation in a training for the 'Tyre Coastal Nature Reserve' staff in the framework of the Intermediate Outcome 3 (iOc3) of the "ELME Project: Evaluation of the Lebanese Marine Environment: A multidisciplinary study" on the 16<sup>th</sup> of March 2021 in Tyre's municipality.

- Speaker during the UN World Oceans Day event entitled "Implementing UN SDG 14.3-Protecting Communities and Livelihoods from a Changing Climate" on the 8<sup>th</sup> of June 2021 to talk about "Climate Change in the Mediterranean and Actions to Understand and Address Ocean Acidification". The event was organized by the International Alliance to combat Ocean Acidification (OA Alliance) and The Ocean Foundation (TOF): <https://unworldoceansday.org/events/implementing-un-sdg-14-3-protecting-communities-and-livelihoods-from-the-threat-of-a-changing-ocean/>

- Speaker in the Sustainability Research & Innovation Congress (SRI 2021) that was held in 12-15 June, 2021 online and onsite in Brisbane, Australia. I was invited to talk about "Risks on Mediterranean marine resources" during a session entitled "Risks associated with environmental change in the Mediterranean Basin", organized by MedECC on the 14<sup>th</sup> of June 2021: <https://attend.sri2021.org/meetings/virtual/Mpt8nFHiBAY3YDfRk>

-Co-chair of the session SS84 entitled "Ocean acidification: trends and effects from local to regional scales" that took place on the 25<sup>th</sup> of June 2021 at the ASLO 2021 Aquatic Sciences Meeting held virtually on June 22-27, 2021: <https://www.aslo.org/2021-virtual-meeting/>

-Organization and participation in the Ocean Acidification Week (#OAWWeek2021) that took place on the 14<sup>th</sup> of September 2021, mainly in the Mediterranean session as a chair of the Ocean Acidification Mediterranean Hub (OA Med-Hub). The event is published on YouTube: [OARS Session: Intro by Ambassador Peter Thomson, UN Secretary General's Special Envoy for the Ocean - YouTube](#)

**2022**

-Panelist in a session entitled "Ocean Diplomacy: How Common Threats to Shared Resources Can Overcome Politics", organized by the Ocean Foundation, on the 18<sup>th</sup> of February 2022 at the American Association for the Advancement of Science (AAAS)



meeting, online: [Ocean Diplomacy: How Common Threats to Shared Resources Can Overcome Politics \(confex.com\)](https://www.confex.com/2022/05/eurosea/).

-Presenter in the EuroSea annual meeting that was held in Cadiz, Spain between 9 and 13 May 2022. [EuroSea](https://www.eurosea.eu/).

-Main Speaker in the Ocean Acidification Workshop, organized by INIOAS, IIM-CSIC, and the IOC-UNESCO, on 18-18 October 2022. The talk was entitled "Ocean acidification research in the Mediterranean Sea: Status, trends and next steps": [Workshop on Ocean Acidification \(Online\) \(inio.ac.ir\)](https://www.inio.ac.ir/).

**Publications****\*Peer-reviewed journals**

1-**HASSOUN Abed El Rahman**, GUGLIELMI Véronique, GEMAYEL Elissar, GOYET Catherine, ABOUD-ABI SAAB Marie, GIANI Michele, ZIVERI Patrizia, INGROSSO Gianmarco, TOURATIER Franck, 2015. Is the Mediterranean Sea Circulation in a Steady State? *Journal of Water Resources and Ocean Science*, 4 (1), 6-17, doi: 10.11648/j.wros.20150401.12.

2-**HASSOUN Abed El Rahman**, GEMAYEL Elissar, KRASAKOPOULOU Evangelia, GOYET Catherine, ABOUD-ABI SAAB Marie, ZIVERI Patrizia, TOURATIER Franck, GUGLIELMI Véronique, FALCO Cédric, 2015. Modeling of the Total Alkalinity and the Total Inorganic Carbon in the Mediterranean Sea. *Journal of Water Resources and Ocean Science*, 4 (1), 24-32, doi: 10.11648/j.wros.20150401.14.

3-**HASSOUN Abed El Rahman**, GEMAYEL Elissar, KRASAKOPOULOU Evangelia, GOYET Catherine, ABOUD-ABI SAAB Marie, TOURATIER Franck, GUGLIELMI Véronique, FALCO Cédric, 2015. Acidification of the Mediterranean Sea from anthropogenic carbon penetration. *Deep Sea Research Part I: Oceanographic Research Papers*, 102, 1–15, <https://doi.org/10.1016/j.dsr.2015.04.005>.

4-GEMAYEL Elissar, **HASSOUN Abed El Rahman**, BENALLAL MOHAMED Anis, GOYET Catherine, RIVARO Paola, ABOUD-ABI SAAB Marie, KRASAKOPOULOU Evangelia, TOURATIER Franck, and ZIVERI Patrizia, 2015. Climatological variations of total alkalinity and total inorganic carbon in the Mediterranean Sea surface waters. *Earth System Dynamics*, 6, 789–800, <https://doi.org/10.5194/esd-6-789-2015>.

5-GOYET Catherine, **HASSOUN Abed El Rahman**, GEMAYEL Elissar, TOURATIER Franck, ABOUD-ABI SAAB Marie, and GUGLIELMI Véronique, 2016. Thermodynamic Forecasts of the Mediterranean Sea Acidification. *Mediterranean Marine Science*, 17(2), 508-518. <https://doi.org/10.12681/mms.1487>.

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12- Jemaa S, Mahfouz C, Kazour M, Lteif M, **Hassoun A.E.R.**, Ghsoub M, Amara R, Khalaf G and Fakhri M, 2021. Floating Marine Litter in Eastern Mediterranean From Macro to Microplastics: The Lebanese Coastal Area as a Case Study. *Frontiers in Environmental Science*, 9:699343. <https://doi.org/10.3389/fenvs.2021.699343>

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**\*Proceedings-  
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2-ABBOUD-ABI SAAB Marie, FAKHRI Milad, **HASSOUN Abed El Rahman**, 2013. Inter-annual variations of water and air temperatures in Lebanese coastal waters (2000-2012). INOC 2013 proceedings: <http://inoctr.org/files/ICOSMAP2013.pdf>

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7-**HASSOUN Abed El Rahman**, GEMAYEL Elissar, KRASAKOPOULOU Evangelia, GOYET Catherine, ABOUD-ABI SAAB Marie, TOURATIER Franck, GUGLIELMI Véronique, FALCO Cédric, 2016. What is the acidification level in the Mediterranean Sea? 2016 Mares Conference, Olhão, Portugal, Volume: Abstract book. 84p, ISBN 9789461973559.

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12-**HASSOUN Abed El Rahman**, GEMAYEL Elissar, RAAD Najla'a, ABOUD-ABI SAAB Marie, FAKHRI Milad, 2018. First quantification of the carbonate system and the acidification in the Eastern Mediterranean Sea. 2018 Ocean Sciences Meeting, OC13A-03, Portland, USA.

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14-HABIB Majd, **HASSOUN Abed El Rahman**, BEAUFORT Luc, 2019. Evolution and Adaptation of Coccolithophores to Recent Environmental Changes in the Mediterranean Sea. The First Italian-Lebanese Science Day: "Global Science", LAAS conference proceedings 2019, American University of Beirut (AUB), Beirut, Lebanon: <http://laaslb.org/wp-content/uploads/2019/04/Proceedings-and-abstracts-april-4.pdf>

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18- **HASSOUN Abed El Rahman**, FAKHRI Milad, RAAD Najla'a, ABOUD-ABI SAAB Marie, DE CARLO Eric Heinen, 2019. First quantification of the carbonate system in the Lebanese Seawater, Levantine Sub-basin, Eastern Mediterranean Sea. OceanObs'19, September 16, 2019, Hawaii, USA: <http://www.oceanobs19.net/>

19- **HASSOUN Abed El Rahman**, FAKHRI Milad, HABIB Majd, OUBA Anthony, JEMAA Sharif, MAHFOUZ Céline, JABER Houssein, GHANEM Abeer, TANNOUS Mariam, EL KHEIR Mohamad, 2020. Spatio-temporal survey of the coastal carbonate system offshore Lebanon-Levantine Mediterranean Sea. Geophysical Research Abstracts, EGU2020-19618, updated on 28 May 2020: <https://doi.org/10.5194/egusphere-egu2020-19618>

20- HABIB Majd, **HASSOUN Abed El Rahman**, BEAUFORT Luc, 2021. Evolution and Adaptation of Coccolithophores to Recent Environmental Changes in the Mediterranean Sea. 28ème Congrès des Doctorants, Université Aix-Marseille, 14-15 avril, 2021.

21- Fernández-Guallart, E.; Fajar, Noelia; Castaño, Mónica; Santiago-Domenech, Rocío; **Hassoun, Abed El Rahman**; Pérez, Fiz F. ; Easley, Regina; Álvarez, Marta, 2021. A decade of spectrophotometric carbonate ion measurements in seawater dealing with inconsistencies. ASLO 2021 Aquatic Sciences Meeting, 22–27 June, Virtual. <https://digital.csic.es/handle/10261/260131>

22- HABIB Majd, **HASSOUN Abed El Rahman**, BEAUFORT Luc, 2022. Evolution and Adaptation of Coccolithophores to Recent Environmental Changes in the Mediterranean Sea. 18th International Nannoplankton Association Meeting, 28 Aug-3 Sep 2022 Avignon (France). <https://ina18.sciencesconf.org/program>

23- Currie Kim, Christopher Sabine, Andrew G. Dickson, Libby Jewett, Alexis Valauri-Orton, Sam Dupont, Lina Hansson, Kirsten Isensee, Marine Lebrec, **Abed El Rahman Hassoun**, Yashvin Neehaul, Katy Soapi, Mary Chris Lagumen, Kaitlyn Lowder, Gabby Kitch, Melissa Meléndez, Maribel I. García-Ibáñez, Ashley Bantelman, Katherina Schoo, Sarah Flickinger, Sophie Chu, 2022. The development of accessible best practices for monitoring ocean acidification globally through the “GOA-ON in a Box” initiative. High CO2 Symposium, Lima, Peru.

24- **HASSOUN Abed El Rahman**, FAKHRI M., MAHFOUZ M., JEMAA S., GHANEM A., OUBA A., YASMINE H., MINA R., TAREK E., 2022. Coastal carbonate system offshore two Eastern Mediterranean cities. High CO2 Symposium, Lima, Peru.

25- KOFFI U., KONAN S., and **HASSOUN A.E.R.**, 2022. Relationship between the carbonate system trends/Ocean Acidification and Marine organisms in the Gulf of Guinea-AFRICA (ROAM project). High CO2 Symposium, Lima, Peru.

26- Lomovasky B., Belivermiş M., Bounakhla M., Castillo-Briceno P., Díaz-Castañeda V., Dupont S., **Hassoun A.E.R.**, Helguera Pedraza Y., Lacoue-Labarthe T., Lamego F., Metian M., Miranda Vera C., Navarrete-Mier F., Okuku E., O'Shea OR., Ozhan K., Sanchez Noguera C., Shaltout N., Smith G., Thorndyke M., Tumnoi Y., Yusseppone MS., 2022. Oceans and you: Public perception of the Ocean, Climate Change and Ocean Acidification. A global initiative to link Science with Society. High CO2 Symposium, Lima, Peru.

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**\*Reports & chapters**

- 2017** - Conclusions and Recommendations of the Science Policy Interface and Ecosystem Approach Coordination Group Joint Meeting on IMAP Scale of Monitoring and Assessment and QSR, prepared with Plan Bleu in the framework of the Joint Meeting on IMAP Scale of Monitoring and Assessment and QSR that was held in Nice, France, 2017: <http://planbleu.org/en/event/invitation-joint-workshop-science-policy-interface-spi-strengthening-and-ecosystem-approach>
- 2018** - Technical report on the seawater quality of the Lebanese coast 2018: [www.cnrs.edu.lb](http://www.cnrs.edu.lb)
- 2019** - GOA-ON (Global Ocean Acidification Observing Network), 2019. "Global Ocean Acidification Observing Network (GOA-ON) Implementation Strategy, 2019." Newton, J.A., University of Washington, USA; Jewett, E.B., NOAA, USA; Tilbrook, B., CSIRO, Australia; Bellerby, R., East China Normal University, China and NIVA, Norway; Chai, F., OED, Second Institute of Oceanography, SOA, China and University of Maine, USA; Chen, C.-T. A., National Sun YetSen University, Taiwan; Dupont, S., University of Gothenberg, Sweden; Feely, R. A., NOAA PMEL, USA; Findlay, H. S., Plymouth Marine Laboratory, United Kingdom; Hansson, L., IAEA OA-ICC, Monaco; **Hassoun, A.E.R., National Council for Scientific Research, Lebanon**; Isensee, K., IOC, UNESCO; Khokiattiwong, S., Phuket Marine Biological Center, Thailand; Mayorga, E., University of Washington, USA; McIntosh, R.D., The Secretariat of the Pacific Regional Environment Programme, Samoa; Pfeil, B., University of Bergen, Norway; Schoo, K. L., IOC-UNESCO; Shaltout, N., National Institute of Oceanography and Fisheries, Egypt; Vargas, C., Universidad de Concepcion, Chile. [http://www.goa-on.org/documents/general/GOA-ON\\_Implementation\\_Strategy.pdf](http://www.goa-on.org/documents/general/GOA-ON_Implementation_Strategy.pdf)
- Technical report on the seawater quality of the Lebanese coast 2019: [www.cnrs.edu.lb](http://www.cnrs.edu.lb)
- 2020** -IUCN 2020. Towards a western Indian Ocean regional ocean acidification action plan. Laffoley, D., Baxter, J.M., **Hassoun, A.E.R.**, Spalding, M., Osborn, D., Oliver, J., & Andrew, T.G. 2020. Workshop report-Switzerland, IUCN. 29pp.
- Technical report on the seawater quality of the Lebanese coast 2020: [www.cnrs.edu.lb](http://www.cnrs.edu.lb)
- United Nations Environment Programme/Mediterranean Action Plan and Plan Bleu (2020). State of the Environment and Development in the Mediterranean. Nairobi. UNEP/MAP and Plan Bleu, 2020. <https://planbleu.org/wp-content/uploads/2020/11/SoED-Full-Report.pdf>
- Balzan MV, **Hassoun A.E.R.**, Aroua N, Baldy V, Bou Dagher M, Branquinho C, Dutay J-C, El Bour M, Médail F, Mojtahid M, Morán-Ordóñez A, Roggero PP, Rossi Heras S, Schatz B, Vogiatzakis IN, Zaimis GN, Ziveri P., 2020. Ecosystems. In: Climate and Environmental Change in the Mediterranean Basin –Current Situation and Risks for the Future. First Mediterranean Assessment Report [Cramer W, Guiot J, Marini K (eds.)] Union for the Mediterranean, Plan Bleu, UNEP/MAP, Marseille, France, pp. 323-468. The chapter "Ecosystems": [https://www.medecc.org/wp-content/uploads/2021/05/MedECC\\_MAR1\\_4\\_Ecosystems.pdf](https://www.medecc.org/wp-content/uploads/2021/05/MedECC_MAR1_4_Ecosystems.pdf) Entire report: <https://www.medecc.org/first-mediterranean-assessment-report-mar1/>
- 2022** -TAIPro2022 CRUISE REPORT R/V BELGICA Cruise n. 2022/12. DOI: 10.5281/zenodo.6918731, <https://zenodo.org/record/6918731#.YvTI12PP1PY>

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### \*Outreach articles

**Hassoun Abd El Rahman**, 2020. Research justice: We are better together! in NANO newsletter (May 2020): [https://nf-pogo-alumni.org/wp-content/uploads/2020/06/NN18\\_02Jun.pdf](https://nf-pogo-alumni.org/wp-content/uploads/2020/06/NN18_02Jun.pdf) , DOI: 10.13140/RG.2.2.16542.97606

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### Awards & grants

2021: [North-South Prize 2020](#) from the Council of Europe in Lisbon, Portugal for the MedECC report (CLA of one [MAR1](#) chapters: [Ecosystems](#)).

2019: Grant from the Ocean Foundation to attend the 4th Global Ocean Acidification Observing Network (GOA-ON) International Workshop, in Hangzhou, China.

2018: POGO fellowship for Ship-board Training on MSM72.

2017: Grant from the IAEA to attend the 10th International Carbon Dioxide Conference in Interlaken, Switzerland.

2016: Grant from the IAEA to attend the 3rd Global Ocean Acidification Observing Network Science Workshop, in Hobart, Tasmania, Australia.

2016: Grant from the IAEA to attend the Mares Conference, Marine Ecosystems Health and Conservation, in Olhão, Portugal.

2014: Grant from the European Space Agency to attend the ESA conference in ESRIN, Frascati, Italy

2013: Grant from the IAEA to attend the 6th international SOLAS summer school in Xiamen University, China

2013: Grant from GreenSeas to attend a summer school in Cape Town, South Africa

2011: Doctoral scholarship by the National Council for Scientific Research-Lebanon

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### Review

\*Participation in the review process of many scientific articles in international peer-reviewed journals, i.e. *Progress in Oceanography* (IF = 4.060 ; Percentile: 93%), *Regional Environmental Change* (IF = 3.481 ; Percentile: 76%), *Biogeosciences* (IF = 3.48 ; Percentile: 96%), *Journal of Marine Systems* (IF = 2.528 ; Percentile: 92%), *Frontiers in Marine Sciences* (IF = 3.661 ; Percentile: 80%), *Oceanologia* (IF = 2.198 ; Percentile: 74%), etc.

\*Jury member for Mediterranean Climate Change Adaptation Awards 2019 & 2020: [www.medadapt-awards.com/en/home/](http://www.medadapt-awards.com/en/home/)

\*Jury member for Ocean Acidification Information Exchange (OAIE) microgrants 2020: [www.oainfoexchange.org](http://www.oainfoexchange.org)

\*Reviewer in the Scientific Committee of the UNEP/MAP and Plan Bleu report “State of the Environment and Development in the Mediterranean, SoED 2020”: <https://planbleu.org/wp-content/uploads/2020/10/SoED-Full-Report.pdf>

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**Personal  
skills and  
competences**

Mother tongue(s) **Arabic**  
Other language(s)

	<b>Understanding</b>		<b>Speaking</b>		<b>Writing</b>
	Listening	Reading	Spoken interaction	Spoken production	
<b>French</b>	Excellent	Excellent	Excellent	Excellent	Excellent
<b>English</b>	Excellent	Excellent	Excellent	Excellent	Excellent

**Computer skills  
and  
competences** Competent with most Microsoft office programs, OceanDataView (ODV), CO2Syst./Calc. and R.

**Other skills and  
competences** -Photography (Abed El Rahman Hassoun's photography on Facebook),  
-I like visiting art galleries and museums, cooking, travelling, experiencing new cultures and meeting new people.