



**IAEA**

International Atomic Energy Agency

*Atoms for Peace and Development*

# **Basic Training Course on Multiple Stressors and Ocean Acidification**

**IAEA Marine Environment Laboratories, Monaco**

**24 October–4 November 2022**

**Ref. No.: EVT2104592**

## **Information Sheet**

### **Introduction**

The Basic Training Course on Multiple Stressors will be based on previous courses on ocean acidification held as part of the activities of the IAEA Peaceful Uses Initiative project “Ocean Acidification International Coordination Centre” (OA-ICC) and partners.

### **Objectives**

Human health and well-being are closely linked to the ocean and the many goods and services it provides. However, the ocean is under cumulative stress from a range of human-driven pressures. The impact of multiple ocean stressors together and their interplay on marine life and ecosystem function is not well understood, yet it is central to mitigate the negative effects they cause and/or to support adaptation strategies that might counteract stressors.

To date, studies often focus on single species or groups of organisms and the influence of a single stressor, while information about ecosystem responses to multiple stressors is limited. Innovative science is needed to resolve the complexity of the interplay of stressors and the resulting impacts.

The aim of this course is to train early-career scientists and researchers entering the multiple stressor field with the goal to better understand key concepts (e.g. What is a stressor? What is a mode of action? What is an interaction?), assist them to be able to measure and manipulate seawater physico-chemistry, develop relevant experimental strategies, set up pertinent experiments in the laboratory and in the field, avoid typical pitfalls and ensure comparability with other studies, in a sustainable way.

## **Target Audience**

The course is open to 12 trainees. Priority will be given to early-career scientists with experience in marine environmental changes. At least one publication in the field of marine environmental changes is required.

## **Working Language(s)**

English

## **Expected Outputs**

Increased capacity to measure and study multiple stressors and increased networking among scientists working on ocean acidification. Initiate/deepen connections with international networks such as the Global Ocean Acidification Observing Network (GOA-ON; [www.goa-on.org](http://www.goa-on.org)). Participants will also work on personal projects, developing strategies for their own research and a data-based project using data resources from the OA-ICC.

## **Structure**

The training will include lectures in plenary, guest lectures and hands-on experiments in smaller groups (the level will depend on the basic knowledge of the selected participants). Subjects to be covered include theoretical aspects of multiple stressor research, how to identify relevant scientific questions, best practices for seawater physico-chemistry characterization, experimental strategies and design, lab- and field-based methods for measuring organism responses to multiple stressors, including nuclear and isotopic techniques, and data analysis, processing, and modeling.

## Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **12 September 2022**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate.

## Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **12 September 2022**.

## Venue

The event will be held at the IAEA Marine Environment Laboratories in Monaco.

## **Additional Information**

Selected participants will be informed by **21 September 2022**.

The course is funded through the IAEA and the Foundation Prince Albert II de Monaco.

Participants should also make their own arrangements for transportation, passports, visas, and vaccinations (including covid). The closest airport is Nice.

## **Additional Requirements**

The participants should have a university degree in marine chemistry, biology, oceanography or a related scientific field, and should be currently involved in or planning to study multiple stressors.

Selection will be based on merit and interest. Your applications should include:

- \* A motivation letter with a short description of your research interest, why you would like to participate, and your plans regarding present and future ocean acidification research (max one A4 page)

- \* CV with publication list

## **IAEA Contacts**

### **Scientific Secretary:**

#### **Ms Ashley Bantelman**

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International Atomic Energy Agency  
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### **Administrative Secretary:**

#### **Ms Carolina Galdino**

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98000 MONACO  
PRINCIPALITY OF MONACO

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Fax: +377 97 97 72 73

Email: [C.galdino@iaea.org](mailto:C.galdino@iaea.org)

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on other matters related to the event to the Administrative Secretary.



# Participation Form

## Basic Training Course on Multiple Stressors and Ocean Acidification

IAEA Marine Environment Laboratories, Monaco

24 October–4 November 2022

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary [A.Bantelman@iaea.org](mailto:A.Bantelman@iaea.org) and to the Administrative Secretary [C.Galdino@iaea.org](mailto:C.Galdino@iaea.org).

**Deadline for receipt by IAEA through official channels: 12 September 2022**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable: Do you intend to submit a paper?                      Yes <input type="checkbox"/> No <input type="checkbox"/> Would you prefer to present your paper as a poster?      Yes <input type="checkbox"/> No <input type="checkbox"/> Title:		

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.





# Grant Application Form

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To be completed by the applicant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary [A.Bantelman@iaea.org](mailto:A.Bantelman@iaea.org) and to the Administrative Secretary [C.Galdino@iaea.org](mailto:C.Galdino@iaea.org).

**Deadline for receipt by IAEA through official channels: 12 September 2022**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	

### 1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended	
			from	to

### 2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked	
			from	to

### 3. Description of work performed over the last three years:

### 4. Institute's/Member State's programme in field of event:

Date:                      Signature of applicant: \_\_\_\_\_

Date:                      Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission  
to the IAEA or National Atomic Energy Authority \_\_\_\_\_