



*L'atome pour la paix et le développement*

الوكالة الدولية للطاقة الذرية

国际原子能机构

International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

## Laboratoires de l'environnement

4 Quai Antoine 1<sup>er</sup>, MC 98000 Monaco, Principauté de Monaco

Phone: (+377) 97.97.72.72 • Fax: (+377) 97.97.72.73

Email: [mel@iaea.org](mailto:mel@iaea.org) • Internet: <http://www.iaea.org/monaco>

In reply please refer to: EVT1703906

Dial directly to extension: (+377) 9797 72-56

Le Secrétariat de l'Agence internationale de l'énergie atomique (AIEA) présente ses compliments aux États Membres de l'AIEA et à l'honneur de porter à leur attention la **réunion technique sur l'utilisation de meilleures pratiques dans le cadre des expériences relatives à l'acidification des océans portant sur des cas de figure où interviennent des facteurs de perturbation multiples** (ci-après dénommée « l'événement »), qui se tiendra à Monaco du **24 au 28 juin 2019**.

Cet événement a pour objet la mise au point et l'application de nouvelles méthodes et meilleures pratiques en matière d'études relatives à l'acidification des océans menées dans des contextes où interviennent des facteurs de perturbation multiples.

De plus amples informations sont fournies dans la notice ci-jointe.

L'événement se déroulera en anglais.

Les États Membres sont invités à désigner un ou plusieurs participants et sont vivement encouragés à choisir des femmes qualifiées.

L'AIEA n'est normalement pas en mesure de prendre à sa charge les frais de voyage et autres dépenses des participants. Elle dispose toutefois de fonds limités pour payer une partie des frais de participation de certains d'entre eux. Cette aide peut en principe être accordée, sur demande expresse, à un participant par pays, à la condition que, de l'avis de l'AIEA, le participant apporte une contribution importante à l'événement. La demande d'aide financière devra être faite au moment de la désignation des participants, au moyen du formulaire de demande de subvention ci-joint (formulaire C).

Il convient de noter que l'AIEA ne verse aucune compensation en cas d'endommagement ou de perte d'effets personnels. Par ailleurs, elle ne prend pas à sa charge l'assurance maladie des participants aux événements qu'elle organise. Il est donc recommandé à ceux-ci de s'assurer à titre individuel. Toutefois, l'AIEA prend à sa charge une assurance couvrant les accidents et les maladies clairement imputables aux travaux exécutés pour son compte.

Le formulaire de participation (formulaire A) ci-joint devra être adressé à l'AIEA par l'autorité nationale compétente (ministère des affaires étrangères, mission permanente auprès de l'AIEA ou autorité nationale de l'énergie atomique) au plus tard le **5 avril 2019**. Une fois dûment complété, il devra être envoyé par courrier électronique à l'adresse [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) ou par fax au +43 1 26007 (exemplaire papier non nécessaire). Une copie devra être envoyée par courrier électronique à la secrétaire scientifique de l'événement, M<sup>me</sup> Lina Hansson, Division des Laboratoires de l'environnement, Département des sciences et des applications nucléaires (mél. : [L.Hansson@iaea.org](mailto:L.Hansson@iaea.org)), et à la secrétaire administrative, M<sup>me</sup> Hasti Dessa (mél. : [H.Dessa@iaea.org](mailto:H.Dessa@iaea.org)). La secrétaire scientifique de l'événement assurera la liaison directement avec les participants concernant les questions d'organisation, notamment relatives au voyage, selon que de besoin, une fois les formulaires de participation officiels reçus.

Si les gouvernements souhaitent en outre nommer un ou plusieurs observateurs pour seconder et conseiller les participants désignés, ils sont priés de communiquer les noms et les coordonnées de ceux-ci à l'AIEA avant la date susmentionnée. Conformément aux règles en vigueur, les gouvernements doivent prendre à leur charge les frais de participation des observateurs qu'ils envoient aux événements de l'AIEA. Celle-ci ne verse aucune compensation en cas d'endommagement ou de perte d'effets personnels, ou en cas de maladie, blessure ou décès des observateurs survenant pendant leur voyage ou pendant leur présence aux événements qu'elle organise.

Le Secrétariat de l'Agence internationale de l'énergie atomique saisit cette occasion pour renouveler aux États Membres de l'AIEA les assurances de sa très haute considération.



26 février 2019

- Pièces jointes (en anglais seulement) :
- Notice d'information
  - Formulaire de participation (formulaire A)
  - Formulaire de demande de subvention (formulaire C)



# Technical Meeting on the Use of Best Practices for Ocean Acidification Experiments in Multi-Stressor Scenarios

**IAEA Environment Laboratories  
Monaco**

**24–28 June 2019**

**Ref. No.: EVT1703906**

## Information Sheet

### Introduction

The ocean is subject to a multitude of human-caused pressures, such as ocean warming, acidification, eutrophication and oxygen depletion, acting simultaneously in complex ways. A major challenge for scientists today is to determine the cumulative effects of such interactive stressors on marine organisms, communities and ecosystems. Most studies on ocean change to date have investigated the response of acclimated single species/strains under the influence of a single driver. However, the assessment of impacts on ecosystems, necessary to inform science-based policy advice, requires information on responses to multiple drivers at the ecosystem level. There is an urgent need to develop a new generation of studies based on methodology that will allow studies to progress from single to multiple drivers, from organisms to ecosystems, and from acclimation to adaptation responses.

The trans-disciplinary [Working Group 149](#) of the Scientific Committee on Oceanic Research (SCOR) is working to design a framework of experiments, observations, and conceptual/mathematical models to respond to this need. These include a series of guidelines to perform multi-stressor studies, including a web-based decision support tool for researchers to assist with the design of their experiments; a virtual marine scientist laboratory application called MEDDLE (Multiple Environmental Driver Design Lab for Experiments) to test experimental set-ups; and a series of video tutorials on a range of topics made by experts in each field. These resources will go live in April 2019 and will provide a platform for the next

generation of scientists to conduct rigorous interrelated research and to further refine this approach as new technologies emerge.

The IAEA Ocean Acidification International Coordination Centre ([OA-ICC](#)) promotes international collaboration and coordination to address ocean acidification. Among its many activities, the OA-ICC facilitates the development of standardized protocols, methods and tools for ocean acidification research to ensure the quality and comparability of results. To that end, it also promotes the use and development of guidelines and protocols, including those developed by SCOR Working Group 149, for both newcomers and established scientists working in the field, as well as training using these tools

## **Objectives**

The objectives of this event are to become familiar with the modes of learning available in the new SCOR WG149 web-based best practice guide. This best practice guide will provide a valuable platform to test methods and best practices for ocean acidification studies within a multi-stressor context that were developed at an IAEA Technical Meeting held in Monaco in June 2017, and to train the participants in their use.

## **Target Audience**

This Technical Meeting is open to 20 participants from IAEA Member States. Financial support is limited to participants from Member States eligible to receive technical assistance under the IAEA's Technical Cooperation Programme. Participants should have a university degree in marine biology, oceanography or a related scientific field, and should be currently involved in ocean acidification studies, ideally within a multi-stressor context. Priority will be given to early- to mid-career scientists and/or technicians, working in the ocean acidification/ocean change field.

## **Working Language(s)**

The working language of this event will be English.

## **Expected Outputs**

- Competency in the use of the new web-based best practices guide that can be passed on to others;
- New tools and best practices to study ocean acidification in conjunction with other stressors tested and adapted as necessary;
- Increased capacity by participants to study ocean acidification in a multi-stressor context; and
- New science collaborations among scientists attending the event.

## **Structure**

The training will be based on the web-based decision support tool and other tools developed by the SCOR Working Group 149, available here, and include both lectures and discussions in plenary sessions and hands-on laboratory sessions in smaller groups to support the online tools.

## **Topics**

Subjects to be covered include: introduction to multiple-driver studies and to a newly developed online best practices guide for multi-stressor experiments, including a decision support tool, and the MEDDLE simulator.

## **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 **5 April 2019**. 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 above deadline.

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

Please note that the IAEA is in a transition phase to manage the entire registration process for all regular programme events electronically through the new InTouch+ (<https://intouchplus.iaea.org>) facility, which is the improved and expanded successor to the InTouch platform that has been used in recent years for the IAEA's technical cooperation events. Through InTouch+, prospective participants will be able to apply for events and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this new facility should write to: [IntouchPlus.Contact-Point@iaea.org](mailto:IntouchPlus.Contact-Point@iaea.org).

## **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 **5 April 2019**.

## Venue

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

## Visas

Participants who require a visa to enter France should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of France.

## Additional Information

More information on travel and logistical arrangements will be provided to selected participants in due course before the event.

## IAEA Contacts

### Scientific Secretary:

#### **Ms Lina Hansson**

IAEA Environment Laboratories

Department of Nuclear Sciences and Applications

International Atomic Energy Agency

4a, Quai Antoine 1er

98000 MONACO

PRINCIPALITY OF MONACO

Tel.: +377 9797 72-56

Fax: +377 9797 72-73

Email: [L.Hansson@iaea.org](mailto:L.Hansson@iaea.org)

**Administrative Secretary:**

**Ms Hasti Dessa**

IAEA Environment Laboratories  
Department of Nuclear Sciences and Applications  
International Atomic Energy Agency  
4a, Quai Antoine 1er  
98000 MONACO  
PRINCIPALITY OF MONACO

Tel.: +377 9797 72-50

Fax: +377 9797 72-76

Email: [H.Dessa@iaea.org](mailto:H.Dessa@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.

**Event Web Page**

Please visit the following IAEA web page regularly for new information regarding this event:

<https://www.iaea.org/events/evtl703906>



# Participation Form

## Technical Meeting on the Use of Best Practices for Ocean Acidification Experiments in Multi-Stressor Scenarios

**IAEA Environment Laboratories, Monaco**

**24–28 June 2019**

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 [L.Hansson@iaea.org](mailto:L.Hansson@iaea.org) and to the Administrative Secretary [H.Dessa@iaea.org](mailto:H.Dessa@iaea.org).

Please attach a passport copy or other document of identification (ID).

**Deadline for receipt by IAEA through official channels: 5 April 2019**

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:			



# Grant Application Form

## Technical Meeting on the Use of Best Practices for Ocean Acidification Experiments in Multi-Stressor Scenarios

**IAEA Environment Laboratories, Monaco**

**24–28 June 2019**

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 [L.Hansson@iaea.org](mailto:L.Hansson@iaea.org) and to the Administrative Secretary [H.Dessa@iaea.org](mailto:H.Dessa@iaea.org).

**Deadline for receipt by IAEA through official channels: 5 April 2019**

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 \_\_\_\_\_