



Department of Nuclear Sciences and Applications
IAEA Environment Laboratories, Monaco

**Training Course on
Marine Ecosystems and Industries at Risk:
Impact of Multiple Stressors**

Ref. No.: K4-TR-50137

Title:	Training Course on Marine Ecosystems and Industries at Risk: Impact of Multiple Stressors
Venue:	IAEA Environment Laboratories, Monaco
Dates:	9–27 November 2015
Deadline for Nominations:	20 September 2015
Organizers:	Argonne National Laboratory (ANL) and International Atomic Energy Agency (IAEA)
Host Organizers:	IAEA Environment Laboratories, Monaco
Language:	English
Background Information:	The current fragmented approach — relying on the knowledge and tools from different disciplines — towards understanding the effects of different stressors on marine ecosystems and their services limits the possibilities of finding effective mitigation strategies. The analysis of possible synergistic effects of a combination of stressors acting on a marine ecosystem requires a comprehensive, integrated approach. Therefore, this course has an interdisciplinary profile in reviewing the effects of global and local stressors on marine ecosystems from a physico-chemical, biological and economic point of view. Such an approach is necessary for understanding ultimately how the combined effect of multiple stressors can affect the functioning and the resilience of marine ecosystems, and what the implications are for marine policy and governance.
Purpose:	The course aims to provide trainees with hands-on laboratory training, practical training and lectures supporting an integrated approach to understanding, analysing and assessing the synergistic impact of stressors affecting marine ecosystems including, inter alia, ocean acidification.

Expected Outputs:	The course is expected to result in an enhanced understanding of multiple stressors acting on marine ecosystems and an increased capacity to assess their environmental and economic impact.
Scope and Nature:	<p>The training will include lectures and presentations in plenary sessions, as well as hands-on laboratory experiments and practical work in smaller groups. The experimental core of the course will provide training in the use of radiotracers to measure the response of a representative marine bioindicator species to various stressors and in selected radioanalytical techniques for alpha, beta gamma emitting radionuclides. The emphasis during practical sessions will be on synergistic effects of ocean acidification and trace metal pollutants, whereas other stressors will be discussed during lectures.</p> <p>Experimental data will be processed, interpreted and explained in the context of multiple stressors. Lectures will provide participants with an introduction to the subject of multiple stressors in marine ecosystems, an overview of the tools available to study this subject, and presentations on environmental and economic risk assessment.</p>
Participation:	The course is open to 16 trainees from IAEA Member States. Priority will be given to early-career scientists.
Participants' Qualifications:	The participants should have a university degree in marine sciences or a related field such as oceanography, marine biology, environmental chemistry, physics, and ecology. They should be currently involved in scientific research, including laboratory experimental activities, environmental or ecosystem modelling work, climate studies, etc.
Nomination Procedure:	<p>Applications should be submitted using the attached Participation Form (Form A). The completed form should be endorsed by relevant national authorities and returned to the IAEA through the established official channels, i.e. the designated National Liaison Office for IAEA matters. Applications must be received by the IAEA not later than 20 September 2015 for the attention of the Scientific Secretary of the course, Ms Iolanda Osvath, IAEA Environment Laboratories, Department of Nuclear Sciences and Applications, IAEA, 4a Quai Antoine 1er, 98000 Monaco, Principality of Monaco (Tel.: +377 97 97 72 72; Fax: +377 97 97 72 73 Email: I.Osvath@iaea.org).</p> <p>Nominations should also be copied to the co-Scientific Secretary of the course, Mr Marc Metian (Email: M.Metian@iaea.org), and to the Administrative Secretary for the course, Mr Emmanuel Tiam Fondop (Email: E.Tiam-Fondop@iaea.org).</p> <p>Nominations received after this date or outside the established official channels will not be considered.</p>

**Administrative and
Financial
Arrangements:**

It should be noted that the IAEA is generally not in a position to bear the travel and other costs of participants in the course. However, a number of grants will be made available by the Government of the United States of America, through the Argonne National Laboratory, to participants from developing countries. The grant application (using **Form C**) should be received by the IAEA no later than **20 September 2015**. No grant application will be considered after this date.

The IAEA does not bear responsibility for any damage to or loss of personal property. The IAEA also does not provide health insurance coverage for participants in meetings, workshops or training courses or for consultants. Arrangements for private insurance coverage on an individual basis should therefore be made. The IAEA will, however, provide insurance coverage for accidents and illnesses that clearly result from any work performed for the IAEA.

Designated participants who require a visa to enter France should submit the necessary application to the nearest diplomatic or consular representative of France well in advance of entry. An official letter of invitation will be issued to all designated participants by the IAEA Scientific Secretary of the course.

**IAEA Scientific
Secretaries**

Ms Iolanda Osvath

Radiometrics Laboratory
IAEA Environment Laboratories
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
4a, Quai Antoine 1er
98000 MONACO
PRINCIPALITY OF MONACO
Tel.: +377 97 97 72 72
Fax: +377 97 97 72 73
Email: I.Osvath@iaea.org

Mr Marc Metian

Radioecology Laboratory
IAEA Environment Laboratories
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
4a, Quai Antoine 1er
98000 MONACO
PRINCIPALITY OF MONACO
Tel.: +377 97 97 72 17
Fax: +377 97 97 72 76
Email: M.Metian@iaea.org

**IAEA Administrative
Secretary**

Mr Emmanuel Tiam Fondop
Radiometrics Laboratory
IAEA Environment Laboratories
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
4a, Quai Antoine 1er
98000 MONACO
PRINCIPALITY OF MONACO
Tel.: +377 97 97 72 15
Fax: +377 97 97 72 73
Email: E.Tiam-Fondop@iaea.org



Training Course on Marine Ecosystems and Industries at Risk: Impact of Multiple Stressors

**9–27 November 2015
IAEA Environment Laboratories, Monaco**

To be sent to the competent official authority (Ministry of Foreign Affairs or National Atomic Energy Authority) for subsequent transmission to: IAEA Environment Laboratories, Department of Nuclear Sciences and Applications, International Atomic Energy Agency (IAEA), 4a, Quai Antoine 1er, 98000 Monaco, Principality of Monaco, for the attention of the Administrative Secretary of the course, Mr Emmanuel Tiam Fondop. Kindly also send a copy by email to: E.Tiam-Fondop@iaea.org.

PARTICIPATION FORM

FAMILY NAME:		GIVEN NAMES:		Mr./Ms.
INSTITUTION:		FULL ADDRESS:		
		Tel.:		
		Fax:		
Email:				
NATIONALITY:	NOMINATING GOVERNMENT OR ORGANIZATION:			
MAILING ADDRESS (IF DIFFERENT FROM ADDRESS INDICATED ABOVE):				

DO YOU INTEND TO PRESENT A CONTRIBUTED PAPER?			YES	NO
PLEASE INDICATE THE TITLE.				



Training Course on Marine Ecosystems and Industries at Risk: Impact of Multiple Stressors

9–27 November 2015
IAEA Environment Laboratories, Monaco

To be sent to the competent official authority (Ministry of Foreign Affairs or National Atomic Energy Authority) for subsequent transmission to: IAEA Environment Laboratories, Department of Nuclear Sciences and Applications, International Atomic Energy Agency (IAEA), 4a, Quai Antoine 1er, 98000 Monaco, Principality of Monaco, for the attention of the Administrative Secretary of the course, Mr Emmanuel Tiam Fondop. Kindly also send a copy by email to: E.Tiam-Fondop@iaea.org.

GRANT APPLICATION FORM

(To be completed only by participants from developing countries on whose behalf a grant is requested)

NAME:

(MR/MS):

Mailing address:

Fax:

Phone:

Email:

Date of birth (year/month/day):

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 attended	
			from	to



3. DESCRIPTION OF WORK (performed over the last three years)

.....

.....

.....

.....

4. INSTITUTE'S/MEMBER STATE'S PROGRAMME IN FIELD OF COURSE

.....

.....

.....

Date Signature of applicant

Date Signature and stamp of responsible Government official