IAEA ANL Training Course on Marine Ecosystems and Industries at Risk: Impact of Multiple Stressors, Monaco, November 9-27, 2015

Mon 9 Nov	**Tue 10 Nov**		**Wed 11 Nov**		**Thu 12 Nov**		**Fri 13 Nov**	
Group 1 + Group 2	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**
08:30-09:00 Registration 09:00-09:20 Welcome and opening remarks (D Osborn, D Fisher) 09:20-09:45 Introductions and presentation of the training course (M Picel) 09:45-11:00 Keynote lecture: Impacts of ocean acidification and warming on the ocean. Discussion. (JP Gattuso) *11:00-11:15 Administrative announcements, Coffee break* 11:15-12:30 Radiation safety instruction. Q/A. (A Sam)	08:00-12:00 E: Introduction to laboratory work (REL)	08:00-10:30 V: Visit of RML and MESL *10:30-11:00 Coffee break* 11:00-12:00 L: Harmful Algal Blooms (Y Bottein)	08:00-12:00 E: Experimental work (REL)	08:00-12:00 L & E: Po-210 in marine biota: lecture and lab work (RML)	08:00-12:00 E: Experimental work (REL)	08:00-09:00 E: Po-210 in marine biota: sample digestion 09:00-10:00 L: Economic value of marine ecosystem services (H Kite-Powell) *10:00-10:15 Coffee break* 10:15-12:00 L & P: Intro to data evaluation (REL)	08:00-12:00 E: Experimental work (REL)	08:30-09:30 L: Economic implications of OA and combined stressors in marine ecosystems (H Kite-Powell) 09:30-12:00 L & P: Intro to data evaluation (REL)
12:30-14:30 LUNCH BREAK	12:00-14:00 LUNCH BREAK							
14:30-15:15 Background and introduction to the experimental work (M Metian. M Rozmaric, M Picel) *15:15-15:30 Coffee break* 15:30-16:30 Introduction to laboratory infrastructure (seawater system) 19:00 Social dinner	14:00-16:30 V: Visit of RML and MESL *16:30-16:45 Coffee break* 16:45-17:45 L: Harmful Algal Blooms (Y Bottein)	14:00-18:00 E: Introduction to laboratory work (REL)	14:00-18:00 L & E: Po-210 in marine biota: lecture and lab work (RML)	14:00-18:00 E: Experimental work (REL)	14:00-15:00 E: Po-210 in marine biota: sample digestion 15:00-16:00 L: Economic value of marine ecosystem services (H Kite-Powell) *16:00-16:15 Coffee break* 16:15-18:00 L & P: Intro to data evaluation (REL)	14:00-18:00 E: Experimental work (REL)	14:00-15:00 L: Economic implications of OA and combined stressors in marine ecosystems (H Kite-Powell) 15:00-17:30 L & P: Intro to data evaluation (REL)	14:00-18:00 E: Experimental work (REL)

IAEA ANL Training Course on Marine Ecosystems and Industries at Risk: Impact of Multiple Stressors, Monaco, November 9-27, 2015

Mon 16 Nov		Tue 17 Nov		Wed 18 Nov		Thu 19 Nov		Fri 20 Nov	
Group 1	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**
08:00-11:45 E: Experimental work (REL) 11:45-12:15 L: US support programme to IAEA capacity building (S Hamilton)	09:00-11:15 E: Po-210 in marine biota: lab work (RML) *11:15-11:45 Coffee break* 11:45-12:15 L: US support programme to IAEA capacity building (S Hamilton)	08:00-12:00 E: Experimental work (REL)	08:00-11:00 E: Po-210 in marine biota: lab work (RML) *11:00-11:30 Coffee break* 11:30-12:00 International OA collaboration and coordination (L Hansson)	08:00-12:00 E: Experimental work (REL)	08:30-09:30 L: Radionuclides and metals (Cs, Zn) (T Matthews) 09:30-10:30 L: Effect of OA on calcifiers (A Venn) *10:30-11:00 Coffee break* 11:00-12:00 L: Microplastics (D Huertas)	Monaco National Holiday		08:00-12:00 E: Experimental work (REL)	08:00-12:00 P: Data analysis (M Metian)
12:15-13:45 LUNCH BREAK		12:00-14:00 LUNCH BREAK							
13:45-14:15 Radionuclides and radioactive waste: potential climate change and health impacts (M Picel) 14:15-17:00 E: Po-210 in marine biota: lab work (RML)	13:45-14:15 Radionuclides and radioactive waste: potential climate change and health impacts (M Picel) 14:15-18:00 E: Experimental work (REL)	14:00-14:30 International OA collaboration and coordination (L Hansson) 14:30-18:00 E: Po-210 in marine biota: lab work (RML)	14:00-18:00 E: Experimental work (REL)	14:00-15:00 L: Radionuclides and metals (Cs, Zn) (T Matthews) 15:00-16:00 L: Effect of OA on calcifiers (A Venn) *16:00-16:30 Coffee break* 16:30-17:30 L: Microplastics (D Huertas)	14:00-18:00 E: Experimental work (REL)	Monaco National Holiday		14:00-18:00 P: Data analysis (M Metian)	14:00-18:00 E: Experimental work (REL)

IAEA ANL Training Course on Marine Ecosystems and Industries at Risk: Impact of Multiple Stressors, Monaco, November 9-27, 2015

Mon 23 Nov		Tue 24 Nov		Wed 25 Nov		Thu 26 Nov		Fri 27 Nov	
Group 1	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**
08:00-12:00 E: Experimental work (REL)	08:00-12:00 P: Data analysis working session (M Metian)	08:00-12:00 E: Experimental work (REL)	08:00-10:00 P: Po-210 in marine biota: evaluation of results (RML) *10:00-10:30 Coffee break* 10:30-12:00 L: Economic impact/ Industries. Discussion. (N Hilmi)	08:00-12:00 E: Experimental work (REL)	08:30-10:30 P: Practical data analysis work (M Metian) *10:30-11:00 Coffee break* 11:00-12:00 L: Mercury in the aquatic environment and intro to ORNL (T Matthews)	08:00-12:00 E: Experimental work (REL)	08:00-10:00 P: Final data evaluation (REL, T Matthews) *10:00-10:30 Coffee break* 10:30-12:00 L: Multiple stressors - synthesis (M Metian)	08:30-12:00 Discussion and interpretation of experimental results Participants' presentations	
12:00-14:00 LUNCH BREAK									
14:00-18:00 P: Data analysis working session (M Metian)	14:00-18:00 E: Experimental work (REL)	14:00-15:30 L:Economic impact/ Industries. Discussion (N Hilmi) *15:30-16:00 Coffee break* 16:00-18:00 P: Po-210 in marine biota: evaluation of results (RML)	14:00-18:00 E: Experimental work (REL)	14:00-15:00 L: Mercury in the aquatic environment and intro to ORNL (T Matthews) 15:00-17:30 P: Practical data analysis work (M Metian)	14:00-18:00 E: Experimental work (REL)	14:00-16:00 P: Final data evaluation (REL, T Matthews) *16:00-16:30 Coffee break* 16:30-18:00 L: Multiple stressors - synthesis (M Metian)	14:00-18:00 E: Experimental work (REL)	14:00-16:00 Participants' presentations Wrap-up Closure	

REL = Radioecology Laboratory

RML = Radiometrics Laboratory

MESL = Marine Environment Sciences Laboratory

E: experimental work

L: lecture

P: practical work

V: visit

Coffee breaks*: where they are not explicitly mentioned in the programme, in particular during experimental and practical work sessions, they will be taken at times indicated by the responsible trainers so as to suit the work programme.*