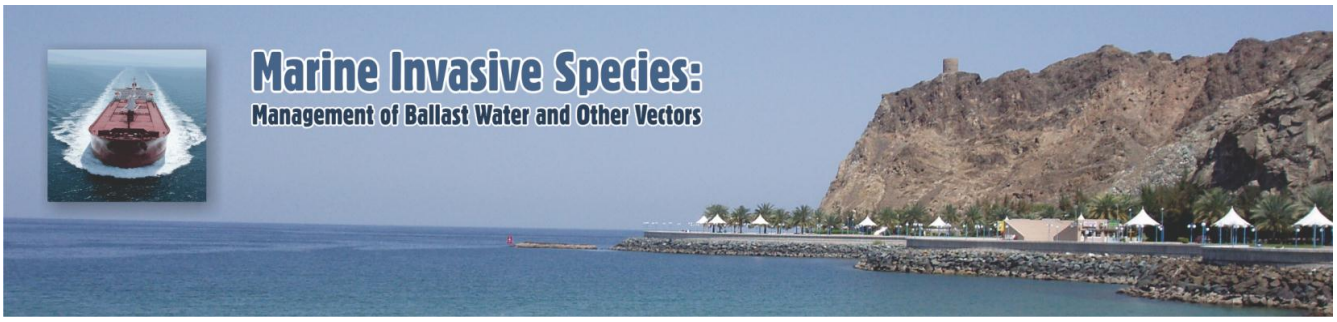


Marine Invasive Species:

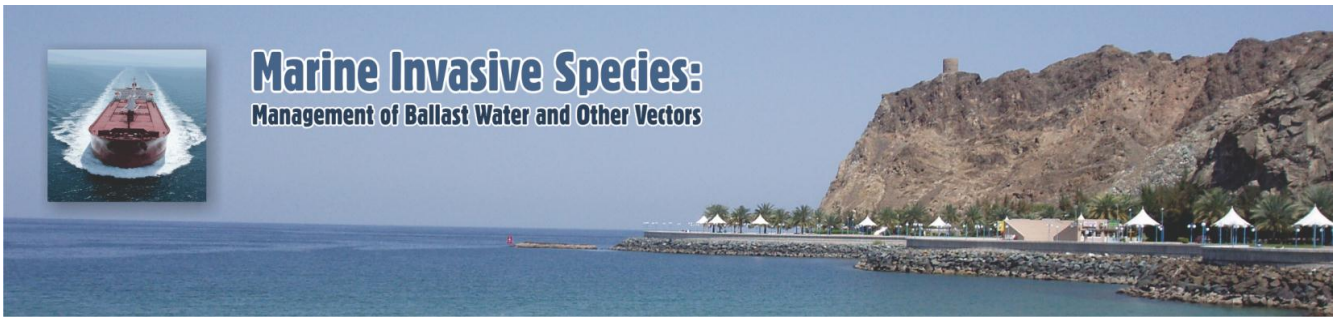
Management of Ballast Water and Other Vectors

February 17-19, 2014
Muscat, Sultanate of Oman

Organized by
Ministry of Environment & Climate Affairs
Aquatic Ecosystem Health and Management Society

Ministry of Environment & Climate Affairs

AQUATIC ECOSYSTEM HEALTH & MANAGEMENT SOCIETY



Program-at-a-Glance

Sunday, Feb. 16	
12:00-1:00	Arrival and Lunch
1:00-4:40	Invasive Species Capacity Building Workshop

Monday, Feb. 17		Tuesday, Feb. 18			Wednesday, Feb. 19	
8:00	Registration					
9:00-9:40	Inauguration & welcome	9:00-10:20	Keynotes		9:00-10:20	Keynotes
9:40-10:00	Break	10:20-10:40	Break		10:20-10:40	Break
10:00-11:20	Keynotes		Parallel A	Parallel B	10:40-12:00	Session 4
11:20-12:00	Session 1	10:40-12:00	Session 2	Session 3		
12:00-1:30	Lunch	12:00-1:30	Lunch		12:00-1:30	Lunch
1:30-2:50	Keynotes	1:30-2:00	Featured Speaker	Featured Speaker	1:30-2:10	Keynote
2:50-4:10	Session 1	2:00-3:00	Session 2	Session 3		
4:10-5:00	Poster session & refreshments	3:00-3:20	Break		2:10-3:30	Session 4
		3:20-4:40	Session 2	Session 3	3:30-4:10	Panel Discussion
		6:00-7:00	Cultural program			Conference summary
		7:00-9:00	Banquet		4:10-4:20	Publication plans
					4:30-7:00	Tour of Muscat

Please note:

All presentations and posters are the property of the presenter. Audio recordings, copying, videotaping or photography of the presentations is prohibited. Media should obtain the permission of the conference chair for use of any conference material.

We request participants to switch off mobile phones in the conference hall.

You should consider your personal name badge as your entry ticket. Please wear your badge at all times during the conference.

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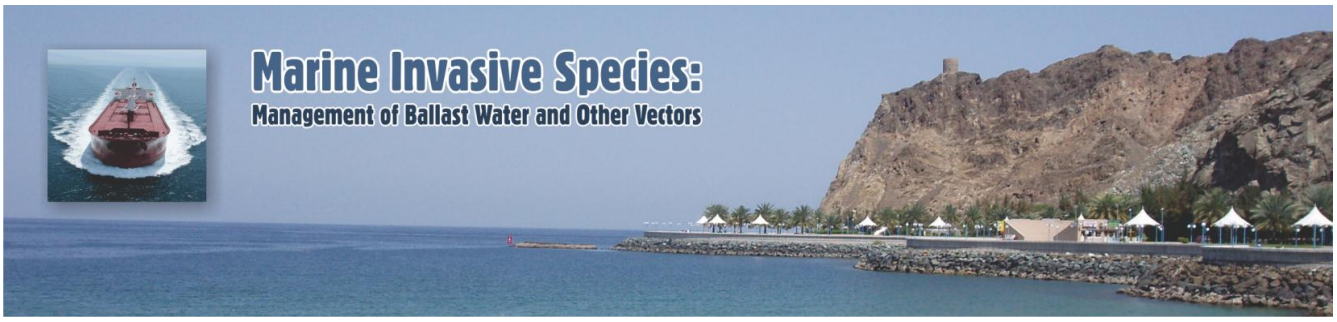


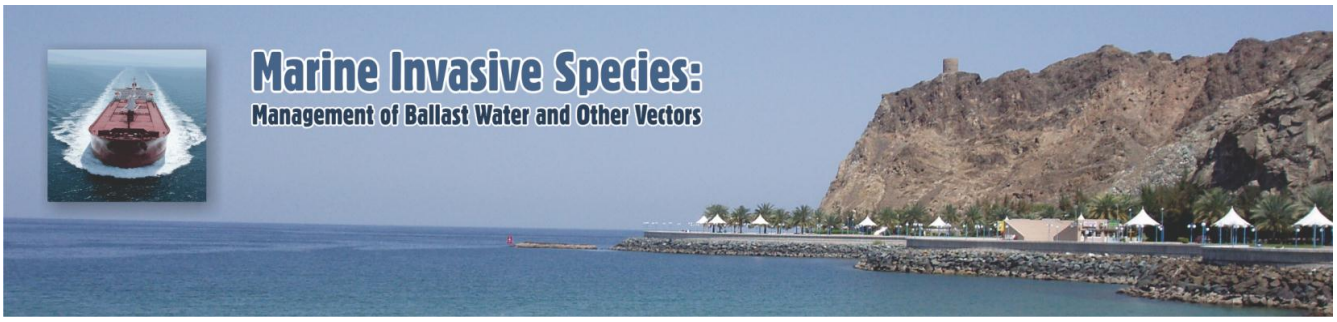
Program

Sunday, February 16th		
Invasive Species Capacity Building Workshop		
12:00-1:00	**Arrival and Lunch**	
1:00-1:10	**Welcome & workshop objectives**	
1:10-1:30	Pettitt-Wade, H.	History of Invasion Theory
1:30-1:50	Pagnucco, K.	Vectors of Aquatic Invasive Species
1:50-2:10	Chan, F.	Risk Assessment
2:10-2:30	Hernandez, M.	Vector Management
2:30-2:50	Break	
2:50-3:10	Josie Iacarella	Context-Dependency of Invasive Species Impacts
3:10-3:30	Andrea Moore	Aquatic Invasions Under Climate Change
3:30-3:50	Iman Al-Hashmi	Monitoring Invasions in Omani Waters
3:50-4:20	**Panel Discussion**	
4:20-4:40	**Wrap-up**	

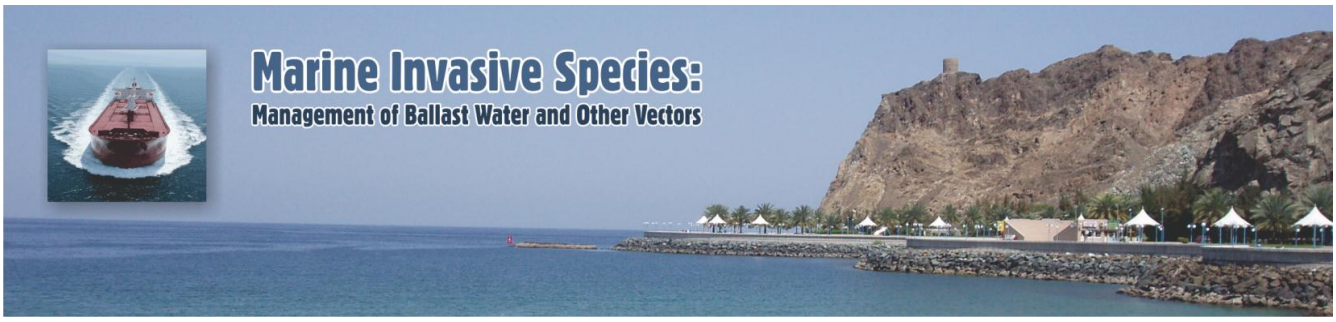
Monday, February 17th			
8:00	Registration desk opens		
9:00-9:40	• Conference opening • Welcoming by Ministry of Environment and Climate Affairs (MECA) • Welcome by the President of the Aquatic Ecosystem Health & Management Society (AEHMS) • Opening remarks from International Marine Organization (IMO) • Opening remarks from Regional Organization for the Protection of the Marine Environment (ROPME)		
9:40-10:00	Break		
10:00-10:40	K.1	*Keynote: Bailey, S.*	*Ballast water as a global vector for aquatic invasive species*
10:40-11:20	K.2	*Keynote: Ruiz, G.M.*	*Invasion history and vector dynamics in coastal marine ecosystems: A North American perspective*
Session 1. Vectors and Pathways			
11:20-11:40	S1.01	Carney, K.	Coal crazy and Panamax-ready: Global trade and the transport of marine organisms to Chesapeake Bay
11:40-12:00	S1.02	Dobretsov, S.	Biofouling on ship hulls: The vector for moving marine invasive species
12:00-1:30	Lunch		

Monday, February 17th			
1:30-2:10	K.3	*Keynote: Glibert, P.*	*Altered nutrient composition and its effect on suitability for species introductions and the cascade of impacts on food webs and nutrient biogeochemistry*
2:10-2:50	K.4	*Keynote: Al Azri, A.*	*Intensity and frequency of Harmful Algal Blooms (HABs) in the coastal water of Oman: A possible role of ballast water*
2:50-3:10	S1.03	Van der Knaap, M.	Nile tilapia in the Lake Tanganyika Basin, copying examples from other lakes
3:10-3:30	S1.04	Owfi, F.	Ecological and environmental impact assessment of marine invasive species in the ROPME sea area via ballast water, using by SWOT / GIS analytical model
3:30-3:50	S1.05	Berezina, N.	Natural and anthropogenic mechanisms for introduction of Malacostracan crustaceans in the Russian part of the Gulf of Finland (Baltic Sea)
3:50-4:10	S1.06	Naderloo, R.	How do alien species come to the ROPME sea area? What do they do in such an eggshell environment?
4:10-5:00	**Poster session and refreshments**		

Poster Session		
P.01	Agembe, S.	Intentionally and accidentally introduced alien invasive fish species in Lake Victoria
P.02	Al-Hashmi, K.	The dinoflagellate *Prorocentrum minimum*: First report in Muscat (Sea of Oman) coastal water
P.03	Al-Najjar, T.	Jordan national strategic action plan for ballast water management
P.04	Bagheri, T.	Environmental pollution of waste generated by commercial vessels
P.05	Boman, N.	Phenotype dependent dispersal in Round Goby
P.06	Dorgham, M.	The role of alien polychaetes in Alexandria coast, Egypt
P.07	El-Serehy, H.A.	Invasive copepods and plankton dynamics in the Suez Canal, Egypt
P.08	Emam, R.	Challenges for ballast water management convention: Implementation or requirements
P.09	Jolley, E.	Ballast water management – Assessment of implications for project investment decisions
P.10	Khalaji-Pirbalouty, V.	Well established invasive isopod, *Sphaeroma walkeri* Stebbing, 1905 (Crustacea: Isopoda) from the Iranian coast of the Oman Sea



Poster Session		
P.11	Machkevskyi, V.	Marine parasites - the object and a factor in the problem of invasive species in the seas
P.12	Makasa, L.	Ballast water discharge, a threat to Southern Lake Tanganyika
P.13	Muthukrishnan, T.	Efficiency of antifouling coatings in managing marine microbial species
P.14	Olilo, C.	Effects of water hyacinth biomass on the life histories, ecology and yield of Nile Perch, Nile Tilapia and Dagaa in Lake Victoria, Kenya
P.15	Omondi, R.	Invasion, impact and management of invasive macrophytes in Lake Victoria, Kenya
P.16	Rezaie-Atagholipour, M.	Alien crab species, *Scylla serrata* (Brachyura: Portunidae), in the Iranian mangrove stands of the ROPME sea area: Uninvited but welcomed guest
P.17	Russell, D.	Green turtle (*Chelonia mydas*) shifts in diet from native to non-native food sources in Kaneone Bay, Hawaii
P.18	Sabour, W.	New record of alien fish indo-pacific species *Torquigener flavimaculosus* (Hardy and Randall, 1983) (Pisces: Tetraodontidae) in the Syrian sea water (Eastern Mediterranean Coast)
P.19	Sajjadi, A.	The role of ballast water and canal pathways on non-native species invasion in the Caspian Sea
P.20	Saraji, F.	Seasonal variation of *Cochlodinium polykrikoides* in the north of Oman Sea (Iranian waters)
P.21	Shapoori, M.	Phytoplankton viability in ballast water from commercial and petroleum ships entering Kharg Island in ROPME sea area, Iran
P.22	Stepien, C.	Evolutionary diversification and spread of the VHSv fish virus in the Great Lakes and beyond



Tuesday, February 18th			
9:00-9:40	K.5	*Keynote: Mandrak, N.E.*	*Risk assessment – cornerstone of aquatic invasive species programs*
9:40-10:20	K.6	*Keynote: Kernan, M.*	*Climate change and the impact of invasive species on aquatic ecosystems*
10:20-10:40		Break	
	PARALLEL PROGRAM A		
Session 2.	**Impacts of Invasive Species**		
10:40-11:00	S2.01	Iacarella, J.	Functional response as a tool for predicting alien impacts in aquatic ecosystems
11:00-11:20	S2.02	Piontkovski, S.	Does climate change favor invasive species in Omani waters?
11:20-11:40	S2.03	Moore, A.	A state-of-the-art flow-through mesocosm: Innovative technology for studying synergistic impacts of aquatic invasive species and climate change
11:40-12:00	S2.04	Al Gheilani, H.	Harmful algal blooms (including invasive species) and their effect in Oman waters: An overview
12:00-1:30		Lunch	
1:30-2:00	S2.05	*Featured: Al-Yamani, F.*	*Potential impacts of ballast water on Kuwait's marine biodiversity*
2:00-2:20	S2.06	Al Qasmi, A.M.	The impact of agricultural inputs and ship anti-foulings on the microalgal structure of the aquatic system
2:20-2:40	S2.07	Bu-Olayan, A.H.	Assessment of trace metals, algal blooms, and environmental variables to mullet (*Liza klunzingeri*) in Kuwait Bay
2:40-3:00	S2.08	Al Anouti, F.	Extending identification of invasive bacteria in marine samples by rapid PCR-based assays to ballast water biofilms
3:00-3:20		Break	
3:20-3:40	S2.09	Al-Muftah, A.	Harmful phytoplankton surveillance in Qatari waters
3:40-4:00	S2.10	Roohi, A.	The population dynamic of comb jelly *Mnemiopsis leidyi* invasion in the Caspian Sea
4:00-4:20	S2.11	Pagnucco, K.	Beyond the benthos: Non-native benthic predators increase strength of trophic cascades, and indirectly affect pelagic communities
4:20-4:40	S2.12	Maximov, A.	Ecosystem engineering by invasive polychaetes in the Gulf of Finland (Baltic Sea)

Tuesday, February 18th				
		PARALLEL PROGRAM B		
	Session 3.	**Risk Assessment**		
	10:40-11:00	S3.01	Chan, F.	Vector-based risk assessment for ballast water introductions in the Canadian Arctic
	11:00-11:20	S3.02	Holzer, K.	A tale of three coasts: Temporal and spatial variation in ballast water management to reduce invasion risk
	11:20-11:40	S3.03	Verna, D.	Ballast-borne marine invasive species: Exploring the risk to coastal Alaska, USA
	11:40-12:00	S3.04	Goes, J.I.	Shrinking snow caps and rising tides: The response of the Arabian Sea ecosystem to recent climatic trends
	12:00-1:30		Lunch	
	1:30-2:00	S3.05	*Featured: Badran, M.*	*IMO GloBallast programs response to threats of ships' ballast water pathogenic and invasive species*
	2:00-2:20	S3.06	Polikarpov, I.	New and probably invasive harmful dinoflagellates in NW ROPME sea area
	2:20-2:40	S3.07	Schwartz, N.	Why are aliens so successful?
	2:40-3:00	S3.08	Pettitt-Wade, H.	The varying success of invaders as determined by their ecological niche and potential for niche flexibility
	3:00-3:20		Break	
	3:20-3:40	S3.09	Thorlacius, M.	Importance of intraspecific behavioral traits in the colonization of novel environments
	3:40-4:00	S3.10	Mirzaei Asl, B.	Invasive species in ship's ballast water vs. native species
	4:00-4:20	S3.11	Hellstrom, G.	Using acoustic telemetry in the study and management of invasive fish
6:00-7:00			Cultural program	
7:00-9:00			Banquet	

Wednesday, February 19th			
9:00-9:40	K.7	*Keynote: Hallegraeff, G.*	*Transport of harmful marine microalgae via ship's ballast water: Management, treatment and mitigation*
9:40-10:20	K.8	*Keynote: Parhizi, A.*	*ROPME SEA area Strategic Action Plan (SAP) and its roadmap towards ballast water management convention implementation*
10:20-10:40		Break	
Session 4.	**Management Strategies**		
10:40-11:00	S4.01	Andaloro, F.	Non Indigenous Species (NIS) and Invasive Alien Species (IAS) in the Italian seas – an overview
11:00-11:20	S4.02	Stepien, C.	A new next-generation sequencing approach to simultaneously characterize entire invasive and native fish communities from water samples
11:20-11:40	S4.03	Alhajri, S.M.	Remote sensing and GIS for monitoring HABs: A brief overview
11:40-12:00	S4.04	Al-Kandari, M.A.	Molecular tools separate Harmful Algal Bloom species, *Karenia mikimotoi*, from different geographical regions into distinct sub-groups
12:00-1:30		Lunch	
1:30-2:10	K.9	*Keynote: Gollasch, S.*	*Ballast water management compliance control sampling*
2:10-2:30	S4.05	van Slooten, C.	Ships and invasive species: Ballast water treatment techniques, efficacies and novel rapid methods to assess discharge water quality
2:30-2:50	S4.06	Polglaze, J.	Management of the biofouling vector: Where to look for invaders?
2:50-3:10	S4.07	Hernandez, M.	Effects of chlorine treatment in reducing viable zooplankton populations in ballast water tanks
3:10-3:50		Panel Discussion & Summary	
3:50-4:00		Publication Plans	
4:30-7:00		Scenic tour of Muscat	