

MONITORING FOR BALLAST WATER MANAGEMENT – FROM PROS TO CONS TO YES OR NO?

Romina Kraus

Rudjer Boskovic Institute, Center for Marine Research, Croatia

ABSTRACT

Transfer of harmful aquatic organisms and pathogens (HAOP), including invasive aquatic species (IAS), across natural barriers is recognized as one of greatest pressures to the sea realm, imposing threat to the environment, human health and economy. A prominent vector of such species are proven to be ballast waters (BW), which are transferred by vessels engaged in the international shipping of goods. International Convention for the Control and Management of Ship's Ballast Water and Sediments, 2004 (BWM Convention) includes implementation of monitoring as a vital part of an early detection of introduction of HAOP/IAS in the ports in order to enable rapid response with available methods of eradication, control or containment for an identified HAOP/IAS species. What are basic requirements of such a specific monitoring in ports? What are possibilities of rapid responses and available methods? A presentation on pros and cons should lead us a step closer towards understanding of this issue and to give us the answer, yes or no.

Reference list

IMO (2004) International Convention for the Control and Management of Ships' Ballast Water and Sediments. International Maritime Organization, London.

National Invasive Species Council. (2003) General Guidelines for the Establishment and Evaluation of Invasive Species Early Detection and Rapid Response Systems. Version 1. 16 pp.

Lodge, D.M., Williams, S., Macisaac, H.J., Hayes, K.R., Leung, B., Reichard, S., Mack, R.N., Moyle, P.B., Smith, M., Andow, D.A., Carlton, J.T., McMichael, A. (2006) Biological Invasions: Recommendations for U.S. Policy and Management. Ecological Applications, 16(6), pp. 2035–2054.

Washington State Aquatic Nuisance Species Committee. (2005) Early Detection And Rapid Response Plan For Aquatic Invasive Species In Washington State. (A Washington ED)

Sonigo, P., Turbé, A., Berman, S., Reilly, K., Nyegaard Hvid, H. (2011) A comparative assessment of existing policies on invasive species in the EU Member States and in selected OECD countries. Final report. European Commission (DG Env), 258 pp.

Emerton, L., Howard, G. (2008) A Toolkit for the Economic Analysis of Invasive Species. Publisher Global Invasive Species Programme (GISP). Training Course on Best Practice for the Management of Introduced Marine Pests. Invasive Species Specialist Group (ISSG), Publish-





3rd Science for the Environment Conference Aarhus Denmark 1-2 October 2015

er Global Invasive Species Programme (GISP), Course Module 4). www.issa.org/gisp_training_coursematerials.htm

Genovesi., P., Scalera, R., Brunel., S., Roy, D., Solarz, W. (2010) Towards an early warning and information system for invasive alien species (IAS) threatening biodiversity in Europe, Technical Report 05/2010, European Environment Agency, Luxembourg: Office for Official Publications of the European Union, ISBN 978-92-9213-099-2, ISSN 1725-2237, DOI 10.2800/4167.)

Scalera, R. (2011) Proposal for the development of a National Strategy on Invasive Alien Species in Croatia.

Anderson, L.W.J. (2005) California's reaction to Caulerpa taxifolia: a model for invasive species rapid response. Biological Invasions 7: 1003–1016.

Wittenberg, R., Cock, M.J.W. (eds.) 2001. Invasive Alien Species: A Toolkit of Best Prevention and Management Practices. CAB International, Wallingford, Oxon, UK, xvii – 228.

Genovesi, P., Shine, C. (2004) European Strategy on Invasive Alien Species. Nature and Environment No.137, Council of Europe Publishing. 67 p. (http://www.coe.int/t/dg4/cultureheritage/conventions/Bern/T-PVS/sc24_inf01_en.pdf)

Smits, J. and F. Moser (Eds.) (2009) Rapid Response Planning for Aquatic Invasive Species, A Maryland Example. Mid-Atlantic Panel on Aquatic Invasive Species, Maryland Sea Grant College, University System of Maryland. (A Maryland ED)

Everglades Cooperative Invasive Species Management (ECISMA). (2009-2011) Early Detection and Rapid Response Plan for Invasive Species in the Everglades Cooperative Invasive Species Management Area 2009 - 2011. (An Everglades ED)

Aquenal Pty Ltd. (2008) National Control Plan for the European green shore crab Carcinus maenas. Prepared for the Australian Government. (An Australian ED, e.g., for Carcinus maenas)

Worrall, J. (2002) Review of Systems for Early Detection and Rapid Response. USDA Forest Service, Forest Health Protection, For the National Invasive Species Council.

Anderson, Lars WJ. " Control of invasive seaweeds. " Botanica Marina 50.5/6 (2007): 418-437.