



Jose Carlos Borrero. Ph.D.

Nationality: USA, New Zealand

Profession: Oceanographic Consultant

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PRESENT POSITIONS:

- Director, Senior Consultant, eCoast Ltd.
- Adjunct Assistant Research Professor, University of Southern California, Los Angeles, CA, USA

SPECIALISATION:

Coastal engineering, processes, oceanography and hazards; tsunami hazards and analysis; hydrodynamic numerical modelling; design of coastal structures and impact assessment, multi-purpose reefs, environmental impact assessment, expert witness.

YEARS OF EXPERIENCE:

- 20 years (consulting since 1998)

KEY QUALIFICATIONS:

- Ph.D. Ocean and Coastal Engineering, University of Southern California, August 2002
- M.S. Ocean and Coastal Engineering, University of Southern California, May 1997
- B.S. Civil and Environmental Engineering, University of Southern California, December 1995
- B.S. Journalism, Telecommunications Production, University of Florida, May 1993

PROFESSIONAL MEMBERSHIPS:

- Member Engineering New Zealand
- Member New Zealand Coastal Society (Technical Group of Engineering New Zealand)
- Member Geoscience Society of New Zealand.
- Associate Member World Association for Waterborne Transport Infrastructure (PIANC)
- Member of American Geophysical Union (AGU)
- Technical Advisor for the Surfbreak Protection Society (NZ) and Save the Waves Coalition

WORK HISTORY

2012-Present

Director/Senior Consultant, eCoast Ltd.

2010-2012

Senior Consultant, ASR Ltd - Marine Consulting and Research

2006-2009

Manager, Coastal Science Group, ASR Ltd - Marine Consulting and Research

2006-Present

Adjunct Assistant Professor, University of Southern California.

SUMMARY OF PROFESSIONAL OUTPUT

- 54 published articles in research journals (12 lead author) since 1997.
- 80+ technical and consulting reports since 2006
- 12 post-tsunami reconnaissance surveys (4 as team leader/principal scientist)
- 6 field investigations of near-shore hydrodynamics and/or instrument deployment
- 2 large scale hydraulic physical laboratory experiments
- 5 organized or co-organized international conferences
- 4 co-editorship conference proceedings volume

PUBLICATIONS SUMMARY

TECHNICAL AND CONSULTING REPORTS

IN PROGRESS

- Borrero, J.C.** and Mead S. (2018) Assessment of Water Levels on Lake Taupo, New Zealand. Project for Waikato Regional Council, delivery expected September 2018
- Borrero, J.C.** (2018) Assessment of Tsunami Hazards in Northland Maritime Facilities. Project for New Zealand Ministry of Civil Defence and Emergency Management and Northland Regional Council, delivery expected end of 2018.
- Borrero, J.C.** and Greer, S.D. (2018) Investigation of Factors Influencing the Rates of Input, Beaching and Re- Suspension of Plastic Debris in the Marine Environment – Project for The Ocean Cleanup Project Foundation, Netherlands, delivery expected end 2018.

2018

- Borrero, J.C.** and Bosserelle, C (2018) Tsunami Inundation Assessment for the Gisborne District Council, Prepared for Gisborne District Council, June 2018.
- Borrero, J.** and O'Neill, S. (2018) Probabilistic Tsunami Inundation Assessment for the Eastern Bay of Plenty, Report prepared for Bay of Plenty Regional Council, June 2018.
- Borrero, J.** (2018) Tsunami Inundation Assessment for the Firth of Thames, New Zealand, Report prepared for Waikato Regional Council, June 2018.

2017

- Borrero, J.** (2017) North East Point Mahé Island: Community Consultation on the Status of the Reef and Beach and Identification of Next Steps for Effective Management, Report prepared for UNDP Seychelles, December 2017.
- Borrero, J.** (2017) Establishing a Real-Time Tsunami Hazard Assessment Tool for the Canterbury Region, New Zealand, Report prepared for Environment Canterbury, September 2017.
- O'Neill, S. McIntosh, R., **Borrero, J.C.**, and Mead, S.T., Hydrodynamic Modelling of Northlands CFHZ's. Prepared for Northland Regional Council, October 2017.
- Borrero, J.** (2017) ComMIT modelling for Real-time Tsunami Forecasting in New Zealand, Report prepared for GNS Science, New Zealand, September 2017.
- Borrero, J.** and O'Neill, S. (2017) Probabilistic Tsunami Inundation Assessment for the Western Bay of Plenty, Report prepared for Bay of Plenty Regional Council, July 2017.
- Borrero, J.** (2017) Response to Concerns Regarding the Numerical Modelling of Tsunami Inundation at Whitianga Area School, Report prepared for Waikato Regional Council, May 2017.

2016

- Borrero, J.C.**, Atkin, A., Greer, D., O'Neill, S. and Mead S. (2016) Coastal Processes Assessment of North East Point, Mahé, Seychelles, Prepared for UNDP Seychelles, November 2016.
- Borrero, J.C.** (2016) Numerical modelling of tsunami inundation in Whitianga and Mercury Bay, New Zealand, Prepared for Waikato Regional Council, October 2016.
- Borrero, J.C.** (2016) Hydrodynamic Modelling of Tsunami Waves at Abu Dhabi Offshore Oil Fields, Prepared for Ove Arup and Partners, London, September 2016.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Mon Choisy Beach, Republic of Mauritius: Final Design Report, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Rivière des Galets, Republic of Mauritius: Final Design Report, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.

2015

- Borrero, J.C.** (2015) Numerical modelling of tsunami effects at Port Waikato, Raglan and Aotea Waikato West Coast, New Zealand, Prepared for Waikato Regional Council, December 2015.

- Borrero, J.C.** (2015) Numerical modelling of tsunami inundation along the Kennedy Bay to Opito Bay coast, Coromandel Peninsula, New Zealand, Prepared for Waikato Regional Council, December 2015.
- Borrero, J.C.** and Goring, D.G. (2015) Real-time Modeling and Assessment of Tsunami Waves in Lyttelton Port Generated by the September 17, 2015 Illapel Earthquake in Central Chile, Prepared for Lyttelton Port Company, September 20, 2015.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Mon Choisy Beach, Republic of Mauritius: Detailed Technical Assessment, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Rivière des Galets, Republic of Mauritius: Detailed Technical Assessment, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Mon Choisy Beach, Republic of Mauritius: Options for Adaptation, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Rivière des Galets, Republic of Mauritius: Options for Adaptation, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Clarke, M., **Borrero, J.C.**, Mead, S.T., Klaus, R. and Persand, S. (2015) An Economic Valuation and Cost Benefit Analysis of Adaptation and Enhanced Ecosystem Resilience for Mon Choisy Beach, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Clarke, M., **Borrero, J.C.**, Mead, S.T., Klaus, R. and Persand, S. (2015) Cost Benefit Analysis for Adapting to Sea Level Rise: Protection or Managed Retreat in Rivière des Galets, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.** (2014) Numerical modeling of Tsunami Inundation at Port Charles, Coromandel Peninsula, New Zealand, Prepared for Waikato Regional Council, January 2015.

2014

- Borrero, J.C.** (2014) Numerical modeling of Tsunami Inundation at Whangamata, Whiritoa and Port Charles, Coromandel Peninsula, New Zealand, Prepared for Waikato Regional Council, August 2014.
- Borrero, J.C.** and Goring, D.G. (2014) Real-time Modeling and Assessment of Tsunami Waves in Lyttelton Port Generated by the April 1, 2014 Earthquake in Northern Chile, Prepared for Lyttelton Port Company, April 12, 2014.
- Borrero, J.C.** (2014) Development of a Real-Time tsunami inundation assessment tool for Auckland, New Zealand, prepared for Auckland Council.
- Borrero, J.C.** (2014) Numerical Modelling of Tsunami Waves at Lelu Island, British Columbia, prepared for Ove Arup and Partners, London.
- Borrero, J.C.** (2014) Numerical Modelling of Tsunami Waves at Batangas Bay, Philippines, prepared for Ove Arup and Partners, London.
- Morris, B. and **Borrero, J.** (2014) Inundation of Whitianga town during the 1960 Chilean tsunami, Waikato Regional Council Technical Report 2014/65.

2013

- Borrero, J.C.**, Goring, D.G., Greer, S.D., Power, W.L. and Barberopoulou, A. (2013) Decision Making Tools for the Real-Time Assessment of Far-Field Tsunami Hazards in New Zealand Ports and Harbours Part 1: Background Information and Preliminary Analysis. Prepared for New Zealand Ministry of Business Innovation and Employment, December 20, 2013.
- Borrero, J.C.**, Titov, V.V. and Synolakis, C.E. Numerical Modeling of Tsunami Effects in Southern California from a Hypothetical M9.1 Earthquake near the Alaska Peninsula, in Ross, S.L., and Jones, L.M., eds., The SAFRR (Science Application for Risk Reduction) Tsunami Scenario: U.S. Geological Survey Open-File Report 2013-1170, 136 p., <http://pubs.usgs.gov/of/2013/1170/d/>.
- Borrero, J.C.** and Mead, S.T. (2013) Water Levels on Lake Taupo and Implications on Foreshore Erosion, Prepared for Waikato Regional Council, Hamilton, New Zealand.
- Borrero, J.C.** (2013) Tsunami Hazard Assessment for Talara, Peru, Prepared for Langan Engineers.
- Borrero, J.C.** (2013) Modelling a Large Tsunamigenic Earthquake Source off the Goringe Bank for Tsunami Impact at the Wylfa NPP, Wales, Prepared for Ove Arup and Partners, London.

2012

- Borrero, J.C.** (2012) Tsunami Inundation Modelling: Whitianga, Tairua and Pauanui, Prepared for Waikato Regional Council, Hamilton, New Zealand, ISSN 2230-4363.
- Lynett, P.J., **Borrero, J.C.** and Sangyoung, S. (2012) Numerical Simulations of Maritime Tsunami Hazards in Crescent City, CA, Prepared for California Emergency Management Agency.
- Borrero, J.C.** and Greer, S.D. (2012) Spectral Characteristics of Numerically Modelled Tsunami Waves at Khor Fakkan, Fujairah, UAE, UAE, prepared for Ove Arup and Partners, London.
- Borrero, J.C.** (2012) Tsunami Hazard Assessment for A Site in the UAE from Earthquakes along the Makran Subduction Zone, Prepared for Ove Arup and Associates, London.
- Borrero, J.C.** (2012) Numerical Modelling of Tsunami Waves at Kakinada, India, prepared for Ove Arup and Partners, London.
- Borrero, J.C. (ed.)** (2012) Field Survey Report of Tsunami Effects Caused by the August, 2012 Offshore El Salvador Earthquake, Prepared for United Nations Educational, Scientific and Cultural Organization (UNESCO) International Tsunami Information Center (ITIC), Honolulu, HI, 107 pp.
- Borrero, J.C.** (2012) Tsunami Inundation Modelling for Omaezaki Port, Japan, Prepared for Chevron USA, Richmond, CA.
- Borrero, J.C.** (2012) Tsunami Hazard Analysis for Batangas Bay, Philippines, Prepared for Ove Arup and Associates, London, UK.
- Borrero, J.C.**, Atkin, E., Frazerhurst, J., Grant, D., Lebreton, L. (2012) New Kuta Beach Stabilization: Analysis and Assessment of Shore Protection and Coastal Management Options, , prepared for PT Bali Pecatu Graha.
- Borrero, J.C.**, Atkin, E., Frazerhurst, J., Grant, D., Lebreton, L. (2012) New Kuta Beach Stabilization, Field Data Analysis and Hydrodynamic Numerical Modelling, prepared for PT Bali Pecatu Graha.
- Borrero, J.C.**, Atkin, E., Frazerhurst, J., Grant, D., Lebreton, L. (2012) New Kuta Beach Stabilization: Field Data Collection and Preliminary Numerical Modelling, prepared for PT Bali Pecatu Graha.

2011

- Borrero, J.C.**, Lebreton, L.C.-M, Greer, S.D., Mueller, H. and Csato, C. (2011) Plastic Pollution in the World Ocean: A Research Study into the Origin, Transport and Distribution of Floating Debris, Prepared for the Sea•thos Foundation, Venice, CA.
- Borrero, J.C.** (2011) Local Tsunami Source Models for Northern Chile, Prepared for Golder and Associates, Irvine CA.
- Borrero, J.C.** and S. D. Greer, (2011) Wheatstone LNG Terminal Tsunami Hazard Study, Prepared for Chevron Australia Pty. Ltd.
- Mead S.T., **Borrero, J.C.**, Grant, D., Lebreton, L., and Moores, A. (2011) Design of a Submerged Reef for Coastal Protection, Prepared for US Army Corps of Engineers, National Erosion Control Development and Demonstration Program, Ventura County Demonstration Site.
- Borrero, J.C.** and Grant, D. (2011) Oceanographic Analysis of Beran Island, Ainglaplap Atoll, Republic of the Marshall Islands, Prepared for B.V. Resorts LLC
- Borrero, J.C.**, Lebreton, L., Greer, S.D., Csato, C., Mueller, H. (2011) Plastic Pollution in the World Ocean, A research study in to the origin, transport and distribution of floating debris. Prepared for the Sea•thos Foundation, Venice Beach, CA.
- Borrero, J.C.**, (2011) Review of WYB0004 Seismic Hazard Assessment: Stage 2 Interim Tsunami Hazard Assessment Report, Prepared for Arup, London.

2010

- Borrero, J.C.**, (2010) Borth Reef: Physical Modelling Study of Coastal Protection and Surfability, Prepared for Royal Haskoning, Peterborough, UK
- Borrero, J.C.**, Lebreton, L., Oldman, J. (2010), Assessment of Submerged Reefs for Coastal Protection in Port Phillip Bay, Report prepared for the Department of Sustainability and Environment, Victoria, Australia
- Borrero, J.C.**, Lebreton, L., Mead, S. and Frazerhurst, J. (2010), "Re-Imagining the Folkestone Shore" Report prepared for Folkestone Re-Development Group. February, 2010.
- Mead, S., **Borrero, J.C.**, Lebreton, L., Grant, D., "Scoping Study of the New Zealand West Coast Physical Marine Environment", Report Prepared for Golder and Associates, New Zealand.

2009

- Borrero, J.C.**, Mead, S., Campbell, A. (2009) "Borth Multipurpose Reef: Final Design Note" Prepared for Royal Haskoning, December 2009.
- Borrero, J.C.** and Mead, S.T. (2009) "La Roche Percée: Review of a Proposed Beach Renourishment Plan" Prepared for CAPSE-Nord, Noumea, April 2009.
- Borrero, J.C.**, Mead, S.T and LeBreton, L. (2009) "La Roche Percée [New Caledonia]: Hydrodynamic Analysis of the Littoral Environment, Design of a Multi-Purpose Erosion Control Structure" Prepared for CAPSE-Nord, Noumea, March 2009.
- Borrero, J.C.**, Harrison, S. and Mead, T. (2009) Uitoé Bay, New Caledonia Field Data Collection and Hydrodynamic Analysis of Proposed Channel Configurations, Prepared for CAPSE-Nord, Noumea, May 2009
- Borrero, J.C.** (2009) Stability Assessment for Submerged Reef Breakwaters constructed from Large Sand Filled Geotextile Containers.
- Borrero, J.C.**, Mead, T., Harrison, S. (2009) Weather and Sea Conditions Leading Up to the Grounding of the San Cuvier 27th July 2008
- Frazerhurst, J. **Borrero, J.C.**, Mead S., Harrison, S. (2009) Tidal and Wave Energy Resource Study – Victoria. Prepared for: SKM Consultants, July 2009.

2008

- Harrison, S., **Borrero, J.C.** and Black, K.P. (2008) "Extreme Water Levels at the Powlett River Mouth" Prepared for GHD, Australia, July 2008.
- Borrero, J. C.**, Mead, S.T., Black, K.T., Bosserelle, C. and Healy, T. (2008). "Matakana Island [New Zealand] Access Numerical Modelling & Assessment" Prepared for the Pritchard Group, June 2008.
- Borrero, J.C.** (2008) "Historical Assessment of Tsunamis Affecting the Southern Coast of the Dominican Republic" Prepared for Sandwell Engineering, Vancouver, Canada, May 2008.
- Mead, S. T., Black, K.P., **Borrero, J.C.**, Bosserelle, C. and Bou, A. (2008) "Design and Assessment of Physical Effects of Multi-Purpose Reef for Beach Sand Retention at Orewa Beach [New Zealand]" Prepared for the Orewa Beach Reef Trust and Rodney District Council, March 2008.

2007

- Borrero, J.C.** and Mead, S.T. (2007) "Channel Sedimentation at Gisborne prior to the Grounding of the Jodi F. Millennium Prepared for TT Club c/- Langley Twigg Lawyers, October 2007.
- Borrero, J. C.**, Mead, S.T., Black, K.T. and Bosserelle, C. (2007). "Matakana Island [New Zealand] Data Collection Report" Prepared for the Pritchard Group, September 2007.
- Mead S. T., **J. C. Borrero**, K. P. Black and J. Frazerhurst, (2006) "Multipurpose Reefs for Port Elizabeth South Africa: Detailed Design Report for Multipurpose Reefs at 4 locations in Port Elizabeth, South Africa" Prepared for Africoast Engineers, November 2007.
- Black, K.P., Mathew, J., and **Borrero, J.C.** (2007) "Southern Pipeline Estuarine and Hydrodynamic Physical Process Assessments" prepared for URS, New Zealand and Tauranga City Council, August 2007.
- Mead, S.T., **Borrero, J.C.**, Black, K.P. and Frazerhurst, J. (2007) "Investigations into the Development of Multi-Purpose Reefs at Las Rosadas [Mexico] for Beach Access and Amenity Enhancement" Prepared for Costa Chamela Corporation, May 2007.
- Borrero, J.C.**, Raichlen F., and Yeh, H., (2007) "Third Party Review of Samoa Town (Humboldt County, CA) Master Plan Tsunami Vulnerability Report", prepared for GeoEngineers, February 2007.

2006

- Borrero, J. C.**, Mead, S. T., Black, K. P. and Frazerhurst, J. (2006) "Feasibility and Design Study for a Multi-Purpose Reef in Long Branch, New Jersey" Prepared for Surfers' Environmental Alliance and the State of New Jersey Department of Environmental Protection, July 2006.
- Mead, S. T., Black, K. P., **Borrero, J.C.**, Frazerhurst, J., Anderson, D., Phillips, D.J. and Kramer, M (2006). "St Francis Bay Beach Project: Feasibility Study. Investigations into the Application of Multi-Purpose Reefs at St Francis Beach for Coastal Protection and Amenity Enhancement." Prepared for the St Francis Bay Beach Reef Trust, June 2006.

Borrero, J.C., L. Dengler, B. Uslu, C.E. Synolakis (2006) "Numerical Modeling of Tsunamis Effects at Marine Oil Terminals in San Francisco Bay", Prepared for California State Lands Commission, Marine Facilities Division, http://www.slc.ca.gov/division_pages/MFD/MOTEMS.html June 2006.

2003

Legg, M.R., **J.C. Borrero**, C.E. Synolakis (2003) Evaluate Tsunami Risk to Southern California Coastal Cities, 2002 EERI/FEMA NEHRP Professional Fellowship. Submitted January 2003.

2002

Borrero, J.C., Cho, S., Gordon, S., Moore, J., Richardson, H.W. and Synolakis, C.E. (2002) "Natural Disasters and California: The Regional Economic Cost of a Tsunami Wave Generated by the Palos Verdes Slide," Final Report to the USC Zumberge Research and Innovation Fund, August, 2002.

2001

Borrero, J.C. (2001, 2002) "Pratte's Reef Quarterly Monitoring Reports", 2001 and 2002. 8 reports Prepared for The Surfrider Foundation, San Clemente, CA. September 2001 – October 2002.

PEER REVIEWED JOURNAL ARTICLES

2017

Lane, E., Borrero, J., Whitaker, C., Bind, J., Chagué-Goff, C., Goff, J., Goring, D., Hoyle, J., Mueller, C., Power, W., Reid, C., Williams, J. and Williams, S. (2017) Effects of inundation by the 14th November, 2016 Kaikōura tsunami on Banks Peninsula, Canterbury, New Zealand, *Pure and Applied Geophysics*, DOI 10.1007/s00024-017-1534-x

Power, W., Clark, K., Ngaru-King, D., Howarth, J., Borrero, J., Lane, E., Goff, J., Chague-Goff, C., Williams, J., Reid, C., Whittaker, C., Mueller, C., Williams, S., Goring, D., Hughes, M., Hoyle, J., Bind, J., Strong, D., Lichtfield, N., and Benson, A. (2017) , Tsunami runup observations from the 14 November 2016 M7.8 Kaikōura earthquake, New Zealand, *Pure and Applied Geophysics*, DOI 10.1007/s00024-017-1566-2.

2015

Borrero, J.C., Lynett, P.J. and Kalligeris, N. (2015) Tsunami Currents in Ports, *Philosophical Transactions of the Royal Society A* ,373: 20140372. <http://dx.doi.org/10.1098/rsta.2014.0372>

Borrero, J.C., Goring, D.G. (2015) South American Tsunamis in Lyttelton Harbor, New Zealand, *Pure and Applied Geophysics*, 10.1007/s00024-014-1026-1

2014

Borrero, J.C., Goring, D.G., Greer, S.D. and Power, W.L. (2014) Tsunami Hazards in New Zealand Ports, *Pure and Applied Geophysics*, 10.1007/s00024-014-0987-4

Erikson, M., Lebreton, L., Carson, H., Thiel, M., Moore, C., **Borrero, J.C.**, Galgani, F., Ryan, P. and Reisser, J. (2014) Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea, *PLoS ONE* 9(12): e111913. doi:10.1371/ journal.pone.0111913.

Lynett, P.J., **Borrero, J.C.**, Son, S., Wilson, R.W. and Miller, K. (2014) Assessment of the tsunami-induced current hazard, *Geophysical Research Letters*, DOI: 10.1002/2013GL058680

Borrero, J.C., Kalligeris, N., Lynett, P.J., Fritz, H.M., Newman, A.V. and Convers, J.A. (2014) Observations and Modeling of the August 27, 2012 Earthquake and Tsunami affecting El Salvador and Nicaragua, *Pure and Applied Geophysics*, DOI 10.1007/s00024-014-0782-2

Admire, A. R., Dengler, L., Crawford, G., Uslu, B., **Borrero, J.C.**, Greer, S. and Wilson, R. (2014) Observed and Modeled Currents from the Tohoku-oki, Japan and other Recent Tsunamis in Northern California, *Pure and Applied Geophysics*, 10.1007/s00024-014-0797-8.

A. C. Vetger, M. Barletta, C. Beck, **J. Borrero**, H. Burton, M. L. Campbell, M. F. Costa, M. Eriksen, C. Eriksson, A. Estrades, K. V. K. Gilardi, B. D. Hardesty, J. A. Ivar do Sul, J. L. Lavers, B. Lazar, L. Lebreton, W. J. Nichols, C. A. Ribic, P. G. Ryan, Q. A. Schuyler, S. D. A. Smith, H. Takada, K. A. Townsend, C. C. C. Wabnitz, C. Wilcox, L. C. Young, M. Hamann (2014) Global research priorities for the management and mitigation of plastic pollution on marine wildlife, *Endangered Species Research*, 25 (p. 225-247), doi: 10.3354/esr00623.

2013

- Borrero, J.C.**, Titov, V.V. and Synolakis, C.E. (2013) Numerical Modeling of Tsunami Effects in Southern California from a Hypothetical M9.1 Earthquake near the Alaska Peninsula, in Ross, S.L., and Jones, L.M., eds., The SAFRR (Science Application for Risk Reduction) Tsunami Scenario: U.S. Geological Survey Open-File Report 2013–1170, 136 p., <http://pubs.usgs.gov/of/2013/1170/d/>.
- Lebreton, L. C.-M. and **Borrero, J.C.** (2013) Modeling the transport and accumulation floating debris generated by the 11 March 2011 Tohoku-oki tsunami, *Marine Pollution Bulletin*, 66, 53-58 DOI 10.1016/j.marpolbul.2012.11.013
- Borrero, J.**, Bell, R., Csato, C., DeLange, W., Greer, D., Goring, D., Pickett, V. and Power, W. (2013). Observations, Effects and Real Time Assessment of the March 11, 2011 Tohoku-oki Tsunami in New Zealand, *Pure and Applied Geophys.*, 170, 1229-1248, DOI 10.1007/s00024-012-0492-6
- Borrero, J.** and Greer, S.D. (2013) Comparison of the 2010 Chile and 2010 Japan tsunamis in the Far-field, *Pure and Applied Geophysics*, 170, 1249-1274, DOI 10.1007/s00024-012-0559-4.

2012

- Wilson, R., Admire, A., **Borrero, J.**, Dengler, L., Legg, M., Lynett, P., McCrink, T., Miller, K., Ritchie, A., Sterling, K., and Whitmore, P. (2012) Observations and Impacts from the 2010 Chilean and 2011 Japanese Tsunamis in California (USA), *Pure and Applied Geophysics*, DOI 10.1007/s00024-012-0527-Z.
- Hill, E, **Borrero, J.**, Huang, Z., Qiu, Q., Banerjee, P., Natawidjaja, D., Elosegui, P., Fritz, H., Pranantyo, I., Li, L., Macpherson, K., Skanavis, V., Synolakis, C., and Sieh, K. (2012) The 2010 Mw 7.8 Mentawai earthquake: Very shallow source of a rare tsunami earthquake determined from tsunami field survey and near-field GPS. *Journal of Geophysical Research*, Vol 117, B06402, doi:10.1029/2012JB009159.
- Lebreton, L.C.-M., Greer, S.D. and **Borrero J.**, (2012) Numerical modelling of floating debris in the world's oceans, *Marine Pollution Bulletin* 64, 653–661.
- Lynett, P., **Borrero, J.**, Weiss, R., Son, S., Greer, D., Renteria, W. (2012) Observations and Modeling of Tsunami-Induced Currents in Ports and Harbors, *Earth and Planetary Science Letters*, 327-328 (68-74).

2011

- Okal, E.A. and **Borrero, J.C.** (2011) The "tsunami earthquake" of 22 June 1932 in Manzanillo, Mexico: Seismological study and tsunami simulations, *Geophysical Journal International*, 187, 1443–1459.
- Fritz, H.M., **Borrero, J.C.**, Synolakis, C.E., Okal, E.A., Weiss, R., Titov, V., Jaffe, B., Foteinis, S., Lynett, P., Chan, I., and Liu, P.L-F (2011) Insights on the 2009 South Pacific Tsunami in Samoa and Tonga from Field Surveys and Numerical Simulations, *Earth Sci. Revs.*, 107, 66–75.
- Okal, E.A., **J.C. Borrero**, and C. Chagué-Goff (2011) Tsunamigenic predecessors to the 2009 Samoa earthquake, *Earth Sci. Revs.*, 107, 128 – 140.
- Prasetya, G., **Borrero, J.**, de Lange, W., Black, K., and Healy, T., Modelling of inundation on Banda Aceh, Indonesia during the great Sumatra tsunamis December 26, 2004. (2011) *Natural Hazards*, DOI 10.1007/s11069-010-9710-7.
- Barberopoulou, A., **Borrero, J.C.**, Uslu, B., Legg, M. and Synolakis, C.E. (2011) A Second Generation of Tsunami Inundation Maps for the State of California, *Pure and Applied Geophysics*, DOI10.1007/s00024-011-0293-3
- Prasetya, G., Black, K., de Lange, W., **Borrero, J.** Healy, T. (2011) Debris dispersal modeling for the great Sumatra Tsunamis on Banda Aceh and surrounding waters *Natural Hazards* DOI 10.1007/s11069-011-9903-8

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FIELD STUDIES AND DATA COLLECTION

Tsunami Field Survey – Team member, reconnaissance survey of the November, 2016 Earthquake and tsunami in New Zealand (November 2016).

Instrument Deployment, Retrieval and Site Surveys –North East Point, Mahe Island, Seychelles (January, 2016, September 2016).

Instrument Deployment, Retrieval and Bathymetric Surveys – Mon Choisy and Rivere des Galets, Mauritius. Programming and deployment of Aquadopp current meters and pressure sensors (September, 2014).

Tsunami Field Survey – Team leader, reconnaissance survey of the August, 2012 Earthquake and tsunami in the El Salvador.

Tsunami Field Survey – Team leader, reconnaissance survey of the October 25, 2010 Earthquake and tsunami in the Mentawai Islands, Sumatra, Indonesia.

Tsunami Field Survey of the September 2009 Earthquake and Tsunami in Samoa and American Samoa (September 2009).

Instrument Deployment – Uitoe, New Caledonia. Programming and deployment of Aquadopp current meters and pressure sensors (January, 2009).

Field Data Collection – Orewa, New Zealand. Deployment and retrieval of surf-zone sled for surf zone current velocity measurements (February 2008).

Tsunami Field Survey of the September 2007 Earthquake and Tsunami in Bengkulu, Sumatra, Indonesia (September 2007).

Instrument Retrieval – Chamela Bay, Mexcio. SCUBA retrieval of Aquadopp Current meter and frame (March, 2007).

Tsunami Field Survey of the March 28, 2005 Earthquake and Tsunami in Nias, Sumatra, Indonesia (April 2005).

Tsunami Field Survey of the December 26, 2004 Earthquake and Tsunami in Aceh, Sumatra, Indonesia. Includes extensive surveys of Banda Aceh (January 2005, March 2005, April 2005)

Tsunami Field Survey of the December 26, 2004 Earthquake and Tsunami Along the Northeast Coast of Somalia (March 2005).

Field Survey of tsunami deposits from the September 1992 Nicaraguan tsunami (March 2003).

Tsunami field survey – Leader of the International Tsunami Survey Team (ITST) after the September 9, 2002 earthquake and tsunami in Wewak Papua New Guinea (September 2002).

Tsunami field survey – Member of the International Tsunami Survey Team (ITST) after the June, 2001 Tsunami in Camaná, Peru (June 2001).

Bathymetric Surveying and Monitoring – Regular profiling and collection of high-resolution bathymetry offshore of Dockweiler State Beach, El Segundo, CA. Project is in conjunction with the construction of an artificial surfing reef (2001/2002).

Tsunami field survey – Member of the International Tsunami Survey Team (ITST) after the September, 1999 Tsunami on Fatu Hiva Island in French Polynesia.

Tsunami field survey - Joined the ITST after the August, 1999 Izmit Bay, Turkey Earthquake and Tsunami.

Tsunami field survey - Joined the ITST after the July 17,1998 Papua New Guinea Tsunami and Earthquake.

Tsunami field survey - Joined the ITST after the February 17,1996 Biak, Irian Jaya, Indonesia Tsunami.

Tsunami field survey - Led USC's expedition to Manzanillo Mexico after tsunami and earthquake of October 1995.

Field Investigation - Participated in a joint USC/ US Army Corps of Engineers survey to Nicaragua to perform detailed mapping of nearshore bathymetry for use in numerical models, March 1995.

Technical Advisory Committee – Junior member of advisory committee overseeing design and construction of Pratte's Reef, America's first artificial surfing reef, El Segundo, California (1999-2000).