

WATER VIEWS: CARING AND DARING

3WDS14 – WATERWHEEL
WORLD WATER DAY
SYMPOSIUM 2014
WAVES, RIPPLES, & SPLASHES



WATERWHEEL

Water Views: Caring and Daring – Waterwheel World Water Day Symposium 2014 – 3WDS14

ISBN: 978-0-9925610-0-0

Editor: Suzon Fuks

Assistant Editor: Silvana Tuccio

Associate Editors: Dawn Albinger, Gillian Kehoul, James Cunningham, Julie Robson, Molly Hankwitz, and Sarah Jane Pell

Guest Authors: Alberto Vazquez, James Cunningham, Lila Moore, Liz Bryce, Molly Hankwitz, Russell Milledge, Suzon Fuks, West D.L. Marrin, and Zsuzsanna Soboslay

Graphic Design: Inkahoots / Book Production: Suzon Fuks

Published by Igneous Incorporated, Australia, March 2015

The information and opinions expressed in these papers are solely of the authors and should not be considered as having the endorsement or support of the publisher.

Compilation Copyright © 2015 by Igneous Incorporated.

Copyright of the individual papers are retained by the authors.

For permission requests, please contact:

Igneous Incorporated

3/27 Waverley Street, Annerley, Queensland 4103, Australia



This e-book brings together the works presented between March 17 and 23 at the Waterwheel World Water Day Symposium 2014 – 3WDS14. 450 participants, including children, youth, communities, TED talkers, scientists, activists and artists, from 34 countries and five continents, responded to the theme ‘Water Views: Caring and Daring.’

They interacted with audience “live” on the Internet and in 18 physical venues (“nodes”), through Waterwheel, an online platform dedicated to water. The 2014 symposium integrated youth participation and intergenerational dialogue with ‘Voice of the Future.’ Waterwheel’s unique video-conferencing / media-mixing system, the Tap, allowed presenters and audience to be on the same web-page experiencing “liveness” with the potential for creativity. The symposium was free of charge and, being online, saved on travel costs, accommodation and venue, thereby reducing its carbon and water footprints.

Transversal knowledge and multidisciplinary across cultures and languages shaped the content and structure of the e-book. The nine, richly illustrated sections contain three types of entries, based on the presentation given as part of the Waterwheel World Water Day Symposium 2014: “Splash”– project overview, “Ripple”– detailed project description, and “Wave”– peer-reviewed article on original research. My immense gratitude goes to assistant editor Silvana Tuccio, the associate editors, contributors, reviewers and Inkahoots.

Suzon Fuks

Created in 2011 by an Australian team – Inkahoots, Igneous and Suzon Fuks –Waterwheel responds to the need on a global level to share resources around water awareness, management and celebration. Waterwheel’s international community is growing exponentially every year, as is the Waterwheel World Water Day Symposium, its biggest annual event. The symposium was co-chaired by Amin Hammami (Tunisia) and Suzon Fuks (Australia/ Belgium) for three years in a row, from 2012 to 2014.

WATERWHEEL WORLD WATER DAY SYMPOSIA PARTNERS

2012–2013: University of Sousse in Tunisia under the direction of Professor Hichem Rejeb;

2013: Queensland College of Art Galleries of Griffith University (Brisbane) and Five Colleges (Massachusetts);

2014: World Water Museum Installation & Technohoros Gallery (Athens), Cantoalagua (Bogota), Inkahoots & Igneous (Brisbane), CEIArtE—UNTREF, IQlab & Reciclarte (Buenos Aires), Hayward Area Recreation and Park District (California), Boultek (Casablanca), Bonemap & James Cook University (Cairns), Columbia College (Chicago), Bildungsbüro & Aktionstag (Coburg), Ear to the Earth (NY), Lieu Multiple & Espace Mendes (Poitiers), University of Arts, Studio for Transdisciplinary Projects & Research (Poznan), Milk Bar & WEAD—Women Environmental Artists Directory (San Francisco), De Saisset Museum of Art and History (Santa Clara University), Bamboo Curtain Studio (Taipei), Centre of Contemporary Arts (Torun), ESAD—Ecole Supérieure d’Audiovisuel et de Design (Tunis), and Houghton Valley—Lifting the Creek (Wellington).

3WDS14 TEAMS

The Selection Committee was composed of professors, teachers, researchers, scientists and artists: Alejandra Ceriani (Buenos Aires), Amin Hammami (Tunis), D.L. “West” Marrin (San Diego), Dobrila Denegri (Torun), Ian Winters (San Francisco), Irina Novarese (Berlin), Joanna Hoffmann-Dietrich (Poznan / Berlin), Lauren Elder (San Francisco), Leah Barclay (Brisbane), Mary Gardner (Byron Bay), Molly Hankwitz (San Francisco), Paula Vélez (Paris / Medellín), Ricardo Dal Farra (Montreal / Buenos Aires), Silvana Tuccio (Syracuse / Melbourne), Suzon Fuks (Brisbane).

Youth Committee: Liz Bryce (Christchurch), Keti Haliori (Athens), Mariana Carranza & Jasmin Müller-Alefeld (Coburg), Michele Guieu (San Jose), Suzon Fuks (Brisbane).

Technical Guides and Translations Team: Alberto Vazquez & Riccardo Dal Farra (Buenos Aires); James Cunningham & Suzon Fuks (Brisbane); Hedva Eltanani (Tel Aviv); Katarina Djordjevic Urosevic (Belgrade); and Amin Hammami (Tunis).

CONTRIBUTORS

Aaliwica, Abdellah Hassak alias Dubosmium, Adam Czarnecki, Albertinum Gymnasium, Alberto Vazquez, Alejandra Ceriani, Alexander Schellow, Alexandrinum Gymnasium, Ali Sanderson, Alireza Hejazi, Amber Hansen, Amin Hammami, Amorgos elders, Amy Sharrocks, Ana Labastida et al, Ana Laura Cantera, Andrea Mikeska, Andrea Selwood, Andres Salazar Quintero, Angela Morelli, Anna Lewandowska-Czarnecka, Anna Yen, Annie Abrahams, Aristi Costopoulou, Ashhar Farooqui, Atefeh Khas, Attakkalari dancers (Ronita Mookerji and Sylvester Mardi), Australian Voices, Ben Pederick, Benjamin Burke, Bonemap, Bonnie Hart, Camilla Boemio, Carine Fortin, Carlotta Brunetti, Carmen Hutting, Casimirianum Gymnasium, Catalina Salguero, Catherine Lee, Cheryl Colopy, Christian Bujold, Corinne Weber, Cristabel Tapia, D.L. West Marrin, Daniel Njoroge, Dave McArthur, David Monicci, Dr Te Huirangi Waikerepuru, Dr. Reinhard Reiter, Eklavya Prasad, Elizabeth Zetlin, Elvis Marangon, Emmanuel Fleitz, Engineers without Borders - Berlin, Eric Leonardson, Esther Moñivas, Fabian Kesler, Fabricio Costa Alisedo, Fatine Jarrad, Fernando Godoy, Fo Wilson and students from Columbia College Chicago, Garth Paine, Geoff Hume-Cook, Glenda Pickersgill, Gofrey, Grant Corbishley, Grundschule Neuses, Hector Buitrago, Helen Anastasiou and children from Interactive European School, Himanshu Kulkarni, Hydromemories, Ian Clothier, Ian Winters, Ines Hoepfel, Irina Novarese, Ivan Pavlov, Jacques Perconte, Jaime Del Val, James Cunningham, Jan Vladyka, Janelle Vaughn Dowell, Jasmin Muller-Alefeld, Jason Lim, Jauk, Javiera Mansilla Saez, Jean-Noel Montagne, Jeff Turpin, Jelena Lalic, Jennifer Koney, Jenny Fraser, Jenny Rattenbury, Jeroen van der Linde, Jesus Landin-Torrez, JJ McNeal, Jo Hardy, Joanna Hoffmann-Dietrich, Joanna Rosinska, Joel Chadabe, John G. Boehme & students from Camosun College, Jolian Solomon, Joolie Gibbs, Josephine Starrs, Juan Andres Moreno, Juanita Ariza, Juergen Freund, Julie Rousse, Karl Metchkin, Katarina DJ Urosevic and students of Veselin Maslesa Primary School, Katarzyna Hoffmann, Katarzyna Kucharska, Kate Lee Short, Keti Haliori, Khemais Benhamida, Kiwi Henare, Kj Joy, Krista Franklin, Lauren Elder, Lea Petrou & 4th grade students of the International School of Piraeus, Leah Barclay, Leon Cmielewski, Lila Moore, Lisa Dali alias Nezha, Liz Bryce, Ljiljana Novak, Lorraine Beaulieu, Lynette Lancini, Magdalena Parnasow-Kujawa, Maggie Wenger, Mahesh Vinayakram, Mana Salehi, Marco Pezzotta, Margaret Shiu, Mari Keski-Korsu, Maria Krumm, Maria Papanikolaou, Mariana Carranza with Kinder- und Jugendtheater, Marika Boutou, Martina Essig, Mary Armentrout, Mary Chege, Mclean Fahnestock, Meld, Michal Rybak, Michael Canuel, Michele Guieu, Michele Guieu & students from Cumberland Elementary School, Michelle Atherton, Miljana Peric, Minty Donald and Nick Millar, Miranda Munro, Mirela Abramovic Dordijevski, Mohamed Tahiri, Molly Hankwitz, Mrs Munyiva, Museum of Natural History- Coburg, Nancy Ceridwyn, Naoufel Souayah, Nicholas Ng, Nicole Roethig, Nina Haft, Oliver Walker, Olivier Naudin, Oscar Caicedo, Pascale Barret, Patrick Loeffler, Patrick Treguer, Paula Vélez Bravo, Peggy Hofman, Pegi Marshall-Amundsen, Peter Hall, Pierre Christophe, Piibe Piirma, Piotr Slomczewski, Rebecca Youdell, Rhonda Truscott, Ricardo Dal Farra, Riccardo Bertan, Rob van Kranenburg, Rodrigo Rudge Ramos Ribeiro, Russell Milledge, S.Shakthidharan, Sadie Harmon, Sarah Colbert, Sarah Jane Pell, Sergey Jivetin, Sharyn Lowth, Shelly McArdle, Siham El Rharbi, Silke Bauer, Silvana Tuccio, Simon Linke, Siprian, Sladana Zivkovic, Stella Chiu-Freund, Stephan Wolf, Susan Greene, Susan Sentler, Suzon Fuks, Te Urutahi Waikerepuru, Therese Collie, Tiffany Tonel, Toby Gifford, Tom Beyer, Tracey M. Benson, Ulay, Uli Westphal, Valya Stergioti, Vicki Smith, Vinny Bhagat, Viola Thiele, Virginia Gathoni, William Waterway, Wu Mali, Yaser Murtaja, Yvonne Senouf, Zoe Nikitaki and Zsuzsanna Soboslay.

CONTENTS

1. Opening.....	011
OPENING – OVERVIEW by James Cunningham.....	012
OPENING – OVERVIEW by Liz Bryce.....	013
– ‘100 Names for Water’ by Ulay – Splash.....	014
– ‘Last Drop’ by Jason Lim – Splash.....	016
– ‘Little Streams Make Big Rivers’ by Suzon Fuks – Ripple.....	018
2. Voice of the Future.....	027
VOICE OF THE FUTURE – OVERVIEW by Suzon Fuks.....	028
YOUTH PERSPECTIVE – OVERVIEW by Liz Bryce.....	029
– ‘Ask the Flask’ by Ketii Haliori – Ripple.....	030
– ‘Haiku Workshop on Water’ by Patrick Treguer, Lieu Multiple Team, Paula Vélez (Version Française p. 37) – Ripple.....	033
– ‘Spheres en Bouteille’ by Lorraine Beaulieu (Version Française p. 44) – Ripple.....	042
– ‘Water Conservation Awareness Posters’ and ‘Watercolors of Bay Area Landscapes’ by Michele Guieu – Ripple.....	046
– ‘Message in a Bottle – Concept’ by Corinne Weber, Yvonne Senouf for Meld – Ripple....	050
– ‘One Hundred Boats, One Hundred Waters’ by Lea Petrou – Ripple.....	055
VOICE OF THE FUTURE – OVERVIEW by Alberto Vazquez.....	059
– ‘Coburg Node’ by Jasmin Müller-Alefeld, Mariana Carranza – Ripple.....	060
– ‘Mares y Malabres’ by Mariana Carranza – Ripple.....	065
– ‘Five Precious Letters’ by Virginia Gathoni – Splash.....	068
– ‘Promises to Children of the Future’ by Helen Anastasiou – Splash.....	070
– ‘Lake ZOO’ by Katarina Djordjevic Urošević – Splash.....	072
– ‘Walk Along the Water’ by Jelena Lalic – Splash.....	074
3. Activism, Art & Science.....	077
– ‘Canary Coffee’ by Mari Keski-Korsu – Splash.....	078
– ‘ArkO and the OSWASH (Open Source Washing Machine)’ by Paula Vélez, Jean Noël Montagné, Rob van Kranenburg – Splash.....	080
– ‘Sounding Zameen’ by Leah Barclay – Splash.....	082
– ‘Rights’ by Elizabeth Zetlin – Splash.....	084
– ‘Drinking Water and Sanitation Challenges in North Bihar’ by Eklavya Prasad – Splash.....	086
– ‘The Mary Flows On’ by Glenda Pickersgill, Joolie Gibbs – Splash.....	088
ACTIVISM, ART & SCIENCE – OVERVIEW by Lila Moore.....	090
– ‘Water Sense’ by Alireza Hejazi – Ripple.....	091
– ‘Flood Language’ by Joolie Gibbs – Ripple.....	096
– ‘The Paperboat Project’ by Mr. & Mrs. Gray – Ripple.....	102
– ‘Magnificent Object Workers’ by Anna Yen, Jeff Turpin, Therese Collie – Ripple.....	108
BERLIN NODE – OVERVIEW by James Cunningham.....	112
– ‘One Hour, One River – Berlin Node’ by Irina Novarese, the Hydromemories artistic group, Engineers Without Borders Germany – Ripple.....	113
– ‘Reflections Built on Water’ by Riccardo Bertan, Elvis Marangon – Ripple.....	119
– ‘Water e-Motion: Transformative Views’ by Dr. Lila Moore – Wave.....	122
4. Art & Science.....	131
ART & SCIENCE – OVERVIEW by Dr D.L. “West” Marrin.....	132
– ‘Hybrid Practices – from General to Specific’ by Piibe Piirma – Wave.....	134
– ‘Fuel Cells in Art Projects’ by Ana Laura Cantera (Versión Española p. 143) – Wave.....	140

– ‘H2O: Emergencias’ by Esther Moñivas Mayor – Wave	146
– ‘Understanding and Communicating about Water via Spatial and Temporal Patterns’ by Dr. D.L. “West” Marrin – Splash.....	154
– ‘Flow – Poznan Node’ curated by Joanna Hoffmann-Dietrich, assisted by Piotr Słomczewski – Wave	156
ECOLOGY	
– ‘The Strategies of Plicosepalus Acaciae to Get Free Water in the Desert Environment’ by Naoufel Souayah – Splash	178
– ‘Watercaring for Trout Breeding in Upper Bavaria’ by Carlotta Brunetti, Dr. Reinhard Reiter – Splash.....	180
VISUAL NARRATIVES – OVERVIEW by James Cunningham.....	182
– ‘Mapping the Tomato: Visual Narratives of Daily Food Consumption’ by Peter Hall – Ripple	184
– ‘Mutatoes’ by Uli Westphal – Ripple	187
– ‘You Eat 3,496 Liters of Water Daily’ by Angela Morelli – Splash	192
– ‘Perceiving the Links among Water, Food and Choice’ by Dr. D.L. “West” Marrin – Wave	194
5. Hydrology – Past & Future.....	203
INDIA, GREECE, TUNISIA & CA, USA	
– ‘Participatory Groundwater Management, in North Bihar’ by Dr. Himanshu Kulkarni, Eklavya Prasad – Wave	204
– ‘Yamuna Beach Project’ by Vinny Bhagat, Ashhar Farooqui – Splash	206
– ‘Zameen’ by Attakkalari dancers, S. Shakthidharan, Leah Barclay, Jehan Kanga – Splash	208
– ‘Understanding Conflicts around Floods in India’ by Eklavya Prasad, K. J. Joy – Wave ..	210
– ‘Contemporary Development Betrays Ancient Brilliance in Water Management’ by Cheryl Colopy – Wave	220
– ‘Greek Node’ curated by Keti Haliori – Ripple.....	226
– ‘The Water-Oracle of Apollo on the Island of Amorgos’ by Zoe Nikitaki – Wave.....	232
– ‘The Story of Water in Three Major Sites in Tunisia’ by Khémais Benhamida – Wave.....	240
– ‘Tunis Node’ curated by Amin Hammami – Splash	246
– ‘What?! Sharks in My Backyard? – Hayward Node’ by Jennifer Koney, Maggie Wenger, Nancy Ceridwyn – Splash.....	248
PATTERNS & CYCLES – OVERVIEW by Dr. D.L. “West” Marrin.....	250
– ‘The Art of A.R.T.’ (Adapting to Rising Tides) by Lauren Elder – Splash	252
– ‘New Definition of Earth’s Water Cycle’ by William Waterway – Splash	254
– ‘Water Forms – Great Sandy Strait’ by Jolian Solomon – Splash.....	256
– ‘The Aral Sea Disaster’ by Karl Metchkin – Ripple.....	258
– ‘Rebuilding Connection between Small Rivers and Local Societies Due to Contemporary Needs in Vistula Mouth’ by Adam J. Czarnecki, Rodrigo R. Ramos Ribeiro, A. Lewandowska-Czarnecka – Wave.....	260
URBAN WATER	
– ‘Pour une gestion durable de l’eau’ par Fatine Jarrad – Splash	266
– ‘Between Commercialisation and Devalorisation of Water! “The Guerrab” as a Research Tool in the Moroccan Society’ by Siham El Rharbi (Version Française + English Abstract) – Wave	268
6. Conservation & Transmission.....	277
PAST & FUTURE – OVERVIEW by Molly Hankwitz.....	278
– ‘World Water Museum’ by Keti Haliori – Ripple	280
– ‘Museum of Water’ by Amy Sharrocks – Splash	284
– ‘Ao. Aoo. Oo. Oooa. Eooao. Eau’ by Emmanuel Fleitz, Pierre Christophe – Splash.....	286
– ‘The Future of Water in Poitou-Charentes’ by Carine Fortin – Splash	288
– ‘Joining Rivers’ by Alireza Hejazi, Aristi Costopoulou – Ripple	290

– ‘Absorbing Red Photons’ by Michelle Atherton – Ripple	293
– ‘Deep Like The Rivers’ by Fo Wilson, Andrea Mikeska, Cristabel Tapia, Janelle Vaughn Dowell, JJ McNeal, Sarah Colbert – Ripple	296
WATER & MEMORY – OVERVIEW by Russell Milledge.....	300
– ‘Hydrologies+History::Water and Memory – Milkbar Node’ curated by Molly Hankwitz – Ripple.....	302
– ‘Water Rights in Gaza & Maia Mural Brigade’ by Susan Greene – Ripple.....	306
– ‘Speaking Tributaries’ by Ana Labastida, Kate Lee Short, Sadie Harmon, Jesus Landin-Torrez – Ripple	312
– ‘See, Sea – An Exploration of Memory and Time’ by Susan Sentler – Wave	314
7. Care & Dare.....	323
CONNECTING TO CREEKS – OVERVIEW by James Cunningham.....	324
– ‘Fresh Meets Salt’ by Jo Hardy, Rhonda Truscott, Sharyn Lowth, Shelly McArdle – Ripple	326
– ‘Art as Environment – A Cultural Action at Plum Tree Creek: Mending Broken Land with Water’ by Margaret Shiu & Wu Mali – Wave	329
– ‘Putawai: Lifting The Creek – Wellington Node’ by Ella Cavander, Jan Vladyka, Grant Corbishley, Geoff Hume-Cook, Dave McArthur, Miranda Munro, Jenny Rattenbury, Andrea Selwood – Wave.....	336
FLUID VALUES – OVERVIEW by Suzon Fuks.....	346
– ‘Fluid Values – Cairns Node’ curated by Bonemap – Ripple	348
– ‘Hine Pu-Wai-Ora’ by Te Urutahi Waikerepuru – Ripple	351
– ‘Water from a Hybrid Polynesian Context’ by Ian Clothier – Wave	355
BEYOND LANDMARKS	
– ‘Words for Water: Gathering’ by Tracey M Benson – Ripple	362
– ‘Maldives Match-Up ‘ by Josephine Starrs, Leon Cmielewski – Ripple	367
– ‘Hybrid Cartographies’ by Camilla Boemio – Ripple	371
– ‘Ringbalin – River Stories’ by Ali Sanderson, Ben Pederick – Splash	382
NEEDS AND TRENDS	
– ‘Humid Balance’ by Dr. Ricardo Dal Farra – Ripple	384
– ‘Cantoalagua 2014: A Unique Voice – Bogota Node’ by Hector Buitrago, Catalina Salguero, Juanita Ariza, Oscar Caicedo, Juan Moreno (Versión Española p. 389)	388
– ‘Sip. Do Not Gulp.’ by Michele Guieu – Ripple.....	391
– ‘The Image and Sound of Water in the Persian Garden’ by Mana Salehi – Wave.....	395
– ‘Acqua, Luce, Ortigia: The Culture of Water Environments – Overview’ by Dr. Silvana Tuccio – Wave.....	403
8. Performance.....	411
PERFORMANCE PERCEPTION – OVERVIEW by Zsuzsanna Soboslay.....	412
– ‘Metamorphosis’ by Atefeh Khas – Splash	414
– ‘Hydrontology’ by Jaime Del Val – Ripple.....	416
– ‘Getting Intimate with Moolabin’ by James Cunningham – Wave	420
– ‘As Water is to Water’ by Zsuzsanna Soboslay – Wave	426
PERFORMANCE – OVERVIEW by James Cunningham.....	440
PERFORMANCE – OVERVIEW by Lila Moore.....	441
– ‘Ebb & Throw’ by Bonnie Hart – Splash.....	442
– ‘The Empress’ Tears’ by Pegi Marshall-Amundsen, Suzon Fuks – Splash	444
– ‘Guddling* About: Experiments in Vital Materialism with Particular Regard to Water’ by Minty Donald, Nick Millar – Splash	446
– ‘Performative Class’ by John G. Boehme & Intermedia ART Students from Camosun College – Splash	448
– ‘Sour Amane’ by Nezha Rhondali – Ripple (Version Française p. 454).....	450

PERFORMANCE CONNECTIVITY & RESEARCH – OVERVIEW by Molly Hankwitz	458
– ‘Bay Requiem: A Work in Progress’ by Nina Haft, Ian Winters – Ripple.....	459
PERFORMANCE CONNECTIVITY & RESEARCH – OVERVIEW by Alberto Vazquez	463
– ‘S P E A K 4.0 / LIQUID’ by Alejandra Ceriani, Fabián Kesler, Fabricio Costa Alisedo, Javiera Saez Mansilla (Versión Española p. 468) – Ripple.....	464
OCEAN SYNAPSE – OVERVIEW by Zsuzsanna Soboslay.....	470
– ‘Ocean Synapse: A Transhemisphere Performance Exploring Convergence Phenomena as Bodies in Drift’ by Sarah Jane Pell, Benjamin Burke – Wave	471
– ‘Envisioning, Performance and Poetic Design as Research Approach to Predict Future Convergence Between Bodies, Technologies and Water’ by Sarah Jane Pell, Benjamin Burke – Wave	477
– ‘Bonemap’s Fluid Hybridisation’ by Russell Milledge, Rebecca Youdell – Wave	482
9. Hydrosonics.....	493
HYDROSONICS – OVERVIEW by Suzon Fuks.....	494
– ‘Hydrosonics – New York Node’ curated by Leah Barclay, with Joel Chadabe, Tom Beyer, The Australian Voices, Mahesh Vinayakram, David Monacchi, Garth Paine, Eric Leonardson – Ripple.....	496
– ‘Hydrographies: 607km’ by Ferando Godoy Monsalve (Versión Española p.506) – Wave .	502
– ‘Remembering Chinaman Creek’ by Nicholas Ng, Amber Hansen – Wave	511
– ‘Voluminous HydroLogic’ by Sergey Jivetin – Ripple	518
– ‘Imaginary Concerts’ by Dr. Ricardo Dal Farra (Versión Española p. 522) – Ripple	520
– ‘Mille Lumières’ by Julie Rousse, Jacques Perconte – Splash	524
– ‘River Listening’ by Toby Gifford, Simon Linke – Splash.....	526
Appendices.....	529
– Call for Proposals.....	530
– Call for Proposals for Voice of the Future – Youth Participation.....	534
– Media Release.....	540

4.

Art & Science

ART & SCIENCE - OVERVIEW

by Dr. D. L. “West” Marrin

This session explored the crossroads of art and science both in terms of artists selecting scientific topics or natural phenomena for their works, and scientists using artists to portray their data or provide them with unique perspectives.

The first presenter, Piibe Piirma, is a media artist and teacher from Estonia who has studied and photographed tiny unicellular plants in her work. Not only has she displayed the intricate patterns, shapes, and colors of the beautiful organisms in her art, she has also cared for the cultures while translating science into poetry. Piibe curated an exhibition displaying the photos and paintings of the tiny plants that also serve as the subject of her doctoral research.

Ana Laura Cantera is a professor of visual arts from Argentina who is working with fuel cells that extract energy from contaminated water via microorganisms that can metabolize organic materials and co-metabolize toxic metals. The artistic rendition of these fuel cells included creating human-like objects that would slowly decompose, which she used as a metaphor for humans overexploiting and destroying the natural environment. She also presented a project that highlighted the cycling of energy in natural and human systems as exhibited by the flow of bioelectrical energy through the water, fuel cells, microorganisms, and human figures that slowly transformed.

The third presenter was Esther Moñivas, an art historian and professor of contemporary art from Spain, who specializes in the aesthetics of materials and, especially, water. The topic of “art and science dialogues” was discussed in terms of its potential to promote new synergies between the two fields utilizing water as the source of imagination. She also discussed how complex and often confusing issues in water quality, politics and management can be communicated more effectively to the public through the medium of art. Some of the artistic projects emerging from her art-science dialogues, including videoart, paintings and textural works, were reviewed.

The final presenter was myself, a water scientist and former professor from Hawaii. I discussed the sharing of interdisciplinary perceptions via the use of spatial and temporal patterns common to both the natural world and the arts. I reviewed the work of several artists that have focused on the use of patterns and rhythms within nature to design structures or strategies that have been installed in the aquatic environment to enhance natural processes or have been exhibited to effectively communicate the threats to our watery world.

A common theme among all the presentations was the potential for artists and scientists to collaborate in ways that will enhance their respective works and provide a more effective means of communicating water issues to the public.

H2O: EMERGENCIAS

Esther Moñivas Mayor

Antonio Nebrija University, Madrid, Spain

Abstract

This paper introduces a set of activities held in the School of Fine Arts in the Complutense University of Madrid during October and November, 2013. The International Year of Water Cooperation and the XIII Madrid Science Week were the setting for a series of artistic projects and discussions on water issues. The program included a workshop entitled 'Art and Science dialogues: Water projects workshop,' which sought to promote new synergies between these two fields of knowledge, and fostered a debate on the current status of water within the School, addressing it on the political, economical, environmental, sociological, psychological and aesthetic levels. This workshop also stimulated a series of performances and visual artworks that were displayed in the exhibition 'h2o: emergencias,' held in the showroom of the School of Fine Arts and in the digital platform waterbodies.org. All the projects were responding to a real emergency, taking on the challenge of a new water culture from the perspective of the global XXI century water crisis, and seeking to be engines of awareness within the ecosystem of the School, the city and the world. This article takes a brief look at these artworks.

Reflecting, debating and performing in the School of Fine Arts. 'Art and Science Dialogues: Water Projects Workshop'

The 2013 International Year of Water Cooperation and the XIII Madrid Science Week were the setting for a series of artistic projects and discussions on water issues, at the School of Fine Arts of the Complutense University of Madrid.

This program began with a workshop entitled 'Art and Science Dialogues: Water Projects Workshop,' directed by myself. Held in October, it sought to promote new synergies between these two fields of knowledge, stimulating original narratives about this fundamental element and public resource. As a starting point, it took water as a driver of the imagination, briefly analyzing contemporary water semantics, and discussing a series of artworks made in the last few decades. The focus was on projects inhabiting the communal space, exemplified by artists like Buster Simpson, Viet Ngo, Olafur Eliasson, Patricia Johansson, Lynne Hull or The Harrisons. The theoretical perspective went over the idea of water in material imagination (Bachelard, 1942), but paid special attention to the h2o concept, a notion in the imagination of the contemporary citizen far from the original essence of 'water' (Illich, 1985). This introduction also provided an overview of problems in aquatic ecology, as well as data about current water distribution and emerging problems in this area (Arrojo, 2008).

In the second session, the workshop fostered a debate on the current status of water within the School of Fine Arts, understanding the School as a complex system and an ecological unit that could lead to wider conclusions. Participants were asked to work in groups on eight different issues:

- Economy
- Policy, management and sustainability
- Supply, storage, distribution and access points
- Uses and interactions
- Quality and productivity
- Conservation and environmental impact
- Landscape design and aesthetic integration
- Education and symbolic integration

The objectives were to share knowledge, to gather new information, and to write brief conclusions on each issue that could be interesting to others. In the final debate one thing was notable: the lack of

information about water management, quality and politics. The students pointed out the general lack of water in the School's environment (dry "green" areas, empty swimming pools, taps not working), as well as the lack of interest in promoting healthy interactions with this resource. As they explained, water is necessary in many artistic techniques, but the School's management does not really prevent contamination with toxic substances. Solutions for separating water from turpentine were discussed, and professors described the history of how green areas became dry over two decades. Finally, a few students presented information from other sources about the low quality of the drinking water at the School. Ultimately, this debate showed the need for understanding the real water systems we inhabit, and the importance of information (usually not easily accessible) in improving water use.

In November 2013, a selection of twelve artistic projects born in this context were introduced at a round-table discussion featuring Eva Lootz (Spanish National Award for Fine Arts, 1994), who in the last decade has focused on hydrological systems, and myself as curator of the exhibition.

Complementing the round-table, the School also hosted three performances. The first one, Clara Durán and Beatriz Álvarez's 'Emotional dialysis,' consisted of an interactive installation that aimed to use water to recall the Lethe River in Greek mythology, which was believed to divide life from death, conscious from unconscious, and present from past, keeping the memories of those who were travelling through. The audience was invited to write their secret memories with ink on a vellum paper, later dissolving the words by putting them in a tank of water. This communal dialysis sought "to get rid of those emotions, memories or feelings that terrify us with persistence to the point of paroxysm, and that we are unable to share with others" (Durán and Álvarez, 2013).



Fig.1 Clara Durán and Beatriz Álvarez, 'Emotional dialysis,' 2013.

The second performance was by Marta Pinilla, who installed her 'Portable stream', consisting of three sculptural art books with embroidered lines representing the flow of a river. This installation sought to metaphorically return water to lands where human activity and water policies had dried riverbeds and destroyed vegetation—like in the gardens of the School of Fine Arts or in Monteagudo de las Vicarias, to take the examples provided by the artist. During the performance, the audience was asked to extend the symbolic riverbed of the books using cards printed by the artist. 'Portable stream' is an evolving project that intends to be located in diverse environments, and that seeks to promote social awareness of the impact water has on deforestation. A panel exposed her reflections on the Common Agricultural Policy (PAC) of the European Union, and how it is managing agricultural subsidies (cited in Pinilla, 2013):

"Since the 80's, this policy tries to reduce agricultural surpluses by promoting certain crops and reducing others. The landscape in Monteagudo de las Vicarias, a small village in the Soria province (Spain) changed drastically because of this policy. It used to be a place where a wide range of products, fruits and cereals were cultivated. However, to receive those grants, these traditional crops were uprooted and fast-growing plants such as corn or sunflower were grown instead. The

disappearance of trees has not only changed the landscape, the decrease in vegetation has led to a decrease in transpiration. The decrease in transpiration leads to decreasing humidity and thereby precipitation. Water is now scarce and every summer there are restrictions. Since crops were changed, desertification has increased exponentially. Much of the land is now barren and infertile soil erosion is more than evident. Human activity has destroyed the vegetation.”



Fig.2 Marta Pinilla, 'Portable stream,' 2013 (detail).

Naiana Cabral conducted the last performance, entitled 'Agua viva.' It was directly connected to her work 'Fuente,' performed on August 13th, 2013. Bridging both actions, the artist symbolically became a “water messenger” who brought the sound and essence of pure water—obtained in a ritual bath in the Sierra de Aracena y Picos de Aroche Natural Park (Huelva, Spain)—to the artificial, contaminated and partially dried water system of the Complutense University environment. In Agua Viva, Cabral used a hidden sound device under her blue attire to “fill” the old, empty swimming pool in the garden of the School of Fine Arts. By means of a movement sensor, her interactive device allowed her to establish a relationship with this urban environment, co-creating with the people around her a landscape and a sound-scape.

Engines of awareness within the ecosystem of the School. 'H2o: emergencias'

The School of Fine Arts closed its first art & science program with an exhibition entitled 'h2o: emergencias,' which included not only these three pieces but also other video art, installations, paintings and textual works (La Trasera, Fine Arts School, Complutense University of Madrid, 12-15 November 2013). This exhibition intended to show a number of projects—many of them works in progress, which seek points of connection between the sociological, ethical and scientific perspectives on this vital resource. All the projects were responding to a real emergency, taking on the challenge of a new water culture from the perspective of the global XXI century water crisis, and seeking to be engines of awareness within the ecosystem of the School, the city and the world. We will take a brief look at these artworks.

'Blue Iceberg' was inspired by the Spanish scientific Glackma Project (<http://glackma.es/>), which since 2001 has been studying glaciers as natural sensors for analyzing global warming. The artwork sought to explore natural patterns of “water drawings,” observing and documenting for this aim the defreezing processes over cardboard of ice cubes stained with blue ink. A video piece based on the first 17-minute performance was created with the collaboration of visual artists Alba Escayo and Ana Zdravkovic, and the composer Tze Toh. The visually seductive meanderings of blue liquid flowing over the paper as the ice melted was captured in the video.



Fig.3 Alba Escayo, Ana Zdravkovic and Tze Toh, 'Blue Iceberg,' 2013 (video still).

Antonio Labella, Sinclair Castro Blancas and Raquel Vicente Dobato presented their installation 'Si no hay niños, no hay río', based on an action conducted in October 2013 where the artists launched a rubber boat in different spots of Madrid's Manzanares River. The video shows the boat floating in a dark environment, producing in the viewer an estrangement from this urban water space. The installation also included a series of photographs, a map with the spots marked, and the rubber boat full of small texts reflecting on water, play and childhood by Hans-Georg Gadamer, Paul Valéry, Miguel Hernández or Walter Benjamin.

'Watermarks' was a photographic project by Daniel Sánchez that began with a reflection on the place of water in the School of Fine Arts and its connection with people (Sánchez, 2013):

"We do know that water is, at least in our society, a very handy resource: if we need it, we find it easily. However, there is not a thorough concern about this fragile and important resource. It's well known that water comes out from the different access points around the Fine Arts School but, apart from that, nobody knows anything else. Water is practically invisible [...]. The importance of water in the faculty environment is often unrecognized and thus water itself is disregarded and even wasted."

The nearly archaeological perspective of Daniel Sánchez to the water environment of the School of Fine Arts resulted in a collection of images of small spots, leaks, oxidations and traces of water use. The artist not only documented the site-specific watermarks with aesthetically interesting photographs, but also offered short descriptions and exact positions on a map with (probably ironic) scientific precision.



Fig.4 Daniel Sánchez, 'Watermarks,' 2013 (detail).

Isabel Álvarez presented a painting entitled 'Wave', where the depiction of flux and solidity turned into cultural metaphors, and a reflection on the role of cities in the natural environment. To this end, over the painted image of a ship's wake on the sea, she superimposed a line drawing reproducing the plan of a city that had the shape of a ship (Álvarez, 2013):

"[...] I conceive the city as an obstacle for water, an intruder, an alien element and an invader in nature, and I have chosen the wake the ships leave behind them as they navigate as a metaphor for the waste that our civilization leaves behind as it goes on. It works as a visual diagram of the wicked use of water in the cities, of how they cloud it and break its balance."

In the work 'Confluences,' the team of María Hidalgo, Ana Notario and Esperanza Arquero combined material experimentation and observation of physical properties such as hygroscopy, capillary, buoyancy and deliquescence. Their research produced a series of images showing the processes of diverse materials transformation when submerged in water. Paper, plastics, fabrics, plants, glass and metal elements created ephemeral "submerged sculptures" suggesting, in the words of the artists, an aesthetic dialogue with dance, sensuality, composition or softness.

Néstor Domínguez Varela presented his interactive video installation entitled 'Fountain', as an environmental protest against bad water use in Madrid, a city with more than three million inhabitants. On his webpage, he asked visitors to collaborate by sending videos of their own bathrooms. The first video resulting from this interaction showed a mosaic of images and overlapping sound of successive evacuating toilets, mixing their sounds to generate a loud noise with the purpose of overwhelming the audience. In the centre, an image of a Madrid fountain appeared slowly while the water of the toilets flowed down. As the artist explained (Domínguez, 2013):

"A million toilets are simply too many toilets. The water stream per second that this requires, assuming that each household only pulls the string ten times a day, is immense, goes beyond our imagination: we simply cannot recreate in our minds such quantity. [...] We do not see the water when it goes down the drain, or our neighbours' or, indeed, we cannot even see the water before using it. It is always hidden and we are barely aware of its existence and source."



Fig.5 Nestor Domínguez Varela, 'Fountain,' 2013 (video still).

In 'The water that comes. The used water. The water that we come to have,' Pía Alejandra Gálvez Lindegaard used photography to look at the health, hygiene and drinking-water quality issues at the School of Fine Arts (Gálvez, 2013). She documented three coexisting types of water in this environment: the tap water ('the water that comes'); the one affected by students activities such as cleaning tools or mixing it with substances like turpentine ('The used water'); and water treated with the so called EM Technology or "effective microorganisms" to improve its quality ('The water that we come to have'). The resulting series of images allowed for an interesting visual analysis, and sought to raise awareness about the consumption cycle of water.

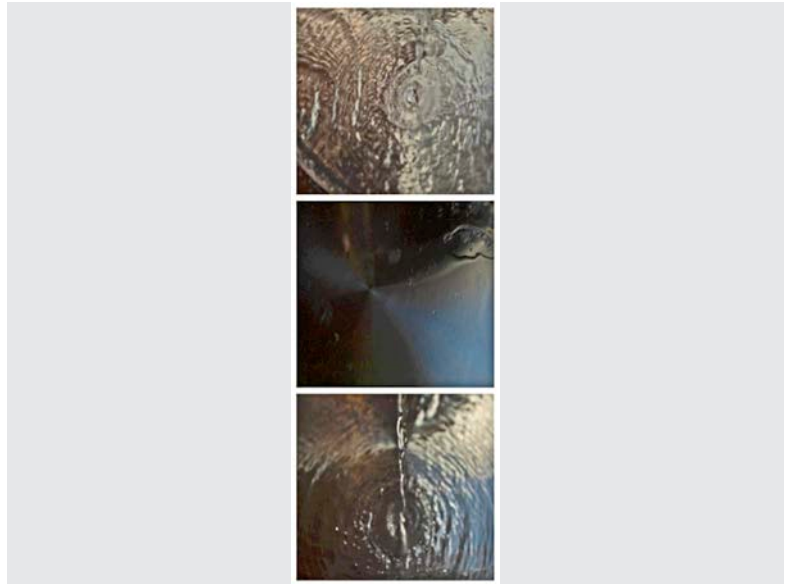


Fig.6 Pía Alejandra Gálvez Lindegaard, 'The water that comes. The used water. The water that we come to have', 2013 (detail).

Raquel Checa Solueta, Héctor Hernández Rosas and César García proposed an environmental complaint in the form of a sculptural and audiovisual project entitled '540 L / 54".' Based on the real current danger of massive extractive exploitation of the Spanish Alberche and Corneja rivers, they provided in their installation not only detailed information and news about the legal process taking place in Navaescorial (Ávila), but also actively attempted to intervene in this reality by collecting signatures to stop it (Checa and Hernández, 2013). The artists exposed the way this exploitation will affect agriculture and livestock, and the risks to the water supply in this area. The audiovisual piece showed current river flows projected over a prism built with 90 bottles containing 540 litres of water from the Alberche river. The contrast between the free water, following its natural course, and the stagnant bottled water that may cause the destruction of this ecosystem, generated a strong conceptual contrast but also a beautiful set of light effects on the surrounding walls.



Fig.7 Raquel Checa Solueta, Héctor Hernández Rosas and César García, '540 L / 54"', 2013.

Finally, Romana di Vuolo's artwork entitled 'Oil is thicker than blood' included an audiovisual piece and two acrylic paintings on linen, all of which showed processes of flux and dissolution. The sensitive images of the video were reinforced by critical reflections on the relationship between water, economy and health, written on a panel (DiVuolo, 2013):

“The title refers to the economic power represented by oil. [...] The black gold invades the blue gold. A war of power between the big global holdings that pollute seas and oceans regardless of the terrible consequences these accidents cause in the environment, and therefore in humans [...]”

So, the sense of beauty was mixed with terrible disgust when the deeper message of the artwork was discovered, reminiscent of the Prestige disaster in Galicia, and the indefinable mixture of fuel, sand, plastics and salt water that destroyed thousands of kilometers of coastline in 2002. Di Vuolo wanted to note with her text the lively debate and the current controversy in public opinion, providing detailed information about the state of the “Prestige case.”

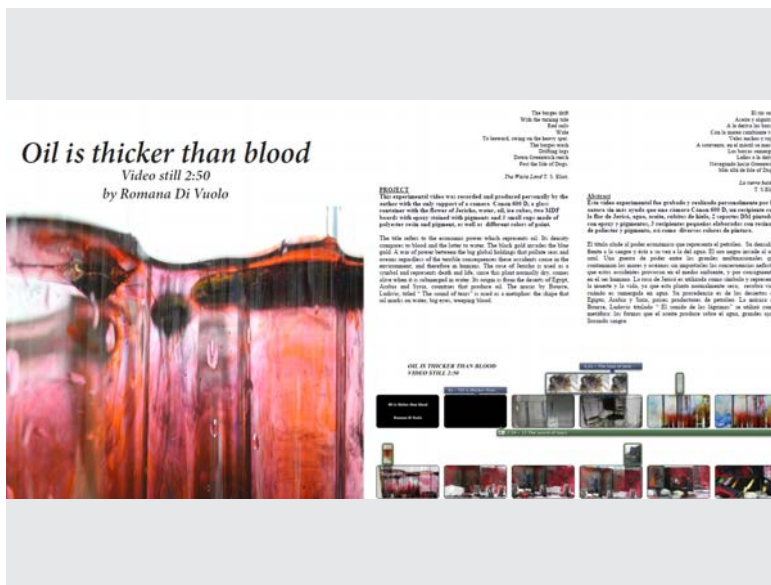


Fig.8 Romana di Vuolo, ‘Oil is thicker than blood,’ 2013. Video still.

In addition to these art projects, the showroom included a central space with texts by the participants in the workshop reflecting on water policy and management in the School of Fine Arts, inviting the audience to contribute their own thoughts. There was also a communal hydrological poem that was written in the workshop with the aim of collecting the plural essence of water in all the participants’ imaginations. This poem, made of heterogeneous small pieces of paper, was enriched by visitors along its display, a testament to the strong public interest in this crucial issue.



Fig.9 ‘h2o: emergencias.’ Exhibition view.

Considering it a processual experiment with novel water imaginations dealing in a porous manner with a particular environment, we could point out ‘h2o: emergencias’ as a successful experience. Far from disappearing, the words, images, sounds and liquid fluxes that it comprised, will indefinitely

stream in the form of electric waves on the Internet (water-wheel.net, waterbodies.org, vimeo channel, blog, etc.), but also will flow in a vaporous state in the School of Fine Arts.

AUTHOR BIOGRAPHY

Esther Moñivas is an art historian, conservator-restorer and freelance curator. She is Professor of contemporary art at Nebrija University and conducts research at the Spanish National Research Council's Institute of Philosophy (CCHS-CSIC) and at the GNAPV group in Nebrija University. In 2014, she was guest researcher at the University of Applied Arts Vienna. Her research explores the concept of matter in contemporary art; material semantics; the aesthetics of fluid materials (particularly water); and the current processes of convergence between art and science.

REFERENCES & LINKS

- Álvarez, I. (2013). 'Wave.' In Moñivas, E. (Curator). 'H2o: emergencias.'
- Arrojo Agudo, P. (2008). 'La nueva cultura del agua del siglo XXI.' Zaragoza, Spain: Expoagua Zaragoza.
- Bachelard, G. (1942). 'L'eau et les rêves : Essai sur l'imagination de la matière.' Paris, France: José Martí.
- Checa, R. & Hernández, H. (2013). '540L / 54".' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/232>.
- Di Vuolo, R. (2013). 'Oil is thicker than blood.' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/228>.
- Domínguez Varela, N. (2013). 'Fuentes.' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/225>.
- Durán, C. & Álvarez, B. (2013). 'Emotional dialysis.' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/229>.
- Gálvez, P. A. (2013). 'The water that comes. The used water. The water that we come to have.' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/231>.
- Illich, I. (1985). 'H2O and the waters of forgetfulness: reflections on the historicity of stuff.' Dallas: Heyday Books.
- Moñivas E. (2013). 'H2o: emergencias'. Complutense University of Madrid. <http://extensionbellasartes.wordpress.com/2013/12/04/h2o-emergencias/>.
- Moñivas E. (Curator) (2013). 'H2o: emergencias' channel. <http://vimeo.com/channels/canalh2oemergencias>.
- Moñivas E. (Curator) (2013). 'H2o: emergencias' virtual exhibition. <http://artscicenter.com/waterbodies-ex/monivas>.
- Pinilla, M. (2013). 'Portable stream.' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/227>.
- Sánchez, D. (2013). 'Watermarks.' In Moñivas, E. (Curator). 'H2o: emergencias.' Retrieved from <http://artscicenter.com/waterbodies-ex/node/226>.
- Screen recording of the Tap presentation http://water-wheel.net/media_items/view/4882