



# 2013

SOCIETY OF ENVIRONMENTAL  
TOXICOLOGY AND CHEMISTRY

*Annual Report*

# WHO WE ARE

## **MEMBER-DRIVEN SOCIETY**

SETAC Members  
Global Partners and Affiliates  
Geographic Units' Sustaining  
and Affiliate Members and Partners  
Tripartite balance among academia,  
business and government

## **GOVERNED BY**

Members involved in the SETAC  
World Council and Global Committees  
Geographic Units  
Regional Chapters and Branches

## **WORKING TO ACHIEVE**

Environmental Quality  
Through Science®

## **PARTICIPATING IN**

International Activities  
Professional Training  
Workshops  
Advisory Groups  
Meetings  
Publications

PRESIDENT'S MESSAGE.....	04
WORLD COUNCIL .....	06
PUBLICATIONS .....	07
ADVISORY GROUPS .....	08
WORKSHOPS & SPECIAL TOPIC MEETINGS.....	12

## **GEOGRAPHIC UNITS**

NORTH AMERICA.....	14
EUROPE .....	18
ASIA/PACIFIC .....	22
LATIN AMERICA .....	24
AFRICA.....	26
AWARDS .....	28
PARTNERS .....	32
GLOBAL PHOTO CONTEST .....	34
FINANCIALS .....	36
STAFF & CONTACTS .....	38

## ABOUT THE SOCIETY

The Society of Environmental Toxicology and Chemistry (SETAC) is a not-for-profit, global professional organization comprised of some 6,000 members and institutions dedicated to the study, analysis and solution of environmental problems, the management and regulation of natural resources, research and development, and environmental education.

Since 1979, the society has provided a forum where scientists, managers and other professionals exchange information and ideas.

SETAC's founding principles are:

**Multidisciplinary approaches to solving environmental problems**

**Tripartite balance among academia, business and government**

**Science-based objectivity**

SETAC is implementing this mission worldwide. Building on a strong track record in North America and Europe, membership growth and education in developing countries are important priorities for the society's global program of activities in recognition of the pressing environmental challenges confronting Asia/Pacific, Latin America and Africa.

## TRIPARTITE IN SCIENCE, DIALOGUE AND GOVERNANCE

In addition to its globally respected science, SETAC's tripartite character is the society's principal calling card, providing a quality forum on environmental issues for communication and interaction among professionals on a multisector, interdisciplinary and multinational basis. This tripartite aspect—relying on a fundamental balance of scientific participation among government, academia and business—adds unique strengths in governance and in objectivity to SETAC meetings, workshops, advisory groups and publications at a time when such objectivity is so critical to sound policy and societal decision-making.



## William Goodfellow

### SETAC President

SETAC is truly a global, professional scientific society with increasing membership in all regions of the world. Our much respected and appreciated scientific program draws on the best environmental scientists and practitioners from government, business and academia around the world. Society membership has risen to roughly 6,000 professionals representing more than 110 countries and is steadily increasing each year.

With the addition of Africa as a formal geographic unit, our presence and collaboration in developing countries is on a broader and sounder basis. Our scientific program, already quite formidable, has been reinforced by our ever-growing global outreach. Through our geographic unit network, we are able to address international as well as regional and local environmental problems and challenges. Our five geographic units maintain the grass-roots culture of our society and ensure decisions are made with our individual members clearly in mind. Most importantly, our science is particularly valued for its foundation in a consensus between government, business and academia, an approach based on SETAC's founding principle of tripartite engagement and governance.

SETAC remains active within such significant global undertakings as the Stockholm Convention, the Strategic Approach to International Chemicals Management (SAICM), the United Nations Environment Programme (UNEP) Global Mercury Partnership, the Minamata Convention on Mercury and the International Organi-

zation for Standardization (ISO). We are also working with many partners from international governmental and nongovernmental organizations. Since 2002, the UNEP/SETAC Life Cycle Initiative has been the broadest, most visible collaboration with UNEP, and we have expanded this relationship by working with UNEP Chemicals and other key units in the UN system. This initiative is currently undertaking a phase-three effort to mainstream life cycle thinking worldwide.

We are particularly proud of the opportunities our programs offer to members throughout their professional careers, in all geographies, and across a broad range of scientific disciplines. Our scientific programming is anchored by well-attended annual meetings in key regions of the world. Annual meetings this past year were held in Glasgow (SETAC Europe), Lusaka (SETAC Africa) and Nashville (SETAC North America). We also held special meetings on various topics in Hanoi, Vietnam; Kumamoto, Japan; and Rome, Italy; and numerous branch and chapter meetings throughout the world.

The past year was a time of preparation and transition for the next five years. We successfully negotiated a new publishing contract with our publishing partner, Wiley Blackwell. As part of this new contract, we were able to ensure the same financial resources to SETAC while eliminating page charges for authors publishing in SETAC journals. This was very important for our journals to remain competitive, making sure that we continue to attract the best submissions for *Environmental Toxicology and Chemistry (ET&C)* and *Integrated Environmental Assessment and Management (IEAM)*.

SETAC's global and regional workshops and symposia encourage scientific dialogue and debate on important and emerging issues that use science as part of management or impact policy decisions. Upcoming workshops or symposia addressing ecosystem services, hydraulic fracturing, life cycle impact assessments and freshwater salinization build on an already impressive portfolio of events which, most recently, focused on global climate change, pollinators and pesticides, life cycle database parameters, predictive ecotoxicology, passive sampling devices, marine debris and endocrine disrupters. We kicked off our Horizon Scanning Research Prioritiza-

tion Project at the Lusaka, Zambia, and Nashville, Tennessee, USA, annual meetings to bring forward the next generation of important global and regional environmental questions. Our goal for next year is to have similar meetings at the other three geographic unit annual meetings. SETAC committees and advisory groups continue to expand with member interests, and we are particularly proud of their efforts in working together across disciplines to tap the great potential of our members' interdisciplinary expertise and passion. I believe these activities are SETAC's greatest strength.

Our future programming is to continue adding to this impressive story in the years ahead, working towards our next world congress in Orlando, Florida, in November 2016. We know that members want to belong to a professional society that is impactful and meaningful. We strive to provide the best tools and programming opportunities to meet this need. I would like to thank the leadership and members of SETAC for their continued support. Without everyone's unified efforts, SETAC would not be the professional society that we have become. Thank you all for a very successful year!



(From top left) David Phillips, Paulo Masoni, Gustavo Somoza, Barnett Rattner, Patrick Guiney, Douglas Fort, Michael Mozur, Peter Campbell, William Goodfellow, Patricia Bi Asanga Fai, Timothy Canfield, Miguel Mora.

## 2013 SETAC WORLD COUNCIL

### President

William L. Goodfellow | Exponent, Inc., US

### Vice President

Peter Campbell | Syngenta, UK

### Treasurer

David Phillips | Smithers Viscient, UK

### Immediate Past-President

Timothy Canfield | Federal Government, US

### Africa

Patricia Bi Asanga Fai | University of Dschang, CM

### Asia/Pacific

Kenneth Leung | University of Hong Kong, HK

### Europe

Laurent Lagadic | INRA, FR

Paolo Masoni | ENEA, IT

### Latin America

Gustavo Somoza | IIB-INTECH, AR

### North America

Kim Anderson | Oregon State University, US

Douglas Fort | Fort Environmental Laboratories, Inc., US

Patrick Guiney | S.C. Johnson & Son, Inc., US

Kurt Maier | East Tennessee State University, US

Miguel Mora | Texas A&M University, US

Barnett Rattner | Federal Government, US

### Ex-Officio

Michael Mozur | SETAC Executive Director  
(January–March)

## JOURNAL HIGHLIGHTS

### Environmental Toxicology and Chemistry (ET&C)

**Editor-in-Chief: G. Allen Burton, Jr.**

ET&C, with an impact factor of 2.618, is a monthly publication dedicated to furthering scientific knowledge and disseminating information on environmental toxicology and chemistry, including the application of these sciences to risk assessment.

#### IMPACT PAPERS

An analysis of the impact of papers published in ET&C over the past 30 years – an overview of the science and coming attractions

#### SPECIAL SECTION

Issue 1: Global Climate Change

#### NEWS COVERAGE

Contaminant Residues and Declines of the Cascades Frog (*Rana cascadae*) in the California Cascades, USA

Carlos Davidson et al. | Volume 31, Issue 8 (1895-1902)

Covered by *LA Times*, *Live Science*, *Smithsonian*, *San Francisco Chronicle* and more.

Brain Region Distribution and Patterns of Bioaccumulation Perfluoroalkyl Carboxylic and Sulfonic Acids in Highly Exposed East Greenland Polar Bears

Alana K. Greaves et al. | Volume 32, Issue 3 (713-722)

Covered by *Science World Report*, *Nature World News*, *UPI* and more.

Pesticides in Blood from Spectacled Caiman (*Caiman crocodylus*) Downstream of Banana Plantations in Costa Rica

Paul B.C. Grant et al. | Volume 32, Issue 11 (2576-2583)

Covered by *the Guardian*, *NPR*, *Fox News* and more.

Effects of selenium on development, survival, and accumulation in the honeybee (*Apis mellifera* L.)

Kristen R. Hladun et al. | Volume 32, Issue 11 (2584-2592)

Covered by *Nature World News*, *RedOrbit*, *Phys.org* and more.

Ecotoxicity of climbazole, a fungicide contained in antidandruff shampoo

Elisabeth Richter et al. | Volume 32, Issue 12 (2816-2825)

Covered by *Scientific American* and *Water Technology*

### Integrated Environmental Assessment and Management (IEAM)

**Editor-in-Chief: Richard J. Wenning**

IEAM is a quarterly publication focused on the application of science in environmental decision-making, regulation and management, including aspects of policy and law, and the development of scientific approaches to environmental problem solving.

#### SPECIAL SERIES

Issue 2: Ecosystem Services: from Policy to Practice

Issue 3: Watershed Cumulative Effects Assessment

Issue 3 (electronic only): New Challenges in Ecological Risk Assessment

#### PODCASTS

Stalking the Elusive Wildlife TRVs with David Mayfield and Anne Fairbrother

For What It's Worth: Using the Ecosystem Services Concept in ERAs with Valery Forbes and Peter Calow

Practically Speaking: Scientific Pragmatism with Glenn Suter

Assessing Cumulative Effects in Watersheds with Monique Dube

Ruffling Feathers—A New Approach to Pesticide Risk Assessment for Birds with Matthew Etterson

SETAC advisory groups provide a vital forum for scientific discourse in topical areas across environmental and transdisciplinary science. In 2013, 26 groups sponsored dozens of platform and poster presentations at SETAC meetings, highlighting interests and activities that are far-reaching, innovative and collaborative. SETAC advisory groups also provide valuable input to international forums and conventions such as the Strategic Approach to International Chemicals Management (SAICM), the International Organization for Standardization (ISO), the Stockholm Convention and the Minamata Convention on Mercury.

## **IN 2013, TWO NEW ADVISORY GROUPS WERE FORMED:**

### **Wildlife Toxicology**

The new Wildlife Toxicology Advisory Group (WTAG) is an open, global forum that serves as a platform for SETAC members and society as a whole on scientific issues concerning wildlife toxicology in the broadest sense. The mission of the WTAG is to improve and communicate the scientific outcome of research related to wildlife toxicology, promote and advance the use of non-destructive, sub-lethal, ethical and scientifically sound methods, and when possible, animal alternative models. The WTAG provides a forum to disseminate scientific outcomes to inform environmental decision-making.

Chair: Nico van den Brink

### **Freshwater Salinization**

The salinization of freshwater rivers is a serious environmental threat that affects ecosystem integrity and can compromise the goods and services that rivers provide. In view of climate change, resource extraction releases and demographic predictions, the importance of this issue is likely to increase in the future. The objective of this new advisory group is to consolidate and develop a worldwide scientific network related to research associated with assessing the ecological and ecotoxicological issues related to the increasing salinity of freshwaters and to exchange knowledge and tools as well as disseminate findings and future risks associated with salinization. The aim is to predict the future trends of salinization of freshwaters, assess its impact on the ecosystems and evaluate the consequences of such impacts for human welfare.

Chair: Ben Kefford | Co-chair: Miguel Cañedo



# GLOBAL ADVISORY GROUPS SPONSORED SESSIONS

## Animal Alternatives in Environmental Science

Chairs: Scott E. Belanger, Michelle Rau Embry

- Alternative Methods for Evaluating Toxicity: Methods, Endpoints, and New Testing Strategies
- Animal Alternative Methods for Evaluating Toxicity: Methods, Endpoints, and New Testing Strategies

## Bioaccumulation Science

Chairs: Henriette Selck, Aurelia Lapczynski

- Advances in the Estimation and Assessment of Terrestrial Bioaccumulation
- Advantages and Disadvantages of Using Trophic Magnification Factors to Assess Food Web Biomagnification

## Ecological Risk Assessment

Chairs: Mary Sorensen, Mark Johnson

- Implementing Ecological Risk Assessment Weight-of-Evidence Approaches that Contribute to Decision-Making
- Quantitative Approaches to Mega-scale Risk Assessment
- What Worked and Why?

## Ecosystem Services

Chairs: Tim Canfield, Joke van Wensem, Lorraine Maltby

- Ecosystem Services and Environmental Stressors
- Whisky Production in a Sustainability Context: Chemical, Ecological, Economical, and Social Aspects of the Whisky Industry

## Ecotoxicology of Amphibians and Reptiles

Chairs: Christine Bishop, Jamie Bacon

- Amphibian and Reptile Ecotoxicology: Progress and Challenges in Understanding Chemical Effects, Exposure, and Risk
- Needs and Challenges for Protecting Amphibians and Reptiles from the Impact of Environmental Pollutants

## Endocrine Disrupter Testing and Risk Assessment

Chairs: Thomas Hutchinson, Gary Ankley

- Endocrine Disruptors: Identification, Quantification, Hazard and Risk Assessment

## Exposure Modeling

Chairs: Louis Thibodeaux, Justin Birdwell

- Can You Believe Your Model? Tools and Techniques to Aid in the Prediction of Environmental Fate and Transport
- Occurrence, Fate, Transport, and Risks of Veterinary

Pharmaceuticals in the Terrestrial Environment

- Occurrence, Fate and Behavior of Per- and Polyfluoroalkyl Substances in the Global Environment
- Fate, Transport and Toxicity of Wastewater-borne Contaminants

## Life Cycle Assessment Global Coordinating Group

Chair: Nydia Suppen-Reynaga

- For sponsored sessions, see geographic unit-level Life Cycle Assessment advisory groups

## Metals

Chairs: Bill Stubblefield, Ilse Schoeters

- Fate and Effects of Metals: Aquatic Biological Perspective: Dietary and Bioconcentration
- Fate and Effects of Metals: Aquatic Biological Perspective: Toxicity Mechanisms
- Fate and Effects of Metals: Geochemical Perspective
- Fate and Effects of Metals: Marine Concerns
- Fate and Effects of Metals: Regulatory and Risk Assessment Perspective
- Modeling and Interpreting Effects of Metals Mixtures

## Nanotechnology

Chair: Albert Koelmans

- Transitioning Nanosafety Science to Solutions

## Pharmaceuticals

Chair: Alistair Boxall

- Ecological Consequences of Exposure to Pharmaceuticals: From the Laboratory to the Field
- What Do We Know About the Ecological Risk of Personal Care Product Ingredients?
- Environmental Exposure and Effects of Pharmaceuticals and Veterinary Medicines

## Plants (formerly Aquatic Macrophytes Ecotoxicology)

Chairs: Gertie Arts, Mark Hanson

- Aquatic and Terrestrial Plant Ecology, Ecotoxicology and Risk Assessment
- Ecotoxicology and Risk Assessment of Aquatic Primary Producers

## Sediment

Chairs: Stuart Simpson, Paul Sibley

- PAH in the Environment: Advances in Assessment of Occurrence, Sources, and Human and Ecological Risks

## Soils

Chairs: Kees van Gestel, Michael Simini

- Ecotoxicology and Risk Assessment of Soils
- Development and Application of Soil Ecotoxicology Tools and Regulatory Schemes for Non-temperate Regions
- Environmental Omics–Integration of Different -omics, Multigenerational Effects, Epigenetics, Evolution and Mode of Action in Risk Assessment
- Soil Ecotoxicology

## Sustainability

Chairs: Cynthia Stahl, Andrew Henderson

- Sustainability and Resource Use in Life Cycle Assessment
- Sustainability Ethics: An Experiential, Game-based Approach

# NORTH AMERICA ADVISORY GROUPS

## Chemistry

Chair: Sascha Usenko

- Characterization and Processes of Atmospheric Pollutants
- Emerging Approaches for Rational Design of Chemicals with Minimal Biological Activity
- Environmental Implications of Biochar
- Environmental Stereochemistry Then and Now: A Tribute to Wayne Garrison
- Helping Contaminants Emerge: Non-targeted and Effect-directed Environmental Analysis
- Innovative Environment: New Tools for Addressing Issues in Environmental Toxicology and Chemistry
- Occurrence, Fate, and Behavior of Per- and Polyfluoroalkyl Substances in the Global Environment

## Human Health Risk Assessment

Chair: Spencer Williams

- Application of Bioavailability in Risk Analysis and Remedial Decision-Making

## Life Cycle Assessment

Chair: Jane Bare

- Decision Analysis for Valuation in Life Cycle Assessment
- Life Cycle Assessment for Sustainable Practices
- Multi-sector Applications and Harmonization of Life Cycle Assessment and Environmental Product Declarations for Sustainability
- Sustainability and Human Health
- Sustainability and Resource Use

# EUROPE ADVISORY GROUPS

## Dung Organism Toxicity Testing

Chair: Jörg Römbke

## Environmental Monitoring Advisory Group of Pesticides

Chairs: Anne Alix, Martin Streloke

- Monitoring Data and Post-registration Studies of Pesticides: Generation, Compilation and Use in the Environmental Risk Assessment and Management

## Extreme Stress Events and Ecosystem Recovery

Chairs: Frederik De Laender, Lucia Guilhermino

- Environmental Risks and Hazards of Oil and Gas Exploration

## Life Cycle Assessment

Chair: Christian Bauer

- Exploring the Role of Life Cycle Assessment in Supporting, Steering and Evaluating Policies

- Increasing the Robustness in Life Cycle Impact Assessment Methods
- Managing Complexity, Uncertainty and Variability in Life Cycle Assessment
- Progress in Life Cycle Sustainability Assessment and Social Life Cycle Assessment

## Mechanistic Effect Models for Ecological Risk Assessment of Chemicals

Chairs: Thomas Preuss, Udo Hommen

- Examples for Use of Ecological Models in Chemical Risk Assessments

## REACH

Chair: Tim Kedwards



2013	2014
Biotic Ligand Model Workshop (page 22)	Endocrine Disruption Focused Topic Meeting
Endocrine Disruptor Screening Program Workshop with TERA	Integration of Ecological and Human Toxicology in Adverse Outcome Pathways
Modelink Workshop	Ecosystem Services
MagPie Workshop	Restoration of Impaired Ecosystems
Life Cycle Impact Assessment Workshop	Life Cycle Impact Assessment
7 <sup>th</sup> SESSS Nanoparticles in the Environment	Freshwater Salinization
Mercury Science and Policy Symposium (page 22)	Mixture Toxicity—Exposure-Based Approach
8 <sup>th</sup> SESSS Pollinators	10 <sup>th</sup> SESSS Bioavailability of Organic Chemicals
19 <sup>th</sup> LCA Case Study Symposium	20 <sup>th</sup> LCA Case Study Symposium
Madang Workshop (page 23)	
9 <sup>th</sup> SESSS Marine Ecotoxicology	

## Endocrine Disruptor Screening Program Workshop with TERA

To collect the insights of multiple stakeholders involved in the Endocrine Disruption Screening Program (EDSP), more than 240 scientists from government, business, academia and nonprofit organizations participated in a workshop in April 2013. SETAC agreed to brand the workshop, and several SETAC members participated. The workshop focused on the science and experience to date with the EDSP and identified opportunities to inform ongoing and future efforts to evaluate the endocrine disruption potential of chemicals. The workshop included presentations from invited speakers across three sessions, followed by panel and audience participation and additional invited experts serving as discussants. A number of key points and recommendations emanated from the collective sessions and informed the planning for a SETAC North America Focused Topic Meeting scheduled in early 2014.

## MODELINK Workshop

The general aim of the MODELINK workshop, titled “Ecological Effect Models to Link Ecotoxicological Tests to Protection Goals,” was to provide guidance for when and how to apply ecological models to regulatory risk assessments. Such guidance is essential because risk assessment questions, data and protection goals vary across chemicals, ecosystems and species, and consequently the question of how to apply models to risk assessments is not trivial. The workshop was set in two parts, separated by a period of homework on case studies. The first part took place in 2012 in Le Croisic, France. The second part took place in April 2013 in Monschau, Germany.

## MAgPIE Workshop

The first part of the work-intensive SETAC Europe workshop on “Mitigating the Risk of Plant Protection Products in the Environment” (MAgPIE) took place from 22–24 April in Rome, Italy. It was organized to develop a toolbox of risk mitigation measures designed for a better use of plant protection products for agricultural purposes. This toolbox is to be provided to European Regulatory Authorities for implementation in guidelines and regulations to better harmonize the practices across Europe.

## Life Cycle Impact Assessment Workshop

Nearly 40 experts in various categories of Life Cycle Impact Assessment (LCIA) met in Glasgow back-to-back with the SETAC Europe meeting in May 2013. This workshop, under the UNEP/SETAC Life Cycle Initiative, started a multi-year process to identify mature impact indicators and models and to develop consensus guidance on their use. A follow-up workshop on the integrative impact assessment framework, including normalization and weighting, was held in conjunction with the SETAC North America annual meeting in Nashville. Both of these are leading toward Pellston-type workshops in 2015 and 2017.

## Special Science Symposia

In 2013, three SETAC Europe Special Science Symposia were organized in Brussels, Belgium. These focused meetings presented the top of the bill on specific subjects. Esteemed speakers presented the state of the science on “Fate and Ecotoxicity of Nanoparticles in the Environment” during the 7th SESSS from 2–3 October and on “Pesticide Risks for Pollinators” at the 8th SESSS from 16–17 October. A third event on “Risk Assessment and Management of Marine Systems” took place from 4–5 December.

## 19<sup>th</sup> LCA Case Study Symposium

The symposium was held from 11–13 November in Rome, Italy, and brought together two hundred participants to discuss LCA in market research and policy with special focus on “Harmonisation Beyond Standardisation” and how LCA can support the decision-making process at all levels, i.e., industry and policy contexts, and how LCA results can be efficiently communicated and be used for supporting market strategies.



# North America

Since 1979

## **SETAC NORTH AMERICA 34<sup>TH</sup> ANNUAL MEETING**

17–21 November 2013, Nashville, Tennessee USA

HARMONIZING SCIENCE ACROSS DISCIPLINES

The SETAC North America 34<sup>th</sup> Annual Meeting took place in the Opryland Hotel and Conference Center in the musical Nashville, Tennessee. SETAC North America embraced the “all-in digital” priorities set by SETAC World Council and partnered with MultiView to capture 100 hours of conference presentations. These videos are available on the SETAC Live Learning Center at [setac.livelearning.center.com](http://setac.livelearning.center.com).

### **Scientific Program**

A full-day session on Canadian Oil Sands showcased research assessing the environmental impacts associated with the development of the oil sands industry, the progress of reclamation strategies, and the toxicity and chemical characterization of the highly complex mixtures of oil sands components.

The Ecological Risk Assessment Advisory Group sponsored “What Works and Why,” which explored successful ecological risk assessment and remediation experiences. Attendees learned how science can inform decision-making for “wicked” environmental problems in the “Decision-Making and Inputs to Decision-Makers” session, and social values and pre-constructed indices joined the lively discussions about assessing sustainability in the “Life Cycle Assessment” track.

A new sustainability ethics game used game theory and the tragedy of the commons theory to explore the ethics of environmental issues and policies. And as with each conference location, several presenters took the time to explore local issues including the science and remediation being completed in the Tennessee Valley Authority Kingston fly ash recovery project.

Technologically, SETAC rolled out a couple of new initiatives at the annual meeting: select presentations were digitally captured and are now available in the SETAC Live Learning Center, and conference attendees were able to navigate the sessions with a new mobile app.

## Professional Training Courses

There were nine professional training courses ranging from the fundamentals of human health risk assessment to science communication and professional networking.

## Students

The North American Student Activities Council (NASAC) hosted two free noon-time seminars in Nashville. Valery Forbes from the University of Nebraska-Lincoln discussed solutions to some of the most common networking situations for graduate students in her seminar entitled “Do You Have What It Takes to Network Successfully?” and the Sustainable Nano group panel shared with us the tricks of the trade on how to write about science in a blog format in the seminar entitled “Blogging About Science: Sharing Your Data in a New Way”

## Plenary Speakers

### SUSAN SHARKEY

*USEPA*

EPA’s Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources

### PAUL T. ANASTAS

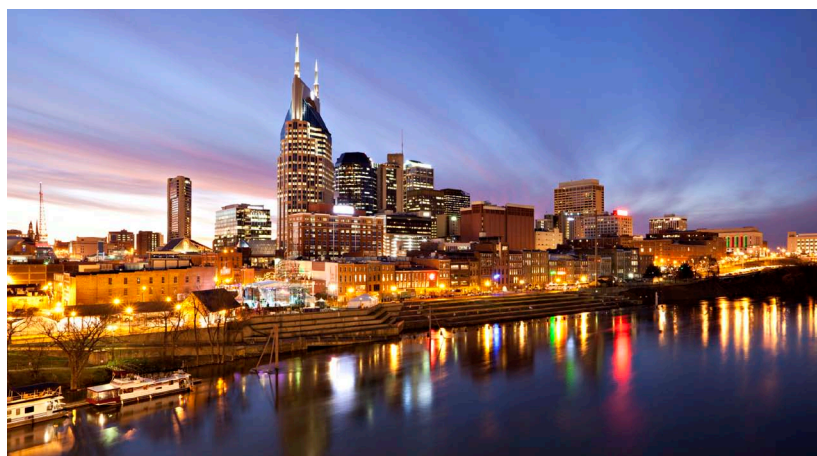
*Yale University*

Come Together–Right Now: Chemists and Toxicologists Enabling Reduced Toxicity by Design

### WILLIAM PURCELL

*Jones Hawkins & Farmer, PLC*

The Next New Generation of Leadership



(Left) The Nashville skyline. Nashville was the location for the SETAC North America 34th Annual Meeting in 2013.

(Bottom left) SETAC members gather in the exhibit hall for an impromptu jam session during the Nashville meeting.

(Bottom right) SETAC student members during the Student Noontime Seminar at the Nashville meeting.



## REGIONAL CHAPTERS

SETAC regional chapters offer increased opportunities to exchange ideas with their peers and are particularly well suited to address regional and local environmental issues and concerns. SETAC North America currently has 19 active chapters: Carolinas, Chesapeake-Potomac, Desert Southwest, Hudson-Delaware, Laurentian, Mexico, Mid South, Midwest, North Atlantic, Northern California, Ohio Valley, Ozark-Prairie, Pacific Northwest, Prairie Northern, Rocky Mountain, Saint-Laurent, South Central, Southeast and Southern California.

## GRANTS

An Earth Day event grant was awarded by the SETAC North America Education and Short Course Committee to Norka E. Paden of the Idaho Department of Health and Welfare Environmental Health Education and Assessment Program (EHEAP). The grant funded the purchase of education kits for children and a booth activity at the Boise WaterShed Earth Day Celebration.



SETAC member, Norka E. Paden shares her experience at the Boise WaterShed Earth Day Celebration.

## ENDOWMENT FUND

The SETAC North America Endowment Fund (established in 2005), through a combination of current and planned gifts, is intended to continuously accumulate sufficient principal to annually generate investment interest, dividends and related proceeds for the purposes of supporting technical, scientific and educational activities consistent with the society's mission. The invested principal exceeded \$139,700 in 2013, and dividends supported seven student travel awards for the SETAC North America annual meeting, totaling \$3,890. In addition, the fund provided \$1,200 for doctoral student presentation awards given in honor of Foster "Sonny" Mayer at the SETAC North America 34<sup>th</sup> Annual Meeting in Nashville. This newly named award series will be continued for future SETAC North America meetings.

Contributions to the fund are received from a substantial percentage of SETAC North America members, their home organizations and other philanthropic groups. Contribution can be made when paying annual dues, while registering for the SETAC North America annual meeting, while attending specific annual meeting events, or through matching gifts, challenge grant commitments and charitable bequests. Contributions by U.S. members qualify as tax-deductible under the IRS code. Contributions have been made to honor mentors, outstanding scientific accomplishments and members in memoriam.



# LOOKING AHEAD

## SETAC North America 35<sup>th</sup> Annual Meeting

9-13 NOVEMBER 2014, VACOUVER, BRITISH COLOMBIA, CANADA | VANCOUVER.SETAC.ORG

*Sea to Sky: Interconnecting Ecosystems*



(From top left) Tom Augspurger, John Elliot, Ruth Hull, Bryan Brooks, Nile Kemble, Karsten Liber, Stefanie Giese-Bogdan, Larry Kapustka, Douglas Fort, Mary Reiley, Barnett Rattner, Patrick Guiney, Kurt Maier, Charles Wong

## SETAC NORTH AMERICA 2013 BOARD OF DIRECTORS

### President

Patrick Guiney | S.C. Johnson & Son, Inc., USA

### Vice President

Kurt Maier | East Tennessee State University, USA

### Secretary-Treasurer

Douglas Fort | Fort Environmental Laboratories, Inc., USA

### Immediate Past-President

Barnett Rattner | Federal Government, USA

### Executive Committee Member

Mary Reiley | Federal Government, USA

### Board Members

Tom Augspurger | Federal Government, USA

Bryan Brooks | Baylor University, USA

Will Clements | Colorado State University, USA

John Elliott | Environment Canada, Canada

Stefanie Giese-Bogdan | 3M Environmental Laboratory, USA

Ruth Hull | Intrinsic Environmental Sciences Inc., Canada

Larry Kapustka | SLR Consulting Ltd., Canada

Nile Kemble | Federal Government, USA

Karsten Liber | University of Saskatchewan, Canada

Charles Wong | University of Winnipeg, Canada

### Student Member

Erica Brockmeier | University of Florida, USA

### Ex Officio

Greg Schiefer | SETAC North America Executive Director



# Europe

Since 1989

SETAC Europe had another successful year thanks to a well-attended annual meeting in Glasgow, Scotland. Financially, a profitable 2013 led to the establishment of a reinvestment fund to support the society's mission through activities such as student travel grants. Furthering education is a core mission, and plans to establish a SETAC Europe–Certified Environmental Risk Assessor program are currently underway.

## TWO THOUSAND DELEGATES IN GLASGOW

The SETAC Europe 23<sup>rd</sup> Annual Meeting, which is also the major event in environmental toxicology and chemistry in Europe, was held from 12–16 May in Glasgow, Scotland, United Kingdom. Nearly 2,000 delegates from academia, government and business convened to present important new findings and to discuss how to implement this in policy and development.



### Keynote Speakers

**ROY DENNIS**

Scotland's Nature and Natural Areas

**LAURENCE MEE**

Science and the Adaptive Management of Europe's Seas

**COLIN MOFFAT**

Making That All Important Assessment and Communicating Our Message

**MICHAEL BRAUNGART**

Cradle to Cradle Chemistry—A Strategy for Innovation and Quality

## REINVESTMENT FUND

Based on a financially successful year, mostly due to a well-attended annual meeting, the SETAC Europe Council decided to establish a reinvestment fund. This fund is nourished with the profits of SETAC Europe and will be spent on activities that support the mission of SETAC. For the coming year, this fund is used to support students with registration grants for SETAC meetings, short courses and summer schools, and it will be used to develop a SETAC Europe accreditation scheme for environmental risk assessors.

## FOCUS ON EDUCATION

The further improvement of the SETAC Europe education programme received lots of attention the past year. Short courses were organized in conjunction with the annual meeting in Glasgow. More than 100 attendees learned about statistical methods, testing methods, modeling, risk assessment and life cycle assessment among other topics.

The SETAC Summer Schools were also very well received. Seven different one-week courses were organized in Germany, Portugal and Italy. The courses excel in a hands-on approach and give an extra boost to international collaborations between students to achieve the most in their PhD career.

Further, SETAC Europe is currently developing an accreditation scheme for risk assessors. There is a need for an internationally recognized standard for the education of scientists - European regulations of chemicals are becoming increasingly complex, and environmental risk assessment approaches are being harmonized across Europe. The SETAC Europe education program for environmental risk assessors aims to establish such a common standard. Students and professionals who successfully follow the courses will be registered as SETAC Europe Certified Environmental Risk Assessors. The program is expected to launch in 2015.



(Left) Scottish liddle in traditional highland dress.

(Right) Scottish Exhibition and Conference Centre in Glasgow, site of the SETAC Europe 24th Annual Meeting.

## NEWS FROM THE BRANCHES

The SETAC Arabian Gulf Branch was founded on 25 March and held its first annual meeting from 10–12 December in Doha, Qatar. It provides a platform for local scientists to collaborate and, together with the greater SETAC network, will help find solutions for the environmental challenges that the Gulf States are facing.

During a SETAC-supported, international conference on “Bioindication in the Ecological Assessment of Soils and Related Habitats” in February in Russia, Moscow, it was determined that there is a need for a SETAC Russian Language Branch to facilitate the interactions between Russian-speaking environmental scientists and the European and global scientific community. So stay tuned for news about a new Russia branch!



Meeting attendees at a site visit to a floating mangrove project in Lusail Village, Qatar, during the December 2013 Arabian Gulf Branch meeting.

## ACTIVE STUDENTS

In February, the 3<sup>rd</sup> Young Environmental Scientist (YES) meeting took place in Krakow, Poland. Organized by the SETAC Europe Student Advisory Council (SAC), this student-only, biennial meeting mirrors the SETAC Europe annual meeting and provides a learning environment for student presenters to gain confidence in an international setting and prepare to become fully fledged members of SETAC. As with the two previous meetings, there was no registration fee, and all presenters received travel grants. In addition to scientific presentations, students took part in a soft skills workshop on scientific networking and learned about career planning.

As SETAC strives to become more global, student activities within the society are also following suit. Starting at the Berlin World Congress, the SAC formalized its partnership with the North American Student Advisory Council (NASAC) during 2013. Joint activities include student-led courses at SETAC annual meetings, joint participation in assembly meetings and establishing “Students of SETAC” social media pages on Facebook, Twitter and LinkedIn.

## LOOKING AHEAD

### SETAC Europe 24<sup>th</sup> Annual Meeting

11–15 MAY 2014, BASEL, SWITZERLAND | [BASEL.SETAC.ORG](http://BASEL.SETAC.ORG)

*Science Across Bridges, Borders and Boundaries*

### SETAC Europe 10<sup>th</sup> Special Science Symposium

14–15 OCTOBER 2014, BRUSSELS, BELGIUM | [SESS10.SETAC.ORG](http://SESS10.SETAC.ORG)

*Bioavailability of Organic Chemicals: Linking Science to Risk Assessment and Regulation*

### SETAC Europe 20<sup>th</sup> LCA Case Study Symposium

26–28 NOVEMBER 2014, NOVI SAD, SERBIA | [LCANOVISAD.SETAC.ORG](http://LCANOVISAD.SETAC.ORG)

*LCA in Promoting Eco-Innovation and Sustainability: Education, Research and Application*



## 2013 SETAC EUROPE COUNCIL

### President

Laurent Lagadic | INRA, France

### Vice President

Mónica Amorim | Universidade de Aveiro, Portugal

### Treasurer

Jose Julio Ortega-Calvo | CSIC, Spain

### Immediate Past-President

Paolo Masoni | ENEA, Italy

### Board Members

Anne Alix | Dow AgroSciences, United Kingdom

Tania Alvarez | EcoRisk Solutions Ltd., United Kingdom

Gertie Arts | Alterra, The Netherlands

Thomas Backhaus | Gothenburg University, Sweden

Carlos Barata | CSIC, Spain

Anna Barra Caracciolo | IRSA, Italy

Karel De Schampelaere | Ghent University, Belgium

Brian Harvey | Syngenta, United Kingdom

Tim Kedwards | SC Johnson Ltd., United Kingdom

Kari Lehtonen | Finnish Environment Institute, Finland

Gerd Maack | Federal Environment Agency, Germany

Merab Mirtskhulava | National Center for Diseases Control, Georgia

Alberto Pistocchi | GECOSistema srl, Italy

Ilse Schoeters | Rio Tinto, United Kingdom

### Student Representative

Dragan Jevtić | Jagiellonian University, Poland

### Ex Officio

Bart Bosveld | SETAC Europe Executive Director



The Asia/Pacific region faces an array of environmental challenges associated with increasing human population, industrialization and economic growth. SETAC Asia/Pacific had a busy year organizing and supporting symposia, meetings and workshops, addressing many of these challenges, and is preparing to continue building on its successes with the SETAC Asia/Pacific biennial meeting in Adelaide, Australia, in 2014.

**2<sup>nd</sup> International Conference on Environmental Pollution, Restoration and Management and Biotic Ligand Model (BLM) Workshop**

4-8 MARCH | HANOI, VIETNAM

The conference was co-organized by SETAC Asia/Pacific, Hanoi University of Science and Loyola University Chicago and included a BLM workshop. Two hundred scientists and managers from academia, business and government from 35 countries collaborated on environmental research and shared techniques about using BLM for environmental regulation of heavy metals with Asian scientists and managers. The conference included eleven sessions that covered various topics on environmental pollution, restoration and management.

**Mercury Science and Policy Symposium**

6 OCTOBER | KUMAMOTO, JAPAN

In October 2013, the UNEP's internationally binding convention on the control of mercury was signed. As part of its activities in the global mercury partnership and in conjunction with the National Institute for Minamata Disease, SETAC organized a Mercury Science and Policy Symposium in Kumamoto, Japan, on 6 October. While protection of human health remains a primary goal of the Minamata Convention on Mercury, experts at the symposium recommended that the prospective measures for managing mercury pollution should be expanded to include wildlife health and ecotoxicology. Approximately 175 participants and a 14-member expert panel convened to synthesize and discuss the current state of scientific information on mercury's





environmental behavior and potential associated risks from sources to receptors. The symposium's outcomes will be used to inform policymakers and to establish a research agenda for filling knowledge gaps.

### Madang Workshop

11-12 NOVEMBER | MADANG, PAPUA NEW GUINEA

The second workshop in Papua New Guinea, organized by SETAC Australasia, featured discussions about managing the country's environmental chemistry and ecotoxicology issues. The 28 scientists from Papua New Guinea and two representatives from the SETAC Asia/Pacific Board of Directors particularly focused on the need for risk-based water quality guidelines for the area. During the workshop, Riall Gabuogi was elected as the new Papua New Guinea representative on the SETAC Australasia Council, and it was agreed to run the workshop biennially.

## SETAC ASIA/PACIFIC 2013 BOARD OF DIRECTORS

### President

Koji Arizono | Prefectural University of Kumamoto, Japan

### Vice President

Ross Smith | Hydrobiology Pty Ltd., Australia

### Treasurer

Munro Mortimer | The University of Queensland, Australia

### Immediate Past-President

Kenneth Leung | University of Hong Kong, Hong Kong



## REGIONAL CHAPTERS

The 3<sup>rd</sup> SETAC Australasia conference was held from 1-3 October at the University of Melbourne. The conference theme "Multidisciplinary Approaches to Managing Environmental Pollution" aimed to encompass a broad and diverse mix of session topics relevant to ecotoxicologists, environmental toxicologists and chemists.

## LOOKING AHEAD

### SETAC Asia/Pacific 2014 Conference

14-17 SEPTEMBER, ADELAIDE, SOUTH AUSTRALIA

*Advancing Science for a Sustainable Environment*

### Joint SETAC Asia/Pacific and Indonesian Chemical Society Workshop

9-10 OCTOBER, AMBON, MALUKU, INDONESIA

*Comprehensive and Representative Aquatic Contaminant Sampling, Analytical Integrity, and Data Publication*

### Board Members

Wang Hongtao | IKE Environmental Technology, China

Raio Kookana | CSIRO, Australia

Kuan-Chun Lee | Procter & Gamble, Singapore

David Parry | Rio Tinto, Australia

Noriyuki Suzuki | NIES, Japan

Ichiro Takeuchi | Ehime University, Japan

Jing You | State Key Laboratory of Organic Geochemistry at Guangzhou Institute of Geochemistry, China



SETAC Latin America experienced exciting developments in 2013, including the first meeting of the newly established Andean Countries Regional Chapter. Membership reached 196 representatives from 20 different Latin American countries (excluding Mexico). Working to increase membership and its program of activities, the geographic unit is preparing to meet the new but exciting challenges associated with this growth. With a traditionally strong participation from academia, plans include better outreach to business and government sectors and promoting bottom-up participation.

**Argentina**

The Argentina Regional Chapter organized a workshop titled “Strengthening Links Between the Scientific and Social” at the University of Mar del Plata. Eighty representatives from academia, business and government, with strong participation from students, discussed environmental topics with regard to their social relevance.

**Brazil**

The Brazil Regional Chapter held its annual meeting from 4–8 November 2013 in Rio Grande, Brazil. The meeting featured 25 platform presentations, three short courses, seven round tables and four workshops.

**Andean Countries**

A group of Colombian researchers spearheaded the organization of the new Andean Countries Regional Chapter, and the inaugural congress was held from 6–8 November 2013 in Medellín, Columbia. Eighty participants from Argentina, Bolivia, Brazil, Colombia and Germany took part in three keynote presentations, one symposium and 24 platform presentations.





Organizers of the Mar del Plata meeting in Argentina.



Speakers at the inaugural congress of the SETAC Andean Countries Regional Chapter.

## LOOKING AHEAD

### ECOTOX Brazil 2014

23–26 SEPTEMBER 2014 | GUARAPARI, ESPIRITO SANTO, BRAZIL

*Ecotoxicología: Pesquisa, Gestão e Produção: Interagir Para Inovar—www.ecotox2014.com.br*

### V Congress of SETAC Argentina

22–25 OCTOBER 2014 | NEUQUÉN CITY, ARGENTINA

[www.setacargentina.com.ar](http://www.setacargentina.com.ar)

In addition, the board has recently approved a proposal for the organization of the next SETAC Latin America annual meeting, which will be held in 2015 in Buenos Aires, Argentina.

## SETAC LATIN AMERICA 2013 BOARD OF DIRECTORS

### President

Leónidas Carrasco Letelier | National Agricultural Research Institute, Uruguay

### Immediate Past-President

Gustavo M. Somoza | Instituto de Investigaciones Biotecnológicas/ Instituto Tecnológico de Chascomús, Argentina

### Board Members

Eleine Francioni de Abreu Lima | Petrobras, Brazil

José Maria Monserrat | Universidade Federal do Rio Grande, Brazil

Boris Johnson-Restrepo | Universidad de Cartagena, Cartagena, Colombia.

Victoria Rodríguez de Higa | Secretaría de Ambiente y Desarrollo Sustentable, Buenos Aires, Argentina

Sebastián Reynaldi | Universidad Nacional de Colombia, Medellín, Colombia

Héctor Asprea | Secretaría de Ambiente y Desarrollo Sustentable, Buenos Aires, Argentina

Fabiola Valdés | Instituto Nacional de Pesquisas da Amazônia, Manaus, Brasil (Representing ECOTOX Brazil)

Damián Marino | Universidad Nacional de La Plata, La Plata, Argentina (Representing SETAC Argentina)



A continent full of contrast, Africa’s natural beauty clashes with increased population growth and land use, scarcity of water and often low levels of education and poor governance with little or no interaction between researchers, industry and regulatory. SETAC Africa, ready to face some of these challenges, successfully held its first conference since attaining independent geographic unit status in 2012. Membership also experienced a 40% growth in 2013, now totaling 121 members.

## **6<sup>TH</sup> SETAC AFRICA CONFERENCE**

### **21<sup>st</sup> Century Africa and Beyond –Balancing Economic Growth Opportunities with Environmental Sustainability**

2–3 SEPTEMBER | LUSAKA, ZAMBIA

The conference was organized in collaboration with the University of Zambia Department of Chemistry, the Chemical Society of Zambia and the African Network for the Chemical Analysis of Pesticides. A four-day summer school on bioassays, bioindicators and biomarkers, and a one-day short course on computer-based methods in toxicology were organized in conjunction with the conference. Seventy-six participants from 18 countries attended the conference. Twenty-one new members joined SETAC Africa at the conference, nine of which were Zambians. This was a big achievement as SETAC was previously almost unknown in the region. Three keynote speakers included important representatives from the National Environment Council of Zambia and UNEP Africa, further raising awareness about the society.



A variety of topics, including climate change, emerging pollutants and nanotechnology, were discussed during 74 presentations in 11 sessions. Some of these topics were covered for the first time at a SETAC Africa meeting, demonstrating advanced scientific thought. It was evident that many presentations were not only science driven but also solution driven, an important aspect for many members in the region. Additionally and as a direct result of the meeting, working groups within SETAC Africa on important issues were identified.



Opening ceremony at the 6<sup>th</sup> SETAC Africa Conference in Lusaka

The SETAC Africa General Assembly and SETAC Africa Council Meeting were held immediately after the conference, and successful elections were held.

### SETAC Global Horizon Scanning Project

The society-wide program was successfully launched during the Lusaka meeting. The project aims to identify geographically specific research needs to address stressor impacts on environmental quality.

### Planning Ahead

Members from Nigeria are organizing a regional conference for 2014 to raise awareness in the central and western region about SETAC, with plans to host the next SETAC Africa biennial meeting in 2015.

## 2013 SETAC AFRICA EXECUTIVE COUNCIL

### President

Patricia Asanga Fai | University of Dschang, Cameroon

### Secretary

Silke Bollmohr | University of Johannesburg, South Africa

### Treasurer

Aviti Mmochi | University of Dar Es Salaam, Tanzania

### Regional Managers

#### North

Mohammad Abdel-Hamid | University of Mansoura, Egypt

#### South

Mathew M. Nindi | University of South Africa, South Africa

#### West and Central

Ikechukwu Onwurah | University of Nigeria, Nigeria

#### East

John Wasswa | Makerere University, Uganda

### Council Members

Randal Albertus | Sasol Technology (Pty) Limited, South Africa

Norah Basobo | National University of Science & Technology, Zimbabwe

David Kapindula | Environmental Council of Zambia, Zambia

Bernard Kiremire | Makerere University, Uganda

SETAC strives to recognize and honor outstanding contributions of individuals or groups of individuals to the environmental sciences and to the society through its awards program. SETAC also endeavors to recognize and honor the participation of students and pre-professionals and to use society resources to enhance their professional development. SETAC awards may be global in stature, or they may recognize contributions at the geographic unit or regional level. The SETAC Global Awards Committee is charged with ensuring the overall intent of the awards and fellowships process; its scope encompasses contributions and achievements throughout all geographic units. Candidates may be self-nominated or nominated by another individual.



### Founders Award

**Samuel N. Luoma | University of California-Davis**

The Founders Award is the highest SETAC award and is given to an individual who has had an outstanding career in environmental sciences and whose clearly identifiable contributions to the development of the science are consistent with the goals of SETAC.



### Herb Ward Exceptional Service Award

**George Cobb | Baylor University**

Renamed in 1999 to honor Environmental Toxicology and Chemistry's founding Editor-in-Chief C. Herb Ward for his important contributions to the founding and development of SETAC, this award recognizes any past or present SETAC member who has performed long-term, exceptionally high-quality service to the society.



### SETAC/ICA Chris Lee Award

**Monica D. Poteat | North Carolina State University**

Sponsored by SETAC and the International Copper Association, this award recognizes the leadership and technical contributions of the late Chris Lee by providing up to \$5,000 to a graduate student or recent graduate whose ongoing research focuses on fate and effects of metals in the environment.



### ET&C Best Student Paper Award

**Yamini Gopalapillai | University of Guelph**

Given annually to the best published or accepted student paper in *Environmental Toxicology and Chemistry*, the best student paper winner is selected on the basis of recommendations from the author's advisor and the ET&C Editorial Board.

# Global Awards



## ET&C Best Paper Award

**M. Alisa Mast | USGS Colorado Water Science Center**

In its inaugural year, this award recognizes the most innovative or creative paper with transparent, reproducible, rigorous and relevant science published in the previous volume year of *Environmental Toxicology and Chemistry*.



## IEAM Best Paper Award

**Mark Borsuk | Dartmouth College**

In its first year, this award from the editors of *Integrated Environmental Assessment and Management* recognizes innovative analysis and problem-solving research published in the previous journal volume year.



## Global Partners Capacity-Building Award

**John Giesy | University of Saskatchewan**

This award recognizes individuals or groups for their contribution toward building capacity in the environmental sciences in countries with developing economies.

---

# Asia/Pacific Awards

## 2<sup>nd</sup> International Conference on Environmental Pollution, Restoration and Management

**Hye-Ok Kwon | Ulsan National Institute of Science and Technology (UNIST)**

**James Brady | Queensland University of Technology**

**Tharaka Ariyadasa | Osaka University**

## SETAC Australasia Emeritus Membership

**John Chapman | Honorary Scientific Fellow, Office of Environment and Heritage, Australia**

**Munro Mortimer (retired) | The University of Queensland, Australia**

# Europe Awards



**Young Scientist Award**  
**Julita Stadnicka-Michalak | EAWAG, Switzerland**

Best platform presentation at the SETAC Europe 23rd Annual Meeting, sponsored by ECETOC.



**Young Scientist Award**  
**Kevin King Yan Ho | The University of Hong Kong**

Best poster presentation at the SETAC Europe 23rd Annual Meeting, sponsored by the Tom Feijtel Fund.



**AstraZeneca Award**  
**Martine Jordaan | Cape Nature, South Africa**

Best publication in risk assessment, modelling and theoretical studies.



**Eurofins Award**  
**Lubertus Bijlsma | Research Institute for Pesticides and Water, University Jaume I, Spain**

Best publication in chemical analysis and environmental monitoring.



**RifCon Award**  
**Joana Reis Almeida | University of Porto, CIMAR, Portugal**

Best publication in ecotoxicology, ecoepidemiology and biological/biochemical studies.



**SETAC Europe Environmental Education Award**  
**Amadeu Soares | University of Aveiro, Portugal**



**SETAC Europe Life Cycle Assessment Young Scientist Award**  
**Rosalle Van Zelm | Radboud University Nijmegen, The Netherlands**

Sponsored by Springer Verlag and Tetra Pak.





## SETAC Government Service Award

**John D. Walker | U.S. Environmental Protection Agency**

Since 1997, this award has recognized exemplary dedication and service in promoting the application of environmental toxicology and chemistry to risk assessment, the implementation of programs for ecologically sound practices and principles, and the provision of a communication forum among environmental professionals and society.



## SETAC/Menzie Environmental Education Award

**Stephen J. Klaine | Clemson University**

Donated by the Menzie family, this \$1,000 award honors a recipient who has made significant contributions to environmental education, either through educating other educators or by working with community groups and K-12 programs.



## SETAC/EA Engineering Jeff Black Fellowship

**Sun Young Jeong | Columbia University**

This \$2,000 award to a master's-level student honors Jeff Black's life in science and his contributions to SETAC by recognizing an outstanding student in any field of study encompassed by SETAC.



## Eugene Kenaga SETAC Membership Award

**Ruth Hull | Intrinsik Environmental Sciences Inc.**

Created in 2003, this award honors Eugene Kenaga, a founder and first president of SETAC, by recognizing an individual's efforts to improve member services, enhance membership growth, or provide leadership at the regional or national level.



## Outstanding Regional Chapter Member

**Christine Custer | U.S. Geological Survey**

This award goes to a North America regional chapter member who consistently contributes to the development of the society at the chapter level and who has improved the chapter's services through leadership, membership growth, committee involvement, event planning, organizational or administrative support, or participation on the Student Advisory Council.

## SETAC North America Student Travel Award

*Kevin Johnson Memorial*

**Adam J. Nikolaus | University of Wisconsin Milwaukee**

## SETAC North America Endowment Fund

*Masters*

**Lorraine Brown | Simon Fraser University  
Mark A. Bradley | University of Michigan**

## SETAC North America Endowment Fund

*Minority*

**Crystal Lee Pow | North Carolina State University  
Austin D. Gray | The Citadel Graduate College**

## SETAC North America Endowment Fund

*Undergraduate*

**David A. Dreier | Baylor University**

## SETAC North America Endowment Fund

*PhD*

**Peter J. Cadmus | Colorado State University  
Keegan Rankin | University of Toronto**



The SETAC Global Partners Program—the premier level of SETAC support—is an invaluable part of our scientific community. SETAC Europe Partners and Nonprofit Partners, and SETAC North America Sustaining Members and Affiliates foster the Society’s mission at the geographic unit level. Through the distinctive support of these organizations, SETAC is better able to meet the challenges environmental scientists face to achieve Environmental Quality Through Science®. They are actively engaged in helping SETAC build valuable partnerships to explore emerging areas of science. They underwrite student activities, memberships and registrations for developing world researchers, workshops and training activities, and the SETAC Development Fund. Thanks to them, the society’s mission is carried out around the world.

## GLOBAL PARTNERS

3M Company

ARCADIS

BP

Department for Environmental Food and Rural Affairs

Eastman Chemical Company

ExxonMobil

Petrobas

The Procter & Gamble Company

Rio Tinto

S. C. Johnson & Son, Inc.

SERDP/ESTCP

Shell

Smithers Viscient, LLC

Syngenta Crop Protection, Inc.

Unilever

Wildlife International, Ltd.

## GLOBAL AFFILIATES

American Cleaning Institute

Canadian Water Network

Global Silicones Council

ILSI Health and Environmental Sciences Institute

International Copper Association, Ltd.

International Zinc Association

Personal Care Products Council

Research Institute for Fragrance Materials



## **SETAC NORTH AMERICA SUSTAINING MEMBERS**

ABC Laboratories	Dupont
Agilent Technologies, Inc.	E.R. Mancini & Associates
Bayer CropScience LP	EA Engineering, Science, and Technology, Inc.
Cardno ENTRIX	Electric Power Research Institute
CDM Smith Inc.	Environmental Enterprises USA, Inc.
CH2M HILL	Exponent, Inc.
Chevron Corporation	FMC Corporation
The Chlorox Company	GEI Consultants, Inc.
Colgate–Palmolive Company	Golder Associates
Copper Development Association, Inc.	Monsanto Company
The Dow Chemical Company	Windward Environmental LLC

## **SETAC NORTH AMERICA AFFILIATE MEMBERS**

American Petroleum Institute	Oregon State University
Baylor University	Southeast Missouri State University
The Institute of Environmental and Human Health, Texas Tech University	University of Saskatchewan

## **SETAC EUROPE PARTNERS**

Akzo Nobel N.V.	Euro Chlor
ARCHE	Harlan Laboratories Ltd
AstraZeneca	Henkel AG & Co. KGaA
Blue Frog Scientific Limited	Huntingdon Life Sciences
Cefic LRI	IBACON GmbH
CEHTRA	Tetra Pak
Dr. U. Noack-Labororien	WCA Environment Limited
ECT Oekotoxikologie GmbH	WIL Research Company, Inc.

## **SETAC EUROPE NONPROFIT PARTNERS**

Alterra Wageningen UR  
Brunel University  
CIIMAR, University of Porto  
European Chemicals Agency  
Finnish Safety and Chemicals Agency (Tukes)

# Photo Contest

Following a successful launch in 2012, the SETAC Global Environmental Photography Contest continued in 2013 with two contests held in conjunction with the SETAC Europe 23<sup>rd</sup> Annual Meeting in Glasgow, Scotland, and the SETAC North America 34<sup>th</sup> Annual Meeting in Nashville, Tenn. Over the course of the two contests, members from ten different countries submitted 44 photos, capturing the environment and nature from a global perspective. SETAC members were invited to cast their votes, and the winners were announced at the meetings. Prizes were awarded to first-, second- and third-place winners.

## GLASGOW MEETING WINNERS



### 1<sup>ST</sup> PLACE

"Jellyfish" by George McMennamy



### 2<sup>ND</sup> PLACE

"Toilets in the Red Sea—The Sea Takes Our Waste" by Christopher Green



### 3<sup>RD</sup> PLACE

"Gannets on Little Skellig, Ireland" by Roland Kuhl

## NASHVILLE MEETING WINNERS



### 1<sup>ST</sup> PLACE

"Butterfly" by George McMennamy



### 2<sup>ND</sup> PLACE

"(SE)TAC'd a course up the mountain just to see if I  
(Mt.) Hood " by Paddy McManus



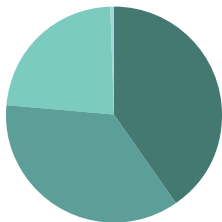
### 3<sup>RD</sup> PLACE

"Cyclops Returns"  
by Norihisa Tatarazako

The SETAC World Council and the SETAC geographic units operate as separate financial entities. This consolidated and unaudited summary of financial performance is provided for information only. SETAC invests in students, recent graduates and developing country members by subsidizing dues, student travel and meeting registration fees.

*All figures are expressed in thousands of US dollars.*

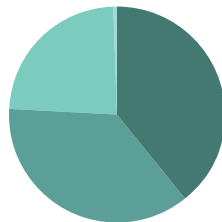
<b>NET OPERATING RESULTS</b> .....	<b>\$90</b>
<b>TOTAL ASSETS</b> .....	<b>3,420</b>
<b>TOTAL LIABILITIES</b> .....	<b>2,031</b>
<b>NET ASSETS</b> .....	<b>1,389</b>



### Operating Revenues

TOTAL 5,080

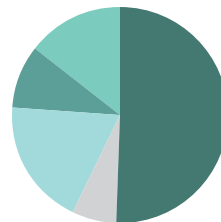
■ Europe .....	2,057
■ North America .....	1,832
■ World Council .....	1,185
■ Other .....	17



### Operating Expenses

TOTAL 5,004

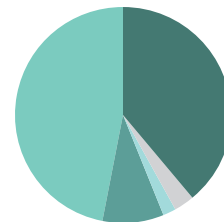
■ Europe .....	1,973
■ North America .....	1,822
■ World Council .....	1,189
■ Other .....	20



### Sources of Revenue

TOTAL 5,051

■ Annual Meetings .....	2,647
■ Other Meetings .....	340
■ Membership Dues .....	989
■ Publications .....	484
■ Other .....	748



### Areas of Expenses

TOTAL 5,004

■ Annual Meeting .....	1,951
■ Other Meetings .....	159
■ Member Dues .....	97
■ Publications .....	454
■ Other .....	2,343



## PENSACOLA OFFICE

Responsible for SETAC North America, SETAC Asia/Pacific, SETAC Latin America and SETAC Global Operations

229 South Baylen Street, 2nd Floor, Pensacola, Florida 32502, USA

T +1 850 469 1500 | F +1 888 296 4136 | E [setac@setac.org](mailto:setac@setac.org)



**Greg Schiefer**  
SETAC North America  
Executive Director  
[greg.schiefer@setac.org](mailto:greg.schiefer@setac.org)



**Jason Andersen**  
IT Manager  
[jason.andersen@setac.org](mailto:jason.andersen@setac.org)



**Sabine Barrett**  
Communications Manager  
[sabine.barrett@setac.org](mailto:sabine.barrett@setac.org)



**Teresa Daugherty**  
Finance and Membership  
Manager  
[teresa.daugherty@setac.org](mailto:teresa.daugherty@setac.org)



**Linda Fenner**  
Finance and  
Exhibits Manager  
[linda.fenner@setac.org](mailto:linda.fenner@setac.org)



**Jennifer Lynch**  
Publications Manager  
[jen.lynch@setac.org](mailto:jen.lynch@setac.org)



**Nikki Mayo**  
Events Manager  
[nikki.mayo@setac.org](mailto:nikki.mayo@setac.org)



**Mimi Meredith**  
Publications Manager  
[mimi.meredith@setac.org](mailto:mimi.meredith@setac.org)



**Joshua Sullivan**  
Communications Specialist  
[joshua.sullivan@setac.org](mailto:joshua.sullivan@setac.org)



**Laura Swanson**  
Membership and Awards  
Specialist  
[laura.swanson@setac.org](mailto:laura.swanson@setac.org)



**Bruce Vigon**  
Scientific Affairs Manager  
[bruce.vigon@setac.org](mailto:bruce.vigon@setac.org)

## BRUSSELS OFFICE

Responsible for SETAC Europe, Africa

Avenue de la Toison d'Or 67 b 6, 1060 Brussels, Belgium

T +32 2 772 72 81 | | F +32 2 770 53 86 | E [setaceu@setac.org](mailto:setaceu@setac.org)



**Bart Bosveld**  
SETAC Europe  
Executive Director  
[bart.bosveld@setac.org](mailto:bart.bosveld@setac.org)



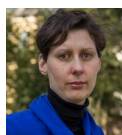
**Roel Evens**  
Scientific Project Manager  
[roel.evens@setac.org](mailto:roel.evens@setac.org)



**Filip Gunst**  
Accounting  
[accounts@setac.org](mailto:accounts@setac.org)



**Barbara Koelman**  
Office and Meeting Manager  
[barbara.koelman@setac.org](mailto:barbara.koelman@setac.org)



**Sarah Spanoghe**  
Membership Coordinator  
[sarah.spanoghe@setac.org](mailto:sarah.spanoghe@setac.org)



**Veerle Vandeviere**  
Finances and Meeting  
Registration Manager  
[veerle.vandeviere@setac.org](mailto:veerle.vandeviere@setac.org)



**Valerie Verstappen**  
Communications Coordinator  
[valerie.verstappen@setac.org](mailto:valerie.verstappen@setac.org)





**Environmental Quality Through Science™**

[www.setac.org](http://www.setac.org)