



ACTRA
CANBERRA 2024



Conference Program

**Australasian College of
Toxicology & Risk Assessment**

**16th Annual Scientific Meeting
& Continuing Education Day**

Climatoxicology: Assessing risk in a time of rapid change

Continuing Education Day - Wednesday 28th August 2024

Annual Scientific Meeting - 29th - 30th August 2024

Rex Hotel, Canberra, ACT

www.actra.com.au

Continuing Education Day

Wednesday 28th August 2024

Time	Topic	Presenter/Chairperson
8.00hrs	Registration and Arrival Coffee	
9.00hrs	Acknowledgement of Country	Associate Professor Paul Wright, FACTRA, RMIT University and ACTRA Immediate Past President
	President's Welcome	Tarah Hagen, FACTRA, SLR Consulting Australia and ACTRA President
9.15hrs	Session 1 QSAR, Chemical Grouping and Read Across	Chairperson: Effi Liden, Department of Health, Victoria and ACTRA Membership Officer
9.15hrs	Introduction to QSAR and Read Across	Effi Liden, Department of Health, Victoria
9.45hrs	Phosmet: A Case Study in the Use of QSAR to Evaluate Potential Genotoxicity in Data Poor Food and Feed Metabolites	Dr Rhian Cope FACTRA, SLR Consulting Australia and ACTRA Secretary
10.25hrs	Morning Tea and Coffee	
10.50hrs	Using QSAR and Read Across for Chemical Grouping	Louise Stedman, Australian Industrial Chemicals Introduction Scheme
11.30hrs	QSAR Assessment of Nitrosamines for Nonclinical Pharmaceutical Assessment	Irene Horn, Therapeutic Goods Administration
12.00hrs	Lunch	
13.00hrs	Session 2 Introduction to R Basics in the Context of Environmental Risk Assessment	Chairperson: Katie Richardson, RACTRA, Senversa and ACTRA Vice President
13.00hrs	Introduction to R Basics in the Context of Environmental Risk Assessment	Dr Antti Mikkonen & Dr Maryam Moslehi, Environment Protection Authority Victoria
	Case Study: [Please bring your laptop with R installed.]	Dr Antti Mikkonen & Dr Maryam Moslehi, Environment Protection Authority Victoria
15.00hrs	Afternoon Tea and Coffee	
15.30hrs	Case Study continued	Dr Antti Mikkonen & Dr Maryam Moslehi, Environment Protection Authority Victoria
15.45hrs	Applications of R in Environmental Risk Assessment	Dr Antti Mikkonen & Dr Maryam Moslehi, Environment Protection Authority Victoria
16.45hrs	CE Day Wrap-up	Katie Richardson, RACTRA, Senversa and ACTRA Vice President
1700hrs	CE Day Close	
18.00hrs	Networking function	The Assembly: The Peoples Pub 11 Lonsdale Street, Braddon
	This networking opportunity is not a formal part of the CE Day Registration and is on a pay as you go basis.	

Outline of the CE Day

Morning session

Introduction to in silico methods: Read across and QSAR with case studies.

Case studies include:

- Using QSAR in data poor environments to evaluate potential genotoxicity for phosmet.
- Using QSAR and read across for chemical grouping.
- Using QSAR assessment of nitrosamines.

Afternoon session

1. Introduction to R Basics in the Context of Environmental Risk Assessment:

- Why R is Important for Analysing Contaminated Land Data
- Basics of Data Analysis in R:
 - Reading and cleaning data in R (e.g., fixing data formats, dealing with odd data points or duplicates)
 - Basic Data Analysis Techniques (e.g., simple Stats, mathematical models and data interpretation)
- Data Visualisation – Attribute-based and Spatial Analyses
 - Different Types of visualisation for Different Data Types
 - Introduction to Visualisation Packages
 - Tips for Making Clear and easy-to-follow Visualisations.

2. Case Study:

We'll use an environmental dataset to practice what we've learned.

Please bring your laptop with R installed. We'll provide you with the required codes and information and will guide you through the data cleaning, analysis and visualisation of the data to tie together all the learnings for the day.

3. Applications of R in Environmental Risk Assessment

- Examples of Risk Assessment Modelling – Model development
- Thinking Process – Structuring Mathematical Approaches

Annual Scientific Meeting

Thursday 29th August 2024

Time	Topic	Presenter/Chairperson
8.00hrs	Registration and Arrival Coffee	
8.45hrs	ASM Opening	
8.45hrs	Acknowledgement of Country	Associate Professor Paul Wright, FACTRA, RMIT University and ACTRA Immediate Past President
	President's Welcome	Tarah Hagen, FACTRA, SLR Consulting Australia and ACTRA President
	Conference Co-Chair Welcome	Lana Barbour, DCCEEW and Dr Rhian Cope, FACTRA, SLR Consulting Australia and ACTRA Secretary
9.00hrs	Session 1 Climatotoxicology 101	Chairperson: Dr Rhian Cope FACTRA, SLR Consulting Australia and ACTRA Secretary
9.00hrs	Climate Change Science 101: Key Messages and Data	Professor David Karoly, Climate Council and University of Melbourne
9.40hrs	Key Impacts of Climate Change on Human and Environmental Health	Tarah Hagen, FACTRA, SLR Consulting Australia and ACTRA President
10.20hrs	Impacts of Climate Change and the Water Treatment and Supply Sector on Aquatic Systems	Dr Carolyn Brumley, Senior Principal Scientist, Senversa
10.35hrs	Morning Tea and Coffee	
11.00hrs	Session 2 Water: Climate Impacts and Toxic Effects	Chairperson: Effi Liden, Department of Health, VIC and ACTRA Membership Officer
11.00hrs	The Changing Picture of Harmful Algae in the Gippsland Lakes, Impacts on Recreational Water and Seafood Safety	Rachael Poon, Senior Health Scientist, Vanora Mulvenna, Dr Effi Liden, Dr Jennifer O'Connor, Isabella Gore and Suzie Sarkis, Department of Health, Victoria
11.40hrs	Australian & New Zealand Guidelines for Fresh & Marine Water Quality: Transitioning from Burrlioz to (shiny)ssdtools for deriving aquatic ecosystem guideline values for toxicants, including case studies	Dr Rebecca Fisher, Ecological Risk Assessment Modeller, Australian Institute of Marine Science
Speaker Sponsor		
12.20hrs	Trihalomethanes in Drinking Water and Low Birthweight: A Data Linkage Study in Queensland	Dr Phil Choi, Senior Environmental Health Scientist, Queensland Health
12.35hrs	Lunch and ACTRA AGM	
14.00hrs	Session 3a The Impacts of Climate Change on Exposure	Chairperson: Dr Adam Wightwick, RACTRA, Ramboll
14.00hrs	Warming Worlds, Rising Risks: Understanding Climate Change's Impact on Mercury Exposure	Dr Larissa Schneider, Associate Professor, Australian National University
14.40hrs	Using Risk Assessment to Support the Use of Recycled Aggregates	Ruth Jarman and Dr Jackie Wright, Environmental Risk Sciences (enRiskS)
14.55hrs	The Case of the Lone Firefighter	Sheridan Chapman, Senior Consultant, DRC Environmental
15.10hrs	What do those risk numbers mean? Interpreting and Communicating Risk	Dr Jackie Wright, Director, Environmental Risk Sciences (enRiskS)

Thursday 29th August 2024

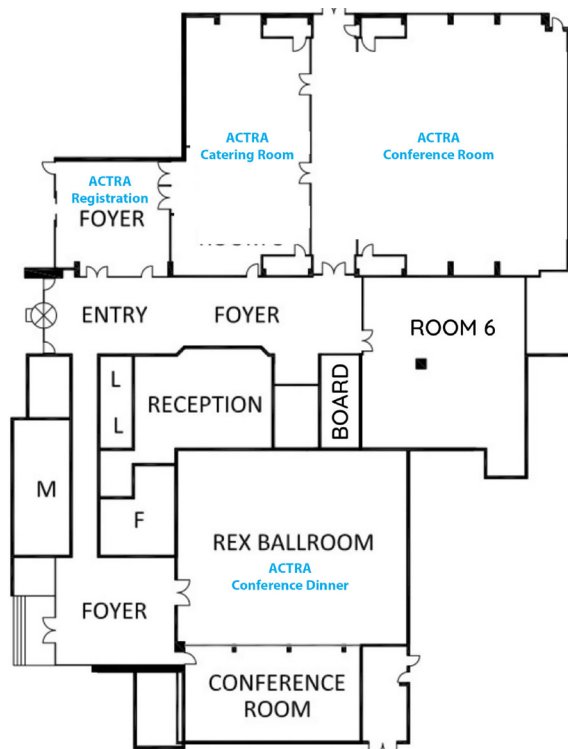
Time	Topic	Presenter/Chairperson
15.25hrs	Afternoon Tea and Coffee	
15.55hrs	Session 3b The Impacts of Climate Change on Exposure	Chairperson and Moderator: Lana Barbour, Department of Climate Change, Energy, the Environment and Water (DCCEEW)
15.55hrs	Moderated Panel: The Impacts of Climate Change on Pesticide Practices and Pesticide Risk Assessment	Dr Rhian Cope FACTRA, SLR Consulting Australia and ACTRA Secretary Gregory Sekulic, Director - Agricultural Chemical Policy, CropLife Australia Dr Maria Trainer, Australian Pesticides and Veterinary Medicines Authority
16.45hrs	ASM Day 1 Highlights and Discussion	Associate Professor Paul Wright, FACTRA, RMIT University and ACTRA Immediate Past President
17.00hrs	Close ASM Day 1	
19.00hrs	ASM Dinner Dance commences with pre dinner drinks	Rex Ballroom, Rex Hotel
23.00hrs	ASM Dinner Dance Close	

Speaker Sponsor



Industry Perspectives on Pesticides and Climate Change
Pesticides and Climate Change

ACTRA Conference Floor Plan



Annual Scientific Meeting

Friday 30th August 2024

Time	Topic	Presenter/Chairperson
8.30hrs	Registration and Arrival Coffee	
9.00hrs	Session 4 Air: Climate Impact on Bushfires and their Toxic Effects	Chairperson: Dr Andrew Harman, Department of Mines, Industry, Regulation and Safety and ACTRA Treasurer
9.00hrs	Climate Change and Managing Landscape Fire Regimes, Risks and Benefits	Dr Rochelle Christian, Director, Rochelle Christian Consulting
9.40hrs	Health Impacts of Wildfire Smoke: It's Not Just Burning Wood	Professor Lisa Miller, University of California Davis, USA
10.10hrs	Acrolein and Reactive Carbonyl Compounds as Joint Mediators of Environmental Lung Injury	Dr Phillip Burcham, Associate Professor, University of Western Australia
10.40hrs	Morning Tea and Coffee	
11.10hrs	Session 5 Travel Grant Award and Presentation	Chairperson: Dr Peter Di Marco, Managing Director Benchmark Toxicology Services Pty Ltd
11.10hrs	AmesFormer: A State-of-the-Art Graph Transformer for Mutagenicity Prediction	Luke Thompson, B.Sc. Honours Researcher, The University of Sydney
	Student Travel Grant Award Ceremony	
11.40hrs	Session 6 Impacts of Climate Change on Health	Chairperson: Dr Rhian Cope, FACTRA, SLR Consulting Australia and ACTRA Secretary
11.40hrs	Understanding and Mitigating the Health Impacts of Extreme Heat in a Changing Climate	Professor Ollie Jay, University of Sydney
12.20hrs	Thirsty Work: Climate-dependent Stock Water Screening Levels for the Broad PFAS Family	Katie Richardson, RACTRA, Senversa and ACTRA Vice President
12.40hrs	Mitigating Contaminated Dust Sources in a Drying Climate	Kara Fry and Dr Antti T Mikkonen, Environment Protection Authority Victoria
12.55hrs	Poster Presenter's Introduction	
13.00hrs	Lunch	
13.30hrs	Session 7 Poster Presentations	Poster presentations will take place over the lunch break
	Forecasting calls to the Poisons Information Centre during wild mushroom season in South Australia	Dr Peter Bain ¹ , Teresa Lebel ² , and Carolyn Lewis ¹ ¹ SA Department for Health & Wellbeing ² SA Department for Environment & Water
	Establishment and Safety Assessments of Micro/Nanoplastic Libraries 2: Focus on Polypropylene (PP)	Prof., Dr. Yasuo Tsutsumi, Graduate School of Pharmaceutical Sciences, Osaka University, Japan

Friday 30th August 2024

Time	Topic	Presenter/Chairperson
14.00hrs	Session 8 Climate and Biota	Chairperson: Alyson Macdonald, RACTRA, Australian Environmental Auditors
14.00hrs	Stygofauna Ecosystems in Australia, and the Potential Impacts of Climate Change on these Communities	Dr Mattia Saccò, Subterranean Research and Groundwater Ecology (SuRGE) Group, Curtin University
14.40hrs	Climate Change, Poisonous Plants and Risks to Livestock	Dr Rhian Cope FACTRA, SLR Consulting Australia and ACTRA Secretary
15.00hrs	Extreme Weather Events and the Rise of the Moulds	Jackii Shepherd, Senior Occupational Hygienist, Robson Environmental
15.15hrs	Afternoon Tea and Coffee	
15.45hrs	Session 9 Environmental Risk Assessment in a Changing Climate	Chairperson: Katie Richardson, RACTRA, Senversa and ACTRA Vice President
15.45hrs	Incorporating Climate Change into Environmental Risk Assessment	Dr Jenny Stauber ¹⁴ , S. Mentzel ¹ , P. J. van den Brink ^{2,3} , K. Brix ^{4,5} , J. Carriger ⁶ , J. Moe ¹ , R. Nathan ⁷ , P. Noyes ⁸ , J. Rohr ⁹ , J. Verheyen ¹⁰ , R. G. Stahl ¹¹ , A. B. A. Boxall ¹² and W.G. Landis ¹³
	<p>Speaker Sponsor</p>  <p>¹Norwegian Institute for Water Research ²Aquatic Ecology and Water Quality Management Group, The Netherlands ³Wageningen Environmental Research, The Netherlands. ⁴EcoTox, USA ⁵ University of Miami, RSMAS, USA ⁶ Land Remediation and Technology Division, U.S. EPA. ⁷Department of Infrastructure Engineering, University of Melbourne. ⁸Integrated Climate Sciences Division, U.S. EPA.</p>	<p>⁹Department of Biological Sciences, University of Notre Dame, Notre Dame, IN, USA. ¹⁰Laboratory of Evolutionary Stress Ecology and Ecotoxicology, KU Leuven, Belgium. ¹¹DuPont Company (retired), USA ¹²University of York, UK. ¹³ Western Washington University, Bellingham, Washington, USA. ¹⁴Department of Environment and Genetics, La Trobe University</p>
16.45hrs	ASM Day 2 Highlights, Discussion and Conference Close	Tarah Hagen, FACTRA, SLR Consulting Australia and ACTRA President
17.00hrs	Close ASM Day 2	

Disclaimer

The conference committee reserves the right to make alterations to the CE Day and ASM program as circumstances may require.



Contact

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