

# Jennifer Metcalfe

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PO Box 3734, South Brisbane, 4101 Queensland, Australia

## International science communicator since 1989

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I am a senior, highly experienced (30 years) science communicator who loves to: find, tell and share people's **stories**; help scientists use the right communication **strategies to truly engage** people; and **train and mentor** scientists and others involved in science to communicate.

I am most passionate about facilitating positive changes to people's lives and the environment they live in. I have been working as a science communicator since I joined CSIRO in 1989. From late 1995, I have been operating my own science communication consultancy, Econnect Communication.

My international profile as a highly sought after and skilled science communicator reflects my experience as well as my education in science (environmental science and biochemistry), journalism, communication and audio-visual production.

## Skills telling stories, creating strategies and training

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I research, interview, write and promote stories about science and the people involved in science. My skill is in taking complex, lengthy and often sensitive information and distilling this into concise and simple plain English. I tailor each story's messages to the needs of specific audiences.

I tell stories through newspaper, magazines, TV, radio, video, website, blogs, Facebook, Twitter, newsletters.

I also tell stories about our natural, historical and cultural environments through interpretative experiences in visitor centres and museums, and on walks.

My skills in photography and videography complement my writing skills. I love nothing better than to be out in the field with a bunch of researchers, farmers or fishers hearing and recording their stories and taking their pictures.

I work with research projects, programs and organisations to help them plan and implement their communication through strategies that are informed by risk communication principles.

I facilitate planning workshops, I research the perceptions, concerns and communication needs of target groups and individuals, and I design clear messages.

My research informs the practices I recommend to ensure the most effective communication possible.

I focus on participatory communication activities designed to increase interactions between scientists, policy makers and different public target groups such as farmers, fishers, business people and communities.

I am a teacher, trainer and mentor. I have been training adults in communication skills (media, presentation, writing, social media, photography, engagement, strategy) for more than 25 years. I have been a visiting university lecturer in Australia and internationally for more than 10 years. Through my business, I have mentored, trained and supported more than 20 interns in the past 15 years.



## Career highlights

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- Selecting, mentoring and leading more than 20 passionate science communicators who have been part of the [Econnect Communication](#) team over the past 24 years. My team has included a mix of junior and senior communicators, writers, editors, photographers, videographers, and graphic designers. Together we have proved a formidable team delivering quality products and outputs to clients.
- Creating and implementing the [Climate Champion program](#) of 40+ farmers around Australia who communicated with their peers about climate science. They also participated with researchers to provide them with feedback that shaped the research that got done and the products that were created. We wrote stories about these farmers, facilitated their interactions with researchers, and helped them to feel confident to communicate to a range of different audiences. A farmer involved in the program from the start, Susan Tickner said: *“You pulled together a bunch of passionate people, of different opinions, backgrounds, sectors, shapes and ages, to present to Australia an articulate and compelling story of farmers managing climate risk.”*
- Working, often on a pro bono basis, with the Philippines Landcare Foundation to help them shape their communication and promote conservation farming, particularly in the poor areas of Mindanao and Bohol in the south. I helped to create two books on Landcare. The first told the stories of the people involved, [Landcare in the Philippines: stories of people and places](#), and the second provided people in the Philippines and elsewhere with a manual, [Landcare in the Philippines: a practical guide to getting it started and keeping it going](#).
- Developing and refining a seven-step process for planning science communication for organisations and research projects. I use the process in devising and implementing communication strategies for clients, and in the training workshop for scientists and communicators, [Planning Science Communication](#).
- Devising a foolproof [risk-communication](#) approach to message design that I apply to all my communication activities. The approach considers what the organisation or project manager wants to get across to a specified audience, what that audience wants to know about the research topic, and what that audience could get wrong unless the correct information is stressed.
- Developing, piloting and running hundreds of [communication-skills workshops](#) for researchers across the world in media, presentation, writing, social media, communication planning, issues management, stakeholder engagement and visual communication. We always receive positive feedback at the end of these workshops, averaging a rating of 6.4 out of a possible 7 for participant satisfaction.
- I led the development and concept for [Climate Kelpie](#), a portal for Australian farmers and their advisors. It connects them to tools and information about climate to help them make decisions about their farm business. We worked with a sample set of farmers to specify the information architecture and navigation, and to test prototypes. A similar process was used to develop other portals such as: [Biomass Producer](#), and [SustainPacFish](#).
- I worked as part of a team to develop and test Australia’s first [social indicators of river health](#). These indicators were used in community engagement programs across the state of Victoria.



## **Experience: Science Communicator, Journalist, Teacher**

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- 1995–current: Director and owner of [Econnect Communication](#) Pty Ltd
- 2014–2018: Visiting lecturer, [University of Rhine Waal](#), Germany, teaching: Risk and Crisis Communication; Comparative Media Studies; and Sustainability in Science and Industry & Corporate Social Responsibility in the [Science Communication and Bionics](#) degree
- 2005–2015: Sessional lecturer, University of Queensland teaching Medical and Science Journalism, Environment Communication, and other lectures in science communication as part of the Masters of Science Communication degree
- 2012–2019: PhD student, University of Queensland (2012-16); Australian National University (2016-19)
- 2014: [Universitas 21](#) exchange to the University of Nottingham, UK, working with supervisors in the Science in Society team
- 1989–1995: Communication Manager, CSIRO Tropical Crops and Pastures
- 1988–1989: Researcher for *CountryWide*, ABC TV, and freelance journalist
- 1984–1988: Senior biology and multi-strand science teacher, Pine Rivers High School, Queensland
- 1983–1984: Senior biology teacher, Lilydale SDA High School, Victoria

## **Science communication advisor to Boards**

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- 2019-current: Board Director, [NSW Circular Economy Innovation Network](#)
- 2018-current: Board Director, [Picture Yourself in Agriculture](#) (PYiA)

## **Education in Science and Communication**

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- PhD** Australian National University (2019)
- Bachelor of Business** (Communication), Queensland University of Technology (1989)
- Master of Science** (Environmental Science), Griffith University, Queensland (1986)
- Bachelor of Education** (Science), Avondale College / Newcastle University, New South Wales (1981)

## **Judge of prestigious Australian journalism awards**

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- 2015-current: [Eureka Prize for Science Journalism](#)
- 2013-current: [Crawford Fund Journalism Award](#)



## Professional Associations with Communication, Media, Universities

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Australian Science Communicators foundation member (1994–current)

Media, Entertainment and Arts Alliance member (1989–2016)

Queensland University of Technology alumni member

Griffith University alumni member

## Professional Appointments

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Member, International Scientific Committee for the [Public Communication of Science and Technology \(PCST\) Network](#) (1996–present); currently Chair of the program committee

President, [Australian Science Communicators](#) (2006–2008), included hosting the [2007 World Conference of Science Journalists](#)

Secretary, Australian Science Communicators (2002)

Member, Australian Science Communicators National Committee (1995, 1996)

Visiting scholar on CSIRO Overseas Study Award, USA (May–October 1993)

## Selected Technical Publications

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Metcalfe, J., & Riedlinger, M. (2019). Public understanding of science: Popularisation, perceptions and publics. In *The Routledge Handbook of Language and Science* (pp. 32-46). Routledge.

Gascoigne, T., and Metcalfe, J. (2019). Training scientists to communicate in a changing world. Theory and best practices in science communication training. Newman, T.P. (ed), Routledge, London and New York.

Metcalfe, J. (2019). Comparing science communication theory with practice: An assessment and critique using Australian data. *Public Understanding of Science*, 28(4), 382–400, <https://doi.org/10.1177/0963662518821022>

Masson, A., Metcalfe, J. and Ossewijer, P. (2016) Motivating engagement, In *Science and Technology Education and Communication, International Technology Education Studies, Volume 14*. Custer, R. and de Vries, M.J. (series eds), Sense Publishers, Rotterdam, The Netherlands

Metcalfe, J. (2013) Engaging people in controversial science: a climate change case study. In *Science communication today: International perspectives, issues and strategies*. Baranger, P and Schiele, B (eds), CNRS Editions, May 2013, pp. 209-2228.

Metcalfe, J., and Gascoigne, T. (2012). [‘The Evolution of Science Communication Research in Australia’](#). In *Science Communication in the World* (pp. 19-32). Springer Netherlands.

Gascoigne, T., Cheng, D., Claessens, M, Metcalfe, J, Schiele, B and Shi, S 2010, [‘Is science communication its own field?’](#), *Jcom*, vol. 9, no. 3.

Metcalfe, J. and Riedlinger, M. 2009, 'Identifying and testing engagement and public literacy indicators for river health', *Science, Technology & Society*, vol. 14, no. 2, pp. 241–67.



Metcalfe, J. and Gascoigne, T. 2009, 'Teaching Scientists to interact with the Media', *Issues*, vol. 87, pp. 41–4.  
Donghong, C., Claessens, M., Gascoigne, T., Metcalfe, J., Schiele, B. and Shi, S. (eds) 2008, *Communicating science in social contexts, new models, new practices*, Springer.

Donghong, C., Metcalfe J. and Schiele, B. (eds) 2006, *At the Human Scale: International Practices in Science Communication*, Science Press, Beijing.

Metcalfe, J., Riedlinger, M., Pisarski, A. and Gardner, J. 2006, *Collaborating across sectors, The relationships between the humanities, arts and social sciences (HASS) and science, technology, engineering and medicine (STEM) sectors*. Occasional Paper 3. Council for Humanities, Arts and Social Sciences, Canberra.

Metcalfe, J., Donghong, C., Riedlinger, M. and Shunke, S. 2005, 'Strategic Issues in Science and Technology Communication Beijing PCST Working Symposium', *Science Communication*.

Gascoigne, T. and Metcalfe, J. 2005, *Commercialisation of research activities in the humanities, arts and social sciences in Australia*, Occasional Paper No. 1, Council for Humanities, Arts and Social Sciences, Canberra.

Metcalfe, J. (ed) 2004, *Landcare in the Philippines – A story of people and places*, Australian Centre for International Agricultural Research, Canberra, <http://www.aciar.gov.au/publication/MN112>

Gascoigne, T. and Metcalfe, J. 2003, 'TV talent – the good, the bad and the truly dreadful', *Australian Zoologist*, Vol. 32, No 2.

Gascoigne, T. and Metcalfe, J. 2001, 'The Evaluation of Programs of Science Awareness', *Science Communication*.

Gascoigne T. and Metcalfe J. 1999, *Scientists Commercialising their Research*, Federation of Australian Scientific and Technological Societies (FASTS) Occasional Paper Series, FASTS.

Metcalfe, J and Martin, L 1998, *Assessing the causes, impacts, costs and management of dryland salinity*, LWRDC Occasional Paper No 20/98, National Dryland Salinity Program.

Gascoigne, T. and Metcalfe, J 1977, 'Incentives and Impediments to Scientists Communicating through the Media', *Science Communication*, Vol. 18, No.3.

Metcalfe, J and Gascoigne, T. 1995, '[Science Journalism in Australia](#)', *Public Understanding of Science and Technology*, Vol. 4, pp. 411–28.

Metcalfe, J. 1994, *A Natural Resources Communication Workbook*, LWRDC Occasional Paper No. 14/94, CSIRO.

Hallman, WK and Metcalfe, JE, 1994 [Public perceptions of agricultural biotechnology: A survey of New Jersey residents](#) New Jersey Agricultural Experiment Station, Rutgers

## Conference and Other Presentations

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Metcalfe, J. 2018, [Comparing science communication models with a long-term participatory case study: the Climate Champion program](#), Presentation to Australian Science Communicators 10th National Conference, November 2018, Sydney, Australia.



Metcalfe, J. 2018, [International Perspectives on Science Communication Theory and Practice](#). Paper presented at the 15<sup>th</sup> Public Communication of Science and Technology Network Conference, April 2018, Dunedin, New Zealand.

Metcalfe, J. 2017, Trends, challenges, opportunities and gaps in science communication research, [Rockefeller Science Communication Conference](#), Bellagio, Italy, November 2017.

Metcalfe, J. 2016, Engagement: A commitment or a military operation?, Presentation to Adaptation 2016 conference, hosted by the National Climate Change Adaptation Research Facility and CSIRO, July 2016, Adelaide Australia.

Metcalfe, J. 2016, Climate Change on the Internet Soapbox: Preaching to the Converted, Panel presentation at [14th Public Communication of Science and Technology Network Conference](#), April 2016, Istanbul, Turkey.

Metcalfe, J. 2016, Climate Champion farmers engaging with researchers, Presentation to [14th Public Communication of Science and Technology Network Conference, April 2016](#), Istanbul, Turkey.

Metcalfe, J. 2015, Science communication in Australia with links to the Philippines, Presentation to the Vietnam Ministry of Science, December 2015, Hanoi, Vietnam.

Metcalfe, J. 2015, Designing risk communication messages about bioenergy, Presentation to [Australian Biotechnology conference](#), Nov–Dec 2015, Launceston, Australia.

Metcalfe, J. 2015, Climate Change on the Internet Soapbox: Preaching to the converted, Presentation to Greenhouse 2015, October 2015, Hobart, Australia.

Metcalfe, J. 2015, Communicating science for evidence-based decision-making, Presentation to the [River Basin Management Society](#), September 2015, Brisbane, Australia.

Metcalfe, J. 2014, Engaging different publics in climate change blogs, Presentation to [European Association for the study of Science and Technology \(EASST\) Conference](#), September 2014, Torun, Poland.

Metcalfe, J. 2014, The theory needed to support science communication practice, Presentation to the [13th Public Communication of Science and Technology Network Conference](#), May 2014, Salvador, Brazil.

Metcalfe, J. 2014, Climate Change on the Internet Soapbox: Who is doing all the talking? Presentation to Changing Climate Change Communication: a conference on the interactions between culture, society and language in the context of global warming, July 2014, Amsterdam, The Netherlands.

Metcalfe, J. 2014, Science communication, science journalist: same or different?, Presentation to the [13th Public Communication of Science and Technology Network Conference](#), May 2014, Salvador, Brazil.

Metcalfe, J. 2014, Climate change “experts” on the Internet soapbox: democratising science and the media through blogs, Presentation to [Australian Science Communicators conference 2014](#), Brisbane.

Longnecker, N., Metcalfe, J., Stocklmayer, S., Searle, S., Leach, J., Medvecky, F., Elliott, J. and Rennie, L. 2014 Developing the evidence base: Inspiring Australia supported research, Presentation to [Australian Science Communicators conference 2014](#), Brisbane, Australia.

Leigh, A., Metcalfe, J. and Hobbs, B. 2014, ‘The Hitchhiker’s Guide to the Digital Universe’, Presentation to [Australian Science Communicators conference 2014](#), Brisbane, Australia.

Metcalfe, J., Reade, C. and Gascoigne, T. 2014, ‘Working with scientists in developing countries to communicate science’, Presentation to [Australian Science Communicators conference 2014](#), Brisbane Australia.

Metcalfe, J. 2013, telling great stories about bioenergy, Keynote address to the Australian Bioenergy 2013 conference, November 2013, Hunter Valley, Australia.

Metcalfe, J. 2013, Outside the Box of Media for Science & Technology Communication, Presentation to 3rd PCST Symposium: Developing S&T Culture to Create Green Quality of Life, August 2013, Jakarta Indonesia.





Metcalfe, J. 2013, 'Communication – Everyone's Business', Presentation to [12th Queensland Weed Symposium](#), July 2013, Hervey Bay, Australia.

Metcalfe, J. 2013, Communicating climate change in the face of disasters, A presentation to the [Science Communication Association of New Zealand \(SCANZ\) conference](#), February 2012, Christchurch, New Zealand.

Metcalfe, J. 2012, Engaging people in controversial science: a climate change case study, Presented to the fourth Journées Hubert Curien International Science Communication Conference, September 2012, Nancy, France.

Metcalfe, J. 2012, Practical and theoretical science communication in Australia, Presentation to International Forum on Science communication in Asia and the Pacific Rim Countries organised by [China Research Institute for Science Popularisation](#) (CRISP), May 2012, Beijing, China.

Metcalfe, J. 2012, Australians engaging in science, Presentation to International Forum on Science communication in Asia and the Pacific Rim Countries organised by [China Research Institute for Science Popularisation](#) (CRISP), May 2012, Beijing, China.

Metcalfe, J. 2012, Strategic science communication in practice, Panel contributor at [12th Public Communication of Science & Technology Network conference](#), April 2012, Florence, Italy.

Metcalfe, J. 2012, Media skills courses for scientists – ingredients and recipes, Panel contributor at [12th Public Communication of Science & Technology Network conference](#), April 2012, Florence, Italy.

Metcalfe, J. 2012, Bringing science to life through stories, A lecture to staff from the Queensland Department of Environment and Resource Management, April 2012, Brisbane, Australia.

Metcalfe, J. and Riedlinger, M. 2012, Communicating in a minute: communicating to decision-makers, Workshop at AAAS Annual Meeting, February 2012, Vancouver, Canada.

Metcalfe, J. 2011, Farmers involved in climate change science, Presentation Indonesian Science Communication conference, November 2011, Jakarta, Indonesia.

Gascoigne, T.H., and Metcalfe, J. 2011, The role of science communicators, Presentation Indonesian Science Communication conference, November 2011, Jakarta, Indonesia.

Metcalfe, J. 2010, Farmers doing their own climate change communication, Presentation to [11th Public Communication of Science & Technology Conference](#), December 2010, New Delhi, India.

Metcalfe, J. 2010, Communicating climate change in the media – with lessons from Climategate, Organised and chaired panel session at [11th Public Communication of Science & Technology Conference](#), December 2010, New Delhi, India.

Metcalfe, J. 2010, Social appropriation of science and technology: Farmers involved in climate change science, Presentation to Foro-Taller Apropiación Social de la Ciencia, la Tecnología y la Innovación, October 2010, Medellín, Colombia.

Metcalfe, J. 2010, Interpretation and space, A lecture to students at Queensland University of Technology, April 2010, Brisbane, Australia.

Metcalfe, J. and Riedlinger, M. 2008, Social indicators of river health inform biophysical outcomes, Presentation to [10th Public Communication of Science & Technology Conference](#), June 2008, Malmö, Sweden.

Metcalfe, J. and Riedlinger, M. 2008, Situating science in the social context with cross-sectoral collaboration, Presentation to [10th Public Communication of Science & Technology Conference](#), June 2008, Malmö, Sweden.

Metcalfe, J. and Riedlinger, M. 2008, 'Identifying and testing engagement and public literacy indicators for river health', Paper presented to workshop, April 2008, Delhi, India.

Metcalfe, J. 2007, UNESCO journalism education and training, Workshop organised for [World Conference of Science Journalists](#), April 2007, Melbourne, Australia.

Metcalfe, J. 2007, The water wars, Produced and chaired a panel session for [World Conference of Science Journalists](#), April 2007, Melbourne, Australia.



Metcalfe, J. 2007, Building and maintaining science communication associations, Panel speaker at [World Conference of Science Journalists](#), April 2007, Melbourne, Australia.

Riedlinger, M., Metcalfe, J. and Pisarski, A. Social science-science collaborations: an identity perspective, Paper at [1st International Conference on Interdisciplinary Social Sciences](#), July 2006, Rhodes, Greece.

Metcalfe, J. 2006, 'Journalists' attitudes to scientists', Paper presented to 9th International Public Communication of Science & Technology (PCST) conference, Seoul, Korea.

Metcalfe, J. and Gascoigne, T. 2005, 'Media Skills Workshops: Breaking down the barriers between scientists and journalists', Paper presented to International Public Communication of Science & Technology (PCST) Beijing Symposium on Best Practices in Science Communication.

Metcalfe, J., Boy, G., Laotoco, A., Ruiz, E. 2004, 'Changing Lives and Landscapes in the Philippines', Paper presented at 8th PCST 2004 Conference, "Scientific Knowledge and Cultural Diversity", June 2004, Barcelona, and at 2004 Australian Science Communicators' Conference, September 2004.

Metcalfe, J. and Gascoigne, T. 2004, 'The Science Communication Professional in Australia', Paper presented at PCST 2004 Conference, "Scientific Knowledge and Cultural Diversity", June 2004, Barcelona and at 2004 Australian Science Communicators' Conference, September 2004.

Metcalfe, J. and Gascoigne, T. 2002, [Training scientists to use the media effectively](#), Presentation at 7th Public Communication of Science & Technology conference, December 2002, Cape Town South Africa.

Metcalfe, J. and Gascoigne, T. 2001, 'Survey on how Australian journalists use the Internet', Presentation to 3rd Asia-Pacific Symposium on Press and Scientific and Social Progress (APSP2001), Beijing, China.

Metcalfe, J. and Perry, D. 2001, 'The evaluation of science-based organisations' communication programs', Presentation to Australian Science Communicators conference, Sydney Australia.

Gascoigne, T. and Metcalfe, J. 2001, *Why do governments spend money on national programs of science awareness*, Proceedings of "Trends in Science Communication today: bridging the gap between Theory and Practice" – 6th International Conference on the Public Communication of Science and Technology, Geneva.

Kirk, L. and Metcalfe, J. 2000, 'Relationships – the building block to successful communication', Presentation to Irrigation Conference, Melbourne.

Gascoigne, T. and Metcalfe, J. 1999, 'Training scientists to understand and love the media', Presentation to 1999 World Science Conference, Budapest.

Gascoigne, T. and Metcalfe, J. 1998, *Developing a new national forum for science - the Australian experience*, Proceedings of "Science without Frontiers" Conference, PCST Network, Berlin.

Metcalfe, J. and Gascoigne, T. 1998, *Media Skills Workshops: Breaking down the barriers between scientist and journalists*, Proceedings of "Science without Frontiers" International Conference on the Public Communication of Science and Technology (PCST), Berlin.

Gascoigne, T. and Metcalfe, J. 1994, *Public communication of science and technology in Australia*, Proceedings of "When Science becomes Culture" Conference, PCST Network, Montreal.