Advancing Science Journalism and Science Communication Capacity in the SADC-region and Africa



SADC Regional Science Journalism Programme:

Advancing Science Journalism and Science Communication Capacity in the SADC-region and Africa

4-5 December 2023

In the run-up to the Science Forum
6-8 December 2023
CSIR International Convention Centre, Pretoria

Presented by

Southern African Development Community (SADC)
Department of Science and Innovation (DSI)





In partnership with

United Nations Economic, Social and Cultural Organisation Regional Office for Southern Africa (UNESCO-ROSA) Human Sciences Research Council (HSRC)

AU/NEPAD Southern African Network of Water Centres of Excellence (SANWATCE)

Stellenbosch University (SU)

Tshwane University of Technology (TUT)

South African Science Journalists' Association (SASJA)

National Research Foundation – South African Agency for Science and Technology Advancement (NRF-SAASTA)















Cover illustration: "Drink Up" by C.F. Basson – Taken up in the "IF" exhibition catalogue, organised by the Polish-Japanese Academy of Information Technology (PJAIT), in cooperation with the European National Institutes for Culture (EUNIC-Warsaw), based on the UN Sustainable Development Goal 11 (SDG 11). The exhibition took place in Warsaw, Poland, October/November 2020.

WELCOME

Why do we need more science journalists?

We face a critical juncture in journalism in general and in science and technology journalism specifically, the latter having been largely neglected in Africa over decades in journalism newsrooms. With specialist beats diminishing around the world, the space for journalists to do their jobs is closing rapidly – and yet, seldom has humankind faced such a huge need for voices that can explain, demystify, analyse and critique. Fake news abounds – from politics and celebrities to science-based topics on broad health issues such as vaccination, climate change, HIV/Aids and evolution.

Investigative journalists and those on beats such as science and the environment are people trained (on the job or formally) as super fact-checkers and explicators. Facing special needs, great opportunities, and devastating disasters, African countries would benefit from a well-prepared, trained and resourced cohort of journalists to keep both public and policyholders informed. With well-equipped and confident journalists, the public is also empowered to make responsible decisions and comments regarding fake news and misinformation about various issues, as well as instances of pseudoscience and dangerous quackery that could have an impact on their well-being.

In South Africa, the Department of Science and Innovation's *Science Engagement Strategy* (2015) recommends going beyond the deficit model of science promotion and communication. In other words, members of the public "are not merely passive recipients of science and technology" and we cannot assume that merely communicating science will automatically translate into a more science-literate public. Its vision is, rather: [A] stimulated and engaged South African society that is inspired by and values scientific endeavour, critically engages with key science and technology issues, and participates in a fully representative innovative science and technology workforce" (DSI 2015).

Against this backdrop, the media as watchdog have a critical role to play in terms of enabling, organising and structuring debate, and alerting the public to matters that might otherwise have been ignored.

We trust that, through your participation in this workshop, your capacity, and skills to communicate complex scientific issues will be strengthened. Our aim is to achieve an important public good: an informed and engaged citizenry with access to credible sources of information in a post-factual world.

We look forward to working with you this week and beyond, building a community of science journalists in Africa.

BACKGROUND

In June 2023, SADC Joint Meeting of Ministers responsible for Education and Training and Science, Technology and Innovation (ET-STI) commended the SADC Secretariat in partnership with UNESCO-ROSA, DSI and SU for coordinating and hosting a successful capacity building workshop on science communication for journalists and media representatives in the region. The workshop was hosted on the margins of the World Science Forum. The Ministers directed the Secretariat to work with UNESCO to host regular annual capacity building events and seminars on science communication to improve the communication and reporting on STI activities and initiatives in the region and to also train the national SADC Media coordinators on science communication.

It is against this background that the SADC Secretariat in partnership with UNESCO-ROSA, DSI, SU, TUT, HSRC, NRF-SAASTA and SASJA will convene several sessions in Advanced Science Journalism to build Science Communication capacity in the SADC-region and Africa. The sessions will form part of the side events in the run-up to Science Forum South Africa from 4-6 December 2023 at the CSIR International Convention Centre (ICC). It will target training unemployed journalism graduates, regional media coordinators and relevant policy makers and researchers in science journalism. The course will be held in a hybrid format and is aimed to provide participants with

- An in-depth understanding of complex scientific issues facing Africa;
- Sensitise participants to ethical dilemmas in science and science journalism, especially from a social justice perspective; and
- Provide guidance to participants working in environments where science and research outcomes need to be made accessible to the public and to science policy audiences.

The expected outcomes of the course include:

- An in-depth understanding of selected scientific issues relevant to Southern Africa and Africa;
- An in-depth understanding of the significance of these issues and how to communicate about/report on them;
- A thorough understanding of the ethical challenges related to complex scientific issues;
- · Tools to deal with disinformation:
- The necessary skills to develop and pitch story ideas about these issues from a range of angles and perspectives (i.e., from an African perspective to local and global audiences); and
- The necessary skills and networking opportunity to develop proposals for the 2025 and future conferences of the World Federation of Science Journalists.

















Greetings from the class of 2022



Participants in the 2022 Short Course: Developing Science Communication Capacity in the SADC region and Africa, hosted at Stellenbosch University: Afeez Hanafi; Aimable Twahirwa; Albert Mirirayi Chekayi; Ally Jamah; Arthur Davies Sikopo; Baboki Kayawe; Banana Mpho Hatahata; Barend Johannes Lourens Jooste; Bengani Ncube; Best Jere; Caroline Lebone Matsane; Carolyn Ashaba; Charles Chikapa; Charles Mkoka; Columbus Mavhunga; Cy Joe Muganda; Davison Kaiyo; Elysa Rakotonirina; Evelyn Rebecca Ruwoko; Gilbert Khayumbi Nakweya; Gugu Nolwazi Sylvia Masemola; Hilary Liwakala Mudengi; Hilda Andrina Mhagama; Jemima Jeanette Beukes; Jeronimo Kateya; Jesusegun Yinka Alagbe; Jonah Nyoni; Jubiel Mary Zulu; Kudakwangu Chisweto-Brandt; Letsatsi Phinehas Lekhooa; Liapeng Grace Raliengoane; Lihle Krwala; Lintle Lekhanya; Louis Kolumbia Kambulaje; Lucy Nambela; Maambele Reginah Khosa; Mapontso Pascalinah Kabi; Margaret Samulela; Mountjoy Chikura; Mqondisi Wiseman Myeni; Muchaneta Munamati; Mugammad Ebrahim Samodien; Ndivhuwo Kharivhe; Nhau Mangirazi; Nomzingisi Dzingwe; Nonduduzo Pretty Vilakazi; Nonkokheli Princess Mahogo; Ntebalo Pius Moorosi; Palesa Maretlwa; Patson Mathonsi; Peter Mabaka; Raphael Chile Mulenga; Refilwe Precious Mabe; Ronald Mwangi Njogu; Sandeep Chakravartty; Sechaba Samuel Mokhethi; Sergio Obete Nhambi; Shehzad Ali Joomun; Sibangani Dube; Sibusiso Wisdom Dlamini; Simamukele Mndzebele; Simbarashe Mudzivo; Siphokazi Totyi; Stranger Hanyani Sono; Tamika Gounden; Tawanda Makawa; Tendai Murenga; Thabo Mamathula Tema; Theophilus Chuma; Thidilweli Mukhudi; Thulani Xolisile Imanuel Sigonya; Treezer Michelle Atieno; Vallary Mmbone Wachira; Vincent Thabang Setlhare; Womba Kasela.















PROGRAMME

8:30-9:00	Arrival and registration		
9:00-9:20	Welcome	Ms Mmampei Chaba, Chief Director: Multilateral Cooperation and Africa, Department of Science and Innovation (DSI), South Africa	
		Ms Anneline Morgan, Senior Programme Officer: Science, Technology and Innovation, Directorate of Industrial Development and Trade, Southern African Development Community (SADC)	
		Dr Martiale Zebaze Kana , Senior Science Programme Specialist and Head: Science Unit, UNESCO Regional Office for Southern Africa (UNESCO-ROSA)	
		Ms Mandi Smallhorne, President of the South African Science Journalism Association (SASJA), and Vice-President of the World Federation of Science Journalists (WFSJ)	
9:20-9:30	Group photo		
9:30-11:00	Sustainable journalism: covering health, water and the environment in southern Africa and SADC The SADC region and other African countries are grappling with the impacts of a climate crisis that are not of our making, most recent in our memories being Cyclone Freddy (2023), Cyclone Idai (2019) and the Durban floods (2022). How can journalists expand coverage of global climate change and tell the story of how changes in global climate systems have an impact on environmental, health and social issues on a local and regional level. How can we help journalists to tell these stories?	Panellists Dr Gabriel Lekalakala, Climate Change and	
		Agrohydrology Specialist, Department of Water and Sanitation, South Africa (online)	
		Ms Thando Tenza , Human Sciences Research Council	
		Dr Lul Riek (MD), Regional Coordinator for Southern Africa at the Africa Centers for Disease Control and Prevention (online)	
		Sibangani Dube, freelance science journalist	
		Prof. Mehita Iqani , DSI-NRF Research Chair in Science Communication, Stellenbosch University (online)	
		Facilitated by Dr Rasigan Maharajh	
11:00-11:30	Comfort break		

11:30-13:00	Facing up to cyclone Freddy (and other extreme weather events) – what could the media have done better? "Nobody imagined it would be so intense" reads the headline of an article published after cyclone Freddy hit Mozambique on the night of 11 March 2023. In this panel discussion, we hear from the journalists on the ground who covered probably one of the longest-lasting cyclones ever recorded – lasting at least 36 days. We also hear from experts how the authorities are responding, and what to expect for this region going into the future.	Panellists Mr Shehzad Ali Joomun, News Editor and Presenter, Mauritius Broadcasting Corporation Mr Charles Chikapa, Coordinator at the Community Radio Initiative, Malawi Dr Emmanuel Fundisi, Specialist in Geoanalytics, Human Sciences Research Council (HSRC), South Africa Ms Elizabeth Viljoen, Operational Weather Forecaster, South African Weather Service (SAWS) Dr Neville Sweijd, Director: Alliance for Collaboration on Climate and Earth Systems Science (ACCESS)) Facilitated by Mandi Smallhorne
13:00-14:00	Lunch	racinated by Mariai Smatthorne
14:00-15:30	What makes science & technology reporting different? How we report on science and technology is important, specifically in the Global South. But first we need a clear understanding of what science is (and what it is not), and how indigenous knowledge systems fit into a country or region's knowledge systems.	Panellists Dr Nathan Geffen, Editor of GroundUp (online) Dr Motheo Koitsiwe, Director of the Indigenous Knowledge Systems Centre, North-West University, Potchefstroom Dr Rasigan Maharajh, founding Chief Director of the Institute for Economic Research on Innovation, Tshwane University of Technology Mr Sheldon Morais, Director: Crafted Communications and Former Head of News, Media 24 Facilitated by Wiida Basson
15:30-14:00	Reflection on the day's sessions	Facilitated by Mandi Smallhorne , Munyaradzi Makoni , Zamuxolo Matiwana and Wiida Basson

TUESDAY, 5 DECEMBER 2023				
9:00-11:00	Crunch time! Writing about the fundamental sciences There is excellent research coming out of African universities, but are we doing enough to tell those stories? Scientific articles are filled with technical jargon, while journalists need to tell a story. What more can be done to bridge this divide? This is a best practice and hands-on session for those who want to hone their science writing skills.	Panellists Mr Thabo Leshilo, The Conversation Africa Prof. Leslie Swartz, editor-in-chief of the South African Journal of Science, and Professor of Psychology, Stellenbosch University (online) Mr Akin Jimoh, chief editor, Nature Africa, Nigeria Ms Lynne Smit, senior editor, Nature Africa (online) Facilitated by Munyaradzi Makoni and Wiida Basson		
11:00-11:30	Comfort break			
11:30-13:00	Reporting on science in indigenous languages At least 50% of today's spoken languages – and 95% of indigenous languages – will be extinct or seriously endangered by 2100. That is why the United Nations proclaimed 2022-2032 as the International Decade of Indigenous Languages. What are we doing in the journalism and science communications field to develop and support indigenous languages?	Panellists Mr Sibusiso Biyela, digital science communicator, ScienceLink Prof. Aboidun Salawu, Director of the Indigenous Language Media in Africa (ILMA) Centre, North-West University (online) Ms Nomathemba Tasha Siziba, Voice of Wits, University of the Witwatersrand Facilitated by Zamuxolo Matiwana		
13:00-14:00	Lunch			
14:00-15:30	Reflection, feedback, and proposals for the World Federation of Science Journalists annual conference in 2025	Facilitated by Mandi Smallhorne , Munyaradzi Makoni , Zamuxolo Matiwana and Wiida Basson		

GUEST SPEAKERS



Mmampei Chaba

Ms Mmampei Chaba is the Chief Director responsible for Multilateral Cooperation and Africa engagements within the Department of Science and Innovation. Her responsibilities include managing South Africa's global and African multilateral science, technology, and innovation relations with organisations such as the African Union, SADC and the UN. She is also responsible for managing the 26 science, technology, and innovation bilateral agreements that South Africa has entered into with strategic countries in Africa.



Anneline Morgan

Since 2019 Ms Anneline Morgan serves as Senior Programme Officer: Science, Technology and Innovation (STI) in the Directorate of Industrial Development and Trade at the Southern African Development Community (SADC) secretariat. From 2014-2019 she was seconded to the SADC Secretariat as the Senior Technical Advisor: STI by the South African Government through the Department of Science and Technology. She has many years of experience in championing regional and international cooperation in STI, which has resulted in the initiation of several regional, continental and international initiatives, programmes and projects.



Martiale Zebaze Kana

Dr Zebaze Kana is an experimental physicist and researcher with extensive experience in STEM education and renewable energy. He heads the Science Unit at UNESCO's Regional Office for Southern Africa (UNESCO-ROSA). He was previously the Chief of Section: Innovation and Capacity Building in Science and Engineering at UNESCO Headquarters in Paris where he also served as executive secretary of the International Basic Science Programme.

PANELLISTS



Aboidun Salawu

Abiodun Salawu is Professor of Journalism, Communication and Media Studies and Director of the research entity, Indigenous Language Media in Africa (ILMA), at North-West University, South Africa. He has taught and researched journalism, media and communication for close to three decades in Nigeria and South Africa. Prior to his academic career, he practised journalism in several print media organisations in Nigeria. He is a co-vice chair of the journalism section of the International Association for Media and Communication Research (IAMCR) and a member of editorial/advisory boards of a number of journals. He was involved in the founding of the International Association for Minority Language Media Research.



Akin Jimoh

Mr Akin Jimoh is chief editor of Nature Africa, and a leader in promoting science and public health journalism in his native Nigeria and across the African continent. A medical physiologist and health promotion/education specialist by training, he was the first news editor for the World Federation of Science Journalists' website and played key roles as a mentor and anglophone coordinator (2009 - 2013) in the Science Journalism Cooperation (SjCOOP) Project.



Charles Chikapa

Mr Charles Chikapa is a Malawian broadcast journalist and media trainer with over 20 years' experience covering a wide range of science stories both at home and abroad while working at the national broadcaster in Malawi. At the height of the HIV/AIDS pandemic, Charles covered international aids conferences and was a member of the Key Correspondents team for the Southern African HIV and AIDS Dissemination Service (SAfAIDS). Charles has extensive experience covering climate change events, including the WCSJ London, 2009; CoP 15 in Copenhagen, Denmark; CoP 16 in Cancun, Mexico; CoP17, Durban, South Africa; UN Climate Change Conference; CoP21 in Paris, France; and WCSJ San Francisco, USA. His passion is how the media in Malawi can communicate complex and relevant scientific topics to diverse audiences.



Elizabeth Viljoen

Ms Elizabeth Viljoen joined the South African Weather Service (SAWS) in 2011 in the National Forecasting Office as an operational weather forecaster. From 2016, she joined the Disaster Risk Reduction branch, where she has been a key role player in the development and implementation of the Impact-Based Severe Weather Warning System for South Africa. In this role, she works very closely with Disaster Managers at all levels around the country.



Emmanuel Fundisi

Dr Emmanuel Fundisi is a remote sensing specialist utilising machine learning and deep learning in analysing remotely sensed data. He has a keen interest in various social science research projects applying web scrapping techniques in harvesting Big data, to promote real-time response to crises in decision and policy making to redress social ills. His work helped policymakers and urban planners understand the spatial distribution of services, identify areas of social vulnerability, and optimize resource allocation for marginalized communities. He is dedicated to bridging the gap between technology and societal challenges by leveraging big data mining and applications in the physical and human sciences within the 4IR paradigm.



Gabriel Lekalakala

Dr Gabriel Lekalakala holds a PhD from the University of Goettingen and a DAAD (German Academic Exchange Service) Alumnus. He is currently a Specialist Scientist responsible for Climate Change Analysis at the Department of Water and Sanitation, and the Chairperson of the Adaptation Network Steering Committee.



Leslie Swartz

Leslie Swartz is a professor of psychology at Stellenbosch University. He holds a PhD in psychology from University of Cape Town and a PhD in English from Stellenbosch University. He publishes extensively on issues of disability and mental health, and he has written two memoirs, designed partly to communicate scientific ideas to a broader audience, through story-telling. He has published more popular work using photography and in collaboration with photographers and filmmakers. He was founding editor-inchief of *African Journal of Disability* and is currently editor-in-chief of *South African Journal of Science* and of *Scandinavian Journal of Disability Research*. He has a special interest in supporting accessible scientific writing.



Lul Riek

Dr Lul Riek is the Regional Coordinator for Southern Africa at the Africa Centers for Disease Control and Prevention. He is a seasoned physician and a global public health expert with many years of work and proven records of accomplishment in supporting countries around Africa in efforts to build resilient health care systems, and in the implementation of health programs in some of the world's most challenging spaces and situations.



Lynne Smit

Ms Lynne Smit is a senior editor at *Nature Africa*. As a science journalist and editor, she enjoys understanding and translating the most complex and technical of subjects. She has worked for several international organisations, including as a senior writer for the World Health Organisation in Africa, and has provided communication services to UNESCO, the EU, and international conferences mostly in the health, technology and innovation areas.



Mehita Iqani

Prof. Mehita Iqani is the South African Research Chair in Science Communication at Stellenbosch University. In this role, she leads a research agenda summarised as "science communication for social justice". She is the author and editor of several books on media, consumer culture, luxury, waste, and the Global South.



Motheo Koitsiwe

Dr Motheo Koitsiwe is a proud South African without borders, the first African indigenous scholar to have completed successfully the IKS PhD thesis in African indigenous astronomy (*bolepa - dinaledi*) of Batswana in Botswana and South Africa. He is currently the Director of the Indigenous Knowledge Systems Centre (IKS Center) in the Faculty of Natural and Agricultural Sciences (FNAS) at North-West University (NWU).



Nathan Geffen

Dr Nathan Geffen is a journalist and founder of GroundUp, a media platform for human rights journalism. In 2018 he was awarded a PhD from the University of Cape Town. His thesis considered different algorithms for speeding up the simulation of sexually transmitted infections. He was one of the leaders of the HIV/Aids advocacy group, the Treatment Action Campaign (TAC). He runs two websites: Quackdown is dedicated to debunking untested medical claims, and TB Online reports the latest news and activism related to tuberculosis. He is the author of *Debunking Delusions*, telling the story of how the TAC struggled against state-supported AIDS denialism and quackery in South Africa



Neville Sweijd

Dr Neville Sweijd is director of the Alliance for Collaboration on Climate and Earth Systems Science (ACCESS). ACCESS is an instrument of the Global Change Programme of the Department of Science and Innovation and the National Research Foundation, hosted by the Council for Scientific and Industrial Research. The main purpose of the programme is to provide a platform for multi-institutional and transdisciplinary research on the drivers, mechanisms of manifestation, impacts and applications and responses to the dynamics of earth systems, as they affect the natural world, ecosystem services and human society.



Nomathemba Tasha Siziba

Ms Nomathemba Siziba is a seasoned science journalist dedicated to unravelling the wonders of the world and bringing complex scientific concepts to a broader audience. As a science journalist, her mission is to bridge the gap between scientific experts and the general public.



Rasigan Maharajh

Dr Rasigan Maharajh is the Chief Director of the Institute for Economic Research on Innovation at Tshwane University of Technology. Rasigan also serves as an Associate Research Fellow of the Tellus Institute, Member of the Academy of Science of South Africa, and Ministerial Representative to the council of Rhodes University. His research critiques the contemporary political economy focusing on the global knowledge commons, and the dynamics of science, technology, and innovation.



Sibangani Dube

Mr Sibangani Dube is a multi-skilled freelance journalist, able to work across multiple platforms. He is the former editor of *Prime Focus Magazine* in Namibia and is currently a lecturer at the International University of Management. He holds a BA Hons in Journalism and Communication from Namibia University of Technology, and a postgraduate diploma in Sport, Peace, and Development from the University of the Western Cape, amongst other qualifications.



Sheldon Morais

Mr Sheldon Morais is an experienced journalist and editor, 15 years as a digital editor at Eyewitness News and the past five years as head of news at News24. He believes science and technology journalism is of utmost importance for the industry, the public's access to information in the age of fake news, and the state of democracy on the continent. He is currently Director of communications consultancy, Crafted Communications.



Shezhad Joomun

Mr Shezhad Joomun is an experienced news anchor and reporter at the Mauritius Broadcasting Corporation, where he specialises in business, science, and environmental news. He is fluent in English, French, Urdu, Hindi and Creole, offering solid comprehension of cultural diversity.



Sibusiso Biyela

Mr Sibusiso Biyela is a digital science communicator at ScienceLink where he helps scientists and research institutions make their work accessible to the public. He is a writer at *SciBraai*, and co-producer and co-host of the *Ilukuluku* podcast which discusses scientific topics in isiZulu. He is also a researcher and partner on the Masakhana Decolonise Science project which aims to make science more accessible in Africa by translating scientific topics into six African languages using artificial intelligence technology.



Thando Tenza

Ms Thando Tenza is a PhD trainee in the Equitable Education and Economies Economic (EEE) research division at the Human Sciences Research Council. Her research interest is science communication in the media and using undersized products such as village chickens to achieve no poverty and zero hunger in resource-poor communities.



Thabo Leshilo

Mr Thabo Leshilo is part of the editorial team of *The Conversation Africa*. He is a journalist and editor with 30 years of experience. He is the former editor of the *Pretoria News*, *Sowetan, Sunday World*, and Business Times. His main areas of interest are human rights, politics, labour, transport and small business development.

FACILITATORS



Mandi Smallhorne

Ms Mandi Smallhorne is a freelance science journalist, president of the South African Science Journalists' Association, and vice-president of the World Federation of Science Journalists. With more than 20 years of experience in media and journalism, Mandi has developed and presented training courses and workshops in South Africa, Mozambique, Botswana, and Namibia.



Munyaradzi Makoni

Mr Munyaradzi Makoni is an award-winning journalist with more than 15 years of experience in science journalism. He specialises in story-driven science journalism for a range of national and international publications, including *University World News*, *Africa in Fact, Eos, Hakai* magazine, Inter Press Service, *Mongabay, Nature, Nature Africa, Physics World, The Lancet, The Scientist, Down to Earth, The Tablet, Science, Wired UK* and *Scidev.net.*



Wiida Basson

Ms Wiida Basson is an experienced science communicator and science journalism trainer, currently working as science writer for the Faculty of Science at Stellenbosch University, where she covers research-related news in the physical, mathematical and life sciences. Previous experience include writing for the daily newspaper *Beeld* (now Media24) and the Council for Scientific and Industrial Research (CSIR) and lecturing in the Department of Journalism, Tshwane University of Technology. She is interested in how the social sciences, specifically the mass media, can contribute towards a more sustainable and socially just world.



Zamuxolo Matiwana

Mr Zamuxolo Matiwana is coordinator of the Science Journalism Community Service Project at the South African Agency for Science and Technology Advancement (SAASTA), a business unit of the National Research Foundation (NRF). He is passionate about indigenous languages and the role that they can play in making science communication accessible in South Africa.

A special word of thanks to the members of the technical committee who worked very hard to make this event happen. They are, in alphabetical order:

Anneline Morgan (SADC); Koki Selepe (DSI); Konosoang Sobane (HSRC); Mandi Smallhorne (SASJA); Mandry Ntshani (DSI); Manuel Jackson (SU); Martiale Zebaze Kana (UNESCO); Michael Ellis (NRF-SAASTA); Muchaneta Munamati (UNESCO), Mcnally Patrice Patirishu (UNESCO); Palesa Sekhejane (HSRC); Rasigan Maharajh (TUT); Reaboka Morakabi (SADC); Sigfried Tivana (DSI); Thabang Setlhare (DSI); Thabo Tema (DSI); Wiida Basson (SU); Zamuxolo Matiwana (NRF-SAASTA); Zimasa Nqabeni (DSI).

RESOURCES

The Journalist's Resource

An open-access online publication for journalists, published by the Harvard Kennedy School's Shorenstein Center on Media, Politics, and Public Policy. They provide tip sheets and explainers to help journalists understand academic research methods; find and recognise high-quality research; investigate scientific misconduct and research errors; and avoid missteps when reporting on new studies and public opinion polls.

Know Your Research: Helping journalists understand academic research (journalistsresource.org)

- 5 Things Journalists Need to Know about Statistical Significance
- 5 Common Research Designs: A Quick Primer for Journalists
- 5 Tips for Using PubPeer to Investigate Scientific Research Errors and Misconduct
- What's Standard Deviation? 4 Things Journalists Need to Know
- What's Peer Review? 5 Things You Should Know Before Covering Research

The Open Notebook

The NPO Open Notebook is regarded as one of the leading online sources of training and educational materials for journalists who cover science.

https://www.theopennotebook.com/

The Earth Journalism Network

Developed by Internews, the objective of the Earth Journalism Network is to enable journalists to cover the environment more effectively. Besides training, the EJN also provides Fellowship programs, story stipends, and grants to media organisations.

https://earthjournalism.net/who-we-are

World Federation of Science Journalists

The WFSJ represents 72 science journalists' associations and 10 000 individual science and technology journalists from around the world. The WFSJ encourages strong, critical coverage of issues in science and technology, the environment, health and medicine, agriculture, and related fields.

https://wfsj.org/