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Ethical issues

Trust

Power

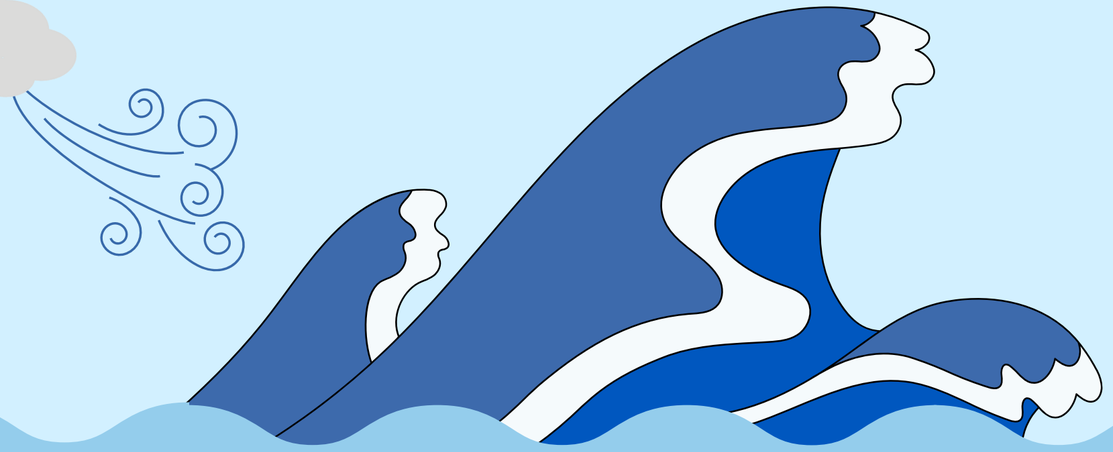
Collaboration

Framing and Sensemaking

Values and Emotion

Underlying Conflicts

Reflective practice



Pre-Crisis

Imminent Crisis

Actual Crisis

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Introduction to the Crisis Navigator

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This Crisis Navigator is designed as a **strategic resource for science communicators**, based on one guiding question:

How can science communicators contribute when a crisis emerges?

The Crisis Navigator bears witness to the complexity of science communication, acknowledging that **science communication is a continuous process** and that there is no one-size-fits-all solution to getting it right. The Crisis Navigator distinguishes between four key crisis phases: pre-, *imminent, actual, and post-crisis*.

The Crisis Navigator **supports effective science communication complementary to crisis communication and creates space for constructive dialogue involving researchers and other stakeholders**, including consideration of when different forms of science communication should take centre stage.

Although each crisis is unique, this Crisis Navigator serves **as a guide for science communicators to better imagine and anticipate what they are - and could be - up against, supporting them** in their role as facilitators and mediators of rapidly-mobilised, trustworthy and evidence-based information.

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Complexity and Uncertainty

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What are good ways to convey the current state of knowledge and uncertainty to the broader public?

Considerations:

Information gaps: What are the knowns and unknowns? How rapidly is knowledge of the crisis evolving? Identify and monitor what information is available to whom, where and when; and what gaps exist or may arise in understanding the situation before, during, and after communicating. To develop appropriate responses to these questions, it can be fruitful to examine science communication practices in other crisis contexts, by comparing and contrasting problems, approaches, and the lessons learned.

Science and evidence: How complex is the science? What is the evidence and does it change? Is there consensus? What are the risks? Consider communicating different perspectives in response to these questions to present a more comprehensive understanding of the issue, while acknowledge limitations in scientific knowledge, including areas of ongoing research or debate. For instance, Expert A may disagree with Expert B on what constitutes good scientific evidence or on which measures to adopt in face of challenge X or Y.

Voice: Who is able to influence the state of knowledge through means such as lobbying, advocacy, protest, (social) media engagement, and so on? Who is seen as credible or trustworthy? Whose voices count? Which voices deserve to be acknowledged, heard, and/or given a public platform – and which ones do not? Weigh the pros and cons of giving voice to particular stakeholders and types of knowledge in society, while remaining responsive to audience concerns and providing opportunities for collective exploration of scientific topics.

Clarity and simplicity: The communication of uncertainty and complexity requires clear and concise language that is accessible to a broad audience, and that avoids jargon and technical terms whenever possible. Ideally, this language breaks down even complex and uncertain concepts into understandable and relatable explanations.

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Underlying Conflicts

What does each stakeholder need?

An underlying conflict refers to a disagreement, often stemming from differences in values or interests among individuals or groups. Unlike overt conflicts that are openly acknowledged, underlying conflicts are less visible but still exert a significant influence on attitudes, behaviors, and interactions. By adopting inclusive, transparent, and participatory approaches that do not shy away from the question “What is at stake for whom and why?,” those involved in the communication of science, first of all science commmunicators, can help to shed light on underlying conflicts, and generate more effective and sustainable solutions to urgent societal issues.

Ethical Issues

How can science communication promote an ethically-sound and responsible crisis response?

Science communicators can facilitate responsibility, prevent misinformation, and support collaborative responses to the challenges at hand. This allows stakeholders to assess the performance of authorities, organizations and hold them accountable for their actions. It can also promote ethical public engagement by fostering trust through transparency, enabling inclusive dialogue, empowering individuals with education, highlighting ethical considerations, addressing societal challenges, building partnerships, and embracing cultural sensitivity. An important consideration is that crises inevitably raise moral or ethical concerns and dilemmas when individuals or organizations are faced with conflicting moral principles and must make difficult decisions that have both positive and negative consequences. For instance, there may be circumstances where the risks of a developing hazard are not fully known yet, but risk communication is needed for the public to be aware of the situation.

Reflect & Act:

Open up & Entertain

Break down hierarchies between science and society and use audience-oriented means of communication

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Framing and Sensemaking

How do different stakeholders frame and make sense of scientific information and science communication?

Whereas framing refers to the way information is presented, sensemaking is about how individuals make sense of the information they receive. With framing, senders structure information to highlight certain aspects of a topic while downplaying others. It is important to be mindful when using terms such as “urgent,” “crisis,” and “issue”. Whereas these terms help to emphasize the exceptionality of a situation, they may remove from view that some problems could have been avoided or that a situation is the result of political neglect of a structural or bigger issue. Framing can significantly influence how an audience perceives, understands, and reacts to scientific information; yet, this does not mean that through framing science communicators can fully control how their audiences make sense of scientific knowledge. Science communication can help different audiences to make sense of scientific information in times of crises by highlighting contradictions and inherent uncertainties, by clearly communicating the actual uncertainty to the public in a clear way, by connecting to different personal situations and social contexts, and by tailoring messages to cultural sensitivities. The latter comprise cultural differences, and requires that communicators adapt messages to resonate with different audiences in ways that respect diverse cultural values and beliefs.

Collaboration

How can constructive exchanges between stakeholders be facilitated?

Collaboration is essential in a crisis to ensure a coordinated, efficient, and effective response. Science communicators in particular are key to facilitating this collaboration by ensuring clear, consistent, and credible communication, engaging the public, and fostering trust and understanding. As science communicators can facilitate constructive exchanges between different stakeholders, publics, and scientists, it is important to facilitate interdisciplinary and transdisciplinary exchanges between these groups.

Reflect & Act:

Broker & Connect

Create connections between stakeholders, acknowledge limits of knowledge and embrace uncertainty

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Values and Emotions

What is the role of values and emotions in science communication – and how do we engage with values and emotions productively?

Values and emotions are key to exploring and communicating the complexity of crises and urgent societal problems. On the one hand, emotions are an important source of information about the values at stake in times of crises. On the other, giving space to emotions and values in communication can render it more effective because it enables connecting with audiences and spurs action.

Power

Who has the ability to influence, shape, and control the framing and sensemaking of stakeholders and publics?

In the context of science communication, 'power' refers to the ability to influence, shape, and control the framing and sensemaking of stakeholders. These processes involve various actors, including researchers, communicators, policymakers, media, and the public, each with differing levels of influence and authority. Questions to consider are: What counts as valid knowledge? Who decides? Whose framing counts? Who has access to new technologies that shape science communication, such as AI? Reflecting on, understanding and navigating these power dynamics is crucial for ethical and effective science communication that promotes informed decision-making, equity, and public trust.

Reflect & Act:

Listen & Include

Open up to a multitude of perspectives and break down barriers that prevent others from accessing resources and knowledge

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Reflective practice

How can science communicators continuously learn from, and adapt to, crisis situations?

It is helpful for science communication practitioners and other stakeholders involved in science communication to regularly reflect on the science communication work they do in any of the crisis stages. Reflective practice means adopting a critical and reflective stance to responses in specific situations, and to understand how these responses are shaped by frames of thought, emotions, assumptions and worldviews. This can help to become sensitive to our own positions and assumptions when it comes to tensions and underlying conflicts that may be exacerbated in times of crises.

Trust

How can science communicators enable, preserve, and build trust in times of crisis?

Science communication in times of crisis should be focused on building and nurturing trust. Dialogical and co-creative forms of science communication can be helpful in establishing trusting relationships with a wide variety of publics before, throughout and after a crisis. Trust can be nurtured by acknowledging emotions and the impact of the crisis on personal situations and by connecting to personal stories. To paraphrase a member of a citizen science group that emerged in the aftermath of the 2011 Fukushima nuclear accident, trust is not a renewable resource. Without it, science communication will not be taken seriously and will fail to deliver.

Reflect & Act:

Analyse & Improve

Reflect on effectiveness of chosen strategies of science communication in the past phases and adapt for future crises, hold yourself and others accountable

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