

Theater as a means of communicating research on climate change: The case of “Cambiare il clima”

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## Backstory

# Theater as a means of communicating research on climate change: The case of “Cambiare il clima”

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**Between 2018 and 2023, the Department of Environmental, Land and Infrastructure Engineering (DIATI) at the Polytechnic University of Turin (PoliTo) implemented a project to advance research and education on climate change monitoring, adaptation and mitigation solutions. As part of their communication efforts, DIATI partnered with Faber Teater to create the play “Cambiare il clima” (in Italian, this means “Change the Climate”).**

**This involved a collaboration between DIATI researchers, communication officers, and Faber Teater. The documentary theater that resulted was premiered at Biennale Tecnologia in 2020 and performed at various venues in Northern Italy, targeting both the general public and students.**

### Beginnings

#### *Introducing the “Cambiare il Clima” project*

“Cambiare il clima” (Change the Climate) is a theater play created by Faber Teater, a theatrical company based in Turin, Italy, in collaboration with the Department of Environmental, Land and Infrastructure Engineering (DIATI) at the Polytechnic University of Turin (PoliTo). The play aims to narrate a new story about the role of science in addressing climate change and to highlight the importance of intertwining

**Above image: From the play: Sebastiano reads Panikkar while Marco plays the piano (picture by Diego Diaz Morales).**



technological progress with individual awareness and more informed economic and political decisions. It balances lightness, irony, and drama to effectively convey its message.

From a scientific perspective, while maintaining a broadly accessible approach, the play aims to unveil the primary directions of scientific and technological research on climate change. Additionally, “Cambiare il clima” encourages reflection on the necessity of an integrated approach to climate change, involving individual citizens, the political and socio-economic spheres, and science and technology. The play emphasizes solutions and opportunities, operating on the assumption that highlighting positive aspects can promote engagement and behavioral change. The target audience for the play were the general public, school pupils aged 14 and older, and university students.

In this backstory, we will describe and analyze the development of the play, its implementation, and its impact.

**Pull Quote 1: “‘Cambiare il clima’ encourages reflection on the necessity of an integrated approach to climate change, involving individual citizens, the political and socio-economic spheres, and science and technology.”**

### *Scientific background of the project—the impact of climate change and climate\_change@polito*

The impact of global warming and climate change on humanity and socio-economic systems is already significant and is expected to increase in the coming decades. The primary strategies in this domain involve monitoring, mitigation and adaptation actions. Monitoring is essential to assess the rate at which climate change effects are occurring and their impact on the environment and society. Mitigation solutions primarily focus on reducing greenhouse gas emissions, while adaptation measures aim to lessen the impact of climate change by acknowledging that some effects are likely unavoidable.<sup>1</sup>

The project climate\_change@polito (cc@polito) was funded by the Italian Ministry of Research under the “Departments of Excellence” funding stream. Implemented from 2018 to 2023, the project facilitated the development of innovative laboratories and field facilities, including the following.

- (1) A van, known as the Moving Lab, equipped with cutting-edge technologies to monitor climate change effects on coastal erosion, air quality, and more.
- (2) The Paleo Lab, a laboratory located within a cave, dedicated to the study and reconstruction of paleoclimate.
- (3) The Glacier Lab, situated on a glacier, for studying the evolution of glacier masses in response to climate change.
- (4) The Core Lab, which includes a rain simulator to investigate the effects of precipitation on air quality, a portable flume to study fish-hydrodynamics interaction (crucial for developing sustainable hydropower systems), and a cold room to analyze the effects of freeze-thaw cycles on materials relevant to civil and environmental engineering.
- (5) The Green Court, an outdoor laboratory designed to test nature-based solutions for mitigating heat island and extreme temperature effects in urban environments, as well as to examine the effectiveness of green infrastructure for grey-water treatment.

Besides research activities, the project also placed significant emphasis on developing new postgraduate degree programs (master degree level) focused on climate change. This highlights the importance of education as a key adaptation measure to combat the spread of unscientific opinions, which unfortunately proliferate through numerous unreliable sources on the internet.

Finally, the project included a comprehensive program of dissemination and communication activities, and included the theatrical show described in this manuscript.

Besides providing a narrative about the various research activities, the play was designed to convey three main messages.

- (1) The first was to clarify the exact meanings of adaptation and mitigation, as they are often confused by the public. This is crucial for raising awareness about their specific roles and complementary functions in combating climate change.
- (2) The second message aimed to inform the audience about the enormous complexity and multidisciplinary nature required to address all the issues associated with climate change. This was a key challenge, as it required developing an inspiring and engaging narrative for the public without compromising scientific rigor.
- (3) Thirdly, the focus was on the concept of uncertainty. When communicating significant challenges like the pandemic or climate change, understanding uncertainty is of utmost importance. It was deemed important to explain that uncertainty should not be an excuse for inaction, either for individuals or decision-makers, as there are effective statistical tools available for making decisions that embrace uncertainty.

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## Art and science

### *Theater as a means for science communication*

Human beings engage in thinking, reasoning, understanding, and planning by sharing stories with one another. We understand that one of the inherent strengths of storytelling lies in its ability to captivate, to immerse, and to transport both the storyteller and the audience into a shared realm. Through this shared experience, individuals emerge somewhat transformed, not only by the characters, events, and facts conveyed in the narrative, but also on a deeper level, through the interaction between the storyteller and the listener. While aspects of storytelling can be found in scientific literature, for instance in Latour and Fabbri,<sup>2</sup> they are not always explicitly articulated in a manner that fully engages individuals outside specific scientific fields or subfields.

For scientific research to reach a broader audience and effectively engage it, translation through alternative expressive languages and media is necessary. Theater is one such medium, increasingly employed for translating scientific knowledge.<sup>3</sup> One of the features of theater relevant for science communication and public engagement is its ability to bring information and issues to life for audiences, facilitated by the co-presence of actors and audience within the same environment. While the stage and the house where the audience sits are separate spaces, the boundary between actors on stage and the audience can be effortlessly and effectively crossed, more so than with other media.

Conveying climate science through mediums like theater becomes even more crucial given the interdisciplinary and inherently complex nature of climate sciences. Climate science serves as the foundational basis from which discourses and actions regarding climate change and the crises it precipitates can occur on both individual and collective level. The challenges of narratively addressing climate change have been underscored by author Amitav Ghosh<sup>4</sup> as a significant imaginative failure. Ghosh has underlined the fact that while modern literature considered highbrow has focused more and more on small events of our everyday lives, climate change regards huge, exceptional, superhuman events.

As we will demonstrate, a potential resolution to this dilemma lies in discussing climate change from the perspective of the small, everyday practices of scientists. These practices—conducted in laboratories and through the use of instruments—are able to address and manage events occurring on a much bigger scale.<sup>5</sup>

### *Making the theater documentary*

The project intended to create a theater play that integrates the languages of theater performance, videos, and music.

The selection of Faber Teater by DIATI was justified by the group's prior exploration of the relationship between science, particularly technology, and humanity (see in particular the technical sheet of "Umano ma non troppo" in [supplemental material Data S1](#) and the trailer of "Lampi di(n)genio in [supplemental material Data S2](#)"). Additionally, the engineering background of the two actors involved, both graduates of PoliTo (in Electrotechnic Engineering and in Computer Engineering) before embarking on their careers as professional artists, was seen as a plus for facilitating a better understanding between the spheres of science and art.

**Inspiration.** In an initial exploratory phase, DIATI's researchers, along with the communication and public engagement team, engaged in discussions with Faber Teater's actors regarding the project's objectives and expectations. DIATI expressed a desire to steer clear of a catastrophist narrative when addressing climate change. This approach aimed not to downplay the urgency of the issue—which was acknowledged as a given—but rather to emphasize the importance of conveying a message that inspires action. It was understood that humans are more inclined to engage in change when they perceive there is room for action and hope, as messages devoid of hope often lead to avoidance. The two parties also deliberated on the narrative to be conveyed, ultimately deciding that the project itself could serve as the central storyline, with the researchers as the main characters. Through the actors' on-stage portrayal, this approach aimed to inspire exploration of various aspects of the climate discourse.

**Production.** During the production phase, which commenced in June 2020, Sebastiano Amadio and Marco Andorno—the artists acting both as authors of the play and actors—along with videomaker Diego Diaz Morales, accompanied various research teams during their activities both in PoliTo's laboratories and in fieldwork settings (see Photo 1 in [supplemental Document S1](#): the artists on the field with the research team of the GlacierLab, picture by Elisa Vanin). The artists primarily engaged with the lead researchers of the five laboratories established within the project (core-lab, greenyard-lab, moving-lab, paleo-lab, and glacier-lab), as well as with their respective research teams. Additionally, they interacted with the Head of the Department, the coordinator of the Department's educational programs, and the coordinator of the "Climate Change" track within the Master of Science program in Environment and Land Engineering. More than 20 people from the Department participated in this process. The Deputy Head of Department for communication and public engagement, along with the administrative staff of the Communication and Social Impact Office, coordinated the interaction process and logistics.

During this phase, the artists observed the researchers' activities and interacted with them over several days. Researchers involved were on principle keen on collaborating to the project and on sharing their daily research life. The outcome of this collaboration was the production of five separate videos, each focusing on one of the research laboratories within the Climate Change project of the Department. These videos followed a short 5-min format, featuring interviews with the researchers and footage of their work in the field. The videos were then incorporated into the theatrical performance, allowing the two actors to showcase them to the audience during the play (see Photo 2 in [supplemental Document S1](#): a moment of the play where an interview to one of the researchers is projected on the rear, picture by Diego Diaz Morales).



One of the scenes of the play: the actors on stage watching the video dedicated to the Paleo-lab (picture by Elisa Vanin).

The initial deep interaction phase between academics and actors was fundamental in revealing the human and emotional dimensions of research, which were then conveyed through videos, sketches, and other creative means (see Photo 3 in [supplemental Document S1](#) with the two actors on stage in one of the play sketches, picture by Diego Diaz Morales). In parallel with the observation phase, a literature study was conducted. This involved the actors delving into relevant literary works, as evidenced by the references provided in the next paragraphs.

Afterward, the process of scriptwriting commenced. The actors undertook the task of reconstructing the overall design of the final play, determining the dramaturgy into which these videos would be integrated. The objective was to craft a coherent narrative path for the audience, while also considering broader themes beyond scientific and technological research, such as individual behaviors, sociology, politics, and economics.

The final script of the play alternates between the videos and dialogues performed on stage. On stage, there are only the two actors and a piano, used to play some live music. The music selections were carefully made, resulting in “Elegy for the Arctic” by Ludovico Einaudi and “Todo Cambia” by Mercedes Sosa.

A role play was also incorporated into the script, inspired by both the “Summary For Policymakers” of the fifth Intergovernmental Panel on Climate Change (IPCC) report<sup>6</sup> and the novel “Solar” by Ian McEwan.<sup>7</sup> Confronting the profound sense of loss that humans experience when confronted with the enormity of this topic, what Amitav Ghosh refers to as the “unthinkable,”<sup>4</sup> Faber Teater aimed to utilize theater—especially this role play segment—to explore various possible reactions. This includes the reactions of different individuals and the different responses that may exist within each of us (see Photo 4 in [supplemental Document S1](#) for a picture of Sebastiano Amadio in the role play, picture by Elisa Vanin).

Other literature that informed the study phase by the actors includes “Ecosophy” by Raimon Panikkar<sup>8</sup> and “A Farewell to Ice” by Peter Wadhams.<sup>9</sup> Professor Wadhams, senior UK sea ice scientist, also contributed to the play with a 5-min interview. In this interview, he discussed his 50-year research activity on sea ice and ocean processes in the Arctic and Antarctic, exploring their effects on the global climate system. Additionally, he shared images he had taken himself over the last decades, offering a firsthand account of the significant changes that have occurred in these extreme areas: “*in working on the ice I think the big change has been the loss of multi-year ice from the Arctic. Multi-year ice is really thick, very heavy ice, mountainous, [...] But now almost none of that is left, it is mostly gone, and so most of the ice is thin, it is called ‘first-year ice,’ it’s flat, thin [...] It’s a different world, it doesn’t look as impressive any more, you can see that very soon there won’t be any ice at all.*” Indeed, the inclusion of the voice of a witness to these transformations was deemed an important element for the play (see Photo 5, picture of multi-year ice, and Photo 6, picture of first-year ice, taken by Peter Wadhams in the Arctic, in [Supplemental Document S1](#)).

The words of Raimon Panikkar, a philosopher, chemist, and theologian, provide a poetic and broader perspective on the relationship between human beings and nature, serving as a fitting conclusion to the show: *“My first body is the one before my eyes. The second is humanity. It is a powerful intuition that belongs to almost every population: humanity is like a family, with only one body, and that body is alive. Our third body is Earth, Nature. We are Earth, we do not merely live on it at our personal use and consumption. We therefore need to treat Nature like we treat our first body: not dominating it or being dominated by it. With friendship, mutual trust, balance.”*<sup>8</sup>

Once the script was finalized, a new phase of interaction between artists and researchers ensued to verify the accuracy of the scientific information and data included in the play. An essential aspect of this phase was the researchers' attitude, as they adhered strictly to providing scientific comments and suggestions, refraining from questioning the artistic choices made by the actors. This behavior was undoubtedly influenced by the trust established during the initial stages of daily interaction.

After receiving the researchers' comments, the final version of the script was produced, and theater rehearsals commenced. This ultimately led to the first performance in November 2020 during Biennale Tecnologia, an event dedicated to public engagement with technology hosted by PoliTo every second year.

The play is structured around two main spaces: the stage and the videos, although these are not the only elements involved. The actors, who appear in both the stage and the videos, serve as a double mediation, enabling the audience (positioned in a third space) to observe the practices of scientists on one hand, and to be addressed directly by the actors on the other.

### Performance and audience feedback

The play premiered on November 15th, 2020, during Biennale Tecnologia at PoliTo. Originally planned as a live performance, new restrictive measures to combat the COVID-19 pandemic in Italy at the end of October necessitated a change in plans. Consequently, the play was video-recorded and screened online, remaining available for on-demand viewing until the end of 2020. A video trailer is available in [supplemental material Data S3](#).

Regarding the online performance, it garnered 340 views during the live streaming and an additional 215 views on-demand from the public, with approximately 100 views from school pupils across four classes. The feedback received was overwhelmingly positive, with some very positive comments from the public, like *“A great effort in documentation to disseminate such a complex topic. It's difficult to offer solutions, hope, and positivity. A sense of powerlessness remains, and in the end, the viewer asks: So what can I do?”* or *“An excellent tool for scientific dissemination, a good mix of in-depth scientific content and incisive language. I watched the show with some 16-year-old students. The kids were attentive and focused for the entire hour, which is no small feat.”* A full list of the comments is available in Italian in [supplemental material Data S4](#).

A noteworthy aspect to highlight is that the collaboration between the academy and theater resulted in a mutually beneficial relationship that enhanced the sustainability of the project. Both partners had strong incentives to disseminate the project: the academy for knowledge transfer and public engagement purposes, and Faber Teater as an additional product to offer at a time when climate change is a prominent topic and festivals and events on environmental and sustainability issues are on the rise. Furthermore, both partners had access to different networks, which had a multiplier effect on the project's visibility and acceptance in various contexts.

Since the summer of 2021, the project has seen significant success, with 13 live performances at theater festivals and research dissemination events, attracting approximately 650 viewers. Additionally, there have been 29 performances in high schools in the Piedmont region, involving approximately 2,500 students.

Furthermore, the play has received notable acknowledgments.

- (1) In 2022, the video dedicated to the PaleoLab (see the video in the [supplemental material Data S5](#)), which is part of the play, won the “Future Earth” award at the Earth Futures Festival. This festival is an initiative promoted by the United Nations Educational, Scientific and Cultural Organization (UNESCO)s International Geoscience Program (IGCP) Project 685: Geology for Sustainable Development and the International Union of Geological Sciences (IUGS).
- (2) The play was selected as one of the works featured in the Climate ChanCe 2022 creative communication competition organized by Shylock - University Theater Center, Venice.

### Challenges and opportunities

#### Perspectives on art-science collaborations

*The researchers' point of view.* Universities worldwide are increasingly tasked with communicating their research achievements to society. For engineering schools like PoliTo, this can be challenging, as technical subjects often struggle to capture attention and establish an emotional connection. However, both PoliTo as a whole and DIATI are actively investing efforts in this direction. PoliTo ranked first among Italian universities for the quality indicator of social impact activities in the assessment conducted by Agenzia nazionale di valutazione del sistema universitario e della ricerca (ANVUR), the Italian National Agency for the Evaluation of Universities, for the period 2015–2019. Additionally, in the specific case of addressing climate change, the urgency of the topic has called for communication strategies that can reach diverse audiences and effectively engage them.

One aspect that researchers found particularly satisfying about this science-art collaboration was the opportunity to communicate not only the results of their research, but also the scientific method and the process that led to those results—the small, everyday practices of the

researchers mentioned earlier. Seeing researchers in their laboratories, even in labs that were still under construction at the time of recording, provided insight into how research is conceived and developed. The interviews with the researchers highlighted the artisanal nature and creativity inherent in scientific and technological research. Prior to conducting tests and experiments, researchers often need to construct their own instruments or adapt existing ones. By showcasing new laboratories, the audience was introduced to the questions that drive research, stimulating curiosity about the outcomes. Moreover, it underscored that the process of building knowledge about climate change is ongoing, not only at PoliTo, but throughout the entire scientific community.

Another important aspect is connected to passion: feedback from the public highlighted the passion communicated by the researchers on stage. According to the artists, this passion emerged spontaneously and was perceived as a positive element by both the audience and the researchers themselves. Viewing their daily activities from a different perspective, as portrayed on stage, helped researchers realize that what they do is interesting beyond the scientific community with which they typically interact. Discovering that their work can evoke emotions in others is an important source of self-motivation.

The project promoters also hope that this passion and enthusiasm may inspire and motivate young people to pursue careers in science. The play has been performed in several schools, and some teachers have commented on its relevance in terms of guiding students in their university orientation.

Another interesting aspect of the play and the work behind it is its ability to bridge various areas of knowledge and expertise. Not only did the play discuss and narrate engineering and natural sciences, but it also did so by employing methods typical of the social sciences, in particular, those used in the study of scientific laboratory communities.<sup>10–12</sup> The early stages of the theatrical research, including the study of publications produced by the DIATI community and contact with its researchers, align with the preparatory investigations and the commencement of ethnographic fieldwork. The utilization of interviews, field observation, and documentation of group practices also mirrors the core elements of the ethnographic method. Moreover, the integration of videos into the script resembles the process of compiling field notes and maintaining an ethnographic diary, both essential tools in ethnographic data collection.

It's worth noting that in traditional ethnographic work, field notes and diaries may not necessarily be included in the final output, nor do they always explicitly reflect the position and presence of the ethnographer in the field—whereas they appear more systematically in research starting from the “reflexive turn.” However, Faber Teater extensively incorporated such documentation from the field into the final production, which served direct communication and popularization purposes distinct from those of ethnographic research.

Internally, a positive aspect that resonated with the researchers and the Department as a whole was the play's potential to provide an overview of the entire “climate\_change@polito” project and its various research streams. DIATI is a department that encompasses 14 different research groups comprising about 80 researchers, in addition to a large number of research assistants and PhD students. It is often challenging to have a precise understanding of the research activities conducted by other groups within the department. The play offered a much more engaging and stimulating format compared to a series of seminars for achieving this objective.

Moreover, the play also helped to better appreciate the communal nature of scientific production within the Department, fostering a sense of belonging and cohesion among DIATI researchers. It created a feeling of being part of a community, with each research group seen as islands in an archipelago, interconnected and contributing to the broader research efforts of the department.

In conclusion, based on our experience, we can affirm that a theatrical play and the collaborative effort required to produce it can effectively serve as an interdisciplinary mediator. Not only does it showcase the research community to external audiences, but it also has the remarkable ability to foster a sense of community among insiders. The process of creating and staging the play has the potential to strengthen the bonds within the research community, uniting individuals across disciplines and research groups.

**The artists' point of view.** The true challenge for the artists in creating “Cambiare il clima” was to convey the passion and enthusiasm of the researchers, along with the exciting dimension of scientific research, inspiring the audience with complex concepts while maintaining scientific rigor. The play effectively communicates the human, practical, and artisanal aspects inherent in both research and theater. The artists delved into the conceptual and scientific dimensions of the research to effectively communicate them, while simultaneously raising awareness among researchers that their work has the power to evoke emotions.

In spending time with the researchers of the Department, and simultaneously engaging in reading, studying, and conversing with them to gain a comprehensive understanding of their work, the two actors endeavored to integrate their dual training as engineers and artists. They sought a common ground between art and science, recognizing that creativity in both realms thrives when rooted in a solid foundation of competence, knowledge, and training.

Pull Quote 2: “Seeing researchers in their laboratories, even in labs that were still under construction at the time of recording, provided insight into how research is conceived and developed.”

Pull Quote 3: “We hope that this passion and enthusiasm may inspire and motivate young people to pursue careers in science”

On one hand, they served as mediators between the technical intricacies of the research and the audience, contemplating which aspects resonated with them as artists and which aspects were most compelling or urgent to communicate to the public. They were mindful not to succumb to facile emotions while maintaining scientific precision.

They began with the premise that the topic of climate change inherently evokes emotions such as fear, anxiety, a sense of helplessness, and anger in the audience. In parallel, they endeavored to bring positive emotions to the stage, including the passion and enthusiasm that drive the researchers, as well as hope. They aimed to strike a balance between the scientific dimension and the human dimension, ensuring that both aspects were effectively conveyed to the audience.

One crucial insight derived from the observation period with research groups was the opportunity to depict the tangible, hands-on dimension of what researchers engage in every day. This allowed for a more authentic portrayal of the research process, providing audiences with a glimpse into the real-world activities and challenges faced by scientists in their pursuit of knowledge.

As previously highlighted, one of the primary challenges for the artists was to convey the complexity of the topic, its study, and potential solutions. They recognized the limitation of delving into scientific complexity at a technical level due to the chosen language style, but they aimed to communicate the complexity to the audience, nonetheless. Thus, it became a matter of striking a balance between simplicity and complexity in the show, aiming to convey the idea that science does not offer easy or definitive answers to profoundly complex problems. Instead, they emphasized that this complexity is inherent to scientific research and represents its strength rather than a weakness.

## Conclusions

Despite previous experiences of collaboration between art and science implemented before by the Department of Environmental, Land and Infrastructure Engineering of the Polytechnic University of Turin, especially in the domain of visual arts and exhibitions, this was the first experience of theater about science. The trial can be positively evaluated, both in terms of audience feedback and in terms of mutual enrichment and cross-fertilization between the researchers and the artists involved.

To summarize some of the strengths of the “Cambiare il clima” project, the following elements stand out.

- (1) The play effectively blends drama and irony, enabling the audience to engage with a highly sensitive topic with a positive attitude.
- (2) The play honors and showcases researchers by bringing them to the stage, recognizing the importance of involving researchers in science communication efforts. The integration of scientists and artists in practice appears to be a successful approach, albeit uncommon. While the dialogue between science and theater is not novel, the active involvement of research groups represents an innovative element. The play eschews a traditional narrative structure with a beginning, middle, and end; instead, the story itself is the research project, providing an opportunity to delve into not only the research outcomes but also the research methods, instruments, and processes.
- (3) Certain segments of the script are crafted to provoke spectators to introspect about their stance on the topic, refraining from offering definitive answers or moral direction. The play and its methodology resonate with some of the most pertinent approaches to engaging with the climate crisis, as proposed by Bruno Latour. Latour advocates for interdisciplinary approaches that facilitate dialogue among scientists, politicians, activists, and citizens, thereby challenging the conventional separation between “nature” and “society.” This shared commitment to exploring complexity serves as an antidote to skeptical, negationist, and catastrophist attitudes, as highlighted in the Faber Teater play through role-play characters such as the “cynic” and the “comfort-mist.” While these attitudes may maintain a distance from the issue, both Latour’s principles and Faber Teater’s work represent collective efforts to actively engage with the climate crisis.
- (4) There is mutual interest in continuing to promote the dissemination of the play in Italy and abroad. The solution of featuring researchers in videos proved to be successful practically, as multiple performances would be incompatible with their teaching and research commitments.
- (5) The methodology employed in the “Cambiare il clima” project has proven to be replicable, as evidenced by a subsequent collaboration with Faber Teater resulting in a new theatrical documentary titled “Fish in Troubled Waters.” This production emerged as an outcome of the RIBES (River Flow Regulation, Fish Behaviour, and Status) project, which received funding from the European Union Horizon 2020 Research and Innovation Program under the Marie Skłodowska-Curie Actions.

In conclusion, we believe it is important to highlight some areas that require improvement or further development. Firstly, assessing the impact in non-quantitative terms, including considering long-term monitoring, is crucial. Secondly, there is a need to update data and certain sections regularly, as research in this field evolves rapidly, along with human attitudes and behaviors.

## SUPPLEMENTAL INFORMATION

Supplemental information can be found online at <https://doi.org/10.1016/j.isci.2024.110384>.

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“Conclusions,” “Results,” “Challenges and Opportunities,” except, for this last section, the comparison with social research methods written by Lara Giordana and the paragraph about interdisciplinarity written by Micol Rispoli, who also wrote the paragraph about the resonance between the play and proposal coming from scholars of the Social Studies of Sciences and Technology’s field; Costantino Manes has written “Scientific background of the project”; Alvise Mattozzi has written “Theatre as a means for science communication”; and Marco Andorno and Sebastiano Amadio have written “Description of the Methodology: Theater Documentary.”

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