A YEAR OF CONNECTION,
COLLABORATION, AND CHANGE

# ELSI PR OFFICE ANNUAL REPORT FY2024

EARTH - LIFE SCIENCE INSTITUTE

*“This was my first time meeting real scientists. Their stories made science feel more human and possible.” (age 15)*

*“I didn’t know science could be connected to so many things. It was exciting and inspiring.” (age 17)*


# Inquiry that Connects, **Science that Inspires**

Welcome to the ELSI PR Office Annual Report for FY2024, presenting our achievements, growth, and continued commitment to excellence in public engagement and science communication.

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# Executive Summary:

ELSI strengthened its role as a globally engaged research institute in FY2024, expanding the reach of its scientific communication, enhancing public engagement, and advancing dialogue at the interface of science and society. The FY2024 also coincided with a major institutional transition: in October 2024, the host university of ELSI, formerly Tokyo Institute of Technology, merged with Tokyo Medical and Dental University to form the new Institute of Science Tokyo. Despite this significant reorganisation and rebranding at the university level, ELSI maintained strong outreach continuity and public visibility throughout the year.

A total of 81 articles were published on the ELSI website, including 19 press releases and research highlights, which together received more than 4,600 online views. These outputs ensured the regular dissemination of research findings and institutional news. ELSI also achieved 306 instances of media coverage across international science news platforms and major Japanese media outlets, significantly amplifying public visibility of its research.

Direct public engagement remained a core activity, with 30 outreach events delivered throughout the year, including public lectures, school visits, exhibitions, and Science Cafés. These events were delivered bilingually, reflecting ELSI's commitment to engaging both Japanese and international audiences. The Annual Public Lecture, attracting 148 participants, served as a flagship event promoting scientific dialogue with society.

ELSI also invested in developing science communication expertise, hosting 12 training events and supporting the two graduate-level courses. These initiatives supported researchers in communicating responsibly and effectively about complex scientific topics. The science–art residency programme continued to foster new forms of engagement by connecting scientific inquiry with artistic perspectives, broadening the cultural reach of origins science.

Together, these activities reflect a coherent outreach strategy that integrates research communication, public engagement, media impact, and capacity building. The outcomes achieved in FY2024 reinforce ELSI's identity as a research institute that values openness, collaboration, and public connection, building meaningful bridges between scientific discovery and society.

# Introduction

Public engagement and science communication are integral to ELSI's role as a center of the World Premier International Research Centre Initiative (WPI). The institute is not only committed to advancing cutting-edge research into the origins and evolution of life but also to **sharing scientific knowledge widely and fostering informed dialogue between science and society**. In keeping with the WPI mission of global visibility and societal relevance, ELSI's outreach strategy emphasises openness, accessibility, and engagement across cultural and disciplinary boundaries.

ELSI's outreach and communication activities serve several key purposes. They help to **make research accessible to diverse audiences**, including students, educators, policy-makers, and the general public. They **support public trust in science** by communicating research with transparency and context. They also **contribute to scientific capacity building**, equipping researchers with the skills needed to communicate complex ideas responsibly. Importantly, outreach at ELSI is not limited to dissemination; it encourages **two-way interaction, inviting curiosity, feedback, and participation in scientific exploration**.

This annual report provides an overview of **outreach and science communication activities conducted in FY2024**, highlighting how ELSI connected research to society through media engagement, public programming, educational initiatives, and interdisciplinary collaboration.

The report also reflects on emerging themes, such as the increasing importance of bilingual communication, interdisciplinary engagement, and narrative approaches to science communication.

The report is organised into five sections:

1. **Research Communication** – dissemination of research through press releases, highlights, media coverage, digital platforms and publications
2. **Research Engagement** – lectures, school outreach, exhibitions, Science Cafés and other public-facing programmes
3. **Science Communication Initiatives** – professional development activities and graduate education
4. **Science–Art Collaboration** – creative engagement linking science with cultural expression
5. **Evaluation and Future Priorities** – key insights from FY2024 and strategic directions for FY2025

Through these efforts, ELSI continues to build a research culture that values public connection alongside scientific excellence. The activities summarised in this report reflect the institute's commitment to communicating science that is **credible, relevant, and meaningful** to society.

# 2. Research Communication

## 2.1 Press Releases and Research Highlights

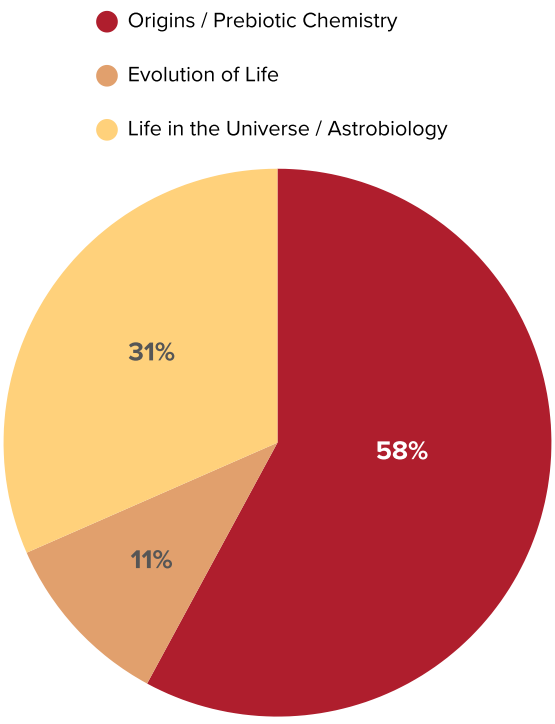
In FY2024, ELSI produced **19 research communication outputs in English and Japanese**: 9 press releases and 10 research highlights. These covered a wide range of topics across ELSI's three core research fields — **Origins / Prebiotic Chemistry, Evolution of Life, and Life in the Universe / Astrobiology** — reflecting the institute's interdisciplinary scope.

Analysis of website engagement data suggests a clear preference among audiences for content that offers scientific context and narrative explanation. While press releases received 1,746 views, research highlights achieved 2,875 views, indicating greater resonance with interpretative, story-driven formats that connect research findings to broader scientific questions.

The distribution underscores ELSI's strength in prebiotic chemistry research, which dominates outreach communication, while also ensuring visibility for planetary and evolutionary studies. Notably, several outputs bridged multiple fields — such as hydrothermal vent nanostructures (chemistry + astrobiology) and protocell models from recycled materials (chemistry + sustainability).

Beyond press releases and highlights, the ELSI website served as a dynamic hub of information throughout FY2024. On average, **1.5 articles per week** were published, bringing the annual total to **81 pieces of content**. These included research articles, event announcements, seminar reports, and institutional updates. The steady rhythm of publication ensured that ELSI maintained a **consistent public presence**, offering regular opportunities for audiences to engage with the institute's scientific discoveries and activities. This continuous flow of material not only sustained visibility but also reinforced ELSI's role as an active and outward-looking research community.

Distribution across fields:



# 2. Research Communication

## 2.2 Media Coverage

ELSI's research received 306 instances of media coverage in FY2024, spanning a wide range of outlets from international science news platforms to mainstream Japanese media. The coverage illustrates both the global relevance of ELSI's discoveries and their resonance with diverse audiences curious about the origins of life and planetary science.

**International reach:** Articles appeared in outlets such as Universe Today, Phys.org, Cosmos Magazine, ScitechDaily, Astrobiology.com, and Earth.com. These features often highlighted findings with broad astrobiological implications, such as the discovery of organic matter in Martian sediments, studies of deep-ocean nanostructures, and constraints on protocell formation. The international coverage underscored ELSI's standing as a research institute contributing to global debates on life's beginnings and planetary habitability.

**Domestic visibility:** Japanese media including NHK, Nikkei, Asahi Shimbun, and Mitsubishi Electric DSpace regularly reported on ELSI's work. Stories were often linked to high-profile discoveries or events, such as the institute's contributions to planetary exploration missions and its leadership in science communication. Domestic coverage reinforced ELSI's role within Japan's science ecosystem, making cutting-edge research accessible to the public in Japanese.

*"I learned a lot of things that are not in textbooks. It made me want to study more science." (age 16)*

**Media attention clustered around three key areas:**

1. **Prebiotic chemistry and protocells** — including forgotten chemical reactions, the role of calcium in molecular asymmetry, and protocell formation from polyesters.
2. **Planetary science and astrobiology** — Martian sediments, Saturn's rings, and Enceladus' ocean were particularly compelling to the press.
3. **Evolutionary biology** — features on genome duplication and the ancient protoribosome emphasised ELSI's contributions to understanding life's evolutionary transitions.

By achieving coverage across both specialist science journalism and mainstream cultural outlets, ELSI not only disseminated its research but also shaped public discourse on humanity's place in the cosmos. Importantly, several stories were republished across networks (e.g. Phys.org and Scienmag), multiplying their reach and impact.

Credit: Science Tokyo HS

# 2. Research Communication

## 2.3 Publications

In addition to digital communications, ELSI produced a suite of publications in FY2024 that served both as outreach tools and evaluation insights. Three major publications were released:

1. **Origins Newsletter Vol. 12** – In this issue, ELSI scientists present interdisciplinary research on the origins of life, combining biological evolution, experiments simulating artificial virus evolution, and laboratory recreations of early Earth's atmosphere and oceans to probe the chemical pathways that may have underpinned life's emergence. The edition also features a profile of a graduate student in the ELSI course and their experience within the institute's interdisciplinary research environment.
   *doi.org/10.5281/zenodo.17402423*
2. **Executive Summary: Lorentz Astrobiology Communication Workshop (2024)** – This publication features the discussions and outcomes of an international workshop on communication in astrobiology, emphasising best practices for communicating speculative and frontier science. It served as both a record for participants and a resource for the broader community, both in astrobiology and science communication.
   *doi.org/10.5281/zenodo.17394453*
3. **Executive Summary: Japan SciCom Forum (JSF2024)** – Documenting the sixth national gathering of science communicators in Japan, this report captured key themes, lessons learned, and collaborative opportunities emerging from the event. It positioned ELSI as a key supporter in shaping Japan's science communication landscape.
   *doi.org/10.5281/zenodo.17394312*

Together, these publication outputs strengthened ELSI's role as both a research institute and a communication hub. They offered stakeholders accessible, thoughtfully designed summaries of complex discussions and ensured that ELSI's contributions to science communication remain visible and citable in the long term.

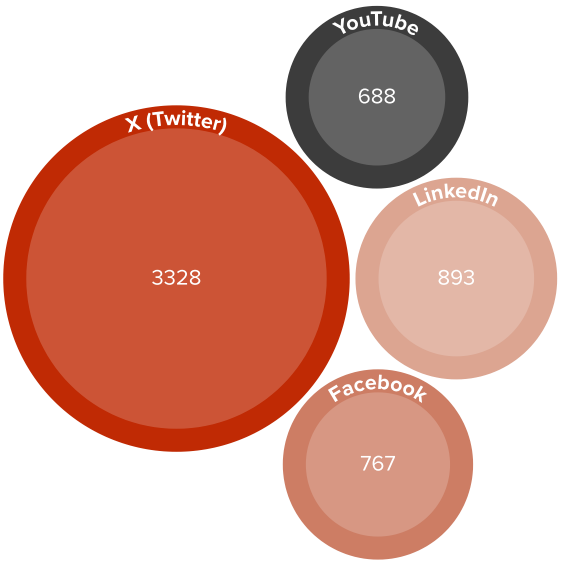


JSF
Japan SciCom Forum

# 2. Research Communication

## 2.4 Social Media and Online Reach

ELSI maintained a consistent and multi-platform digital presence throughout FY2024, using X (Twitter), Facebook, LinkedIn, and YouTube to reach different segments of its audience. The strategy of posting weekly updates ensured that new content was continually visible, supporting both short-term engagement with research outputs and long-term growth of audience networks.




Each platform played a distinct role. X remained the fastest-moving channel, enabling rapid dissemination of news, publications, and event announcements to an international audience. Facebook provided a more community-oriented space, particularly useful for sharing updates in Japanese and connecting with domestic followers. LinkedIn demonstrated steady growth as a professional-facing channel, enhancing visibility among academics, communicators, and institutional partners. YouTube, while smaller in subscriber base, was strategically significant: it served as an archive for seminars, public lectures, and recorded events, extending the reach of ELSI's programming well beyond live audiences.

Taken together, ELSI's digital platforms reinforced the institute's reputation as a **globally connected and outward-looking organisation**. While follower numbers remain modest compared to larger institutions, the emphasis on quality engagement and bilingual communication ensured that content was both accessible and relevant to diverse audiences. Looking forward, there is scope to further expand video and multimedia formats, capitalising on growing demand for visual storytelling in science communication.

Overall, ELSI's research communication activities in FY2024 demonstrated both **breadth and depth**. Press releases and research highlights provided timely updates on discoveries, while media coverage extended these stories across domestic and international platforms. The institute's steady online output – **averaging over 80 articles across the year** – maintained a continuous public presence and ensured that research remained visible beyond the laboratory. Social media channels complemented these efforts, offering accessible entry points for global and local audiences alike.

Thematic analysis revealed that prebiotic chemistry remains the most prominent field represented in communications, reflecting ELSI's strategic leadership in this area, while significant attention was also given to evolutionary transitions and planetary habitability. Printed publications such as the Origins Newsletter and workshop summaries provided tangible records of ELSI's thought leadership in science communication. Taken together, these efforts highlight how ELSI has built a **multi-layered communication ecosystem**, integrating digital, print, media, and social platforms to connect research with society.

# 3. Research Engagement

## 3.1 Outreach Activities

In FY2024, the ELSI Public Relations Office organised a total of 30 outreach activities, reflecting a strong commitment to connecting research with wider society. These activities included public lectures, school visits, exhibitions, and informal science cafés, each tailored to specific audiences and delivered in multiple languages.

Language balance was a notable feature of the programme. Approximately 90% of public lectures and school activities were conducted in Japanese, ensuring accessibility to local communities and students. In contrast, 90% of science cafés were held in English, reflecting their orientation towards international residents, visitors, and the global scientific community. Exhibitions were presented bilingually, bridging both audiences and demonstrating ELSI's inclusive approach to outreach.

A highlight of the year was the ELSI Annual Public Lecture 2024, which attracted 148 participants. This flagship event showcased ELSI's cutting-edge research and provided a rare opportunity for the public to directly engage with scientists through lectures and Q&A sessions. Participant feedback indicated strong appreciation for both the scientific content and the opportunity for dialogue.

ELSI School Visit outreach programme formed a significant component of ELSI's engagement portfolio in FY2024, with several Japanese and International schools joining. These visits provided students with exposure to origins-of-life research, laboratory environments, and direct interaction with researchers.

Post-visit surveys demonstrated a consistently positive impact on participating students:

| Survey Indicator | Result (average across schools) |
|---|---|
| Students who enjoyed the visit | 93% |
| Students who learned something new | 95% |
| Students who want to learn more about science | 88% |
| Students who had never met a scientist before | 72% |

Exhibitions also played a significant role in sustaining visibility, offering interactive experiences for audiences across different age groups. These exhibitions combined scientific content with accessible storytelling and design, underscoring ELSI's ability to communicate complex concepts in engaging formats.

Overall, outreach activities in FY2024 reinforced ELSI's dual identity as a **local institution deeply connected with Japanese society** and an **international hub for dialogue on the origins of life and astrobiology**.

# 3. Research Engagement

## 3.2 Science Communication Initiatives

Alongside public outreach, ELSI placed strong emphasis on advancing the practice of science communication itself during FY2024. The institute organised **12 science communication events**, which provided platforms for researchers, communicators, and students to critically engage with how science is shared and understood.

A notable highlight was the series of **masterclasses co-hosted with The Japan Times and Leiden University**, which explored professional techniques for translating complex research into compelling narratives for wider audiences. These sessions equipped participants with practical tools such as framing scientific uncertainty, working with journalists, and adapting messages to different cultural contexts.

In addition, the PR Office supports the ELSI faculty, who contribute directly to education through the **teaching of two graduate-level courses on science communication**. These courses integrated theory with practice, ensuring that students not only learned principles of effective engagement but also applied them through project-based activities. The courses provide support towards the ELSI PR Office by engaging in activities (e.g., producing engaging posters for exhibitions). By embedding communication training within graduate education, ELSI reinforced its commitment to preparing the next generation of scientists to operate confidently at the interface of research and society.

Collectively, these initiatives underscored ELSI's growing reputation as a **centre of excellence in science communication** in Japan and internationally. They also strengthened networks with academic partners, journalists, and policymakers, creating opportunities for long-term collaboration beyond the institute itself.

*"I enjoyed being able to ask questions directly. The explanations were clear and easy to understand." (age 11)*

# 3. Research Engagement

## 3.3 Science–Art Residency

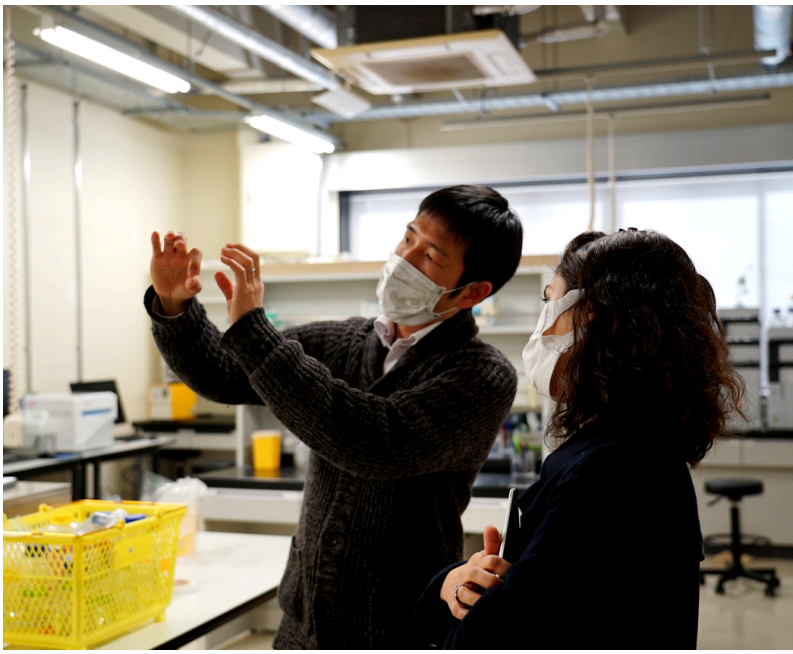
In FY2024, ELSI continued to advance interdisciplinary engagement through the integration of art and science, with a strategic focus on developing new forms of public connection beyond traditional communication. While previous years hosted artist residencies, FY2024 shifted emphasis toward designing a larger-scale science–art initiative to be implemented from FY2025 onwards. This signalled an evolution from exploratory collaborations to structured programme development with institutional partners.

A major outcome of this year's efforts was the planning of a new flagship project titled Echoes of Ryugu: Exploring the Cosmic Tapestry through Science Art. Designed in collaboration with the Institute of Space and Astronautical Science (ISAS), JAXA and artist Aoi Suwa, the project draws inspiration from the Hayabusa2 mission and the extraterrestrial samples returned from asteroid Ryugu. These samples carry rich scientific value and profound cultural meaning as physical traces of the early Solar System. The project uses them as a platform to engage the public with questions about cosmic origins, material histories and humanity's relationship with the universe.

The project consists of three integrated components:

- Artistic interpretations based on the material and symbolic narratives of Ryugu grains
- An immersive interdisciplinary exhibition combining science, design and creative media
- Educational dialogue exploring how scientific and artistic methods can coexist

The project was planned and developed during FY2024, including conceptual design, collaboration planning and partner engagement. It will be implemented in FY2025 as part of ELSI's commitment to interdisciplinary public engagement and cultural outreach. Once launched, Echoes of Ryugu is expected to significantly expand ELSI's public interface, connecting space science, planetary research and society through accessible and creative formats.



*"The lab visit helped me understand science better because I could see the experiments and equipment in real life." (age 15)*

# 4. Evaluation and Insights

The outreach and engagement activities of FY2024 reveal several important insights into how ELSI connects with society and the global research community.

**Breadth of engagement** was a defining feature. With 30 outreach events, 19 press releases and research highlights, 81 website articles, and 306 pieces of media coverage, ELSI maintained a strong and multi-layered presence across platforms. Activities reached audiences in Japan through lectures, schools, and exhibitions, while simultaneously engaging international communities via science cafés, online media, and social networks.

**Depth of interaction** was equally important. Science cafés, masterclasses, and the science–art residency emphasised dialogue and collaboration, moving beyond one-way dissemination. Participants were not only informed but invited to question, reflect, and contribute to discussions about origins science, astrobiology, and their broader societal implications.

**Qualitative feedback** highlighted strong engagement with laboratory tours, opportunities to ask questions during discussions, and the chance to learn about real scientific careers. Many students reported feeling more motivated to study science and appreciated hearing how researchers developed their interest in the field. These findings indicate that ELSI's school visit programme not only supports science learning but also contributes to broadening participation in STEAM and strengthening connections between research and education.

**Thematic balance** reflected ELSI's research priorities. Prebiotic chemistry dominated communications (58%), with significant contributions from planetary habitability (31%) and evolutionary biology (11%). This distribution aligns with ELSI's core strengths, though it also highlights potential areas for greater emphasis, particularly on evolutionary themes, in future outreach.

**Modes of communication** showed clear differences in audience reception. Research highlights consistently outperformed press releases in online readership, underscoring the value of narrative, interpretive formats that connect research to broader questions. Similarly, bilingual provision (Japanese and English) proved essential for accessibility, allowing ELSI to engage both domestic and global audiences effectively.

Finally, **institutional positioning** was reinforced by outputs such as the Origins Newsletter and executive summaries, which not only communicated outcomes but also placed ELSI at the forefront of science communication leadership in Japan. Together, these efforts positioned the institute as a model for how cutting-edge science can be embedded within wider cultural, educational, and societal contexts.

# 5. Looking Ahead – FY2025

Building on the achievements of FY2024, the PR Office will pursue several priorities in the coming year to deepen the impact of ELSI's outreach activities:

**1. Expand Bilingual Engagement**
ELSI will continue to strengthen the balance between Japanese and English programming. While outreach in Japanese ensures accessibility to local communities, expanding English-language outputs will further embed ELSI in global conversations on astrobiology and the origins of life.

**2. Enhance Evaluation Frameworks**
Developing more systematic ways of measuring outcomes—through participant surveys, digital analytics, and impact assessments—will provide stronger evidence of outreach effectiveness. This will also allow ELSI to refine activities in line with audience needs and funder expectations.

**3. Diversify Digital Storytelling**
There is a growing demand for multimedia content, particularly video and interactive formats. Building on the success of YouTube seminars, ELSI will experiment with short-form videos, podcasts, and visual explainers to reach wider demographics.

**4. Strengthen Science–Art Collaborations**
The science–art residency has proven effective in opening up new forms of dialogue. FY2025 will see an expansion of art–science collaborations, with an emphasis on co-created projects that can be exhibited both within Japan and internationally.

**5. Scale up International Partnerships**
Collaborations with institutions such as The Japan Times and Leiden University demonstrated the value of cross-sector partnerships. In FY2025, ELSI will seek to extend its network of partners across the Asia–Pacific and global science communication communities.

**6. Highlight Underrepresented Research Themes**
While prebiotic chemistry has dominated recent communication, more emphasis will be placed on evolutionary biology and planetary habitability, ensuring a balanced representation of ELSI's research fields in public-facing materials.

Through these priorities, ELSI aims to strengthen its role not only as a research institute but also as a **thought leader in science–society dialogue**, demonstrating how fundamental science can inspire, inform, and connect with diverse audiences worldwide.

*“I was inspired by hearing how the researchers started their careers. It made me think that I could also work in science.” (age 14)*

*“The lecture extended my thinking and helped me understand how research is done in real life.” (age 15)*

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