SnT 2021
CTBT: SCIENCE AND TECHNOLOGY CONFERENCE

CTBTO
PREPARATORY COMMISSION

Outreach and Education through Museums and Cultural Centers

Cristopher Allan Cruz Colorado

P5.3-681

YOUTH FOR CTBT

POSTER

Outreach and Education through Museums and Cultural Centers

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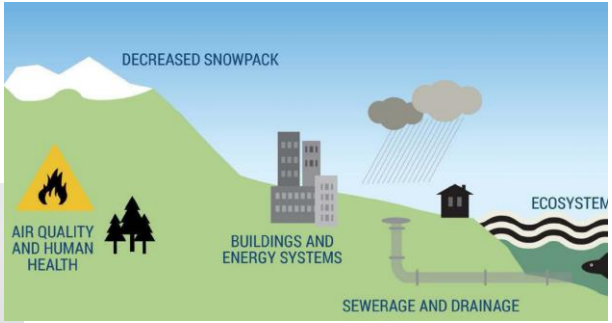
OUTLINE



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ABSTRACT

- The creation of the CTBTO Youth Group is just one example of successful outreach and education being made accessible for individuals not already involved in nuclear/security circles.
- The entry into force of the Treaty is not just dependent on high-level talks but also influenced by civil-society. This is where museums, cultural, historical, and scientific centers are necessary for the communication of the CTBTO, the Treaty, etc. into the public consciousness.
- Such examples already exist to talk about nuclear testing and climate change (i.e., "Godzilla: A Living Atomic Bomb" & "Nuclear Contamination and Climate Change" by Natural History Museum of Los Angeles County x The Los Angeles Times) and natural radiation (i.e., "Radioactivity in the Natural World" by Naturhistoriche Museum Wien).
- It would be in the organization and the treaty's best interest to explore new avenues for awareness and promotion as these learning centers are inclusive and non-discriminatory; possibilities of collaboration include but are not limited to, side events/panels, youth programs, exhibits (temporary and permanent).

nhm naturhistorisches museum wien

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INTRODUCTION

Case Study 1: Nuclear Contamination and Climate Change Panel

- Event was launched after the debut of the temporary “Godzilla: A Living Atomic Bomb” exhibit/showcase at the Natural History Museum of Los Angeles County.
- *Godzilla* showcase blended and dissected fact (real life nuclear tests) and fiction (movie monsters) with a bit of culture and history (from the Marshall Islands).
- Museum x Los Angeles Times Panel offered a deep dive into the current status of Bikini Atoll, the Nuclear Waster Repository (Tombstone), and the threat of rising seas.
- Panel was female led and had a special participation from a CTBTO Youth Group member.
- Full Panel available through Apple Podcasts at: https://podcasts.apple.com/us/podcast/nuclear-contamination-and-climate-change/id350217062?i=1000472103311

Nuclear Contamination and Climate Change: A Discussion with *Los Angeles Times* Reporter Susanne Rust

NHMLAC and the *Los Angeles Times* invite you to join journalists, scholars, activists and community leaders in a discussion at the NHM about nuclear contamination and climate change in the Marshall Islands, a Pacific nation spread across more than 800,000 square miles of ocean in the central Pacific. Attendees will also be able to view *Godzilla: A Living Atomic Bomb*, a small exhibition that focuses on the real-life nuclear tests carried out on Bikini Atoll that inspired the monster, which is on display on the second floor of NHM through April 19, 2020, as well as special collections from the Museum's Anthropology Department.

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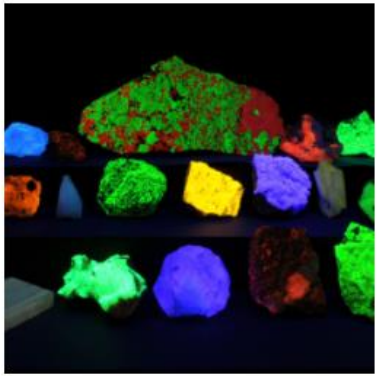
Case Study 2:
Radioactivity in the Natural World (Natürliche Radioaktivität, kosmische Strahlung und Lumineszenz)

- Permanent exhibit at the Naturhistoriches Museum Wien.
- Exhibition provides a rare opportunity to learn about naturally occurring radiation.
- The museum successfully manages to breakdown the different types of radiation that can be found out in the world—and even outside our world—helping break down misconceptions about the term and topic due to its [controversial] associations.

Permanent Exhibitions



Radioactivity in the natural world

from 26. May 2020

A new part of the permanent exhibition in Hall 4 focuses on radioactivity – from natural radioactivity to geological nuclear reactors and minerals that glow in the dark.

Special exhibition: "Natural radioactivity, cosmic radiation and luminescence"

Natural radioactivity
Radioactivity often gets a bad press. Many people think that radioactivity is always artificial, but in fact it is a part of our natural environment – man-made radioactivity only accounts for around a third of all radioactivity that we are exposed to. Therefore, two thirds come from nature, most as a result of decaying natural radioactive substances and from cosmic radiation. Radioactivity itself was only discovered by chance. In 1896, during research on the fluorescence of natural minerals, Henri Becquerel made a mistake in an experiment and ended up finding a previously unknown type of radiation in uranium-rich materials.

Radioactivity includes various types of radiation – for example, helium nuclei occur as alpha radiation, electrons as beta radiation, and electromagnetic radiation as gamma radiation. These are released during the decay of naturally occurring unstable isotopes, which have formed, for example, in the interior of stars.
Energy-rich cosmic radiation comes not only from the Sun, but also from distant galaxies. By interacting with Earth's atmosphere, this cosmic radiation results in additional particles that constantly penetrate the human body.
A special detector in the exhibition shows "live" images of this cosmic radiation.

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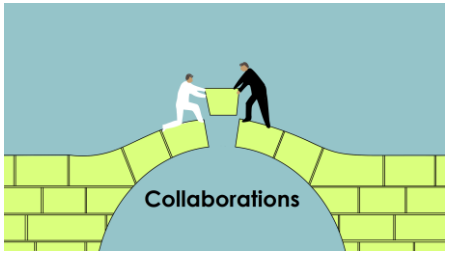
METHODS

A Step-by-Step Process:

1. Establish a line of communication in good faith with a Museum/Cultural Center.
2. Hash out potential avenues for collaboration and cooperation.
3. Proceed with a relatively normal plan of action, as one would with any other side event—akin to guest lectures at Universities.
   a. Include at least one interactive activity or provide am obvious call to action/promotional piece—preferably near the end so that audiences have a higher chance of memory retention.
4. Perform an after-event survey for a better analysis on the efficacy such events have in generating awareness.



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METHODS

Where CTBTO (and the Youth Group) can come in most strongly for potential collaborations:

(INFO TAKEN FROM CTBTO YOUTH GROUP INTRODUCTORY CURRICULUM):

RADIONUCLIDE TECHNOLOGY AND CLIMATE CHANGE STUDIES

The CTBTO's radionuclide network provides global coverage, and its high detection sensitivity is unprecedented. The same samplers used to monitor for nuclear explosion signatures also measure concentrations of specific natural radionuclides, and this data could help climate change researchers.

Nuclear bomb detectors uncover secret population of blue whales hiding in Indian Ocean

By Harry Baker - Staff Writer Published 10 June 2021 on Livescience.com

Scientists found recordings of their unique song dating back almost 20 years.

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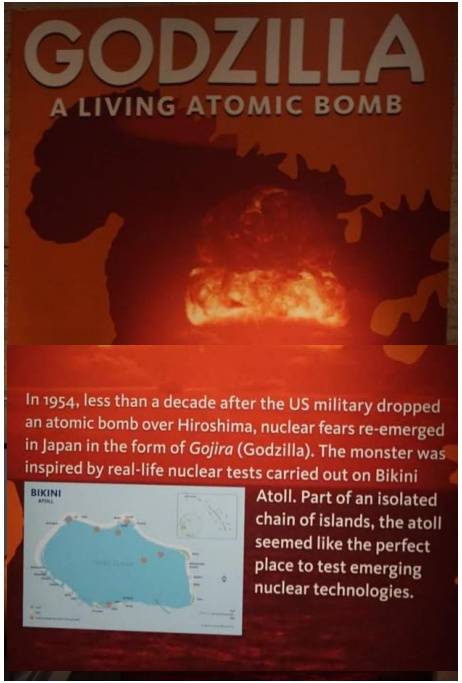
METHODS

Where CTBTO (and the Youth Group) can come in most strongly for potential collaborations:



- Linking the importance of the CTBT to the history of nuclear testing and the importance it holds over regions and countries that fell victim to nuclear explosions such as the Marshall Islands and Kazakhstan.
- Explaining that unlike fictional monsters, nuclear tests are a real threat that have not been eliminated; the CTBT is still one of, if not the most effective multifaceted tool to curb the spread and use of nuclear explosions.

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RESULTS (thus far)

Exact results for this social experiment are unknown, HOWEVER

Case Study 1 provides a decent framework to spin the narrative and adopt an intersectional—but not unfounded—approach to promotion of the Treaty, the organization, and their objectives. Case Study 2 is proof that there is openness and interest in the topic.

Here are the intersectional takeways:

- Concerns over Climate
- Empowering of Young Professionals
- Connecting with a broader audience (Science Diplomacy meets Public Diplomacy meets Trivia) that circumvent serious—but often slow—track level discussions.

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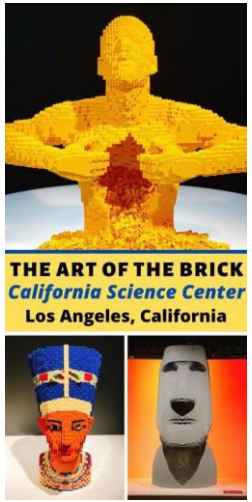
CONCLUSIONS



If blockbuster movie studios, companies and other non-scientific entities can get away with collaborating with museums to promote movies and other products, shouldn't NGOs/IGOs of a caliber like CTBTO be involved in the promotion of its technical and scientific aspects?

Shouldn't our CTBTO Youth be more involved with this cultural centers?

It is a two-way street, it's only a matter of strategic planning and attitude.