## Net Zero and the Circular Economy



## GOETHE INSTITUT

goethe.de/ScienceFilmFestPh

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# About SFF

The Science Film Festival is a celebration of science communication in Southeast Asia, South Asia, Africa, the Middle East and Latin America: In cooperation with local partners it promotes science literacy and facilitates awareness of contemporary scientific, technological and environmental issues through international films with accompanying educational activities. The Science Film Festival presents scientific issues accessibly and entertainingly to a broad audience and demonstrates that science can be fun. The event has grown considerably since its first edition in 2005, becoming the largest event of its kind worldwide.

The Science Film Festival is organized in each country by the Goethe-Institut in close cooperation with local partners. The festival relies on the collaboration and active participation of science education institutions, schools, universities, ministries and cultural centers in each of the host countries, as well as the enthusiasm of their staff and other partners, such as NGOs, educators and student volunteer groups, who facilitate the screenings and activities.

# Theme of the Year

## Net Zero and the Circular Economy

The Science Film Festival 2024 will center on the theme of Net Zero and the Circular Economy, emphasizing the urgent need for actions beyond solely reducing global greenhouse gas emissions to address climate protection effectively. Recent research findings underscore that focusing solely on cutting CO2 emissions is insufficient to halt climate change. To meet the Paris Climate Agreement objectives, a swift transition to achieving net zero emissions is imperative. Yet, this ambitious goal demands significant changes that cannot be achieved overnight. Maintaining any level of net CO2 emissions above zero will perpetuate the rise in atmospheric carbon dioxide levels. Net zero concepts aim to counterbalance carbon dioxide production by actively removing it from the atmosphere.

Integral to this pursuit is the concept of a circular economy, which prioritizes the sharing, leasing, reusing, repairing, and recycling of existing materials and products for as long as feasible. By promoting the reuse and recycling of products, the circular economy effectively slows the depletion of natural resources, curtails landscape and habitat destruction, and aids in preserving biodiversity. On the occasion of its 20th Anniversary, the Science Film Festival endeavors to spotlight films from around the world highlighting the crucial role played by net zero concepts and the circular economy in combatting the challenges posed by the climate crises. The



Rolls-Royce is proud to partner with the Science Film Festival for the third consecutive year to inspire the next generation of innovators.

This year's festival, centred around the theme of "Net Zero and the Circular Economy," resonates deeply with our mission to be a sustainable and socially responsible business, and to align our practices to become a net zero company.

Rolls-Royce believes in the transforming and positive potential of technology. Delivering sustainable, net zero power is at the heart of Rolls-Royce's strategy, future innovation and growth agenda. We have pledged to achieve net zero greenhouse gas emissions from our operations and facilities by 2030 and to support our customers, suppliers and partners to do the same. Our business begins and ends with people, and it is people who hold the key to a greener future. We strongly believe that investing in people to develop a world-class talent pool will help us achieve our ambitions.

In particular, the next generation will be faced with a rapidly evolving global environment and an evergrowing array of challenges and opportunities,

# **Message** Rolls-Royce

meaning we need new voices at the table. This is why they will have an especially important role to play in shaping our future and why we are championing STEM education to inspire the scientists and engineers of tomorrow, both in the region and globally.

Through our support of the Science Film Festival, we hope to ignite a passion for science and technology amongst children and youth at an early age. By doing this, we want to provide the building blocks for them to pick up critical thinking skills and knowledge that are necessary for pushing boundaries, embracing innovation, and making the world a better place.

I welcome everyone to join me on this journey to create a sustainable future for all.

#### Dr Bicky Bhangu

President, Southeast Asia, Pacific and South Korea, Rolls-Royce



# Film Selection Jury

#### Ruby Roan Cristobal, Ph. D.

Executive Producer and Program Host, Radyo Henyo, DZRH-Manila Broadcasting Company Vice-President, Probe Media Foundation Inc. Treasurer, Science Communicators Philippines Inc. Former Chief Science Research Specialist, Science Education Institute, Department of Science and Technology

Dr. Cristobal is currently a Senior Lecturer at the Science Communication Department of the College of Development Communication of the University of the Philippines Los Baños (UPLB), the Vice-President of Probe Media Foundation Inc., the Treasurer of the Science Communicators Philippines (SciCommPH) Inc., and the Executive Producer and Anchor of a weekly science radio program in DZRH-MBC. She has 45 years of professional practice in the areas of STEM education and promotion, development communication, science communication and science communication research, S&T human resources research, interactive science center development, multimedia production, public relations, project development and management, IT management, science center development, exhibit planning and design, educational television and radio production, social media campaigns, corporate audio-visual production.

She worked at the Department of Science and Technology-Science Education Institute (DOST-SEI) as the Chief Science Research Specialist of the S&T Manpower Education Research and Promotions Division.

She advocates science communication and STEM education through mass media, particularly through the production of educational programs on radio, television, and social media. In line with this, she has served as the Science and Production Consultant of the ABS-CBN Foundation, Inc. in producing the longest-running local science educational program for children, "Sine'skwela".

She obtained advanced degrees in science and communication, namely: Doctor of Philosophy (Ph.D.) in Communication from the University of the Philippines Diliman; Master of Professional Studies (MPS) in Development Communication from the UP Open University; and a Bachelor of Science (BS) degree in Biology and graduate units in Environmental Biology from the University of the Philippines Diliman.

She was an Australia Award Fellow in STEM Education at Queensland University of Technology (QUT) in Brisbane in 2014.Dr. Cristobal has been serving as part of the local jury for SFF Philippines since 2010, and also served as a member of the panel of international jury for SFF 2022.



#### **George Vincent Gamayo**

Assistant Professor, Polytechnic University of the Philippines Former Supervising Producer, Panahon TV

George Vincent Gamayo serves as an assistant professor at the Polytechnic University of the Philippines teaching communication and media courses. Previously, he was the supervising producer for Panahon TV, the country's first and longest-running weather program, where he produced stories on climate change and disaster preparedness that received several awards. He also wrote Project DINA (Disaster Information for Nationwide Awareness), a government initiative that provides local governments and schools with audio-visual presentations on how to cope with environmental hazards. In 2018, the Universal Peace Federation recognized him as a Youth Ambassador for Sustainable Peace. A scholar of the government, Mr. Gamayo earned his master's degree in crisis and disaster risk management in 2019 with high distinction. Also that year, he was selected as a fellow of the Asian Broadcasting Union to represent the Philippines at a disaster and environmental reporting training workshop for journalists in the Asia-Pacific region. His current studies are being undertaken as a scholar of the Friedrich Ebert Stiftung Philippines at the Academy of Political Management. His research interests include urban poor communities, indigenous peoples, and communicative discourses on HIV/AIDS, disaster risk, and climate change.



#### **Joseph V. Gutierrez**

- Supervising Science Research Specialist Space Education and Scholarship Division Philippine Space Agency
- Joseph is currently the Supervising Science Research Specialist at the Space Education and Scholarship Division of the Philippine Space Agency. He has also worked at the Department of Education in various capacities: as a Science Teacher, Science Department Head and as a Supervising Education Program Specialist. He finished his bachelor's degree from Adamson University, and MST-Physics from the University of Wyoming on a Fulbright Graduate Student Scholarship. He also participated in the 2009 International Leaders in Education Program at Montana State University-Bozeman.
- While at DepEd, he led the team which developed the Science Shaping Paper and the MATATAG Science Curriculum.
- He owns several small telescopes which he uses to propagate community-based astronomy education.

### FILM SELECTION & SYNOPSES

## Early Learners 5-8 years old



## Raffi

In "Raffi," set in Chile, young Ema experiences a transformative spring cleaning on her family's farm. As the family sorts through a myriad of objects, toys, and clothes that have fallen out of use, Ema's parents, Pa and Ma, seize the opportunity to impart valuable life lessons on sustainability. They introduce Ema to the fundamental principles of the three "Rs": reduce, reuse, and recycle. Through engaging storytelling, Ema learns that items deemed unnecessary or old can embark on a second journey, serving new purposes and thereby reducing waste. This enlightening process not only teaches Ema about the environmental impact of our daily choices but also encourages young viewers to view their belongings in a new light, understanding the power and importance of giving objects a second life in an effort to protect our planet.

CATEGORY Family Edutainment DIRECTOR Ricardo Villavicencio PRODUCED BY Lunes Animation & Villavicencio Studio RUNNING TIME 7 min. COUNTRY Chile YEAR 2023

### House of Little Scientists -Stingless Bee

In this episode of "House of Little Scientists" young viewers are introduced to the fascinating world of stingless bees, creatures that resemble honey bees but have several distinct differences. Unlike bees, stingless bees vary in size and have slightly different colors. Their homes have unique shapes, and most notably, they lack the sharp stingers that other bees possess. This key difference makes stingless bees harmless and approachable, contrasting with bees that can defend themselves with their stingers. The episode delves into the intriguing differences between these tiny honey makers and other bees, highlighting the stingless bees' adorable nature and encouraging viewers to appreciate the diversity and complexity of the natural world without fear of being harmed.

CATEGORY Family Edutainment DIRECTOR BeAmazing PRODUCED BY BeAmazing, Thai PBS, ALTV, NSM RUNNING TIME 9 min. COUNTRY Thailand YEAR 2023



### FILM SELECTION & SYNOPSES

# **Primary School** 9-11 years old





#### Go Go Giwas: Space Station Village - Miss You to the Stars

In the episode titled "Missing You to the Stars" from the animated series "Go Go Giwas: Space Station Village," young viewers are introduced to a narrative that intertwines Taiwanese indigenous cultural elements with scientific themes. This particular installment focuses on the enduring beliefs held by various indigenous cultures in Taiwan and explores the emotional journey of a Bunon elder. Following the loss of a cherished individual, this elder seeks solace in tradition by playing a traditional musical instrument for the deceased. The setting is a space station, and the event takes place on a night when rain envelops the surroundings, adding a layer of depth to the story's atmosphere. Through this act of remembrance and the unique setting, the episode delicately bridges the gap between cultural heritage and the boundless realm of space, reflecting on the ways individuals cope with grief and find comfort in their connections to tradition and the cosmos.

CATEGORY Family Edutainment DIRECTOR Yi-Feng Kao PRODUCED BY LI-Yu Fu, Vick Wang RUNNING TIME 13 min. COUNTRY Taiwan YEAR 2023

### Mytikah Explores -Charles Darwin

Join Manga and Leco on an adventurous journey as they set sail to meet the famed English naturalist, Charles Darwin. Aboard their vessel, they embark towards the Galápagos Islands, a place teeming with unique wildlife and diverse ecosystems. Their mission is to delve into the mysteries of the evolution of species, a concept pioneered by Darwin himself. Through their exploration, they will encounter various animals and plants, observing firsthand the natural selection processes that Darwin studied. This expedition is not just a voyage across the sea but a journey through time, shedding light on the foundations of evolutionary biology. Manga and Leco's adventure provides a captivating insight into the significance of the Galápagos Islands in understanding the natural world's intricacies.

CATEGORY Family Edutainment DIRECTOR Hygor Amorim, Recy Cazarotto PRODUCED BY Recy Doimo RUNNING TIME 3 min. COUNTRY Brazil YEAR 2023





### Mytikah Explores -Maria Sibylla Merian

Manga and Leco delve into the captivating tale of Maria Sibylla Merian (1647 - 1717), a pioneering German illustrator and naturalist known for her adventurous spirit. Merian broke through the boundaries of her time by combining her artistic talent with a keen scientific interest in the natural world, especially the intricate and fantastic world of insects. Using her detailed and vibrant illustrations, she documented the life cycles of various insects, contributing significantly to entomology. Her work is particularly remarkable for its accuracy and the way it blends art with science, providing valuable insights into the metamorphosis of insects and their ecological interactions. Manga and Leco's exploration into Merian's life and work highlights her contributions to both art and science, showcasing her as a trailblazer who ventured into uncharted territories of the natural world with her remarkable observations and artistic representations.

CATEGORY Family Edutainment DIRECTOR Hygor Amorim, Recy Cazarotto PRODUCED BY Recy Cazarotto, Amanda Castro RUNNING TIME 3 min. COUNTRY Brazil YEAR 2023

### Nine-and-a-half: 100 Points for the Climate -How Environmentally Friendly Is Our Everyday Life?

Taking action for the climate: This is something more and more people want to do. But what really helps? Jana undertakes a self-experiment and records for one day everything she owns, consumes, and how she lives. Using the app 'A Good Day Has 100 Points', she uncovers some climate sins in her everyday life. But she also realizes: Living climate-neutral is not so easy. So, what to do? The scientist Dr. Melanie Speck has some good tips for Jana. How do eating meat, driving cars, and electricity consumption affect our climate? And how can protests help save the climate? That's what this episode of "nine-and-a-half" is about.

CATEGORY Family Edutainment DIRECTOR Miriam Bade PRODUCED BY tvision GmbH, WDR RUNNING TIME 10 min. COUNTRY Germany YEAR 2020



### Nine-and-a-half: Climate Justice - What is it?

In this episode of "nine-and-a-half" the focus is on the climate crisis, an issue that strikes with unequal impact across the globe, perceived as fundamentally unfair by many. During the Global Climate Strike, numerous children and adolescents took to the streets to demand greater climate justice. But what exactly does 'climate justice' mean, and how does it relate to each individual? This episode delves into the concept of climate justice, exploring its significance in the fight against climate change and its relevance to our everyday lives. Through interviews, expert insights, and stories from young activists, viewers will gain a deeper understanding of why climate justice is crucial for a sustainable future and how they can contribute to making a difference.

CATEGORY Family Edutainment DIRECTOR Antía Martínez Amor PRODUCED BY tvision GmbH, WDR RUNNING TIME 10 min. COUNTRY Germany YEAR 2023

Die Blitik

KI MAGERECH

#### Nine-and-a-half: Hydrogen - The Green Energy of the Future?

Worldwide, scientists are researching solutions to combat the climate crisis. Hydrogen is seen as a great hope! In the future, it is expected to supply us with energy and replace climatedamaging fossil fuels such as coal, oil, and natural gas. This is because when hydrogen is converted into electricity, no harmful emissions are produced. But is hydrogen really the energy carrier of the future? In this episode of "neuneinhalb," Tessniem visits the "hydrogen village" Bosbüll in Schleswig-Holstein. The village not only produces hydrogen in large quantities but also operates a hydrogen filling station for buses and cars. How exactly can water be turned into hydrogen? Why is this only environmentally friendly under certain conditions? And what comes out of the exhaust of a hydrogen bus? You'll find out in this episode of "neuneineine".

CATEGORY Family Edutainment DIRECTOR Miriam Witsch PRODUCED BY tvision GmbH, WDR RUNNING TIME 10 min. COUNTRY Germany YEAR 2023





#### Nine-and-a-half: Scarce Water - Why Agriculture Needs Solutions

In this episode, reporter Luam delves into a critical topic: water. Despite the apparent abundance of water on our planet, it is becoming increasingly scarce. Luam investigates why agriculture, in particular, consumes so much water. She discovers that inefficient irrigation methods and the cultivation of water-intensive crops are among the main reasons. In her search for solutions, she explores innovative technologies and practices that can reduce water consumption in agriculture. These include drip irrigation systems, the targeted reuse of water, and the cultivation of plants that require less water. Luam's research highlights that through mindful management and technological innovations, water usage can be significantly decreased, thereby contributing to environmental protection.

CATEGORY Family Edutainment DIRECTOR Diane Peßler PRODUCED BY tvision GmbH, WDR RUNNING TIME 10 min. COUNTRY Germany YEAR 2023

### Nine-and-a-half: Sneakers for the Trash - Why Sneakers Are an Environmental Problem

Sneakers have not only been at the forefront of fashion trends for years but have also emerged as a significant environmental concern. Seeking to understand the depth of this issue, reporter Gesa investigates the life cycle of sneakers once they are deemed unwearable and disposed of in textile recycling bins. Her journey takes her to a textile recycling facility, where she learns about the challenges and processes involved in recycling footwear. Additionally, Gesa consults with a journalist who has traced the journey of discarded sneakers to Africa, examining the environmental and social repercussions in the communities that receive these second-hand shoes. This episode of "nine-and-a-half" aims to shed light on the sneaker waste dilemma and explores potential strategies for mitigating this growing problem.

CATEGORY Family Edutainment DIRECTOR Jonas Wintergalen PRODUCED BY tvision GmbH, WDR RUNNING TIME 10 min. COUNTRY Germany YEAR 2022





It seems peculiar that an experience deemed humorous can lead to such physical reactions as showing one's teeth, altering one's breathing patterns, inducing weakness and aches in various body parts, and potentially causing tears. This exploration delves into the prevalent scientific theories regarding the reasons behind human laughter, examining how this universally observed behavior developed over time. Hanna Rybak, hailing from Ukraine, is an independent artist who has carved a niche for herself as an animation director, illustrator, and animator, with a particular passion for ceramics. Her work often intersects the realms of visual storytelling and the intricate art of animation, showcasing a deep appreciation for the medium's capacity to convey complex emotions and narratives through a blend of motion and imagery.

CATEGORY Natural Science, Life Science & Technology DIRECTOR Hanna Rybak PRODUCED BY Gerta Xhelo, Sazia Afrin RUNNING TIME 5 min. COUNTRY Ukraine YEAR 2023

### Wingcopter

A Wingcopter drone is a very special type of aircraft. Like a drone, it can take off and land vertically with its eight rotors. The latter is important because where it is deployed, there is not always a long, safe runway for takeoff and landing. Once it is in the air, two of the eight rotors pivot forwards, turning the drone into an airplane! This is a major advantage, as an airplane can fly much faster than a drone. With its electric motors, it can cover distances up to 100 kilometers. For example, it is used in Africa, specifically in the country of Malawi. There, the roads are often in very poor condition. Gasoline is not always available, and many transport vehicles are out of service. The Wingcopter drone can now transport, for example, medications that need to be kept cool, safely and quickly from one place to another. And it can take off and land in difficult terrain!

CATEGORY Family Edutainment DIRECTOR Matthias Wegmann PRODUCED BY WDR RUNNING TIME 9 min. COUNTRY Germany YEAR 2023



### FILM SELECTION & SYNOPSES

## Secondary School 12-16 years old





When it comes to trees, Ireland has deep roots. Forests once covered a massive 80% of Ireland's land surface and there were laws protecting certain trees. Characters in early Medieval Irish alphabets were named after native trees and who would want to cut down a Hawthorn tree for fear of angering the faeries? But today, forests only cover 11% of the country. With a drive to increase that figure to 18% by 2050, the government view forests as an essential element to achieving net zero emissions by 2050, but is 18% of Irish land enough? And as we still need timber for construction and furniture making, how do we balance our forestry needs? In this episode we discuss how better land management and land planting trees is an essential part of our climate goals, we meet the researchers who are breeding trees to create better quality timber and tackle devastating diseases like ash dieback, and reflect on how literature can shape our views on trees and nature.

CATEGORY Ecology and Environment DIRECTOR Nuala Cunningham, Jen Dunbar PRODUCED BY Nuala Cunningham, Jen Dunbar RUNNING TIME 24 min. COUNTRY Ireland YEAR 2023

### Ananas Anam: Wearable Waste

Fast fashion has gone through a period of rapid growth in the last fifty years. The sector is responsible for an estimated 10% of greenhouse gas emissions, and uses around 93 billion cubic meters of water per year - or 4% of all freshwater extraction globally. This is set to double by 2030. Ananas Anam is transforming pineapple waste into eco-friendly textiles, addressing both agricultural waste and fast fashion's environmental impact. With pineapple production generating 25 million tonnes of waste annually, Ananas Anam's innovative use of discarded leaves to create natural textiles, Piñatex and Piñayarn, presents a sustainable solution. Piñayarn is a compostable yarn, while Piñatex serves as an eco-friendly leather alternative, eliminating the need for the harmful chemicals used in traditional tanning processes. This initiative not only reduces CO2 emissions by avoiding leaf burning but also supports rural farming communities in Bangladesh, promoting a circular economy in textile production. Ananas Anam's approach demonstrates how resource reuse can lead to sustainable development beyond just fashion trends.

CATEGORY Ecology and Environment DIRECTOR RE:TV PRODUCED BY RE:TV RUNNING TIME 7 min. COUNTRY United Kingdom YEAR 2023



#### Anna and the Wild Animals: Operation Rhinoceros

In the heart of South Africa, animal reporter Anna joins a dedicated rhino protection patrol on a crucial mission: the dehorning of a young rhino. The operation is a stark measure against the relentless threat of poaching, fueled by the high demand for rhino horns. The protection unit embarks on a meticulous search across the wildlife reserve, employing a helicopter to locate and sedate the vulnerable animal. Once grounded, the rangers perform the delicate task of sawing off the horn while ensuring the rhino's safety during its sedated state. This procedure, though controversial, is deemed essential for the rhino's survival. Anna witnesses the intense operation from start to finish, grappling with a mix of emotions. The poignant reality of "Operation Rhino" brings her to the brink of tears, highlighting the drastic actions taken to safeguard these majestic creatures against human greed.

CATEGORY Family Edutainment DIRECTOR Ben Wolter PRODUCED BY BR, Text und Bild Medienproduktion GmbH & Co. KG RUNNING TIME 25 min. COUNTRY Germany, South Africa YEAR 2023

### Birds? What Are They Good For?

An ecological documentary focusing on the alarming decline of bird populations and habitats amidst expanding human civilization. It delves into the historical relationship between humans and birds, highlighting how perceptions have evolved over centuries. Created in response to the escalating climate crisis, the film aims to engage both young audiences and adults in discussions about environmental improvement. It emphasizes the often overlooked yet vital role of birds within our ecosystem, influencing everything from food production to air quality. The film seeks to spark a dialogue about environmentalism among the youth, inspiring them to adopt more sustainable lifestyles. Through this exploration, "Birds? What Are They Good For?" advocates for greater awareness and action towards preserving the intricate balance of our natural world.

CATEGORY Ecology and Environment DIRECTOR David Lane Diperstein PRODUCED BY David Lane Diperstein, Charline Tetiyevsky RUNNING TIME 12 min. COUNTRY United States YEAR 2023





### **Dreams of the Ravaged**

In "Dreams of the Ravaged," three young individuals recount their harrowing experiences as survivors of the deadliest super typhoons in the Philippines, highlighting the harsh realities faced by communities on the frontline of climate change. Through a blend of live-action documentary and scribble animation, the film delves into their memories, lessons learned from the climate crisis, and their outlook on the future, navigating the delicate balance between hope and despair. The Philippines, among other Western Pacific nations, has suffered greatly from climate-induced disasters in recent years, with young families bearing the brunt of the trauma. This film, born from the director's own survival of a super typhoon, seeks to educate on the science connecting climate change and extreme weather, amplifying our collective voices in the climate action dialogue. Employing live action and animation, it captures the vulnerability of the youth affected by relentless calamities, underscoring the importance of global collective action against the climate crisis.

CATEGORY Ecology and Environment DIRECTOR Breech Asher Marfil Harani PRODUCED BY Breech Asher Marfil Harani RUNNING TIME 5 min. COUNTRY The Philippines YEAR 2023

#### **Drops of Dew**

During a sweltering summer with strict water rationing, young Emma receives an unexpected gift: a lemon plant. Facing the challenge of nurturing it with limited water ignites a spark in her, shaping her future. This experience becomes the cornerstone of Emma's inspiration to invent a groundbreaking, eco-friendly water recycling system as she grows older. "Drops of Dew" is a captivating short film brought to life by the innovative minds of Gianpaolo Gelati and Alessandro, both of whom have extensive backgrounds in the cinematic arts. Gelati, with degrees in scenography from the Accademia di Brera and scriptwriting from the Civic Cinema School in Milan, and Alessandro, honing his directing skills at the University of Cinema of Bologna and Silvio Soldini's ShortFilmLab, have joined forces to establish Brand Gnu. Their film company is dedicated to crafting compelling narratives, with "Drops of Dew" marking their latest creative endeavor.

CATEGORY Family Edutainment DIRECTOR Gianpaolo Gelati, Alessandro Melchionda PRODUCED BY Gianpaolo Gelati, Alessandro Melchionda RUNNING TIME 15 min. COUNTRY Italy YEAR 2023





#### **E-Kawayaman**

Embark on an enlightening journey to Alaminos City, Pangasinan, where an environmental initiative breaks new ground. "E-Kawayaman," directed by student filmmaker Lance Dizon from the Special Program in the Arts at Alaminos City National High School, delves into the revolutionary use of engineered bamboo. This documentary explores bamboo's role as a sustainable substitute for traditional wood, showcasing its significant environmental benefits and economic potential for the local community. Through expert discussions and vivid demonstrations, the film reveals how bamboo offers a viable solution to pressing ecological issues, positioning itself as a key material for the future. In a narrative that questions the reliance on dwindling tree resources, "E-Kawayaman" proposes bamboo as an innovative and eco-friendly alternative, highlighting the pivotal role of young minds in steering our planet towards sustainability.

CATEGORY Ecology and Environment DIRECTOR Lance Dizon PRODUCED BY Raquel Rarang River RUNNING TIME 10 min. COUNTRY The Philippines YEAR 2024

#### Leader

"Leader" delves into the life of Donnie, a solitary individual residing in an exceedingly secluded coastal region. He dedicates his time to transforming ocean waste into artistic sculptures, channeling creativity to address environmental concerns. This routine proceeds uninterrupted until an unforeseen shift in the tidal patterns occurs. This change serves as a pivotal moment in the story, catalyzing a profound transformation not only in Donnie's life but also within his surrounding community. It's at this juncture that Donnie emerges as a source of inspiration, advocating for a revolutionary approach to living and interacting with our planet, thereby setting the stage for a new normal that embraces sustainability and environmental stewardship.

CATEGORY Non-Verbal and Science Shorts
DIRECTOR Chris Overton

PRODUCED BY Rebecca Harris RUNNING TIME 11 min. COUNTRY United Kingdom YEAR 2021



## **Redesigning Global Aviation**

The Whittle Laboratory at the University of Cambridge initiated the Aviation Impact Accelerator (AIA) to develop an opensource simulator for climate-neutral aviation, aiming for Net Zero air travel and addressing aviation's significant role in globalization and its environmental impact. With air travel's demand expected to double by 2040, the challenge is to decarbonize amidst diverse contributors to emissions. This tool analyzes data to link technologies, behaviors, and policies, exploring sustainable aviation fuels (SAF), ammonia, hydrogen, and battery innovations. It also highlights unconventional partnerships and the importance of aerodynamic improvements and business model shifts. AIA aspires to expedite sustainable solutions, making air travel more environmentally friendly.

CATEGORY Ecology and Environment DIRECTOR RE:TV PRODUCED BY RE:TV RUNNING TIME 10 min. COUNTRY United Kingdom YEAR 2024

## **Reflection in the Marsh**

Three childhood friends, descendants of indigenous communities, dedicate their lives to safeguarding Agusan Marsh, a vital wetland in the Philippines. This area, rich in biodiversity, faces threats from climate change and human activities. Each day, they navigate a complex landscape of conservation work, striving to balance traditional practices with modern ecological management techniques. Their efforts focus on monitoring environmental changes, educating local communities about sustainable practices, and advocating for policies that protect this critical habitat. They confront challenges such as illegal logging, overfishing, and pollution, which endanger the marsh's health and their way of life. Despite these obstacles, they remain committed to their mission, driven by a vision of restoring and preserving the marsh for future generations. Their work embodies a deep connection to their ancestral land, reflecting a broader struggle for environmental justice and the survival of indigenous cultures in the face of global environmental crises.

CATEGORY Ecology and Environment DIRECTOR Breech Asher Marfil Harani PRODUCED BY Breech Asher Marfil Harani RUNNING TIME 14 min. COUNTRY The Philippines YEAR 2023





#### Regrow our Home: Meet the Indigenous People Regrowing a Rainforest in Malaysia

The Tropical Rainforest Collection (TRLC) Banun, an NGO in Malaysia, focuses on restoring the Amanjaya Forest Reserve by employing and training Jahai indigenous communities to propagate endangered rainforest trees using traditional and scientific methods. This short documentary showcases their journey to Kampung Klewang in Royal Belum State Park to purchase tree seedlings from a Jahai-operated nursery, providing income for the community through the sale of these seedlings. As TRLC Banun works to rehabilitate degraded land to combat climate change, Bryan Yong, an aspiring environmental journalist with a background in environmental science and oceanography, emphasizes the importance of connecting researchers with the public through compelling storytelling.

CATEGORY Ecology and Environment DIRECTOR Bryan Yong PRODUCED BY Bryan Yong RUNNING TIME 7 min. COUNTRY Malaysia, Thailand YEAR 2023

### Resortecs: Fashioning a Sustainable Future

Resortecs, a Belgium-based startup, is innovating with Smart Stitch yarns to enable waste-free fashion by allowing for the automated disassembly of garments. The fashion industry, worth \$1.3 trillion and growing, is resource-intensive and polluting, using vast amounts of freshwater and contributing significantly to microfibre pollution and CO2 emissions. Fast Fashion exacerbates waste, with less than 1% of garments being recycled. Resortecs' solution involves bio-based or recycled polymers that work with current stitching machines. Garments made with Smart Stitch can be easily recycled through a closed-loop system that melts the yarn at 150-190 degrees Celsius, recovering up to 90% of the fabric. This process could drastically reduce CO2 emissions and save billions if widely adopted, proving that fashion can be both stylish and sustainable.

CATEGORY Ecology and Environment DIRECTOR RE:TV PRODUCED BY RE:TV RUNNING TIME 6 min. COUNTRY United Kingdom YEAR 2023





### Seaweeds

In the fight against climate change, All.g, an innovative startup, champions the cause by leveraging the potential of seaweed farming. Moving beyond traditional coastal methods, they venture into the realm of carbon credit markets, presenting a novel approach to environmental conservation. This documentary takes viewers on a captivating journey alongside All.g, diving deep into the worlds of innovation, entrepreneurship, and sustainability. It showcases the significant role of seaweed not only as a powerful tool in carbon sequestration but also as a catalyst for positive change in the livelihoods of those within seaweed farming communities. By focusing on the underexplored capabilities of seaweed, the documentary sheds light on its importance in the ecological and economic spheres. Recognized for its compelling narrative and impactful message, the film received the Best Film Viewer's Choice Award at the DOST-SEI Indie-Siyensya in the Philippines, highlighting its contribution to environmental awareness and action.

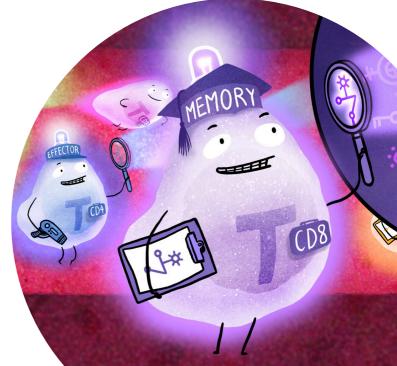
CATEGORY Ecology and Environment
DIRECTOR Franky James Balos
PRODUCED BY Dalumat & Department of Science and Technology - Science Edu-

cation Institute 12 min. **COUNTRY** The Philippines **YEAR** 2023

### The Mystery of the Disappearing Lymphocytes

Lymphocytes, a type of immune cell, are essential in combating infections within the body. The adaptive immune system primarily consists of T cells and B cells, each serving specific functions in defense mechanisms. During the 1950s and 1960s, a series of experiments tracked the movement of lymphocytes, shedding light on their pathways and interactions throughout the body. This research provided critical insights into the behavior and role of T cells, including the process by which they recognize and attack pathogens. Additionally, it uncovered how T cells develop into memory cells, which remain in the body long after an infection has cleared, ready to respond more effectively to future exposures to the same pathogen. This foundational work has been pivotal in our understanding of immune responses, guiding subsequent advances in immunology and the development of vaccines and therapies.

CATEGORY Natural Science, Life, & the Environment DIRECTOR Dan Fox PRODUCED BY Dan Fox RUNNING TIME 3 min. COUNTRY United Kingdom YEAR 2023





#### **The River**

The director, deeply moved by the delicate beauty and historical significance of a small chalk river in the south east of England, embarked on creating a short film that blends poetry with re-imagined history. This animated journey, spanning a remarkable 100 million years, delves into the river's story, highlighting its fragile existence in contemporary times. The filmmaking process, long and meandering, mirrored the river's own path, influencing the director profoundly. Immersed in the project, the director's perspective on the world, on time, evolved, reflecting a deepened connection with the natural environment. The film aims to focus on the intimately known, hoping to touch upon the universally relatable. It stands as an ode to the river Darent, intending not only to celebrate its beauty but also to serve as a cautionary tale about its vulnerability and, by extension, our own. Through this work, the filmmaker seeks to awaken a collective consciousness about the delicate balance between nature and human existence.

**CATEGORY** Non-Verbal & Science Shorts: Science Meets Art

DIRECTOR Temujen Gunawardena PRODUCED BY Badj Whipple RUNNING TIME 4 min. COUNTRY United Kingdom YEAR 2023

## FILM SELECTION & SYNOPSES University & General Public 17+ years old





## Bora Bora - The Lab of the Future

Bora Bora is the most popular destination in French Polynesia, certainly because of its lagoon, considered the most beautiful lagoon in the world. In this context, the islet could have sunk under concrete and pollution, and the reef could have been irreparably impacted. However, thanks to the will of a handful of inhabitants, including the mayor of the island, Bora Bora is today a model of sustainable development, with water treatment technologies that are 15 years ahead of France, programs for restoring corals and safeguarding wildlife, educational actions and rehabilitation of Polynesian traditions such as the "rahui" and the establishment of a monitoring network using new technologies. All this makes the island a veritable open-air laboratory that shows the way for all tropical coastal environments around the world.

CATEGORY Ecology and Environment DIRECTOR Antoine Laguerre PRODUCED BY ARTISANS DU FILM RUNNING TIME 52 min. COUNTRY France, French Polynesia YEAR 2022

#### **Giants Rising**

A journey into the heart of America's most iconic forests, "Giants Rising" reveals the secrets and the saga of the coast redwoods - the tallest and among the oldest living beings on Earth. It's an epic tale that explores the wonders of these silent giants and our dramatic, ever-evolving relationship with them. Living links to the past, redwoods also hold powers that may play a role in our future, including their ability to withstand fire and capture carbon, to offer clues about longevity, and even to enhance our own well-being. How do they do it - and how will redwoods keep working their magic as they're pushed to their limits? Through the voices of biologists, artists, Native peoples and others racing to understand and safeguard these trees, "Giants Rising" reveals the scientific wonders of redwoods, our deep cultural ties to them, and efforts to help these iconic forests overcome the legacy of logging that nearly wiped them out. It's a story that offers lessons about resilience and connection, and the promise of solutions that will help us ALL rise up from the past and face the challenges that lay ahead.

CATEGORY Ecology and Environment
DIRECTOR Lisa Landers, Tangent Productions
PRODUCED BY Tangent Productions in association with Manitou Fund and the Redford Center
RUNNING TIME 80 min.

COUNTRY United States YEAR 2024





#### Green Heroes – Islands of the World

For an extended period, the divide between urban and rural areas has persisted, growing even more pronounced as we confront unprecedented crises. In this moment, bridging the gap between these two spheres is crucial for a future that honors and protects all forms of life. Across the globe, individuals from various professions - including farming, livestock breeding, architecture, and urban agriculture - play a vital role. Their expertise and daily efforts are invaluable in preserving our planet. This raises pivotal questions: Could the keys to urban sustainability lie within our rural landscapes? Is it time to pledge ourselves to a future that embraces environmental stewardship? We embark on a journey to explore the lives of these 'Green Heroes' championing a more sustainable existence and guardians of our Earth's precious resources. Their dedication illuminates the path toward a harmonious coexistence between human advancement and the natural world.

CATEGORY Ecology and Environment DIRECTOR Frederic Planchenault PRODUCED BY Severin Delpon, Jean Moncaut RUNNING TIME 52 min. COUNTRY France YEAR 2021

### Greenwashing: The Climate Killer

Amid climate change and consumer demands, many multinationals pledge "carbon neutrality," often through "carbon offsetting" by financing projects like tree plantations rather than cutting emissions. This model has spurred a business ecosystem, with intermediaries connecting companies to reforestation projects globally, yet prioritizing profit over ecological impact. These projects, although wellintended, frequently fall short or harm the environment and local communities. Nespresso's commitment to making "every cup of coffee carbon neutral by 2022" exemplifies the controversy, raising questions about the genuine impact versus greenwashing in corporate sustainability claims.

CATEGORY Ecology and Environment DIRECTOR Claire Tesson PRODUCED BY Luc Hermann, Paul Moreira RUNNING TIME 52 min. COUNTRY France YEAR 2023





#### How Fisheries Can Become More Sustainable

Overfishing, along with fishing techniques that harm ecosystems, factory farming of fish, and water eutrophication due to waste from these farms, frequently come under scrutiny. Hence, the pursuit of more sustainable fishing and aquaculture practices becomes crucial. This film delves into the issue of overfishing in the North and Baltic Seas, emphasizing the necessity for policy intervention to mitigate the problem. Furthermore, it ventures to the University of Rostock to examine aquaponics, a method that combines fish farming with plant cultivation. By exploring this innovative approach, the film sheds light on how aquaponics represents a step towards a modern circular economy, offering a solution that addresses environmental concerns while sustaining productivity.

CATEGORY Ecology and Environment DIRECTOR Elias Tetzlaff PRODUCED BY Elias Tetzlaff RUNNING TIME 18 min. COUNTRY Germany YEAR 2023

### **In Pursuit of Passive**

The documentary closely follows the development of the first net-zero, passive house in the Greater Tetons-Yellowstone region near Jackson, WY. It serves as an in-depth case study on the Passive House building approach, a methodology aimed at designing and constructing buildings that significantly reduce energy consumption and carbon footprint. By focusing on this groundbreaking project, the film explores the myriad climate and energy performance benefits associated with such sustainable building practices. Highlighted within the documentary are the home's designers, Lindsey Love and Lindsay Schack, who are co-founders of a sustainable architecture and design firm located in Bozeman, MT, and Driggs, ID. Their expertise, along with insights from a variety of building and climate experts, sheds light on the challenges and innovations involved in creating a home that not only meets the rigorous Passive House standards but also blends seamlessly with its natural surroundings. This narrative underscores the importance of sustainable architecture in combating climate change and promoting environmental stewardship.

CATEGORY Ecology and Environment DIRECTOR Mark Fisher, Eric Daft PRODUCED BY Mark Fisher RUNNING TIME 17 min. COUNTRY United States YEAR 2023





### Magic Meadows – The Power of Seagrass

Seagrass holds a pivotal role on our planet, not just as the largest reserve of sugar but also as a protector of beaches from erosion and a purifier of water, functioning similarly to a sewage treatment plant. This plant, unique in its ability to live for nearly 80,000 years, surpasses the lifespan of any other living creature on earth. Serving as both a nursery and habitat, seagrass supports a myriad of marine species, contributing significantly to the biodiversity of our oceans. Its capacity to purify sea water mirrors the efficiency of a gigantic sewage treatment facility, highlighting its importance in maintaining the health of marine ecosystems. Furthermore, seagrass possesses the remarkable ability to aid in mitigating the effects of global warming, showcasing its environmental superpowers. This documentary traces the journey of leading seaweed researchers as they explore the significance of seagrass across various regions, from the Mediterranean to the Baltic Sea. Their work illuminates the crucial role that seagrass plays in our environment and underscores the necessity of preserving this vital marine plant for the health of our planet.

CATEGORY Natural Science, Life, & Science Technology DIRECTOR Florian Guthknecht PRODUCED BY Florian Guthknecht ZDF RUNNING TIME 52 min. COUNTRY Germany YEAR 2024

## Tourism in Times of Climate Change

Climate change is dramatically reshaping tourism across the globe, presenting a complex narrative that isn't solely negative, contrary to what many may assume. This transformation opens up new opportunities and possibilities, enabling tourism in regions previously deemed unsuitable. Places that were once inaccessible or unappealing are now emerging as potential hotspots for travelers seeking novel experiences. Additionally, this shift is catalyzing a move towards more environmentally friendly and sustainable tourism practices, highlighting the adaptability and resilience of the industry. The film explores diverse locations such as Greenland, the Spanish island of Mallorca, and the German tourism spot Ahrtal to uncover surprising insights. Through these examinations, it reveals how destinations are adapting to change, turning challenges into opportunities for innovation and growth in the tourism sector.

CATEGORY Ecology and Environment DIRECTOR Andrea Schäfer PRODUCED BY Thomas Hies, ZDF RUNNING TIME 30 min. COUNTRY Germany YEAR 2023



# How to watch the **Films**





STEP 2

Go to www.goethe.de/ScienceFilmFestPh and click on the *Register Here* button.



Fill-up all the necessary information needed in the registration form and click Send.





This showcase is



enter the Password.

## **Enjoy watching!**

Log in to the E-mail Account you used in the registration and check our E-mail with the access details to the SFF Vimeo

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College Batong Malake, Los Baños, Laguna https://devcom.edu.ph/cdc-story/people/ department-of-science-communication/

theMindmuseum SCIENCE COMES ALIVE! THE MIND MUSEUM J.Y. Campos Park, 3rd Ave., Bonifacio Global City, Taguig City www.themindmuseum.org

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UPFI Media Center Bldg. Ylanan Ave.,UP Diliman, Quezon City www.filminstitute.upd.edu.ph





**TUMBA-TUMBA CHILDRENS MUSEUM OF ART** 

Brgy, Tumba-Tumba Children's Museum of Philippine Art, Sitio Malacanang, Ibaan, 4230 Batangas



## REFLECTION

Harold A. Paningbatan 8-Aquamarine

11-30-10 SCIENCE

What I have learned is the appreciation of corals in The sea, because anal gives beauty to the sea and it also helps not to affect the community or coast that are close to the sea due to the storm that is also caused by the increase in waves that will cause of way flooding and Coral rects support an impressive diversity of species and provide an irreplaceable source of food and shelter to many species of fish. This is not the only thing 1 learned, what I learned is how important food is to different animals because food is needed by different animals so that they an live longer because if there is no food for different animals they not live or survive, different animals like the Frog that eats inser also helps to maintain the locauty of plants because insects an destroy the plants and the prog was eat him because the prog was insects. In the world of people, i leagned that it is necess to clean the unvironment because we can get sick when our ment is not clean. God's gift to us that we can also get our needs so it needs to cleaned and appreciated. ANIMAL INFELECTION

Animal intellegence is a fascinating and diverse aspect of the natural world. From problem - solving intellegence of primotes to the intricate communication skills of caterpillar to butterfly and birds, prog and salagubang self awareness and even cultural rearnings the favorite food of frog salagulang they cat using their 15 tounge.

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