

## **Inventing Tomorrow**

A film directed by Laura Nix (2018)

Associate Producers: Eleese Lui Stemp and Ann Rogers

Fishbowl Films, 1 hour 45 minutes

<https://www.inventingtomorrowmovie.com>

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Increasingly, we see young climate activists highlighted in the news, and rightly so, for their actions are important and significant. This film is about some less-sung stories of six young heroes working in diverse countries to improve the environmental conditions of their cities through the application of science. Across four countries—from a small Indonesian island to the cities of Hilo, Hawaii; Bangalore, India; and Monterrey, Mexico—we see not only the toxic world young people are inheriting, but also the resolve and dedication they bring to tackling these problems. In the words of Sahithi Pingali, a young scientist from Bangalore: “You see the same issues repeated across the world. It’s inevitably our job as the next generation to tackle this. The people who are approaching this through the eye of science are the people who can fix it and are going to fix it.” This film will appeal to Science, Technology, Engineering, and Math (STEM) and environmental educators in both secondary and higher education contexts. It will also appeal to faculty interested in environmental studies, critical sustainability studies, and the sociology of youth empowerment, youth activism, and youth agency. The film is accompanied by free educator guides and youth biographies accessible from the film’s website.

Working through separate vignettes in each of four countries, young people converge at the Intel International Science and Engineering Fair (ISEF), the “science fair of science fairs” in Los Angeles, California. Youth come from a variety of circumstances—from Monterrey youth who will be the first in their family to go to university and who must work long hours while in high school to support their families, to youth from the relative affluence of a suburb of Bangalore who are raised with an acute awareness of the disproportionate effects a wealthy lifestyle can bring to the environment.

The environmental issues youth address are also diverse. In Indonesia, two young women devise a filtration system to mitigate the impacts of mining for tin, which is being harvested for cell phones and other technological devices and releases lead into the water. In Hilo, a third-generation Hawaiian investigates the spread of arsenic from a 28-year-old industrial containment pond that released its toxic waters after two tsunamis hit. In Bangalore, a small team explores how technology can be used to monitor water quality in what is known as the “Silicon Valley of India,” where contaminated lakes catch fire and foamy detergent water that is released into lakes eventually makes its way across highways as bubbly clouds the size of small cars. In Monterrey, three youth from one of the most industrialized cities of Mexico, tackle issues of air pollution—an issue made more salient after one of their uncles died of respiratory disease—through toxin-absorbing photovoltaic paints.

This film's primary story is about science as a tool for empowerment and action, with youth taking on the problems they see in their communities and receiving recognition and supports to advance their work. The film shows a sense of purpose as well as resolve in the face of some of the most grueling aspects of science, including when adult judges circulate during the ISEF fair, asking hard questions with poor language translators. Other themes, more subtly presented, include differences in educational equity between the global north and global south, transnational experiences of education between Los Angelinos and Monterrey youth, and many poignant moments that show the importance of cultural and intergenerational values in shaping young people's approach to the application of science.

*Inventing Tomorrow* shows the victories of science, with the young woman from Bangalore winning awards at ISEF and pursuing solutions at the University of Michigan with graduate students and faculty in environmental engineering. I cannot help but also feel the disappointment for those who did not win at ISEF, from Monterrey and Indonesia, and to reflect on the extreme challenges youth face in advocating for change against nearly every barrier imaginable—ageism, capitalism, industrialism, and globalism, among others.

As the film closes with Nuha and Inti on a boat, trying to encourage miners to test their filters, we feel the deep respect and deference these young Indonesian women show to the miners, and we feel their deep love of the sea as they longingly look outward at what is still clean water, "very blue." This scene resonates with Bill McKibben's (2019) recent response to U.S. Senator Dianne Feinstein's dismissal of young activists in the Sunshine Movement who visited her office to demand policy action on climate change. Her response, primarily that youth do not have the experience or expertise to know what good policy looks like, mirrors what many youth advocates experience: adult disregard for youth knowledge, capacity, and agency. McKibben states that climate change is "an issue on which older people should listen to the young. Because—to put it bluntly—older generations will be dead before the worst of it hits." One cannot help but feel the same way while watching *Inventing Tomorrow*, that "youth carry the moral authority" because they are inheriting a world degraded by the systems and lifestyles older generations have set in place. The film reflects well this status of many youth today— aspirational, educated, dedicated, and striving against many odds to make a positive change not only for themselves, but for society at large. Creation of a sustainable future requires "a deep understanding of the world around us and our symbiotic relationship with it, while becoming increasingly adept at identifying and taking effective action" (Driskell & Van Vliet--, 2018, xxxi). *Inventing Tomorrow* shows us the inspiration and motivation that youth can bring to this challenge.

## References

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Review by Victoria Derr

**Victoria Derr** is Assistant Professor of Environmental Studies at California State University Monterey Bay, where her teaching and research focus on the intersections between sustainable communities, place-based environmental education, and social justice. For more than 20 years, Victoria has engaged children, youth, and communities in participatory research in both rural and urban settings with tribal, Spanish land grant, recent immigrant communities, and in international settings. She is the lead author of *Placemaking with Children and Youth: Participatory Practices for Planning Sustainable Communities*, with Louise Chawla and Mara Mintzer, published by New Village Press in 2018. She holds a masters and Ph.D. from Yale University.