The advancement of science and technology over the past two centuries has brought tremendous prosperity to humanity. People worldwide have witnessed improvements in their living standards, thanks to groundbreaking innovations made possible by the expanding knowledge in scientific fields ranging from physics and chemistry to biology and medicine. Never before have so many individuals lived lives that are longer and free from hunger and cold. Never before were so many people able to appreciate the accomplishments of our civilization.

And yet, this remarkable prosperity has come at a significant cost of extensive environmental degradation. We find ourselves in an era of increasingly rapid climate change and the alarming loss of global biodiversity. Every day, hundreds of thousands of tons of persistent chemicals are released into our water and air, some of which may pose substantial risks to human health. The proliferation of cancer and various respiratory diseases, along with the devastation of wildlife, are among the consequences of the techno-scientific progress that has brought us into the Anthropocene era. It appears that humanity has already left such a profound mark on the planet that our impact will be visible on a geological scale. While science is universally recognized for its role in the progress and advancements we enjoy, can it also be held accountable for toxic spills, nuclear threats, microplastic pollution in our oceans, massive deforestation, and the emergence of new types of diseases?

Since the rise of environmental awareness in the 1960s, philosophers, supported by historians of science and technology, have contemplated this question. Some perceive science as inherently neutral and attribute its misuse to human nature. Others criticize the “Western” scientific enterprise as fundamentally flawed and hostile to nature. Still, others maintain that science is the sole force capable of guiding us through the ecological crisis.

If modern science and technology are seen as inherently linked to the state of our environment (whether they are to be blamed or not), what is often overlooked in historical literature is the fact that scientists were not oblivious to what was happening in the world. On the contrary, at first at the margin of the scientific community, the concept of environmentally and socially sustainable sciences began to take shape. From industrial ecology to green chemistry, a new area of research emerged to address the significant challenges humanity is facing. The concept of sustainability, initially developed within the context of forestry sciences, eventually permeated international politics and was subsequently embraced by scientists across a wide range of disciplines and research projects. Sustainability has now become a permanent fixture in the vocabulary of scholars from diverse fields such as materials science and urban sociology.

This project aims to examine and address the gap in existing scholarship on the history of science regarding sustainability, which has been explored only in a fragmented manner thus far. The project is structured around three major themes, roughly in chronological order. First, it will delve into the history of “sustainability sciences” - disciplines that emerged from the 1970s onwards exclusively dedicated to various aspects of sustainability, such as ecological chemistry or life-cycle assessment studies. The second theme, “sustainability in science,” will investigate the widespread adoption of sustainability terminology within mainstream science, including areas like chemical synthesis or nanotechnology. This part of the project aims to understand how concerns about sustainability and the environment influenced science policy as a whole. Finally, the project will explore the history of the relatively young field known as “sustainability science,” which emerged as a distinct field of inquiry in the 2010s

From a disciplinary perspective, this project resides at the intersection of the social, political, and cultural history of contemporary sciences on one hand, and the field of Science and Technology Studies (STS) on the other. However, it will also draw valuable insights from other disciplines, particularly sustainability studies and environmental history. Although ambitious in scope, the project's aim is not to exhaustively cover the topic, but rather to initiate a discussion within the newly established unit dedicated to the history of sustainability sciences at the host institution. The newly formed laboratory is expected to further develop the key themes of this project over the course of many years.