Faculty Name:

Thanos Bourtsalas

Faculty Email:

ab3129@columbia.edu

Lab:

Earth Engineering Center

Project Title:

Modelling the impact of plastic pollution

Description:

Plastic materials are associated with the development of technology, industry, and commerce, and are an integral part of our evolution. At present, the U.S. is a major producer and consumer of plastics; however, the recycling rate of plastic waste in the U.S. pathetically was about 8.7 % in 2018, similar to the average global recycling rate of 9 %. Thus, most of these materials end up in landfills, and in many cases, in the aquatic environment.

On top of that, the global plastics recycling market has experienced significant turbulence in the aftermath of China's import ban in 2017. A recent study by the Earth Engineering Center of Columbia University, found that the total exports of plastic waste from the US were redirected from China and Hong Kong to other Asian countries, mainly Malaysia, Vietnam, Indonesia, and Thailand, significantly affecting coastal cities of the global South. California is the largest exporter in pre-and post-ban periods, followed by Illinois and Texas.

The aim of this project is to assess the economic, social and environmental costs of plastic pollution, with focus on the development of a new indicator for monitoring and managing plastic pollution. The emphasis will be on the corporate, and on coastal cities.

Location of Research:

Hybrid (both remote and on-site)

# of hrs/week:

20

Department/Program:

Earth and Environmental Engineering

Eligibility:

BS, First Year, BS, Second Year, BS, Third Year, BS, Fourth Year, MS

To apply, please contact:

ab3129@columbia.edu