

Space companies are ‘starwashing’

Expanding past the Earth has an environmental cost

By Devika Rao, The Week US

Everyone wants to go to space, but at what cost? Companies that have been hoping to colonize the cosmos are not addressing the potential environmental and atmospheric impacts of that expansion. This phenomenon is known as ‘starwashing’, and it is likely only going to become more common.

Taking space

Starwashing, a spin on [greenwashing](#), is when space companies “sell space exploration narratives by appealing to a desire to expand humankind beyond Earth” while “downplaying or omitting the negative repercussions for Earth and the space environment,” Marissa E. Yingling, an associate professor of social work at the University of Louisville who first popularized the term, said at [The Conversation](#). These companies “appeal to your sense of cosmic wonder” as well as to an “interest in learning about life’s origins, Earth’s place in the universe or the desire for humans to explore places beyond our planet.”

The problem is that starwashing “takes attention away from actually solving the problems that are here on Earth,” Gregers Andersen, a postdoctoral researcher at the University of Southern Denmark, said to [Grist](#). For example, Blue Origin’s founder, [Jeff Bezos](#), “envision[s] building space habitats that could house billions as a solution to environmental catastrophes on Earth” and “outlined a vision for moving industry off Earth, most immediately to the moon,” said Yingling. SpaceX’s founder, [Elon Musk](#), has expressed interest in creating human settlements on [Mars](#). But “even if having a fraction of the human population live and work in space one day far in the future were possible, it would not fix pressing environmental crises such as wildfires or [climate change](#) in the near term.”

Another source of potential harm is the proliferation of [data centers](#). [AI](#) usage has increased the need for these centers, which have very high water requirements. Bezos and Musk “both have companies that build and rely on resource-intensive data centers based on land” and have “espoused plans to construct solar-powered orbital data centers,” said Yingling. They “frame these plans as environmentally beneficial because an orbital data center wouldn’t require the same amount of water or electricity as a data center on Earth.” Yet “orbital data centers, made up of satellite clusters, would add to an already-crowded space environment.” They can also “threaten Earth-based astronomy” and “pollute Earth’s orbit with debris.”

Room for improvement

Unfortunately, putting things in space takes a substantial [environmental toll](#). Spaceflight “leads to a globally averaged depletion of the ozone layer and contributes to global warming,” said a study published in the journal [Earth’s Future](#). “Nearly 88% of the ozone loss comes from nitrogen oxides released by objects reentering the atmosphere.”

Aside from ozone depletion, “space expansion has other environmental effects,” said Grist. These include the “loss of dark sky as satellites reflect sunlight and damage to wildlife habitats around launch sites,” in addition to the “enormous greenhouse gas emissions involved in building and launching satellites.”

If a “rocket, satellite network or lunar mining project is supposed to benefit everyone, companies should have to provide transparent accounting for emissions, land use, debris risks and impacts on communities,” said [The Cool Down](#). There should also be “tougher oversight before new launch facilities, satellite fleets or data-center projects move forward.”

The prevalence of starwashing does not mean that all extraterrestrial endeavors should be scorned, said The Cool Down. “Methane-detecting satellites have uncovered leaks from oil and gas operations in recent years that dramatically exceeded what had been reported,” said Grist, and “astronauts have been shocked by how fragile and delicate Earth’s atmosphere looks from space,” turning a “surprising number of them into climate advocates.”