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HUMAN SPACEFLIGHT INNOVATIONS TO SURVIVE CLIMATE CHANGE

Abstract

It is undeniable that the Earth is suffering from the consequences of human activity. Predictions about climate change have become increasingly pessimistic, with the first signs of these changes already visible. Although hope still exists, it is clear that humans will have to adapt to new environments and ways of inhabiting the planet. To achieve this, we must focus on developing architectures, processes, and emergency/survival designs that are suitable for the most hostile areas of our planet.

Many populations in desert or remote areas have developed systems that enable them to survive, and throughout the history of space exploration, humans have innovated and developed new ideas with more resources but the same ambitions for survival. With the vast resources available for the space industry, it would be interesting to see how the survival technologies created for the space environment could be useful in the most disadvantaged areas on Earth. Thinking about space habitats could be a response to future environmental problems.

Assuming that the worst weather predictions turn out to be true, then the survival solutions developed for the space environment could be a chance to adapt to new living conditions on Earth. More than a luxury, space and its innovations would become humanity's only chance of survival on the surface of its home planet. This article summarizes research of architectural and design processes developed by the space industry that could be adapted to the harsh environment of climate change.

For our analysis, we will be reviewing a range of space sector projects that have already been implemented, as well as designs and architectural plans developed by professionals in recent years. Rather than letting these innovative solutions go to waste, we can repurpose them for upcoming changes on Earth and make the most of them.