

# Lessons learned from biosphere experiments and what is required for expanding our activities into moon, mars, and beyond.

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For more long and far space mission beyond LEO, closed ecological life support system with food production (biosphere experiments) are required and many projects were designed for various purposes and conducted (e. g. Biosphere 2 project, NASA' s Lunar-Mars Life Support Test Project), and some (e. g. Lunar Palace in china and HI-SEAS in Hawaii) are under going now. In this presentation, reviewing these biosphere experiments including mini-Earth project conducted in Rokkasho, Japan, and put further problems in order from technical and socio-psychological aspects.

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