

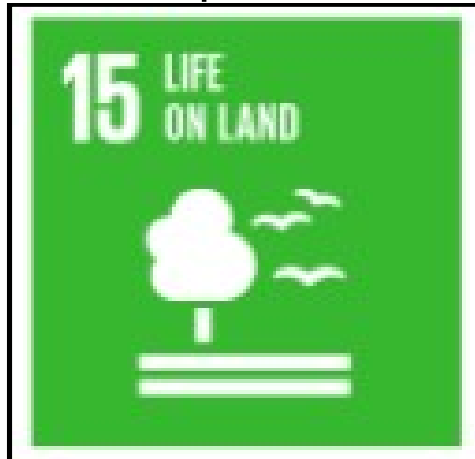


AMITY UNIVERSITY MAHARASHTRA

Established vide Maharashtra Act No. 13 of 2014, of Government of Maharashtra, and recognized under section 2(f) of UGC Act 1956.

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Report on



GOAL 15: Life on Land Sustainable Development Goals

Year 2020

Amity University Maharashtra, Bhatan Post - Somathne,
Mumbai - Pune Expy, Panvel, Bhatan Pada,
Maharashtra 410206



SDG 15: Life on Land

Contents

GOAL 15: Life on Land.....	2
Early Mars Analogues: Habitability and Bio-signature Preservation in Hypersaline Lakes and Permafrost	2
Earth and Space Exploration Program	3
Learning about hot Springs and how life originated.....	4
Learning to observe and taking Scientific Notes.....	4
Studying Life In Extreme Conditions	5
Experiencing Life at Very High Altitude Regions.....	6
Ground Penetration Radar.....	7
Studying the Water Ice Deposits under the Lake	7
Mars Amity Surface Characterization Rover.....	8
Cosmic Adventures	10
MARS : Mars Amity Research Station	10

GOAL 15: Life on Land

Early Mars Analogues: Habitability and Bio-signature Preservation in Hypersaline Lakes and Permafrost

The Activity from Centre of Excellence in Astrobiology in Ladakh is conducted. Several saline lakes present in Ladakh's high-altitude, rain-shadowed region are potential analogues to lakes that existed on early Mars (>3 Ga), formed by evaporation of briny surface lakes. Over 600 small (~<25 km²) individual light-toned chloride deposits have been observed across the surface of Mars and appear to be associated with the fine-scale polygonal pattern, topographic lows and fluvial channels. They are relevant to planetary geomorphologists studying early Mars and have astrobiology significance in relation to the habitability of groups studying microbial life in briny environments and salt deposits. Our group is studying Tso Kar, Ladakh as an Early Mars Analogue and exploring in-situ analysis of samples, testing of hand-held/rover-based instruments for biosignature studies. We published an overview of Ladakh's astrobiology potential



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Earth and Space Exploration Program

ESEP is a 3-year program, with several partner organizations that enables people from all walks of life to learn about our planet and be a part of climate change and Mars exploration training.

The program aims to support research related to astrobiology, help monitor climate change, inspire students to pursue STEAM education, and spread awareness in India.

The first edition of the program was successfully conducted in July 2021.



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Learning about hot Springs and how life originated



Learning to observe and taking Scientific Notes



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Studying Life In Extreme Conditions



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Experiencing Life at Very High Altitude Regions



Ground Penetration Radar



Studying the Water Ice Deposits under the Lake

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Mars Amity Surface Characterization Rover



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Cosmic Adventures



MARS : Mars Amity Research Station

“Amity is establishing India’s first Planetary Science, Education and Experience Program in a remote, off-Earth like environment. The program will support Astrobiology



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and Space Biology research, help monitor Climate change, inspire students to pursue
STEM education and spread awareness about Space in India.”

