

SPACE AND SUSTAINABILITY COMPACT AGREEMENT

1. Applicable UN Sustainable Development Goals

This Compact Agreement Relates to UN SDG for 2030 for the following Goals: 3, 4, 9, 10, 13

2. Purpose of this Compact Agreement

1. Opportunity to remote communities through space education
2. Disaster management and disaster assessment and climate action

3. Parties to the Compact Agreement

Party 1	Antarikchya Prathisthan Nepal (APN), Nepal
Party 2	Navodaya School, Nepal
Party 3 (if any)	

4. Participants and their contact information

4.1 Party 1

Name	Antarikchya Prathisthan Nepal (APN), Nepal
Email Id	rishav@antarikchya.org.np
Address	Lazimpat, Kathmandu, Nepal
Phone number	+9779749465435
Website (if any)	www.antarikchya.org.np
Type of entity (Please choose the applicable one)	<input type="checkbox"/> Government <input checked="" type="checkbox"/> Non-Governmental Organization (NGO) <input type="checkbox"/> Private Sector <input type="checkbox"/> Local/Regional Government <input type="checkbox"/> Civil Society organization/Youth <input type="checkbox"/> Philanthropic Organization <input type="checkbox"/> Multilateral body /Intergovernmental Organization <input type="checkbox"/> Academic Institution /Scientific Community <input type="checkbox"/> Other relevant actor

4.2 Party 2

Name	Navodaya School, Nepal
Email Id	mchirayath@gmail.com
Address	Tarkari Chowk, Khairahani-1, Chitwan, Nepal
Phone number	+9779845026638
Website (if any)	www.navodayachepang.edu.np
Type of entity (Please choose the applicable one)	<input type="checkbox"/> Government

	<input type="checkbox"/> Non-Governmental Organization (NGO) <input type="checkbox"/> Private Sector <input type="checkbox"/> Local/Regional Government <input type="checkbox"/> Civil Society organization/Youth <input type="checkbox"/> Philanthropic Organization <input type="checkbox"/> Multilateral body /Intergovernmental Organization <input checked="" type="checkbox"/> Academic Institution /Scientific Community <input type="checkbox"/> Other relevant actor
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4.3 Party 3

Name	
Email Id	
Address	
Phone number	
Website (if any)	
Type of entity (Please choose the applicable one)	<input type="checkbox"/> Government <input type="checkbox"/> Non-Governmental Organization (NGO) <input type="checkbox"/> Private Sector <input type="checkbox"/> Local/Regional Government <input type="checkbox"/> Civil Society organization/Youth <input type="checkbox"/> Philanthropic Organization <input type="checkbox"/> Multilateral body /Intergovernmental Organization <input type="checkbox"/> Academic Institution /Scientific Community <input type="checkbox"/> Other relevant actor

4.4 Please select the geographical coverage of the Energy Compact
 Africa Asia Europe North America South America Oceania Global

5. Goal Areas for Compact Agreement that are being addressed
 (The goal areas may include both short-term and long-term goals)

- | |
|---|
| <ol style="list-style-type: none"> 1. Train 10 middle school students to build one CubeSat in one year. 2. Meet the basic needs of the said school students such as food, education and shelter for 3 years 3. Use of software base DIGIPEATER for amateur radio enthusiast for transfer of data at the time of disaster 4. Use of multi-spectral cameras to observe normalized differential water index (NDWI) – after one year post the launch in August 2025 |
|---|

5. Detection of earthquake precursors with the help of boomless magnetometers

Long term goals:

1. Encourage young people to be part of Nepali space ecosystem
2. Prevention and control of disaster in Nepal
3. Transfer of information easily irrespective of topography and geographical altitudinal challenges.

6. Space systems, Technology, Data Analytics etc that are involved and sources of information

1. Pre-launch phase

JAXA, China, India, USA (UMichigan)

2. Post-launch phase

Communication and Remote-sensing Cubesat satellite which has 3 payloads each carrying out the below mentioned activities for Nepal:

- (a) Software-based DIGIPEATER will facilitate transfer of text-based data to and by all amateur radio enthusiasts based on a permit system.
- (b) Multi-spectral images to calculate NDWI
- (c) To detect earthquake precursors - ELF (extremely low frequency) and ULF (ultra low frequency) waves in the magnetic field of the earth

7. Services that are being provided

1. Scholarship for students provided by APN and venue for training and education of students provided by the school
2. STEM club in school that is open to all school students from the region – Khairahani, Chitwan, Nepal.
3. Disaster management for reducing casualties of earthquake and climate action through monitoring glacial formation and drought.

8. Timetable for reaching various milestones

Overall Timetable for reaching various milestones:

1. Operate the satellite for two years post-launch August 2025 onwards.
2. Demonstrate the use of all three payloads after the launch in space in August 2025
3. Train the middle school students from April 2024 for satellite manufacturing a year
4. Provide scholarship to the said students for total 3 years for meeting their basic needs of food, education and shelter- April 2024 onwards

Manufacturing of satellite timelines:

- (a) Bread board model (BBM) by July 2024
- (b) Have the engineering model (EM) done by September 2024
- (c) Carry out rigorous testing of EM by October 2024
- (d) Have the flight model (FM) ready by January 2025

Post-launch satellite timelines:

- (a) Satellite being operational for at least 6 months and may extend for 2 months

(b) Orbital decay and reentry of satellite simulated at 1908 days after launch via NASA's GMAT 2022a

9. Monitoring mechanisms for the Goals areas of this Compact Agreement

- (a) Telemetry and controlling the satellite through the ground station of Nepal's National Academy of Science and Technology (NAST) which is a governmental body.
- (b) Internal audit carried out by team annually.
- (c) Prepare an annual report regarding this Space and Sustainability Compact Agreement annually.

10. Please specify the Sustainable Development Goals applicable to this Compact Agreement (Please select all that are applicable)

- SDG 2 – Zero Hunger
- SDG 3 – Good Health and Well Being
- SDG 4 – Quality Education
- SDG 6 – Clean Water and Sanitation
- SDG 7 – Affordable and Clean Energy
- SDG 9 – Industry, Innovation and Infrastructure
- SDG 11 – Sustainable Cities and Communities
- SDG 13 – Climate Action
- SDG 14- Life Below Water
- SDG 15 – Life on Land

Other:

SDG 10 – Reduced Inequalities

GUIDING PRINCIPLES CHECKLIST

Please use the checklist below to validate that the proposed Space and Sustainability Compact Agreement is aligned with the guiding principles.

1. The Space and Sustainability Compact Agreement deals with space technology being used for fulfilling the national, sectoral, and/or sub-national sustainable development strategies/plans, including SDG implementation plans/roadmaps. Yes No
2. The Space and Sustainability Compact Agreement strengthens and/or constitute a target, commitment, or policy action in relation to any one or more of the SDGs listed in point F of this Agreement. Yes No
3. The Space and Sustainability Compact Agreement takes into account the socio-economic impacts of measures being considered. Yes No
4. The Space and Sustainability Compact Agreement fosters enabling policies and an inclusive and safe institutional and working environment that enables everyone to enter, retain and advance in the workforce, take on leadership roles, and receive due recognition for their contributions. Yes No

5. The Space and Sustainability Compact Agreement considers measures that address the needs of the most vulnerable people and groups and those who are most impacted and does not create, exacerbate, or unintentionally increase the vulnerabilities. Yes No
6. The Space and Sustainability Compact Agreement contains SMART (specific, measurable, achievable, resource-based, and time-based) goals. Yes No
7. The Space and Sustainability Compact Agreement considers an achievable timeframe. Yes No
8. The Space and Sustainability Compact Agreement considers issues related to means of implementation to ensure the feasibility of measures proposed (e.g. cost and financing strategy, technical assistance needs and partnerships, policy and regulatory gaps, data and technology). Yes No
9. The Space and Sustainability Compact Agreement promotes cooperative measures at any level, including national, regional, and international cooperation. Yes No
10. The Space and Sustainability Compact Agreement has adequate self-reporting and monitoring mechanisms. Yes No
11. The Space and Sustainability Compact Agreement is a non-binding document between the parties. Yes No
12. The Space and Sustainability Compact Agreement has goals and timelines to be met. Yes No
13. The Space and Sustainability Compact Agreement is available in public domain. Yes No

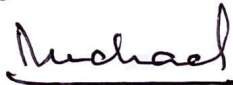
SIGNATURES

(a) Party 1 -



On behalf of APN, Kishan Adhikari, PM of slipus 2 Sat project.

(b) Party 2 -



On behalf of Navodaya School, Dr. Fr. Michael Chirayath.
Manager of the institution

(c) Party 3 -