

SPACE AND SUSTAINABILITY COMPACT AGREEMENT



1. Applicable UN Sustainable Development Goals

This Compact Agreement Relates to the UN SDG for 2030 for the following Goals: Goal 2, Goal 12, Goal 13, Goal 14 and Goal 15.

2. Purpose of this Compact Agreement

The three main purpose of this agreements are

1. **Weather resilience through 24/7 marine and weather advisory** : Reducing cost of operations at sea of fisherfolks by providing them advance weather and marine advisories
2. **Localized additional income identification and training** : Increasing additional income source by providing localized source of income like seaweed. Partner with NGOs for training and livelihood enablement.
3. **Market connect and entrepreneurship** : Identify all potential areas of seaweed cultivation, engage farmers in cultivation and buy back their material post harvest. This enables

3. Parties to the Compact Agreement

Party 1	Numer8 Analytics Private Limited (N8)
Party 2	Indian Network of Ethics and Climate Change (INECC)
Party 3	ClimaCrew Private Limited (CC)

4. Participants and their contact information

4.1 Party 1

Name	Numer8 Analytics Private Limited
Email Id	devleena@numer8.in
Address	302B Mahakali Caves Road, Andheri East, Mumbai – 400093
Phone number	+91 9916064956
Website (if any)	https://www.numer8.in/
Type of entity (Please choose the applicable one)	<input type="checkbox"/> Government <input type="checkbox"/> Non-Governmental Organization (NGO) <input checked="" 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	Indian Network of Ethics and Climate Change (INECC)
Email Id	myron@inecc.net
Address	Indian Network on Ethics and Climate Change C/O Laya Resource Centre Plot No 110, D-No: 5-175/1, Behind Bay Crown Apartment, Near Sun Senora Beach Campus, Yendada, Visakhapatnam – 530045 Andhra Pradesh, India,
Phone number	+91 9892396302
Website (if any)	https://inecc.net/
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
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4.3 Party 3

Name	ClimaCrew Private Limited
Email Id	susanta.kundu@climacrew.in
Address	184-87, Swami Vivekananda Rd, Momin Nagar, Jogeshwari West, Mumbai, Maharashtra 400102
Phone number	+91 99675 54895
Website (if any)	https://www.climacrew.in/

<p>Type of entity (Please choose the applicable one)</p>	<p><input type="checkbox"/> Government</p> <p><input type="checkbox"/> Non-Governmental Organization (NGO)</p> <p><input checked="" type="checkbox"/> Private Sector</p> <p><input type="checkbox"/> Local/Regional Government</p> <p><input type="checkbox"/> Civil Society organization/Youth</p> <p><input type="checkbox"/> Philanthropic Organization</p> <p><input type="checkbox"/> Multilateral body /Intergovernmental Organization</p> <p><input type="checkbox"/> Academic Institution /Scientific Community</p> <p><input type="checkbox"/> Other relevant actor</p>
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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)

<p>Short term goals :</p> <ol style="list-style-type: none">1. Climate resilience for the fisherfolk community- Daily weather and marine advisories and a 5 days forecast2. Reduce the operational costs of fisherfolks at the sea by up to 15%3. Increase their additional incomes by up to 10k per month per fisherfolk through seaweed based alternative livelihood.4. Integrate seaweed farming and marine fishing through integrated marine tropical aquaculture, generating multiple localized income sources for coastal communities, and improving biodiversity of the local spots5. Building a web dashboard to monitor Indo-pacific regions for seaweed site identifications, site monitoring, and marine and weather advisories customized to the fishing community, available in their local language6. Extracting multiple organic value adds from seaweed in the form of bio-fertilisers, bio-plastics and sustainable food and feed. <p>Long term goals:</p> <ol style="list-style-type: none">1. Decreased food security for fishing communities across all coastal countries in Asia Pacific

2. Increased climate resilience especially of small-scale fisheries across Asia Pacific
3. A circular seafood economy through traceability enabled supply chain in India and Asia Pacific
4. Seaweed based integrated coastal aquaculture improving biodiversity of oceans

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

Earth observation, remote sensing and analysis of satellite data will be used to reach the goals.

NASA and ESA data are used from the following data sources

1. NASA Sources
 - a. Group for High Resolution Sea Surface Temperatures
 - b. Ocean Color Web
2. NOAA
 - a. Global Forecasting System
3. ESA
 - a. Global Monitoring and Forecasting Center (GLO MFC)
4. Reanalysis data
 - a. CMEMS
 - b. GFS

7. Services that are being provided

The following services are provided to the marine fisherfolks

1. Potential fishing zones
2. Ocean Currents
3. Tide
4. Hyper local weather data
 - a. Sea Surface Temperature
 - b. Lighting
 - c. Wind direction
 - d. Wind Speed
 - e. Cloud Cover
5. Algal Bloom
6. Ocean depth information
7. Bathymetry
8. Seaweed site identification
9. Seaweed species identification

10. Marine parameter analysis - Salinity, Do2, Ph

8. Timetable for reaching various milestones

Timetable for reaching various milestones describe in the short term goals

1. Climate resilience for the fisherfolk community- Daily weather and marine advisories and a 5 days forecast

- Hyperlocal combined weather update – Completed, March 2023
- Cyclone path prediction – May 2025
- Coastal flood prediction – May 2025
- Visibility Index – October 2025
- Wave Height – October 2025
- Nautical Charts – November 2025
- Voice and Data for marine communication – December 2025

2. Reduce the operational costs of fisherfolks at the sea by up to 15%

- Potential fishing zones around their chosen ports and harbors - Completed, March 2023
- Algae bloom information - Completed March 2023
- Marine and weather advisories suitable or unsuitable for fishing - Complete March 2023
- Market connect at the sea - December 2025

3. Increase their additional incomes by up to 10k per month per fisherfolk through seaweed based alternative livelihood.

- Establishing training modules - started Jan 2024
- Training in seaweed cultivation - started for two states in India, Dec 2023
- Trained coastal communities in batches across states in India - completed 200+ fisherfolks till now, started in Dec 2023
- Buying back seaweed produced by communities - started in 2 states in Dec 2023

4. Integrate seaweed farming and marine fishing through integrated marine tropical aquaculture, generating multiple localized income sources for coastal communities, and improving biodiversity of the local spots - Scheduled to start December 2024

5. Building a web dashboard to monitor Indo-pacific regions for seaweed site identifications, site monitoring, and marine and weather advisories customized to the fishing community, available in their local language - In progress scheduled to be completed by Apr 2025

6. Extracting multiple organic value adds from seaweed in the form of bio-fertilisers, and bio-plastics - In progress, scheduled to complete by Dec 2025

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

(a) Regular monitoring by the internal data team weekly, and by field partners every 3 months.

(b) Internal audit carried out by the team 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 12 – Responsible Production and Consumption

11. ACES Worldwide - Alliance for Collaboration in the Exploration of Space (ACES Worldwide) has facilitated entering into this Space and Sustainability Compact Agreement and is a **confirming party** to this agreement. ACES Worldwide does not have any rights and obligations under this agreement, except the right to publicize and publish this agreement.

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 constitutes 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 –



(b) Party 2 –

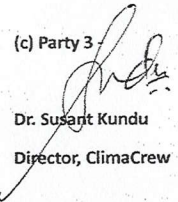


Myron Mendes

National Facilitator, INECC

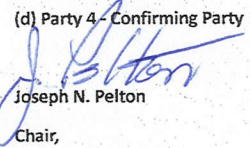
Version 9 September 2024 v3

(c) Party 3 -



Dr. Susant Kundu
Director, ClimaCrew

(d) Party 4 - Confirming Party



Joseph N. Pelton

Chair,

ACES Worldwide - Alliance for Collaboration in the Exploration of Space