



The Commonwealth

# CommonSpace

Making Space Work for All



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# The CommonSpace: Executive Summary

The Commonwealth Space Collaboration Initiative (CSCI) is an ambitious project designed to unify the space exploration, collaboration and research efforts of the Commonwealth member nations. This proposal integrates the foundational elements of the initial CSCI plan with the principles of the King's Astra Carta and aligns with the innovative approaches of the **Lord Mayor of the City of London's Space Protection Initiative**. The initiative focuses on Deep Space Technology, Space Technology Exchange, Space Education, establishing a Space Data Hub and enhancing Sustainability in Space.

# The Commonsensing Project

Message from H.E. Baroness Patricia Scotland, Secretary General

*“Initiative which enables the aspirations contained in the CommonSensing initiative to be fully realized, assisting vulnerable small island states and states across our commonwealth to better respond to the climate crisis they jointly face armed with appropriate data to enable to make policy and implementation plans made on the basis of the best empirical data available. Geospatial data is used for the common good and the protection of our Commons.”*

## Introduction:

Small island nations are on the frontline of the devastating impacts of climate change. CommonSensing is an innovative project based on a partnership between Fiji, Solomon Islands and Vanuatu, and a consortium of international partners. Together they support and build climate resilience and enhance decision-making through the use of satellite remote sensing technology.

# What is the CommonSensing Project?

The project is supporting the three Pacific island nations to strengthen capacity and bridge data gaps for enhanced access to climate finance, strengthened climate policy, reduced impact of natural disasters and improved risk management as follows:

- Improved access to climate finance Provision of data and technical assistance to support design of evidenced based climate change proposals to enhance increased access to climate finance. This component of the project is closely linked to the Commonwealth's Climate Finance Access Hub (CCFAH).
- Disaster risk reduction for natural hazards Use of satellite-derived imagery and elevation models for development of tools that highlight risk areas emanating from climate-driven hazards to support decision making, planning and development of strategies for disaster risk preparedness and reduction.

# What is the CommonSensing Project?

- Enhanced food security Use of computational simulations based on satellite remote sensing data to map climate driven hazards and their impact on the robustness and economics of food production systems for improved decision making.
- Enhanced resilience to climate change Capacity building for enhanced use of weather and climate information services including generation of new satellite data sources to address gaps and strengthen existing platforms for better decision making.

# Partnering for Climate Action

The Commonwealth has entered into a partnership with the project lead, the United Nations Institute for Training and Research (UNITAR), through its Operational Satellite Applications programme (UNOSAT), to deliver the Commonwealth's role in the CommonSensing Project. The Commonwealth is providing technical assistance to support Fiji, Vanuatu and the Solomon Islands to use the CommonSensing platform for enhanced access to international climate finance.

The project works closely with the Commonwealth's Climate Finance Access Hub (CCFAH), which places Commonwealth National Climate Finance Advisers in government departments to support climate change project proposals, capacity-building and project implementation. CommonSensing is funded through a £9.6 million grant from the UK Space Agency's International Partnership Programme (IPP), which supports cutting-edge research and innovation on global issues affecting developing countries. The grant is supplemented by contributions from the project partners and matched with in-kind contributions from Fiji, Vanuatu and Solomon Islands.

# The Strategy : The CommonSpace Initiative

The Commonwealth Space Collaboration ('CommonSpace') initiative brings together 56 member countries working together for prosperity, democracy and peace in space

Our aim is to ensure future space is sustainable, peaceful and that everyone can benefit equitably, in line with the goals of the Commonwealth

CommonSpace focuses on:

- Space Research and innovation
- Space Technology, Data and Security
- The Sustainability Mission
- Regulatory and Governance Frameworks
- Civil society engagement and models for co-investment
- Space Education, Diversity and Skills



# CommonSpace key principles

## Space Sustainability

We need to preserve the space environment for future generations and prevent debris making orbits unusable by carefully managing our use of space, underpinned by data

## Peace in Space

Preventing conflicts in space is key to ensuring future prosperity we can all benefit from future space opportunities, including for prosperity, health and energy

## Equitable Benefits

Space belongs to everyone: we want to ensure space is democratic and the benefits are equitable, so developing countries are not locked out of future space benefits

1. Research and Innovation

2. Technology, Data and Security

3. Sustainability Mission

4. Regulatory and Governance Frameworks

5. Civil Society Engagement and Models for Co-Investment

6. Education, Diversity and Skills

# 1. CommonSpace Research and innovation

1.a. Set a **joint research agenda** for the Commonwealth focused on:

Initial research priorities identified are:

1. Sustainable novel high-performance materials
2. Deep space exploration and novel propulsion
3. People and behavioural science approaches

This could include leveraging existing research budgets and partnerships across Commonwealth countries and sharing research projects and outputs, encouraging collaborations between universities in different countries and sponsoring exchanges/ secondments of academic staff between Commonwealth countries

1.b. Develop **collaborative innovation sprints** on priority areas:

Initial innovation priorities identified are:

1. Debris removal capability
2. Solar and renewable energy from space
3. In-space manufacture of medical devices

Innovation sprints will bring together industry, government and academia to rapidly develop and scale proofs of concept to minimum viable products. The innovation priorities will be reviewed annually to ensure relevance. Innovation sprints could be commissioned through existing innovation teams and accelerators such as NATO DIANA.

## 2. CommonSpace Technology, data sharing and security

### 2.a. Create a **Space Technology Exchange**

- Share information, R&D and expertise across the Commonwealth
- Facilitate joint projects and initiatives to develop and deploy satellite technology for various applications, including communication, navigation, weather forecasting, environmental monitoring, and disaster management
- Create platforms or networks for scientists, engineers, and researchers from Commonwealth countries to exchange knowledge, best practices, and lessons learned in satellite design, operation, and utilization

### 2.b. Establish and host a **Space Data Hub**

- Create and host a single source of relevant and up-to-date space data for government and academic purposes
- Design user-friendly interfaces and visualization tools to enable easy access to the data repository and facilitate data exploration, analysis, and interpretation by users with varying levels of expertise
- Make the data sets available for research analysis, testing and modelling
- Develop data sharing policies which respect privacy and intellectual property

### 2.c. Explore common **security concerns** and broker pragmatic solutions

- Develop standards for secure supply chains
- Promote cybersecurity and resilience in the space sector
- Encourage collaboration and sharing best practice on security including cybersecurity
- Seek to broker solutions to concerns over technology transfer and Intellectual Property theft

# 3. CommonSpace Sustainability Mission

## 3.a. Commonwealth countries **commitment to sustainable practices in space**

- Countries agree to responsible stewardship of space resources, minimising environmental impact on Earth, and prioritising long-term sustainability in space activities
- Countries work together to assess current practices and identify opportunities for improving sustainability in space operations and missions
- Countries will promote international cooperation and dialogue on sustainability in space through partnerships, forums, and initiatives aimed at sharing best practices, standards, and guidelines among Commonwealth countries and beyond

## 3.b. Develop and communicate a **Grand Mission to address Space Sustainability** for the Commonwealth

- Work with the Commonwealth countries to agree a key achievable aim by 2030, for example:  
*“By 2030, the Commonwealth will have supported the development of a fully scaled and deployable debris removal capability”*
- This will be delivered through collaborations with space agencies, research institutions, and private space tech companies across Commonwealth countries
- Co-investment in the development of active debris removal systems, including robotic satellites, space tugs, and other innovative solutions capable of capturing and deorbiting defunct satellites, spent rocket stages, and other debris objects

## 4. CommonSpace Regulatory Frameworks

### 4.a. Define and promote **responsible space behaviours**

- Reaffirm the primacy of the Outer Space Treaty 1967
- Work together to develop commitments which strike the right balance between future space benefits and preserving the space environment
- Develop future regulatory frameworks and mechanisms for governing future space traffic, manufacturing, and other activities
- Promote dialogue, collaboration, and cooperation among Commonwealth countries and international partners on issues related to space law, policy, and ethical considerations in space exploration and utilization

### 4.b. Work to **protect and preserve sites in space** of historical and cultural significance

- Identify and create a register for special sites and locations in space which come under additional protections
- Monitor activity which could endanger those areas, including accidentally
- Organize conferences, symposiums, and roundtable discussions bringing together policymakers, legal experts, scholars, industry representatives, and civil society organizations to exchange views and expertise on space preservation and archaeology

# 5. CommonSpace empowering Civil Society

## 5.a Establish a **Young People's Commonwealth Panel** on Space

- Invite applications for a young people to form an annual Panel to hear the main trends in space and pass advisory resolutions on issues over future sustainability
- Hold an annual event to convene the Panel including associated publicity, and the opportunity for the Panel to present their conclusions to the Commonwealth Secretary-General

## 5.b. Establish the **CommonSpace Fund** for co-investment on ethical and sustainable space technologies

- Sponsor a not-for-profit organisation to develop a mechanism and model for a charitable Fund
- Enable Commonwealth countries to co-invest
- Support and promote crowdfunding for people across the Commonwealth
- Support the creation of Space Bonds to allow people to hold a stake in future technologies

## 6. CommonSpace Education, Diversity and Skills

### 6.a. Work to **promote space literacy** in schools and universities

- Develop novel methods for communicating and exciting young people, such as imagined futures, virtual reality and science fiction
  - Work with schools and universities to encourage a diverse range of students to consider careers in the space sector
  - Set mission-led innovation challenges for students to develop ideas and pitch potential solutions
- Develop **equitable space careers** for a diverse range of practitioners
  - Promote opportunities for upskilling through a mentoring scheme, matching people from across Commonwealth countries
  - Broker secondment opportunities with a matchmaking service for Commonwealth participants
  - Engage a diverse range of people at all career stages in delivering across the full range of the CommonSpace Initiative



# CommonSpace

## Making Space work for All

An initiative by Rt. Hon. Baroness Patrica Scotland KC  
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