

New look for ground-breaking UK-led ESA mission to detect climate change

TRUTHS, which stands for Traceable Radiometry Underpinning Terrestrial- and Helio- Studies, will provide a gold standard reference for satellites observing the Earth, Moon and Sun.

Conceived by the UK's National Physical Laboratory (NPL) and funded by the UK Space Agency, TRUTHS is being developed by the European Space Agency (ESA). The satellite will be built by the UK space industry led by Airbus UK, along with partners across Europe, including Greece, Switzerland, Romania and Czech Republic, who have also provided funding for the mission.

Beth Greenaway, Head of Earth Observation and Climate at the UK Space Agency, said:

The UK-led TRUTHS mission is making significant progress and we can now unveil more details about what it will actually look like. The mission will play a vital role in improving how we monitor climate change using satellite data and support the decisive climate action which global nations are negotiating at COP26.

The ground-breaking mission will create a 'climate and calibration observatory in space' which will reduce uncertainty in the Earth observing data and will set a new benchmark to detect change in Earth's climate system. It will build confidence in climate action providing an enabling element of a Space-based climate observing system tied unequivocally to international standards.

In addition to providing this benchmark climate data, its orbit allows its measurements to be directly compared with other missions when their orbit crosses, as shown in the new material released today.

Dominique Gillieron, Head of the Earth Observation Research Mission at the European Space Agency said:

Building on its experience of multiple previous Earth Observation missions, ESA leads the preparation phase of TRUTHS mission towards its final endorsement by end of 2022 at the ESA ministerial conference. TRUTHS will be a perfect complement to the current planned Earth Observation missions providing unprecedented radiometric accuracy.

When there is uncertainty in data it is difficult to make decisions. This is especially true for climate as very detailed resolutions and long-term records are needed to determine a climate change signal above the natural

variability in the weather and climate. TRUTHS is providing the confidence to allow both existing and new missions data to be harmonised and used to make trusted decisions related to climate adaptation and mitigation strategies. It will provide the reference point to help assess progress of these actions and their impact on society.

The early design phase of the TRUTHS mission has been validated; an important milestone achieved by the TRUTHS consortium as they now move to the detailed design phase.

Artist Impression of TRUTHS – Credit: ESA and Airbus

TRUTHS will provide information, which will be of specific importance to the global south and areas where the in-situ, ground-based infrastructure is most challenging and difficult to provide reliable information, and where remote sensing facilitates are crucial to ensuring a rapid response to adapt.

Professor Nigel Fox, UK TRUTHS Mission Scientist, NPL said:

TRUTHS meets calls from the world's satellite and climate community for robust high accuracy SI traceability. A recent publication from the Committee on Earth Observation Satellites has highlighted the urgency for improved accuracy of observations from space, to help ensure our actions are having the desired impact.

Although TRUTHS is led by the UK its outcomes and objectives are truly global in nature. As the satellite moves through these important phases, many of those who will eventually benefit from the data may only just be starting school and I hope missions like TRUTHS will inspire them to pursue careers in this exciting sector.

Justin Byrne Head of Earth Observation and Science at Airbus Defence and Space UK said:

TRUTHS is an important mission as it will provide the gold standard of calibration for space-based Earth observation – a kind of 'standards laboratory in space'. With TRUTHS we also have the opportunity to further develop important areas of industrial capabilities across the UK space sector.

PM House of Commons statement on G20 and COP26 World Leaders Summit: 3 November 2021

Mr Speaker,

with your permission I will make a statement about the G20 summit in Rome and update the House on COP26 in Glasgow.

Almost 30 years ago, the world acknowledged the gathering danger of climate change and agreed to do what would have once been inconceivable

and regulate the atmosphere of the planet itself by curbing greenhouse gas emissions.

And one declaration succeeded another until,

in Paris in 2015,

we all agreed to seek to restrain the rise in world temperatures to 1.5 degrees centigrade.

Now, after all the targets and the promises

and after yet more warnings from our scientists about the peril staring at us in the face

we come to the reckoning.

This is the moment when we must turn words into action.

If we fail, then Paris will have failed

and every summit going back to Rio de Janeiro in 1992 will have failed,

because we will have allowed our shared aim of 1.5 degrees to escape our grasp.

Even half a degree of extra warming would have tragic consequences.

If global temperatures were to rise by 2 degrees, our scientists forecast that we will lose virtually all of the world's coral reefs.

The Great Barrier Reef and countless other living marvels would dissolve into an ever warmer and ever more acidic ocean,

returning the terrible verdict that human beings lacked the will to preserve the wonders of the natural world.

And in the end, Mr Speaker it is a question of will.

We have the technology to do what is necessary: all that remains in question is our resolve.

The G20 summit convened by our Italian friends and COP26 partner last weekend provided encouraging evidence that the political will exists,

which is vital for the simple reason that the G20 accounts for 80 percent of the world economy and 75 percent of greenhouse gas emissions.

Britain was the first G20 nation to promise in law to wipe out our contribution to climate change by achieving net zero,

and as recently as 2019, only one other member had made a comparable pledge.

Today 18 countries in the G20 have made specific commitments to achieve net zero

and in the Rome Declaration last Sunday,

every member acknowledged – and I quote – “the key relevance of achieving global net zero greenhouse gas emissions or carbon neutrality by or around mid-century”.

To that end, the G20 – including China, including China – agreed to stop financing new international unabated coal projects by the end of this year, a vital step towards consigning coal to history.

And every member repeated their commitment to the Paris target of 1.5 degrees.

In a spirit of cooperation, the summit reached other important agreements.

The G20 will levy a minimum corporation tax rate of 15 percent, ensuring that multinational companies make a fair contribution wherever they operate.

Over 130 countries and jurisdictions have now joined this arrangement, showing what we can achieve together when the will exists.

The G20 adopted a target of vaccinating 70 percent of the world’s population against Covid by the middle of next year

and the UK is on track to provide 100 million doses to this effort.

By the end of this year, we will have donated over 30 million doses of the Oxford-AstraZeneca vaccine,

and at least another 20 million will follow next year,

along with 20 million doses of the Janssen vaccine ordered by the Government.

And the G20 resolved to work together to ease supply chain disruptions

which have affected every member as demand recovers and the world economy gets back on its feet.

I pay tribute to Prime Minister Draghi for his expert handling of the summit.

But everyone will accept that far more needs to be done to spare humanity from catastrophic climate change,

and in the meantime,

global warming is already contributing to droughts and brushfires and hurricanes,

summoning an awful vision of what lies ahead if we fail to act in the time that remains.

So the biggest summit that the United Kingdom has ever hosted is now underway in Glasgow,

bringing together 120 world leaders,

with the aim of translating aspirations into action to keep the ambition of 1.5 degrees alive.

I'm grateful to Glasgow City Council, to Police Scotland, to the Police across the whole of the UK and to our public health bodies for making this occasion possible and all their hard work.

For millions of people across the world, the outcome is literally a matter of life or death;

for some island states in the Pacific and Caribbean, it is a question of national survival.

The negotiations in Glasgow have almost two weeks to run,

but we can take heart from what has been achieved so far. Nations which together comprise 90 percent of the world economy are now committed to net zero,

up from 30 percent when the UK took over the reins of COP.

Yesterday alone, the United States and over 100 other countries agreed to cut their emissions of methane

one of the most destructive greenhouse gases

by 30 percent by 2030.

And 122 countries – with over 85 percent of the world's forests – agreed to end and reverse deforestation by the same deadline,

backed by the greatest ever commitment of public funds to this cause, which I hope will trigger even more from the private sector.

India has agreed to transform her energy system to derive half her power from renewable sources, keeping a billion tonnes of carbon out of the atmosphere.

The UK has doubled our commitment to international climate finance to £11.6 billion and we will contribute another £1 billion if the economy grows as is forecast.

We have launched our Clean Green Initiative, which will help the developing world to build new infrastructure in an environmentally friendly way,

and we will invest £3 billion of public money to unlock billions more from the private sector.

I've asked the world the UK has asked the world for action on coal, cars, cash and trees,

and we have begun to make progress – substantial palpable progress – on three out of the four.

But the negotiations in Glasgow have a long way to go Mr Speaker and far more must be done.

Whether we can summon the collective wisdom and will to save ourselves from an avoidable disaster still hangs in the balance,

and we will press on with the hard work until the last hour.

Mr Speaker, I commend this statement to the House.

MHRA's new Chief Healthcare Quality and Access Officer begins important role

News story

Dr Laura Squire OBE has begun her role as the Medicines and Healthcare products Regulatory Agency's (MHRA) Chief Healthcare Quality and Access Officer



This week Dr Laura Squire OBE begins her role as the Medicines and Healthcare products Regulatory Agency's (MHRA) Chief Healthcare Quality and Access Officer. She joins us from the Department of Health and Social Care, where she worked extensively on the COVID-19 vaccine deployment programme.

Laura started her career as a post-doctoral research assistant looking at resistance to anti-malarial drugs at the Liverpool Institute of Tropical Medicine following her PhD and BSc in Biochemistry and Physiology. She has spent most of her career as a Civil Servant. After many years in operational work Laura moved into government policy in 2014. In parallel, she went back to university, gaining an Executive Master's degree in Public Policy from the London School of Economics. Laura has extensive experience of regulatory and organisational transformation through her wider policy and operational work in other major government departments.

We are delighted that Laura joins us at an exciting time as the Agency looks to implement its transformation and as we continue to work hard on improving safe access to medicines, vaccines and medical devices. Laura's experience will be invaluable in helping us in our important commitment to maintaining high standards in, and improving access to, healthcare for the benefit of patients and the public.

Laura brings with her a wealth of knowledge, including regulatory and extensive policy expertise, which will help inform and guide our work for the future.

Dr Laura Squire OBE, newly appointed MHRA Chief Healthcare Quality and Access Officer commented:

I am coming to the Agency from the COVID-19 Vaccine Programme, something which by mid-September had already saved so many lives. That simply could not have happened without the expertise, professionalism but also the innovative approaches of the MHRA, which enabled the pace we needed whilst making sure patient safety was always uppermost in minds. That is why I wanted to join MHRA.

As we drive forward the transformation, we need to keep striking that balance, doing things differently and innovatively whilst always keeping in mind what this means for patients. I know I am joining a team of hugely skilled and knowledgeable people. I am looking forward to building on the Agency's world-renowned expertise on access to innovative healthcare products for the benefit of public health.

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£110m upgrade for RAF Shadow fleet

Awarded to Raytheon UK, the £110 million contract will see the current fleet of six aircraft increased to eight, and the integration of the latest UK Sovereign Defensive Aids Systems, ensuring this vital capability continues to provide battle-winning intelligence gathering for years to come.

Supporting 150 highly-skilled jobs at Broughton, including specialist aerospace skills and apprentices, and roles at Raytheon's sites at RAF Waddington and Harlow, the contract will also sustain around 350 further jobs across the UK supply chain.

Defence Minister Jeremy Quin said:

"Our newly upgraded Shadow Mk2 aircraft be equipped with world-leading technology developed right here in the UK. This investment supports vital defence outputs and 150 high-quality jobs in North Wales."

Welsh Secretary Simon Hart said:

"The signing of this contract with Raytheon is huge news for North Wales and testament to the incredibly skilled local workforce whose hard work, dedication and professionalism have rightly been recognised.

"This is levelling up in action – the UK Government, working with our partners and using our spending power to support jobs and prosperity in every part of the UK.

"Today that levelling up is happening in Broughton with the signing of this £110 million contract."

Based at RAF Waddington and flown by 14 Squadron, Shadow forms a key part of the RAF's Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) force by gathering intelligence via its high-definition electro-optical and electronic sensors.

Once the data is gathered, satellite communication links enable the information to be assessed while the aircraft is airborne during a mission. To protect the aircraft from possible attack, the aircraft will be fitted with an improved state-of-the-art Defensive Aids System (DAS).

As part of the contract, the latest DAS will be installed across the fleet of 8 aircraft, increasing its ability to defend itself and operate in unfriendly airspace.

Shadow Programme Senior Responsible Owner, Group Captain Shaun Gee RAF said:

“This investment will enable the Shadow fleet to be increased in size and equipped with the latest technology providing a key capability as part of the RAF’s next generation Air Force.”

It is expected the first upgraded aircraft will be delivered to the RAF in June 2023, with delivery of the eighth Shadow R Mk2 aircraft before the end of 2025”

DE&S CEO, Sir Simon Bollom, said:

“This contract is the result of collaborative working between DE&S and industry and ensures the RAF has the world-class capability needed to protect the UK’s interests against ever-evolving threats.”

The investment for an upgraded Shadow fleet forms part of the vision laid out in the Defence Command Paper, which is ensuring that the Armed Forces are prepared for new and emerging threats. This ambition is underpinned by a £24 billion increase in defence spending over next four years.

[UK welcomes work to develop global sustainability reporting standards alongside 40 international partners](#)

The IFRS Foundation has announced the establishment of an International Sustainability Standards Board (ISSB) to develop comprehensive global baseline sustainability reporting standards under robust governance and public oversight. The IFRS Foundation confirmed consolidation of two sustainability reporting organisations, the Value Reporting Foundation and the Climate Disclosure Standards Board, to create a global standard-setter for sustainability disclosures for the capital markets.

The Foundation also published two prototype standards to enable the ISSB to rapidly build on existing frameworks, including the Task Force on Climate-

Related Financial Disclosures (TCFD), when developing its standards. Standards will be subject to full public consultation and can be considered for adoption by jurisdictions on a voluntary basis. Jurisdictions will have their own legal frameworks for adopting, applying or otherwise making use of international standards.

Finance Ministers and Central Bank Governors from 40 jurisdictions (see below) from 6 continents joined the UK in publicly welcoming the announcement of the establishment of the ISSB and its work programme to develop a set of internationally consistent, high-quality, and reliable baseline standards for disclosure of sustainability-related information on enterprise value creation.

List of Finance Ministers

Australia, Brazil (Central Bank Governor), Canada, Chile, China, Costa Rica, Egypt, Ethiopia, European Commission, Fiji, France, Germany, Greece, Guatemala, India, Indonesia, Italy, Jamaica, Japan, Kenya, South Korea, Luxembourg, Maldives, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Paraguay, Philippines, Russia, Saudi Arabia, Seychelles, Singapore, Spain, Switzerland, Tonga, Turkey, UK, Uruguay, USA