New UK space projects to boost global sustainable development receive £3.4 million cash boost

- UK academics will work on space solutions for world issues from tackling human trafficking and forced labour groups to eliminating malaria by detecting breeding locations of mosquitoes

- Funding forms part of the Global Challenges Research Fund (GCRF) which supports cutting-edge research to meet challenges faced by developing countries

Today, on World Humanitarian Day, the UK Space Agency has announced £3.4 million of new funding for 10 leading-edge projects that back UK academics using space to tackle global development problems – from the spread of malaria to human trafficking and forced labour.

In 2018, there were an estimated 228 million cases and 405,000 deaths from malaria alone. Using satellite, air-borne and ground-based sensing technology, academics at The Open University will detect where mosquitoes are most likely to breed and support efforts to tackle this deadly disease at its source. Once identified, 'sprayer drones' will release biocontrol agents that will kill mosquito larvae without affecting other species as part of the DETECT project.

Uganda is a source and destination country for men, women, and children trafficked for the purposes of forced labour and sexual exploitation. A project backed by the cash injection announced today will see UK academics at the University of Nottingham apply Earth observation technology from satellites to Uganda's anti-human trafficking and forced labour efforts.

These projects will develop solutions to global challenges that will open up new opportunities for UK space expertise to help countries overseas to deal with myriad problems. Among the others being backed are space-based solutions that will help protect wildlife habitats in Kenya and another that will improve resilience to flooding in Bangladesh, which is suffering the most prolonged monsoon rains in decades.

Science Minister Amanda Solloway said:

> From flooding to climate change, around the world people continue to be affected by crises that are having a profound impact on their countries' economies and their lives.
>
> These 10 new projects have the potential to provide solutions to

> the world’s biggest development problems by using the latest and most high-tech space technologies such as satellites, and help improve millions of people’s lives in developing countries.

The £3.4 million funding comes from the UK Space Agency’s International Partnership Programme (IPP), which is designed to use UK space expertise in satellite technology and data services to deliver ground-breaking solutions to real-world problems across the globe. Projects aim to help developing countries while building effective partnerships that can lead to growth opportunities for the UK space sector.

This announcement comes as a new report is published, evaluating the impact of existing IPP projects.

The report reveals that since launching IPP in 2016, satellite training has been delivered to over 300 health workers across three states of Nigeria, saving an estimated 30 lives; and a marine pollution application has prevented two oil spills from reaching the coastline, saving an estimated £3 million in clean-up costs and significantly reducing the impact on the environment and its wildlife.

The report also shows that space-based solutions continue to be 12-times more cost-effective at delivering sustainable forestry, seven-times more economical in supporting agriculture, and twice as resourceful for ensuring disaster resilience, than ground-based alternatives.

Liz Cox, IPP’s Head of International Relations at the UK Space Agency, said:

> The compelling results of the previous projects cement the case for investment in space for sustainable development. IPP is not only demonstrating the value of satellite solutions and improving the lives of people on the ground in developing countries but also facilitating effective alliances between the United Kingdom and international organisations. It’s a ‘win-win’ and an exciting moment in the Programme.

IPP, a £30 million a year programme, has already grant-funded 33 projects in 44 countries across Africa, Asia-Pacific and Latin America and built partnerships between 120 space-enabled data organisations and 147 international partners in developing countries. These projects are designed to meet UN Sustainable Development Goals (UN SDGs), such as support for precision agriculture, early warning systems for disaster prediction, maritime safety, and disease forecasting.

The Programme has so far generated £279 million in Gross Value Added for the UK economy and supports 3,300 jobs globally. The UK economy gains more than £2.50 for every £1 invested in IPP projects.

The UK space sector is an economic success story, growing by over 60% since 2010. The sector already supports £300 billion of UK economic activity

through the use of satellite services, and the government has established a new National Space Council to consider how space policy can enhance the country's prosperity and place in the world, as well as our security interests.

All IPP projects are match-funded by consortium members and international partners to ensure maximum value for money. The Programme is fully compliant with Official Development Assistance (ODA), with the Independent Commission for Aid Impact reporting that the UK Space Agency had developed robust procedures for ensuring ODA eligibility and was thorough in its ODA compliance screening.

IPP is part of the Department for Business, Energy and Industrial Strategy's (BEIS) Global Challenges Research Fund (GCRF).

Crop Yield Decision Support in Ghana, led by Assimila Ltd, based in Reading

Big variabilities in crop yields make life difficult for farmers, food supply chain companies and governments seeking to plan and allocate resources. This project will provide information on maize yields in Ghana, such as current yields to help plan harvesting, transport and processing, future yields to inform markets and enhance long term food security and past yields to help farmers benchmark and improve productivity.

The monitoring and forecasting system will be based on the integration of physical crop models, meteorological data and Earth observation satellite imagery. Information will be provided to farmers, supply chain actors, governments and international organisations.

Anti-trafficking using Satellite Technology for Uganda's Sustainability (ASTUS), led by University of Nottingham

ASTUS aims to tackle human trafficking and forced labour. It will develop a stakeholder-informed data-driven Earth Observation (EO) approach to support anti-trafficking efforts in Uganda.

This project's space-based solution is the development of a Modern Anti-trafficking Support System (MASS) to support anti-trafficking decision-making and response. Ensuring stakeholder buy-in and sustainability of the MASS underpins this project's activities and are crucial steps in supporting the Ugandan Government in its anti-trafficking efforts.

DETECT: Integrated Space Technology Vector Control in Guyana, led by The Open University

Mosquito-borne diseases have a major impact on developing countries. In 2018, there were an estimated 228 million cases and 405,000 deaths from malaria alone. DETECT will integrate satellite, air-borne and ground-based sensing to detect where mosquitoes are most likely to breed.

Through satellite communications, the system will then dispatch 'sprayer

drones’ to these high-risk areas to release biocontrol agents – killing mosquito larvae without affecting other species.

Earth Observation for Sustainable Aggregate Supply (EO4SAS) in Kenya, led by Pixalytics Ltd, based in Plymouth

In Kenya, unmanaged extraction of sand and aggregate has potentially serious long-term and wide-ranging impacts. The EO4SAS service aims to provide Kenya with Earth observation data and ideas on how the country might improve the management of its sand resources.

The project will deliver insights into aggregate resources, location, scale and practices of extraction sites, extraction rates, flows to markets and environmental changes on the land associated with extraction activities. The final service will improve the monitoring and regulation of aggregate mining and support sustainability in the aggregate supply chain.

Climate resilient parametric insurance and emergency response for floods in Bangladesh, led by Vivid Economics, based in London

Vivid Economics and its partners in the UK and Bangladesh are developing a satellite-based platform to improve resilience to flooding. It will assist relief efforts by showing resource needs at high spatial resolution in real time during floods, provide funding for emergency response through parametric insurance and improve understanding of flooding to support investment to reduce risk.

The project team will use satellite imagery, machine learning, hydrological and economic modelling to project relief costs of any flood event, which will underpin the insurance product. Over time this will support improved resilience to climate change and poverty reduction.

gEOthermalKenya: Earth Observation Insights for Sustainable Growth of the Kenyan Geothermal Sector, led by Omanos Analytics, based in Glasgow

Omanos Analytics, in partnership with Global Surface Intelligence (GSI), will be working with the Kenyan National Environment Management Authority to characterise and monitor land-use around current and prospective geothermal power plants in order to support the socially, environmentally, and economically sustainable growth of the Kenyan geothermal sector.

The project will combine on-the-ground intelligence from local stakeholders with satellite data, application of machine learning algorithms to satellite data, and dissemination of bespoke data products to key stakeholders.

SAtellite SArgassum Monitoring System (SASAMS) – developing a real-time monitoring service for Mexico’s Caribbean Coast, led by University of Nottingham

The dynamic nature of coastal zones renders conventional ground-based

monitoring of Sargassum (seaweed) ineffective which hinders activity to deal with its negative environmental effects as it rots. Earth Observation and cloud-based processing services offer tools to track, quantify and understand seaweed beaching remotely. We will develop a cost-effective near-real time seaweed monitoring service for the Mexican Caribbean Sea coast.

The service will provide early warning of seaweed beaching and its assessment. This enables federal agencies to allocate resources to affected areas quickly and efficiently, thereby minimising economic, social and environmental impacts and enhancing the resilience of local communities.

Monitoring Agricultural Productivity for Climate Adaptation – Mongolia (MAPCAM), led by Remote Sensing Applications Consultants Ltd, based in Hampshire

Mongolia experiences extremes of climate and has already witnessed above-average impacts from climate change on domestically grown agricultural crops.

MAPCAM will develop information services based on satellite data to monitor in-season production of cereals and other arable crops across the whole country, contributing to Mongolia's policy of self-sufficiency by providing better information to support policy formulation and the prescription of appropriate interventions for food security and climate change resilience.

RIOS: Re-settlement Information and Observing System in Colombia, led by Institute for Environmental Analytics, University of Reading

RIOS will focus on assessing the suitability of Earth observation to provide a monitoring service for managing informal settlements in Colombia.

The project will help mitigate against the danger of loss of life arising from natural disasters in settlement areas and to support the re-housing of displaced people. Informal settlements in Colombia have grown in response to urbanisation and decades of conflict. This growth presents a major challenge in Colombia exacerbated by the natural hazards affecting these settlements. The government requires a near real-time monitoring system, together with robust governance strategies, that prevents re-settlements in areas at risk.

Sat4Wildlife in Kenya, led by Fauna & Flora International, based in Cambridge

Kenya has lost 68% of its wildlife in the last 40 years. This project will harness satellite-enabled technologies and build infrastructure to support collaboration between conservationists and technology experts to help halt the loss of Kenya's biodiversity, reduce degradation of habitats and conserve local livelihoods which depend on them.

Led by Fauna & Flora International and WILDLABS in partnership with the

Satellite Catapult, ZSL, the Arribada Initiative and Ol Pejeta Conservancy, the project that aims to create an online platform and marketplace which will bring together technology providers and conservationists to create an ecosystem of accessible, effective tools for conservation, for example the development of an open source, land-based animal tracking system to mitigate human-wildlife conflict. These technologies, along with ongoing capacity building and education in Kenya, will form the basis of a physical Centre of Excellence within the Ol Pejeta Conservancy.

2nd UK-Philippines Economic Dialogue Joint Press Statement

World news story

The United Kingdom and the Philippines convened the 2nd UK – Philippines Economic Dialogue today.

British Embassy Manila

2nd UK-Philippines Economic Dialogue Joint Press Statement

The United Kingdom and the Philippines convened the 2nd United Kingdom – Philippines Economic Dialogue on 19 August 2020. Department of Trade and Industry (DTI) Undersecretary Ceferino Rodolfo and Her Majesty's Ambassador Daniel Pruce led the virtual Dialogue.

This is the first bilateral dialogue of the Philippines outside ASEAN since the onset of the Covid-19 health emergency. Against challenges posed by the current pandemic, the United Kingdom and the Philippines commit "to support the global health response and efforts towards an inclusive, green and sustainable economic recovery".

DTI Undersecretary Ceferino Rodolfo remarked:

> The Philippines is a key economic partner and ally of UK in ASEAN.

> Engaging UK bilaterally is strategically important at this crucial time as they implement their independent trade regime and as we ramp up international cooperation towards recovery from the effects of the pandemic. This dialogue is the perfect avenue for us to lay the building blocks for a stronger and closer economic relationship in the future.

Her Majesty's Ambassador Daniel Pruce said:

> The past year saw great achievements on policy, stakeholder engagement, and programme outcomes across the development portfolio of the UK in the Philippines. Amid challenges brought by this global pandemic, our UK-Philippine ties continue to bring us closer towards an inclusive, green and sustainable economic recovery. We move a step closer to 75 years of UK-Philippine friendship, and we look forward to an even stronger collaboration between our nations working together to shape the UK's dynamic partnership with ASEAN and the wider region.

The 2nd Economic Dialogue marks a step towards 75 years of formal ties between the UK and the Philippines in 2021. Both countries reaffirm their commitment through a Joint Partnership Statement that will boost bilateral trade and investment; encourage increased investments in key sectors such as aerospace, electronics, automotive and pharmaceuticals; pursue innovation and industrial collaboration; foster MSME development; enable key reforms and deepen programme partnerships, including through the UK Prosperity Fund in areas like health, education, low carbon energy, infrastructure, finance, business environment, intellectual property, and digital economy.

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Huge boost to national testing study will offer new COVID-19 insights

- Office for National Statistics to significantly expand infection survey to 400,000 people in England, making it the country's largest study tracking COVID-19 in the general population
- New data will support rapid testing and diagnosis of COVID-19 on a national and local level, helping to narrow down the areas of concern
- Government to provide £2 million grant to ZOE COVID-19 Symptom Study app to support its ongoing data collection

The ONS COVID-19 Infection Survey tracking the virus in the general

population will expand from regularly testing 28,000 people per fortnight in England to 150,000 by October, the Health Secretary announces today. The survey aims to increase to 400,000 people across the entire project in England.

ONS has also partnered with Scotland, Wales and Northern Ireland to extend the survey across the 4 nations, making this the UK's largest COVID-19 surveillance survey.

The expanded study will play a crucial role in providing extensive, weekly data on the spread of infection, supporting rapid testing and diagnosis of COVID-19 both nationally and in areas of concern. The ONS will prioritise ramping up in the north west of England and London in light of recent upticks in infection rates in these areas.

Letters have already been sent out to tens of thousands of homes inviting new participants to take part in the survey. Anyone who receives a letter asking them to participate in the study is encouraged to do so.

Health Secretary Matt Hancock said:

> This country now has the capacity to test for coronavirus on an unprecedented scale and this ONS survey will be a crucial part of this work – improving our understanding of the rate of infection in the population and how many people have antibodies.
>
> This will allow us to further narrow down the areas potentially affected by local outbreaks and continue our fight to curb the spread ahead of winter.
>
> I urge anyone who is able to take part in this study to do so – you will be playing a vital role in the fight against the virus. The data and insight gathered will help inform our national, regional and local responses to the pandemic, allowing this nation to get back to the things we love doing.

Reporting on a weekly basis, the ONS study will provide both a national picture of how the virus is spreading as well as granular estimates of the number of COVID-19 cases down to local level. Crucially, this will allow government and local authorities to further narrow down the areas which may be undergoing outbreaks, potentially reducing the number of people affected by new restrictions and allowing for swift action to curb the spread of the virus.

Led by the ONS and The University of Oxford in partnership with the departments of health across the UK, the survey uses routine swabbing and antibody testing to provide insight into the rate of infection and antibody levels in the community.

Professor Sir Ian Diamond, UK National Statistician, said:

> Vigilance is key to containing this pandemic and the extra data on the spread of infections and antibodies at local level will be invaluable to the planning of effective local responses.
>
> Following this expansion, the ONS-led COVID-19 Infection Survey will be the biggest of its kind in this country. If you've been approached to take part then please do so. You will be helping us all to contain this terrible virus and get on with our lives.

Alongside this significant expansion, the government is providing a £2 million grant to the ZOE COVID-19 Symptom Study app to support its data collection. Participants use the app to regularly report on their health and symptoms and whether they have tested positive for the virus or not, making it the largest public science project of its kind anywhere in the world.

Data from the app is analysed in collaboration with King's College London researchers and provides granular data on symptoms across the country, helping identify local outbreaks and support NHS decision-making. Researchers are able to predict who has the virus and track infections across the UK as well as identify who is most at risk and where high-risk areas are.

The government will not have access to the base data gathered by the app. The ZOE app is separate to the NHS Test and Trace app launched last week for a trial run, to support national and local contact tracing and help minimise the spread of COVID-19.

Together, these studies will help control the spread of the virus by providing vital new intelligence on the scale of local outbreaks, inform our understanding of the virus and how it affects different demographics.

Jonathan Wolf, CEO of ZOE, said:

> We are a start-up, so we are delighted that this funding guarantees the future of the study throughout the winter. When we started the study with Professor Tim Spector at King's in March, we never imagined it could become so important. We have been blown away by the commitment of the British public to help fight COVID, by sharing the state of their health daily.
>
> The app is an amazing demonstration of the power of large-scale science and the use of machine learning. We have funded the app ourselves so far, and with this funding we can continue the essential work of hotspot detection and research on the long-term risks of COVID.
>
> We are delighted that ZOE and this innovative study can play a part in keeping the UK safe.

The ONS Infection Survey looks at the prevalence of symptomatic and asymptomatic COVID-19 infection in the community, how this varies over time

and how this varies by population broken down by age, ethnicity, geography. Results are published weekly on the ONS website.

The ONS COVID-19 Infection Survey is led by the Department of Health and Social Care (DHSC) and the Office for National Statistics (ONS) and draws on the world-leading scientific expertise of the University of Oxford.

Participants provide samples taken from self-administered nose and throat swabs and answer a few short questions during a home visit by a trained health worker. The swab tests will show whether or not participants currently have the virus. They will be asked to take further tests every week for the first 5 weeks, then every month for 12 months.

20% of participants aged 16 and over also provide a blood sample taken by a trained nurse, phlebotomist or healthcare assistant. These tests help determine what proportion of the population has developed antibodies to COVID-19. Participants will be asked to give further samples monthly for the next 12 months.

The ONS Infection Survey study forms part of pillar 4 of the government's COVID-19 testing strategy, to conduct UK-wide surveillance testing to learn more about the spread of the disease and help inform the development of new tests and treatments. Under this pillar, the significant and successful Real-time Assessment of Community Transmission of Coronavirus (REACT) study led by Imperial will continue data collection until the end of October 2020.

Colleges to receive £200 million to transform their buildings

More than 180 colleges will receive a share of £200 million to begin immediate work from this September to repair and refurbish buildings and campuses so they continue to be great places to learn for the local communities they serve, the Education Secretary Gavin Williamson announced today (19 August).

The funding marks the latest step in the government's drive to overhaul further education and deliver the skilled workforce employers and the economy need, and that will help level up skills and opportunities for more people across the country.

The cash boost forms part of a major £1.5bn investment that will transform colleges over the next 5 years. This initial investment is being fast-tracked so colleges can kick-start work this year and so students and staff will benefit a least a year earlier than originally planned.

Education Secretary Gavin Williamson said:

> We want to build a world class further education system which delivers for the whole nation, and a key part of this is ensuring colleges are fit for the future – with better facilities and brand-new buildings.
>
> It is brilliant news that more than 180 colleges will receive a share of £200 million so they can start immediate work to renovate buildings and facilities, with further funding being invested over the next 5 years.
>
> We want all students to continue to receive high-quality education and training, no matter where they grow up or what college they go to. Now more than ever, it is vital that colleges can support their students to gain the skills they need to progress and help the economy to recover and grow.

David Hughes, Chief Executive of The Association of Colleges said:

> Colleges will be pleased to see their individual allocations as they prepare to provide training, skills and education to over 2 million young people and adults next year. It will help them provide the facilities, advice, support, and high quality teaching they deserve and need.
>
> This capital resource, for bringing building and digital infrastructure up to date is important but they will need to move quickly to spend this money. The college condition survey confirms that there has been underinvestment in the college estate in recent years so it is good news that the Treasury has allocated money for a five year programme to put this right and to ensure that future students and apprentices learn and train in world-leading environments.

The funding comes ahead of the publication of a White Paper this autumn setting out plans to build a high-quality further education system that will provide the skills that individuals, employers and the economy need to grow and thrive.

Work is already underway to transform technical and vocational education and training in this country, including the introduction of new T Levels from September – high-quality technical courses equivalent to three A levels – and working with employers to create more apprenticeship opportunities.

The government is also establishing a network of twenty Institutes of Technology. These are collaborations between universities, FE colleges, and leading employers. They specialise in delivering high-quality higher technical education and training in STEM subjects, such as digital, advanced manufacturing and engineering. Backed by up to £290 million in capital funding to help provide cutting-edge industry standard facilities and kit, they will help deliver the skilled workforce employer need.

Later this year, the government will launch a 2nd competition to ensure that all parts of England is covered by Institutes of Technology, so everyone has the chance to gain higher technical skills and help unlock growth across the country.

Legally binding targets to help "build back greener"

Today the government has set out how it will use ambitious, legally binding targets under its landmark Environment Bill to combat the environmental and climate challenges we face.

The government will introduce at least one long-term target in four priority areas to drive significant and lasting environmental improvements: cleaner air, cleaner water, less waste and more biodiversity.

To make sure we are continuing to tackle the most pressing or newly emerging issues – further priority areas and targets can be introduced at a later date, informed by the latest scientific evidence.

This major new step will make sure both this and any future governments continue to deliver a truly green recovery – meeting the Prime Minister's commitment to "build back greener".

These long-term targets will be supported by interim targets to ensure we stay on track – these will set out our five-year trajectory, and the government will report annually on our progress.

The four priority areas, and proposed objectives for targets, include:

- Air quality: To support our robust action to improve air quality across the country, we will explore targets focusing specifically on reducing public exposure to fine particulate matter (PM2.5), the air pollutant that has the most significant impact on our health
- Resource efficiency and waste reduction: Potential targets will look to increase resource productivity and reduce the volume of residual waste and plastic pollution we generate
- Biodiversity: We will explore targets to restore and create wildlife-rich habitats in our protected sites on land, in freshwaters and at sea and in the wider countryside, and to increase species populations on land and improve marine biodiversity
- Water: We will also look to set targets to tackle pollution from agriculture and waste water to improve water quality, as well as a target on water demand to reduce the volume that is abstracted

Environment Secretary George Eustice said:

> The targets we set under our landmark Environment Bill will be the driving force behind our bold action to protect and enhance our natural world – guaranteeing real and lasting progress on some of the biggest environmental issues facing us today.
>
> I hope these targets will provide some much-needed certainty to businesses and society, as we work together to build back better and greener.

To set these ambitious targets, which will also apply to any future governments, Defra will use a robust, evidence-led process in collaboration with independent experts and stakeholders to make sure these are strong, meaningful and environmental outcome focused.

These will build on the significant progress made through the existing commitments in the 25 Year Environment Plan, by identifying further gaps for improvement to tackle some of the serious challenges that remain.

To hold the Government to account, the new environmental watchdog, the Office for Environmental Protection, will also report annually on the progress that has been made in improving the natural environment in accordance with these targets.

Once proposed targets are developed, businesses, communities and civil society will have an opportunity to share their views in response to a public consultation that is expected in early 2022.

The Environment Bill, which will resume its passage through parliament as soon as possible, builds on this Government's decisive action to protect the environment, as set out in our 25 Year Environment Plan.

Legislation to reach net-zero carbon emissions by 2050 and our presidency of COP26 in November 2021 will also keep the UK at the forefront of international work on these issues.