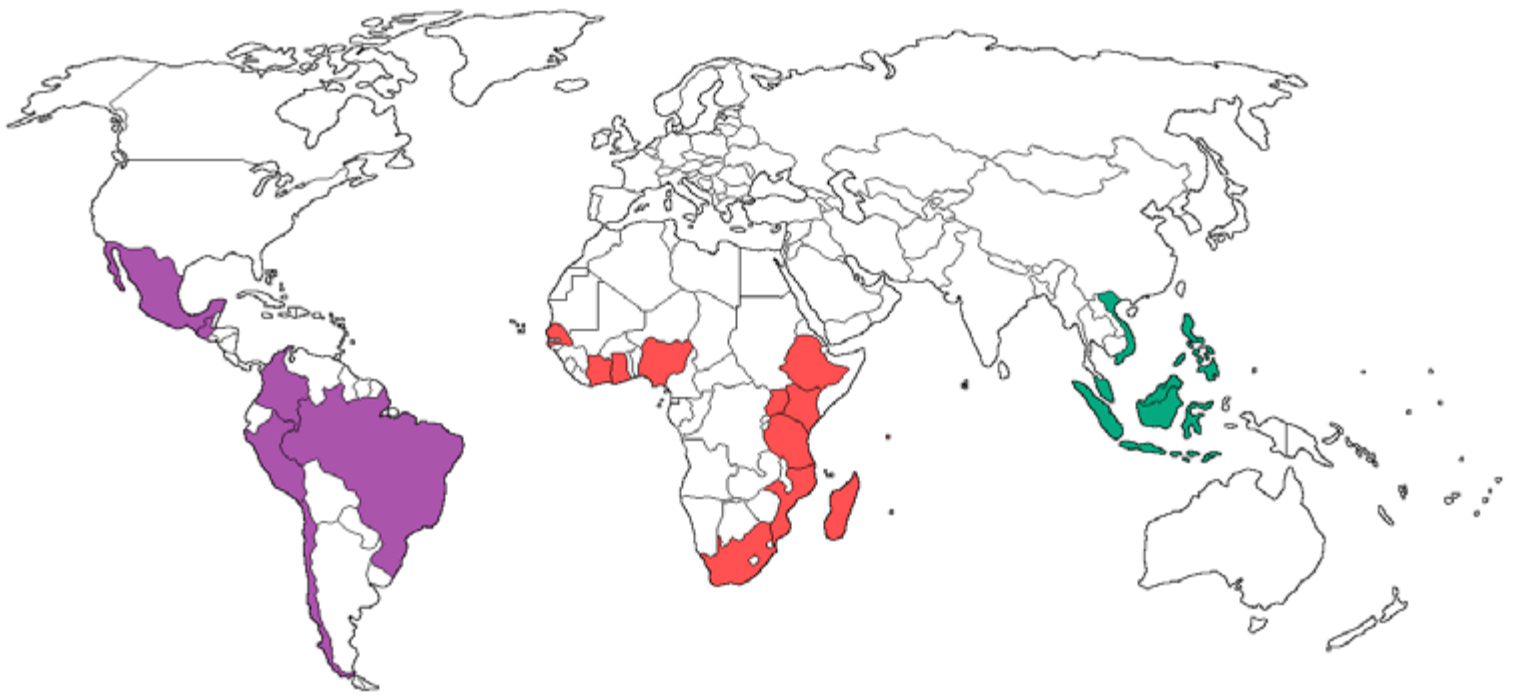




2017 | International  
Partnership  
Programme

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Locations of International Partnership Programme projects across the globe (February 2017)

More information on each case study can be found [here](#).

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## Programme overview

The UK Space Agency's International Partnership Programme (IPP) is a five-year, £152 million programme designed to partner UK space expertise with governments and organisations in emerging and developing economies around the world to deliver a sustainable economic or societal benefit. The programme seeks to effectively measure the impact and sustainability of each project, and all projects are subject to a rigorous Monitoring and Evaluation process. IPP has awarded grants of between 50-100% for organisations to run the projects described in this brochure.

All IPP projects are fully aligned to the United Nations' (UN) Sustainable Development Goals (SDGs), and the corresponding SDGs are shown with each project.



## UK Space Agency

We are responsible for all strategic decisions on the UK civil space programme and provide a clear, single voice for UK space ambitions.

At the heart of UK efforts to explore and benefit from space, we are responsible for ensuring that the UK retains and grows a strategic capability in space-based systems, technologies, science and applications. We lead the UK's civil space programme in order to win sustainable economic growth, secure new scientific knowledge and provide benefit to all citizens.



**Indonesia, Brazil, Mexico, Colombia, Ghana and Kenya:** a £23.8M project led by Ecometrica UK in conjunction with a large consortium of national and international partners to **protect and restore forests**.

The Forests 2020 project aims to help protect and restore up to 300 million hectares of tropical forests by improving national forest monitoring systems for the use of governments, universities and Non-Governmental Organisations (NGOs) in the 6 partner countries: Brazil, Colombia, Mexico, Ghana, Kenya and Indonesia. By using freely available Earth Observation data to address critical gaps in current systems, Forests 2020 will improve partners' capacity to:

- measure forest change
- provide information on the risks and drivers of forest loss (such as forest fires)
- map suitable areas for restoration

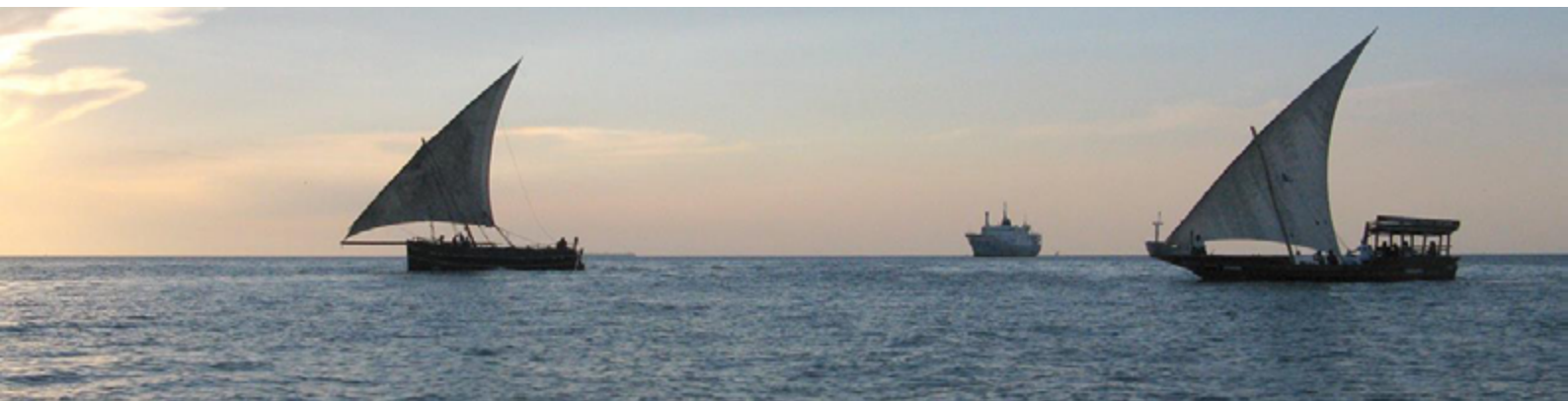
It will also build in-country capacity for the international partners by improving digital infrastructure to manage forest data more effectively and establishing a network of Earth Observation Labs.



**Malaysia:** an £11.4M project between the UK Satellite Applications Catapult and the National Defence University of Malaysia to **tackle flooding, marine pollution and illegal logging.**

Environmental challenges present a serious social and economic threat to the Malaysian people. The Earth And Sea Observation System (EASOS) programme will deliver, trial and evaluate solutions for flood risk, marine pollution and illegal logging with the respective Malaysian government departments.

The project will provide the Malaysian government with a dashboard service delivering decision support tools for law enforcement officials supporting their detection and prosecution of illegal activities and disaster relief efforts.



**Vietnam:** a £2.5M project led by Stevenson Astrosat Ltd UK with the Vietnamese Government to **improve disaster response.**

The project will aid the Vietnamese government to improve their social and economic resilience to natural disaster events (specifically typhoons and flooding) through the use of satellite technology.

It will provide Vietnam with a centralised Recovery And Protection In Disaster system (RAPID), using a dashboard which fuses satellite and non-satellite information for an optimised response during disasters.

RAPID generates information on how critical infrastructure and key areas are affected by natural disasters, allowing users to take preventative measures or plan actions for dealing with them.





**Philippines:** a £6.8M project between Inmarsat UK and the Philippine Government to **reduce the impact of natural disasters by using satellite communications.**

The Philippines suffers over 20 cyclones annually, as well as frequent volcanic eruptions and earthquakes. This project will transform disaster response in the Philippines by deploying satellite communications equipment within pilot regions.

This will help relief agencies and first responders to get information in and out of disaster zones much more effectively; it will provide the Philippines with the capability to restore communications and increase command and control of recovery operations within 24 hours of an occurrence of a disaster; and this project will also provide training to regional staff in the Philippines using the equipment.



**Indonesia:** an £8.1M project led by Inmarsat UK in conjunction with the Indonesian Ministry of Marine Affairs and Fisheries (KKP) to **reduce illegal fishing and improve safety and livelihood security for fishing communities.**

This project will develop a sustainable incentive scheme to encourage fishers to use Vessel Monitoring Systems (VMS). By expanding the adoption of VMS, the surveillance and policing capabilities of the Ministry of Marine Affairs and Fisheries will be improved, and information important for fisheries management will become available.

This will support government, industry and fishing communities to optimise enforcement efforts, to reduce risks at sea and improve the social and economic outcomes of fishing activities. Inmarsat will enhance and add value to VMS use by: designing additional services to be carried by VMS – safety and communications; designing new operational protocols for policing and enhanced fisheries management; and demonstrating how information and technology can lead to reduced illegal fishing and improved fisheries sustainability.



**Côte D'Ivoire:** a £1.46M project between Vivid Economics Ltd UK and the government of Côte d'Ivoire's REDD+ Secretariat and the UN Environment Programme to **create land-use tracking and deforestation warning systems** for the Côte d'Ivoire.

This project aims to contribute to the reduction of poverty and increased forest cover. It will use satellite imagery to monitor how land is being used; this will improve understanding of the value of forests and agricultural production in different areas, and how these interact. This information will help policy-makers preserve and expand forests to the greatest benefits of rural communities, and to integrate smallholders into more valuable global supply chains.

The project will drive two key outcomes:

- help governments to prioritise afforestation and efforts to reduce forest loss
- provide targeted support to local economic development by enabling revenue generation from the forest in a sustainable manner ensuring long term benefit to the local economy.



**Ghana, Zambia and Kenya:** an £8.2M project between a UK consortium (led by CAB International) with the Ministries of Agriculture in Ghana, Zambia and Kenya, aiming to **improve the livelihoods of smallholder farmers by reducing the crop losses caused by pests.**

An estimated 40% of the world's crops are lost to pests (including insects, mites and plant pathogens). This project will use satellite data to create a Pest Risk Information Service (PRISE) - a forecasting system that will enable early warnings in time for smallholder farmers to take preventive action.

As a result, crop protection solutions can be properly targeted and controlled, increasing resilience to pest outbreaks and leading to reduced crop loss. In addition, the project will work with Ministries in the countries involved to help develop policies to strengthen crop protection through the demonstration of an effective pest forecasting service that can be scaled to regional and national levels.



**Senegal:** a £951K project between Airbus Defence and Space UK and New Africa Consulting to enable Dakar City to **collect and maintain property information to assist in revenue generation.**

Using satellite data, this project will monitor building construction and developments in the city of Dakar and link them to information such as ownership and address with location and building characteristics, including size and value.

This will provide the framework for field teams to collect and maintain accurate property information, enabling tax calculations to be made, which will lead to increased revenue generation for the city (estimated to be £millions a year). Dakar City authorities are working with the national revenue authority to ensure that the city and its citizens will benefit from enhanced services as a result of any increased revenue.



**Ethiopia and Kenya:** a £3.1M project between an Airbus-led UK consortium and international partners in Ethiopia and Kenya to **build flood and drought resilience in those countries to support poverty alleviation.**

In Ethiopia this project will focus on working with key government stakeholders to furnish them with better data and application-based tools to facilitate an improved understanding of flood and drought hazards and risks. This will help build social and economic resilience to water-related hazards which currently have a serious impact on the country.

In Kenya it will focus on the efficacy of Earth Observation data for the micro-insurance market – an important tool for farmers who currently have little or no access to insurance. Flood and drought data will be provided to farmers in a format they can easily access, interpret and use to make informed decisions on which crops require micro-financing (insurance) because of their risk levels.

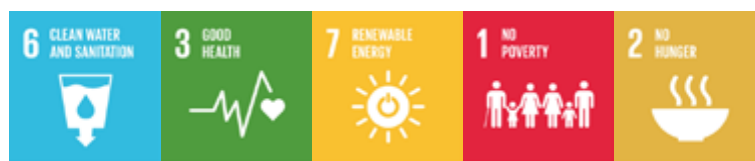




**Uganda:** a £6.2M project led by Rheatech UK, with Uganda's Ministry of Water and Environment, an in-country NGO and commercial partners to deliver a **Drought and Flood Mitigation Service (DFMS) for Uganda.**

The DFMS will provide the people of Uganda with practical information that will help them respond to the effects of forecasted floods and droughts.

The aim is to use satellite and climate forecast data to help local people plan and respond to the effects this will have on their agriculture and water resources. Information will be distributed by national, local government and commercial operators to farmers and relevant bodies such as NGOs. Through these better forecasts, local people can improve their lives and better protect valuable assets such as livestock and crops.



**Seychelles and other Small Island Developing States:** a £330K project between the Institute for Environmental Analytics UK, the Seychelles government and other Small Island Developing States (SIDS), to aid their **transition from fossil fuel energy to renewable energy.**

This project will develop a proof-of-concept satellite data application that enables government planners and technical specialists to plan the use of sustainable energy sources in the Seychelles and other SIDS. These are a group of developing countries facing specific social, economic and environmental vulnerabilities, including a heavy dependence on external markets and the high cost of energy. Each SIDS member has enormous potential to be energy-independent due to their natural renewable energy resources.

The tool will provide consistent data, enabling planning for the sustainable use of natural solar, wind and ocean thermal power. Having good data to hand will allow the respective governments to plan more efficiently for fluctuations in renewable energy and when to invoke fossil fuel energy generation.



**Tanzania:** a £6M project led by Avanti Communications UK with the Tanzanian Government to use satellite services to **support e-education in Tanzania.**

Working with Camara Tanzania, Discovery Learning Alliance, Ace Africa (Majibu), Universal Communications Service Access Fund (UCSAF) and Tanzania Education Authority (TEA), the project aims to reach teachers in Tanzanian schools all over the country to deliver improved education to children at a primary and secondary level, by providing access to e-education and training for IT systems.

The project has three core success measures:

- improved and sustained IT literacy of school teachers;
- development of local self-fund models through school IT infrastructure for service sustainability;
- continued delivery of education content for schools across the country.



**Mozambique, Madagascar, South Africa:** a £900K project between Satellite Oceanographic Consultants Ltd UK, and Government bodies, research centres and universities from Mozambique, Madagascar and South Africa. This project will **provide information on sea levels.**

This project, named Coastal Risk Information Service (C-RiSe) will provide access to data on sea levels, wind speeds and wave heights through an international partnership with Mozambique, Madagascar and South Africa.

The goal is to enable the African partners to use this information in sufficient time to improve socio-economic resilience to coastal hazards associated with sea level changes such as floods, storm damage, wetland loss, habitat change, coastal erosion and saltwater intrusion.



**Nigeria:** a £834K project between Inmarsat UK, the Nigerian Government and the end customer, State Primary Health Management Boards, for a **Maternal Health Pilot Programme**.

This is a proof-of-concept project which has provided essential health information for staff and patients, via satellite technology, across 6 sites in 2 new states in Nigeria. 44 further clinics in 4 states were supported with content.

The aim is to demonstrate that this kind of approach can significantly lower infant mortality rates in remote and rural areas across Nigeria.



**Nigeria:** a £6.1M project between Inmarsat UK, InStat and the end customer, Nigerian Federal Ministry of Health, to **extend Health Services to Remote Populations using satellite communications**.

This project addresses a key development need for Nigeria by extending the reach of basic medical services into remote areas of the country (84 clinics in 3 states) using a satellite-based system. This will deliver professional training, data collection and disease monitoring in areas which are inaccessible by conventional methods.

It aims to reduce the mortality rate in rural Nigeria by providing access to better health information and training for health workers by:

- providing video-based training to health workers to an agreed government standard
- improving health systems management and governance using an information system application
- improving disease surveillance capabilities





**South Africa and Madagascar:** a £1.1M project between UK-based exactEarth Europe and the South African Maritime Safety Authority (SAMSA) to **track small boats and enhance their safety.**

This project centres on tracking small fishing, work and leisure boats using transponders and ‘Satellite Automatic Identification System’ (SAT-AIS) to track those transponders. Knowing the up-to-date location of a boat is vital to saving lives and reducing Search and Rescue costs in South Africa (SA).

Small fishing, work and leisure boats account for the majority of SA maritime accidents. Following on from a pilot project run by exactEarth, SAMSA is mandating the use of SAT-AIS for these types of small boats, and this project will deploy an initial 1,500 transponders across the poorest and most at-risk boats in SA.

To broaden the choice of equipment available in the future, a new transponder will be developed and manufactured by a South African company and trialled on 50 boats in partnership with the Le Centre de Fusion d’Information Maritime (CFIM) in Madagascar. CFIM’s interest spans both maritime safety and small-scale fisheries management.



**Chile:** a £467K project between the UK Satellite Applications Catapult and the Chilean Navy to **reduce illegal fishing**.

Illegal, Unregulated and Unreported (IUU) fishing is estimated to cost the global economy approximately \$20B annually.

Chile is the 10th largest fishing nation in the world and is estimated to lose \$150M in lost revenues per year due to illegal fishing.

By undertaking a trial with the Chilean Navy, the project will demonstrate the benefits of using satellite data to detect IUU Fishing in Chile's Marine Economic Zone. It will evaluate the cost effectiveness of these techniques and estimate the socio-economic impact of implementing a sustainable service.



**Peru and Colombia:** a £1.9M project led by Environment Systems Ltd UK, in conjunction with Government and commercial stakeholders in Peru and Colombia, to **improve agricultural production and food security**.

This project, named EO4cultivar, uses satellite data to provide up-to-date and easy-to-use information to the agricultural supply chain and farmer advisory services in Peru and Colombia.

This data includes field-scale crop observations to help growers monitor their crops to help them better plan and use their resources, therefore potentially increasing their margins. By enabling this data to be used in local and national management practices, EO4cultivar will have real impacts on improving agricultural production and food security in Peru and Colombia.





**Guatemala:** a £5.9M project run by Stevenson Astrosat Ltd UK, the Guatemalan Government, Guatemalan Universities and NGOs to develop a Forest Management and Protection system (FMAP) for **reducing illegal logging and deforestation.**

Illegal removal and transit of valuable trees, change of land use and other such unregulated activities are having huge impacts, both environmentally and socioeconomically, in Guatemala and are of real concern to its government.

The key aims of this project are to:

- provide Guatemala with a centralised Forestry Management support tool in order to conduct activities more cost effectively and efficiently
- support Guatemala in their abilities to manage forests through knowledge exchange, capacity building and training
- establish the FMAP system as a certified product for sustainable forestry management, leading to other opportunities in the Central American region, and enabling wider roll-out to neighbouring countries



**Peru:** a £1.9M project between Vivid Economics Ltd UK and the Government of Peru to **improve the income of subsistence farmers in Peru.**

The project addresses two of Peru's most acute development challenges: reducing the rural population living in poverty (currently 3 million), and preventing deforestation from its current rate of 250,000 hectares per year.

Using publicly available satellite imagery, Vivid Economics will develop economic valuation and small-plot mapping tools for the Peruvian region of San Martin. The project will enable the implementation and certification of sustainable agricultural production, improved strategies for monitoring and enforcing forest protection, and assist in the efficient roll-out of small-scale irrigation systems; which will improve the income of subsistence farmers.





**Mexico:** a £4.6M project between Rezatec Ltd UK and Mexico's International Wheat and Maize Improvement Center (CIMMYT) and Colegio de Postgraduados (COLPOS) to **improve crop yields**.

The Mexican Crop Observation, Management & Production Analysis Services System (COMPASS) project is designed to help Mexican smallholder farmers growing sugar cane and wheat to improve their crop yields and generate more income.

This project will develop a system which utilises affordable, easy-to-use satellite data as well as data from the farmers themselves. Through delivery of data through a smartphone to smallholders in remote areas, the project will help farmers in Mexico to identify the yield gap between crop potential and actual field





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