

United Kingdom, Item 5

UK Statement on Space technology for sustainable socioeconomic development at the 60th session of the Scientific and Technical Subcommittee of COPUOS, 6th-17th February 2023

Chair, Distinguished Delegates

The Delegation of the United Kingdom recognises the importance of “space technology for sustainable socio-economic development”. The adoption of space applications and data can be seen as a practical example of how space technology is used to address a wide range of sustainability and socio-economic challenges. The volume and types of services provided through space applications is only increasing; providing novel solutions, access to data for better decision making and management of these challenges. It is vital to continue to raise awareness and promote the development of solutions made possible through the advancement of space applications. We welcome the opportunity to share examples of how the UK deploys space applications to enable, more optimally, socioeconomic development with an illustrative focus on energy costs and climate change.

As a nation committed to finding efficient solutions to energy consumption and management, the UK is proud to see new space application technologies developed, which have helped reduce public costs and help reduce carbon emissions. An example of this is the

innovation of Electric Vehicles (EVs) in the UK. Using a combination of global navigation satellite system location services, vehicle and owner positioning data, a new service can now be provided that allows Electric Vehicle owners to trade their spare battery capacity through the national grid to offset other energy demands in our everyday lives. The information provided through space enabled services could be used to identify the owners' driving patterns which will further tailor the specific times of the day when the Electric Vehicle would be used and therefore has the flexibility to recharge during all other times. This space application allows Electric Vehicles to be embed into the energy system, which consequently raises cost efficiency for Electric Vehicle owners, generates new economic revenue and strengthens the capability of electricity grids. As this type of service continues to grow it will likely contribute to reduction in CO2 emissions in the energy supply chain which will help to combat climate change.

Another interesting development to improve the UK's energy efficiency is a service that identifies fuel inefficiency across the country. Through the innovative combination of multispectral thermal infrared satellite Earth observation imaging and local authority data, the service uses machine learning to identify homes with poor insulation and higher energy usage. This allows energy suppliers and local government authorities to offer targeted interventions such as insulations or better heating systems to the property owners improving their homes energy

efficiency. This reduces energy consumption and property owners' energy bills.

In conclusion, the adoption of space applications leveraging space data provides innovative solutions to difficult socio-economic challenges such as energy costs and climate change. The UK will continue to fund and support companies looking to take on these challenges through the development of space applications.