



UK Engagement with Space Committee

Corrected oral evidence

Monday 8 September 2025

4.05 pm

Watch the meeting

Members present: Lord Lansley (The Chair); Baroness Bonham-Carter of Yarnbury; Lord Booth-Smith; Lord Clement-Jones; Baroness Donaghy; Baroness Mobarik; Lord Shamash; Lord St John of Bletso; Viscount Stansgate; Baroness Stowell of Beeston; Lord Tarassenko.

In the absence of Baroness Ashton of Upholland, Lord Lansley was called to the Chair.

Evidence Session No. 24

Heard in Public

Questions 209 – 216

Witness

[I](#): Aarti Holla-Maini, Director, UN Office of Outer Space Affairs.

Examination of witness

Aarti Holla-Maini.

Q209 **The Chair:** Welcome to this public session of the Engagement with Space Committee of the House of Lords. We are honoured to have Ms Aarti Holla-Maini, director of the UN Office of Outer Space Affairs, with us as a witness this afternoon. May I call you Aarti?

Aarti Holla-Maini: Yes.

The Chair: If I may invite you to open our session, perhaps we can start with a question about how you see that we should address the difficulties we see in space. Everybody describes it as contested, congested and competitive, and we have a great deal of evidence that tells us of the difficulties that ensue from that. Through the UN Office of Outer Space Affairs, how do you interact with these difficulties?

Aarti Holla-Maini: Thank you very much for having me here. I sincerely apologise to everybody for the delay; it seems to be inevitable with the traffic today. My Lords, it is an honour to address you, especially as the British woman who is heading up a United Nations office on this very high-tech sector.

The three core challenges that face us today are global space traffic co-ordination, cleaning up space, so debris removal, and implementing international space law. We cannot control the number of satellites that are being launched into space; however, we do need to ensure that those that are up there and going up there find a way of not colliding with each other. This is absolutely imperative right now.

How do we do that? The goal is to establish a global mechanism to facilitate space traffic co-ordination to avoid collisions. This really is priority number one, because every collision increases the risk of cascading collisions and ultimately the risk of space becoming unusable, and that is an unacceptable outcome.

The reason for that is that our reliance today on space solutions in the modern world goes far beyond what the eye can see. It is not just about live television or weather forecasts or being able to use our satellite navigation systems in our cars; it is very much more than that. Even our electricity grids and financial markets are synchronised with satellites in terms of timestamps. We can predict where flooding will happen next, monitor coastal erosion, and most importantly, we can provide vital early warning of where these severe weather events may happen, thanks to satellites.

One of the most important use cases in today's world is understanding the rate and pace of climate change. Many key indicators can literally only be measured and monitored from space. We are using satellite data and imagery to measure the ocean temperatures, monitor deforestation, measure sea level rise, crack down on environmental crime such as illegal, unreported, unregulated fishing, and even for border control.

At a local level, this was even done here in London, where we measured air pollution using satellites. The UK has historically been a frontrunner in secure communications, with the SKYNET programme led by former Inmarsat. Meanwhile, LEO—low earth orbit—satellite systems are becoming a game-changer for militaries. If these trends continue, which they most likely will, then we need to remember that many of these services are in fact provided from the most congested and contested orbit—the low earth orbit. If space becomes unusable due to collisions and too much debris in space, then we would lose access to all these services that underpin our way of life today and our ability to navigate the uncertainties that inevitably will affect us all in the future.

Coming to cleaning up space, we are not cleaning it up as fast as we are littering it. Even if we were to stop littering it for just one year, space would not heal itself; it is not like the climate. With the cessation of industrial activity during the Covid pandemic, we saw the climate begin to heal itself; space is absolutely not like that. What we have launched into space stays there, much of it for a very, very long time, and this contributes to increasing the collision risk. We need to take steps that prioritise and even support the acceleration of active debris removal.

Regarding funding missions and putting guidelines for such missions into place, Japan has done so, leading by example and encouraging other space-faring nations to also remove their debris. We must realise that the largest and arguably riskiest pieces of debris that are in space today are in fact legacy government-owned objects.

Collision risk is not an abstract concept at all; it is very real. Near misses are happening all the time. My office has been called twice in the last eight months by actors that have received collision warnings but have not been able to contact the other operator.

One such incident involved precisely a UK-registered satellite that found itself 3 kilometres from a Chinese satellite. Many operators will move their satellites when they are at a distance of 5 kilometres, so you will appreciate that 3 kilometres is unacceptably close. It was UNOOSA's intervention by way of extensive but difficult and still rapid discussions with the Chinese counterparts that ensured that the Chinese satellite manoeuvred away. The second incident was a close encounter of 75 metres, so even closer than 3 kilometres, and again our office sprang into action. But my office as a hotline is not the solution; we need a global mechanism to facilitate these actions.

Finally, there is enabling international space law. Space sustainability starts with implementing internationally agreed, binding obligations, such as requiring satellites to be registered, licensed and authorised. These exist in the space treaties that were adopted by the UN in the late 1960s and early 1970s. However, these instruments are only as good as their implementation at national level, and that is not complete at all.

One of our mandates is to assist member states in implementing them, and today we have a list of over 60 countries that are waiting for our

technical advisory missions to support them in establishing and implementing space law. Unfortunately, we lack the budget to do so at pace and rely on donors to support us, which have predominantly been Japan, France and Luxembourg so far.

The Chair: As part of the overview, could you just tell us a bit about the relationship between your office and the Committee on the Peaceful Uses of Outer Space and what their role is?

Aarti Holla-Maini: UNOOSA was established in New York in 1957 as an expert unit and simply as a secretariat to the newly formed Committee on the Peaceful Uses of Outer Space, which is known as COPUOS. Broadly speaking, COPUOS has the formal mandate for space governance, essentially to maintain the peaceful uses of outer space, and UNOOSA is there to support it.

Since then, our role has evolved. We are not just a secretariat; we are very much a proactive convener, supporting the committee also in its margins and during side events by bringing knowledge and expertise, for example, that resides with industry to the committee so that we can ensure that delegates—essentially diplomats—are informed of the latest developments. The topics that they have to deal with are increasingly technical and complex, and we should not expect Vienna-based diplomats to understand the intricacies of space, especially in such a dynamic environment.

Q210 **Viscount Stansgate:** Sorry about the difficulties you have had; if it helps, a lot of other people have as well. It is often said that the Outer Space Treaty of 1967 is perhaps out of date and not fit for the job of trying to regulate 21st-century space activity. In your view, is there any likelihood of an updated international treaty governing the use of outer space?

Aarti Holla-Maini: Yes, indeed; we hear this comment a lot: the assumption that space treaties are old and the space sector has evolved so much therefore they must be out of date. I assure you they are not.

There are five treaties that were crafted between 1967 and 1979 that underpin all the space activities and space economy around the world as we know it today. The treaties work well and are coming to life now in a way that they were never called on to do before. Allow me to give you a couple of examples—first, the increasing amount of debris that is landing back on earth. My office has been contacted five times this year alone by various countries that have experienced this and have come to us for guidance and advice. The 1968 agreement on the rescue and return of astronauts sets out the rights and obligations associated with such events: the right to compensation in case of damage and the obligation to remove and clean up. Therefore, this is an opportunity for us to encourage more countries that may not have ratified this treaty to do so.

Another example is that as countries see more and more space activities from their territory and more and more start-ups emerging, they are

realising that they are in fact responsible and eventually liable in case of damage for these activities, and that they therefore need a space law.

We are not living at a time when a new binding treaty can successfully be negotiated; the geopolitics of our time do not allow for that. COPUOS has evolved with the times. We now live in an environment where soft-law guidelines, principles and resolutions are the flavour of the day and still represent a shared political will. At the end of the day, whether we speak about treaties or guidelines, the value of all these instruments is in their implementation at national level. But no, we will not see an update of the treaties and are unlikely to see any new treaty emerging at this time.

Viscount Stansgate: My supplementary was about the matter that you have just in effect covered, which is that below the level of an official treaty and the threshold of legality, there are clearly codes of conduct and guidelines that are important in shaping international behaviour. Could you just look at some and explain which of those activities you regard as being particularly efficacious—in other words, that work?

Aarti Holla-Maini: I would say that there are three levels of such non-binding norms that are produced. The first is at United Nations level—for example, what we call the long-term sustainability guidelines, the LTS guidelines. These were adopted in 2019, crafted together with industry. I highlight that because when I looked at them myself—having joined the UN from industry just two years ago—I was impressed by the pragmatism and technical expertise that had gone into them. They really are very good; they are concrete and specific. They call upon states to ensure that information on space objects is shared with my office, for example, to enhance the safety of space operations. This is exactly what needs to happen. If all operators from all around the world—be they public or private—were to share their space object data, space would be much safer. So yes, the long-term sustainability guidelines are not binding.

Viscount Stansgate: I am sorry to interrupt, but when you say that sharing is important—which I am sure we all agree with—am I right in thinking that for the people who do not share, it is for military reasons?

Aarti Holla-Maini: No. For many it is because they have decided that publicly available information is sufficient—for example, a catalogue published in the United States. A lack of sharing comes from a lack of understanding of the value of being proactive in sharing your object's location. At the end of the day, only an operator can know precisely where its own satellite is. If we observe it from earth, we will have a rough idea but it will not be as precise as it can be if the operator tells you itself, because it is the one flying it.

Viscount Stansgate: Forgive me. You were going to mention two other levels of non-binding.

Aarti Holla-Maini: I would like to just stay on this point for one second. Implementation of these guidelines has to be at national level. I spoke

with the space regulator in the UK a few months ago and asked why sharing such information was not a condition of the licence that the regulator was giving. The response was, "Nobody asked me to". This is a matter of policy and there is none on this at present. This points to a lack of leadership at government and regulator level. I would say that the UK has an opportunity to lead by example. The UK was very much involved in drafting the Union guidelines and we have received support from the UK to promote their implementation, but implementation and leadership start at home, so there is an opportunity there.

The other level is industry. I am referring to codes of conduct that may be voluntarily agreed among different operators. These are essentially attempts to find consensus between competing companies. If they agree on concrete aspects, then that can lead to best practices and in turn standards, and this should be encouraged. Unfortunately, these days we see a lowest common denominator approach because operators are in different orbits and have different vested interests, so my hopes for codes of conduct are less positive.

Finally, we see ratings, badges and labels proposed by NGOs. These are only useful if they really get traction and become fashionable, if you will, so that a critical mass starts following and adopting them, or if they lead to tangible outcomes—for example, if they increase the chances of insurance premiums being decreased or increase the chances of insurance at all. Those would be the three levels that I would say.

Lord Shamash: Just to go back to debris, the more I have read and spent time on this committee, the more I have realised how important it is to try to remove it. You mentioned a couple of incidents this year when something has fallen to earth. I understood that some satellites had a situation where, for example, they had 100% fuel, 90% of fuel would be used up, but the last 10% would be blasted off into outer space. I do not know if that is true, but that is what I was informed. But it is an increasing problem because we will be having collisions that are caused by debris, and bad actors may say, "Well, sorry, mate, you've blown up my satellite". Have I got the wrong end of the stick with this? Because it is really serious.

Aarti Holla-Maini: With respect, it is slightly the wrong end of the stick. The geostationary orbits—which are the ones furthest away from the earth at 36,000 kilometres—are the ones that follow a standard and a rule to maintain sufficient fuel on board in order to take them into a so-called graveyard orbit, where they no longer pose a risk to other satellites and objects.

It is the lower objects in low earth orbit that pose the greatest risk because very often they are not manoeuvrable so cannot be moved, and we rely on them falling back to earth with drag according to the laws of physics, which can take up to 100 years or more.

The Chair: When you referred to the UK space regulator, was that the Civil Aviation Authority you were referring to?

Aarti Holla-Maini: Yes.

Q211 **Lord Booth-Smith:** We have heard evidence from multiple attendees to the committee about the role that the UK has played in advocating for more sustainable behaviours. I was wondering, beyond what you have just talked about there, what are the other actions that the UK should take to improve our efforts in shaping the international environment?

Aarti Holla-Maini: The UK support is greatly appreciated by my office, and the UK has been both visible and proactive at United Nations level. It has sponsored the office to work on promoting the long-term sustainability guidelines and the United Nations Register of Objects Launched into Outer Space. Joanne Wheeler from ESSI—the Earth & Space Sustainability Initiative—is a recognised UK expert who participates in different capacity-building events that we organise, including our technical advisory missions to states without space law. The Astra Carta is also a great platform through which to promote space, especially for earth sustainability.

What more can the UK do? The UK is well respected internationally as a mature space-faring nation, and other countries often look to it—especially to the UK regulator—to see how things are being done and which best practices they may follow. For example, the UK licence is respected internationally and by insurance and finance markets. It has even attracted foreign companies to choose the UK as their place of licensing.

The UK's position is also boosted by Scotland, which nominated a trade envoy for space by the Minister for Business and is really promoting the Scottish space industry and encouraging partnerships. The UK could improve its efforts by putting its vast industry expertise forward on key topics that are being considered in the Committee on the Peaceful Uses of Outer Space. We need a shift in mindset where Government truly value industry expertise and leverage it to drive vital issues forward, such as space traffic co-ordination.

I initiated a conversation on precisely this topic two years ago and am sad to say that nothing happened. Meanwhile, the UAE—the United Arab Emirates—has stepped up and assumed a leading role on this topic in the committee, when the UK has in fact a far deeper understanding embedded within its industry. Today, if I am honest, the feedback that I get from pockets of UK industry is a lack of willingness and eagerness to engage and work with industry experts, despite the need for seasoned sectoral experience at government level.

There are other opportunities. COPUOS is about to take a decision on the UNISPACE IV space summit, if you will, to take place in June 2027. This type of event happens every 25 years and is where critical initiatives are born. The International Committee on Global Navigation Satellite Systems is currently defining a time zone for the moon. There is our UN-SPIDER programme, which facilitates access to satellite imagery and training for emergency response and disaster preparedness. The UK could provide

more leadership and support for this conference, especially because it sees itself as a champion of space sustainability.

Finally, I would inform you that UNOOSA has recently entered a partnership with the Commonwealth. This is a great opportunity for the United Kingdom to drive forward implementation not only of the long-term sustainability guidelines but also to promote the export of UK earth observation data. Other countries—such as Italy, Singapore and China—are proactive in pushing their industry and their own interests forward. Italy is pushing ahead with its so-called Mattei Plan, which is about co-operation between Italy and Africa, and it is very interested in supporting UNOOSA on its Commonwealth agreement, as is China. It would be a great shame if the UK—as the home of the Commonwealth—is left behind or left out of this initiative.

Lord Booth-Smith: I have one supplementary. You listed a set of countries there that are broadly comparable to the UK. I was wondering if there were any other nations performing above average and comparable to the UK that we might be able to learn lessons from.

Aarti Holla-Maini: Japan is one. I had certain answers for other questions that would allude on that, but Japan has adopted and issued guidelines for on-orbit servicing and collision avoidance, for example. These are aspects that the UK could learn from on debris removal with Astroscale, especially because of the close collaboration with Japan. That would be a concrete example.

The Chair: We heard a little about debris in space, but Lord Tarassenko would like to ask more.

Q212 **Lord Tarassenko:** You have been very eloquent about the need to avoid space collisions, and some witnesses have told us that all UK-licensed satellites must have end-of-life disposal plans, which means de-orbiting within 25 years or less. Some witnesses wanted to push harder with stricter criteria for de-orbiting within five years of mission end to set a high standard of responsible behaviour. However, some other witnesses said, actually, if you ask UK companies to meet these higher sustainability criteria or pay to space banks, for example, as a form of insurance against collisions, then you will only increase costs for UK companies and make them less competitive. You have talked about the UK leading by example, but what may just happen is that you may be creating an incentive for companies to site operations and run missions elsewhere. So how can you encourage good behaviour in trying to make space more sustainable for all the reasons you have already discussed, and yet not make the industry of that country suffer as a result?

Aarti Holla-Maini: We should remember that even space sustainability has a market hidden behind it. When we think about active debris removal and look at the amount of trash that is in space, we realise there is a massive untapped market there, even if it is slightly different to the markets that we usually consider. I mentioned just now that Japan has

issued guidelines for a licence and that was precisely to support its company, not hinder national innovation; it provided certainty and clarity.

Here the UK has the advantage of also having Astroscale UK, which—unlike Astroscale Japan—can actually tap into European Space Agency funding as well and has the competitive advantage of being first to market. The UK should consider issuing guidelines similar to the Japanese, promoting them proactively at UN level, and encouraging other countries to follow suit with a view to securing more market for their companies, and in this case for UK companies.

An industrial strategy and policy for in-space servicing, assembly and manufacturing missions would help the regulatory, legal and insurance landscape. The need for clearer rules is one of the recommendations in the Government's *Regulatory Sandbox for Rendezvous and Proximity Operations* review. The Japanese guidelines are a great model that could help keep the UK's competitive edge and realise the growth of the UK ISAM market.

The UK has already demonstrated leadership in this field through the groundbreaking missions that Astroscale has demonstrated from the UK, but we now need to provide operators with a predictable compliance pathway that aligns with international best practices and supports innovation. By that I would suggest a more prescriptive and transparent regulatory framework, like establishing specifics-based debris mitigation requirements and secondary legislation or statutory guidance, clarifying the relationship between as low as reasonably practicable-based safety assessments—ALARP assessments—sustainability obligations, and establishing clear technical standards for post-mission disposal, end-of-life planning, and active debris removal readiness.

A clear policy for collision avoidance with conditions in licences—as I referred to from the UK regulator—would also be a great example for the UK to explore. It would position the UK as a leader in the implementation of the long-term sustainability guidelines. When we talk about these topics, we need to realise we are not trying to regulate something new; we are just implementing regulation that has been agreed at the higher, UN level already. The thought process of whether this is hindering or constructive has already happened to a certain extent, and this would just be UK leadership implementing it further.

The Chair: When you talk about issuing statutory guidance in the UK, for example, do you feel confident that the UK Government have the powers to issue statutory guidance and inject some issues into licensing, or would it require additional primary legislation?

Aarti Holla-Maini: Forgive me, I do not know enough about it to be able to respond to the question adequately.

Q213 **Baroness Bonham-Carter of Yarnbury:** You have covered quite a lot of what I was going to ask in both the Chair's question and the previous question, but we have been quite pre-eminent and involved in this in the

legal sector. I know this question is coming up later, but as this becomes larger and now more political and we see the US butting up against China and so on, do you think that the UK is in a position to continue to be as pre-eminent and successful in this legal area when it comes to space?

Aarti Holla-Maini: I have no doubt about it.

Baroness Bonham-Carter of Yarnbury: That is very nice.

Aarti Holla-Maini: I do not say that to please you, but you have a wealth of space law expertise in this country and have been a frontrunner in regulation for a long period of time. In my previous life—when I worked for the satellite operators—I was contacted multiple times by African countries that wanted to know how Ofcom and the UK regulator had tackled certain space issues. For those reasons, I say I have no doubt about it.

Baroness Bonham-Carter of Yarnbury: But can we hang on to it? I come from a different world of creative industries and again pre-eminence, but we often lose our hold, if that is the right way of putting it. Can you give us advice as to how our expertise can go forward in a world that is getting so much more dominated by big powers?

Aarti Holla-Maini: When we look at implementation of the long-term sustainability guidelines, while we have a repository of best practices at the United Nations—examples of where they are being implemented—the most prominent ones are those on the hot topics, if you will: collision avoidance and active debris removal, both of which the UK has experience and knowledge on. This is why I am referring so much to the Japanese guidelines—because they are pioneering—but it is almost the only country that has them. So there is still a window of opportunity. It is not a race but the UK can show leadership with that.

Secondly, we already take some UK experts—for example, Joanne Wheeler, who I am sure you know—with us on our technical advisory missions when we support developing countries and other nations to put their space law and policy into place. Again, these missions are funded typically by Japan, France, Italy now, and Luxembourg. The UK has not been a donor in that field, but it could be and that would also provide more visibility about your leadership.

You referred to the US and Chinese blocs. That is more about programmes into space and less about the legal framework, which is what you asked about.

Baroness Bonham-Carter of Yarnbury: Yes, indeed. So do we have to be on the front foot here?

Aarti Holla-Maini: Yes.

The Chair: Could I ask Lord St John of Bletso just to take us a bit further into that question?

Q214 **Lord St John of Bletso:** Many commentators believe that we are seeing the emergence of a Cold War. I am mentioning this more in terms of the dynamics between US bloc initiatives and the Chinese-Russian equivalent. I am not just referring to the Artemis programme and the International Lunar Research Station establishing a permanent presence on the moon but also competition over satellite networks. You have talked about regulatory influence as well as space resources. How is the United Nations mediating or preventing this polarisation?

Aarti Holla-Maini: Some nations indeed like to see space as a race that has both advantages in that it drives innovation and market development in different areas, but also drawbacks in that it prioritises commercial markets over sustainability. However, orbital politics today are far from binary, especially in the West. The US and Europe have very different approaches and objectives, and China sees orbital politics as an extension of its belt and road initiative.

If I oversaw space security in Geneva, then I may very well say, "Yes, there is absolutely a space race and a bifurcation and two camps forming". Fortunately, I am in Vienna and we are not responsible for space security, only for sustainability and safety. From that vantage point, because security is so clearly not part of our mandate or the mandate of the committee, COPUOS is truly able to advance on multiple initiatives, the prime ones being space traffic, debris and resources, which have also been boosted by the Pact for the Future, adopted at head of state level last September.

Of course, we see camps—for example, the Artemis Accords by the United States—but we try to see them positively as preliminary, consensus-building steps beyond a small group of countries, and we try to go beyond them. China is very open to collaboration. It invites other countries to put payloads on their missions—for example, to the moon—and is even taking foreign astronauts into space with it from next year. So the attitude is very open.

We see the International Lunar Research Station from China and the Artemis Accords as two parallel processes, but they are fundamentally different. The Artemis Accords is simply an agreement on a set of principles that anybody can sign up to without even consulting the US. It does not mean that the signatories are part of the Artemis programme: the technology, development, activities and so on. The ILRS by China is very different. You only become a signatory if you are actually co-operating on technology, development and so on, so we are comparing apples and pears in that respect.

One year ago, we at the UN level established an Action Team on Lunar Activities Consultation—known as ATLAC—which has been agreed by all member states by consensus, and this is to work on co-ordination and sustainability of lunar activities. We are actively trying to prevent a bifurcation of space policy around the moon through this.

Last year we organised the first United Nations Conference on Sustainable Lunar Activities, and we saw the Governments from the United States, China, Russian Federation and others all taking the stage and essentially passing the same messages on the need for interoperability, co-ordination and so on. So while from the outside, it is very much two camps and the geopolitics is very real, when it comes to substance, there is a lot of consensus already if we can avoid seeing things through a political lens and see them purely through the substantial lens.

This year, we will be convening a lunar industry forum to ensure that the member states are informed of the activities of the commercial lunar sector. At the end of the day, COPUOS's regulation and decision-making on lunar is to serve the actors that are predominantly from industry and a handful of countries.

Lord St John of Bletso: It is interesting what you say about the Chinese being far more open to co-operation, because really my question is: what can be done to promote more global co-operation rather than competition? Here I am really pointing my finger towards the Americans, who seem to be taking it rather like a chessboard. In terms of the gains that can be attributed, one would hope that there would be much more co-operation globally in the future.

Aarti Holla-Maini: If I might give an anecdote, I was in China for China National Space Day earlier this year. There is always a large exhibition, and half the exhibition is the governmental initiatives and programmes to the moon, Venus, Mars, and so on. The other half of the exhibition is purely commercial. I was stunned by the number of private Chinese companies that are building launchers and satellites, and their market is largely domestic because the market is so huge. To a certain extent, I feel like the race for space is a little artificial, but at the same time perception is reality, so it is what it is.

Q215 **Baroness Mobarik:** We are increasingly seeing state actors beyond the traditional space-faring powers establishing national programmes, and a large number are developing countries. How should we, the UK, engage with those emerging space powers? Should we be sharing and transferring space technology with those developing countries, as has been suggested by the University of Strathclyde and others? What is your view?

Aarti Holla-Maini: That is an extremely important question. The fundamental tenet of the Outer Space Treaty—which we as an office are custodians of and trying to maintain—is that space is the province of all mankind. While we focus on a handful of countries that are space players, in fact, it is not true; there are so many space agencies and countries that are launching satellites today.

There are different ways for the UK to engage with emerging space powers. One is an opportunity to highlight UK best practices and showcase the United Kingdom's historical leadership. I mentioned earlier

about being seen to support and actively supporting the United Nations technical advisory missions. They could be in the field of space law. I mentioned earlier that we had France as a donor. France has sponsored our missions to Ghana and Costa Rica in the last 12 months.

We know that the choice of countries that a donor may select leads to enhanced relationships and potentially partnerships with those countries. Japan traditionally chooses countries that are of strategic interest to it in the neighbourhood: the Cook Islands and so on, and Italy tends to support Africa because of the Mattei Plan. So every country has its own strategic path that it chooses to follow, but this is one avenue that the UK may seek to support. This visible and tangible monetary and in-kind support goes a long way to facilitating further dialogue.

It would be the same for UNOOSA's technical advisory missions on disaster preparedness and emergency response, which are not only an opportunity to provide leadership but an opportunity to push UK companies and the data that they are supplying, because you have a wealth of service providers here of earth observation data.

I would also like to mention the digital divide and education for all as one concrete example. The UK has Avanti Communications, a UK satellite operator, which has connected 245 schools in Kenya using educational content provided by another UK company called Whizz Education. This started with DfID funding back in 2014 as a pilot project and stopped when the pandemic hit. Since then, it has been a corporate social responsibility project.

There is a massive digital divide the world over. This is a huge market that needs public support to kick-start it. It could be an opportunity through our agreement with the Commonwealth. Dedicated initiatives to support the global South are received very well and later lead to tangible results in co-operation. We should see development as bailing out or helping the global South in a charitable sense and as fostering market development for national companies. That is a positive and economically relevant lens through which to see these opportunities. It is also relevant to security. It is only by assuring a better standard of living and quality of life in these other countries that we prevent their citizens from seeking migration over to the UK.

The last point I would make is that as spaceports begin to open in the future, the UK may wish to consider running payload hosting initiatives through our office, as is the case with JAXA, which is the Japanese space agency and, MBRSC, which is the UAE space development office, and we have such programmes ongoing with private companies such as Exolaunch. This is another opportunity to show UK leadership by inviting third countries to host their payloads on your missions going up.

Q216 The Chair: Thank you for answering all our questions just so excellently and expertly. Can I just ask one more thing? You mentioned a potential space summit in June 2027. Generally, you have Sherpas working towards the summit with an expectation of what it is they are trying to

achieve. If you were presently anticipating what the principal objective of that summit would be, how would you characterise it?

Aarti Holla-Maini: I have not been invited to be so bold, but I would love to be so bold. A global mechanism for space traffic co-ordination would be one. Another would be concrete principles on lunar co-ordination and sustainability, which are already being worked on by the Action Team on Lunar Activities Consultation in the committee, and its work programme should culminate in 2027. Similarly, principles which are agreed on by consensus for the use of space resources, which is, again, a working group that exists already today, and its work should culminate in 2027. These are three prime initiatives in the field of space sustainability, but we could also think of others.

The Chair: That is very interesting. Thank you for all your responses to our questions. This brings our public session to a conclusion.