

Foreign Affairs Committee

Oral evidence: Critical minerals, HC 1095

Tuesday 13 June 2023

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Members present: Sir Chris Bryant (Chair); Drew Hendry; Henry Smith; Graham Stringer.

Questions 88 to 157

Witnesses

[I](#): Fiona Clouder, former Regional Ambassador for Latin America and the Caribbean, COP26, former HM Ambassador to Chile, and independent consultant; Paul Atherley, Chairman, Pensana plc.

[II](#): Dr Marina Caparini, Senior Researcher, United Nations University Centre for Policy Research.

[III](#): Rt Hon Anne-Marie Trevelyan MP, Minister of State, Foreign, Commonwealth and Development Office; Professor Paul Monks, Chief Scientific Adviser, Department for Energy Security and Net Zero; Tim Stern, International Energy Director, Foreign, Commonwealth and Development Office.

Examination of witnesses

Witnesses: Paul Atherley and Fiona Clouder.

Q88 **Chair:** Welcome to the Foreign Affairs Committee. This hearing is part of our inquiry into critical minerals, which has involved visiting Chile, as we will probably refer to a little later. We have three sessions this afternoon, but we start with Fiona and Paul. Do you want to briefly introduce yourselves for the record?

Fiona Clouder: I am Fiona Clouder. I am the former regional ambassador for Latin America and the Caribbean for COP26 and the former ambassador to Chile. I now work as an independent consultant, including for Appian Capital Advisory, which is a major investor in the mining sector.

Paul Atherley: My name is Paul Atherley. I am the founder of a company called Tees Valley Lithium, which is developing a large lithium processing facility in Teesside. I am also the founder and chairman of a company called Pensana, which is developing a rare earth mine in Angola and a rare earth processing facility in Humber.

Q89 **Henry Smith:** Do you feel that the UK Government's critical minerals strategy meets the priorities that the Government have set out on critical minerals, achieving wider policy aims in terms of the geopolitics but also tangible ways that the Foreign Office can support that?

Fiona Clouder: First of all, I think it was a very positive step to see this strategy and the critical minerals refresh. The focus, though, seems to be very much on the supply chain side, which is of course a vital problem and is the subject of your inquiry.

I suppose I also see this from my environmental background. Why are we doing this? It is ultimately to ensure the energy transition to address climate change. I would have liked to see the strategy consider much more of the generic issues, because this is a far more complex problem than just the supply chains of the critical minerals.

In taking that forward, my interest is very much on the international side. It is obviously very good to see the references to international partnerships. Since submission of the written evidence earlier this year, of course a lot of progress has been made, with agreements with some of the key countries. I feel what is not articulated at the moment is that broader international engagement, both to address the supply chain issue and to see this as a major foreign policy issue because of the wider geopolitics involved.

Paul Atherley: I agree very much with what Fiona is saying. There is a bigger issue here. In our understanding of the refresh, it is going to look at how we can accelerate UK domestic development through the ATF and things such as the Faraday challenge. It is also going to look at the collaborations that Fiona mentioned, such as the minerals security



partnership. I have recently been in Australia with Innovate UK, talking to Australian companies to see whether we can connect directly.

Specifically on the point that Fiona makes about enhancing the international markets for the bigger picture, this relates to ESG. If we can look at it more holistically and step into an area that has not been covered, the dominant player, China, dominates the midstream and the processing. For most of the commodities, the mining itself is increasingly diversifying. When you look at that midstream, there is the supply chain resilience factor and the ESG factor that Fiona mentioned—we have to be sure that the minerals we bring here are sourced sustainably—but there is another factor that is incredibly important.

During the industrial revolution, this country took us from steam to steel. The US took us from petrochemicals to plastics. Right now, China is taking us from critical minerals to chemicals, and we are undergoing a chemical revolution. Whoever is going to lead the energy transition is the country that leads the chemical engineering revolution.

The policy is very much focusing on supply chain resilience for the UK consumer. We need to look much more broadly at how the UK can participate in this electrochemical revolution that is happening not in this country, but somewhere else.

Q90 Henry Smith: In respect of supply chains, do you think that our allies and partners understand what the UK has to offer?

Paul Atherley: I was in Australia in February and I met with the peak industry and academic bodies. I was at a lithium roundtable with the federal Minister for Resources, Madeleine King, and the Western Australia Resources Minister.

In the face of the opportunities presented by the Inflation Reduction Act and all the incentives being presented around the world, the question to me was what the UK has to offer. My answer was chemical parks and bad weather. We have a very deeply developed chemicals industry here, as well as one of the fastest-growing offshore wind industries.

Connected to two of the biggest chemical parks in the world, at Teesside and Humber, we have two HVDC cables being laid as we speak from the world's biggest offshore wind farm, Dogger Bank. We have renewable power being connected directly to chemical parks.

Western Australia produces 55% of the world's lithium, so I said to the Australians, "Rather than mining lithia at 5%, putting it on a boat, loading up ships with 95% waste and sending it to China to decarbonise the car industry, why not add value to your product in Australia? Take it to a 50% primary lithium sulphate and export to chemical parks in the UK that can use 100% renewable offshore wind and produce a value-added product to supply the European market." I was very much putting the



case that the UK can offer this electrochemical midstream to our strategic partners, like the Australians.

Q91 **Henry Smith:** Fiona, do you feel that the UK Government are moving in the right direction of sufficiently diversifying supply chains?

Fiona Clouder: Yes, there is clear strategic progress towards that. I also feel that the strategy focuses very much on the narrow definition of critical minerals. I respect that it says that this is going to be kept under review, but again, if we take this back to the bigger problem of the energy transition, that is about far more than just the critical minerals; it is also about the enormous expansion of base materials that are needed, such as copper and nickel.

If we think about climate change and all the commitments made in Glasgow by countries all over the world to radically reduce emissions by 2030, which we need to get to net zero by 2050, people have worked out that to make those 2030 targets we need to go five times faster. Now, there is a whole issue about the policies not happening fast enough all over the world, but to go five times faster, you basically need five times more stuff to make it happen. That goes beyond just the critical minerals needed for battery technology and so on.

I feel we also need to look at that and to talk to countries around the world. We need to treat this as a generic global issue as well as looking at individual countries' positions and competitiveness in this space.

Q92 **Henry Smith:** You anticipate my next question, which can have a brief answer. Do you think that the UK's strategy is achievable and realistic?

Fiona Clouder: If it were just the UK in this space, possibly. The real issue, of course, is that everybody else is at this game. To be honest, in many cases they are way ahead of us. Also, we are—with respect—a small nation and a small voice.

Going back to the point you made very well, I have also had many people ask me, "What is the UK doing and what is its offer?" Whatever we are doing or saying, we are not saying it loud enough for potential partners to then make us the partner of choice.

Paul Atherley: We need to be realistic about what we can offer. We can offer midstream processing. That does not mean we have to offer midstream to be able to create the product and to go all the way to batteries and electric vehicles. We can produce a midstream product that fits into somebody else's supply chain.

For instance, the Atlantic declaration, which was announced the other day, very clearly said that the UK companies can participate, with US\$3,750 per tonne of battery materials that get processed in the UK. In other words, we can be part of the supply chain without it necessarily being the supply chain all the way through. If we think more holistically,



as Fiona was saying, about how we can be part of the bigger solution, then the bit we have to offer is chemical parks and bad weather.

Q93 Drew Hendry: Notwithstanding Paul's comments—in fact, taking them into account—what are the benefits, if any, of clearly articulating to the public the dependency on mining to meet green transition goals? Do the public need to understand the trade-offs?

Fiona Clouder: I very much think so. That is another big part of the issues that need to be looked at. First of all, there is a very low level of public understanding. People do not realise that their cars, their mobile phones and the very buildings they are in rely on mining. Spreading awareness of the contribution mining makes—not only to our society and the world we live in but to global supply chains for all sorts of products across the world, and how that benefits both our society and our economy—is very important.

There are also issues around public perceptions of mining. It is traditionally seen as a very dirty and destructive industry. We have to be realistic about aspects of that, but it is also about turning that narrative around to get people to understand that mining will be an essential feature of the world in future if we are to make the energy transition and address climate change. How can we do this in a more energy-efficient, sustainable and cleaner way that also benefits people?

Paul Atherley: I fully agree with everything Fiona is saying. I would just add that we have to talk more about the magic of these metals that we produce.

I sponsor a young lady at University College London through STEM, and she is now working on Max Verstappen's Formula 1 car. She took me out for lunch the other day and said, "I now get your industry." A Formula 1 car is not just about a powerful engine or a light, wind-tunnel-designed body. It is about materials and metals; it is about graphite that can dissipate heat away from brake discs.

She went on at length about all the metals, and specifically about rare earth permanent magnets. The only reason why the electric vehicle moves is not the lithium ion battery; it is the permanent magnets inside the axial motor. Hearing it from her, she could see the magic in the metals; she could see the magic in the story.

I have one other small story along those lines. We think about electric vehicles in terms of the transition from internal combustion engines. Most buyers of electric vehicles in the future are going to be young women, and they see a completely different set of characteristics to that vehicle. They do not have to stop at a petrol station, leaving the kids in the back of the car. For those of you who are in the public eye, you do not get papped at the petrol station.



To Fiona's point, if we can share to the public a bit about the magic of these metals that we produce and the benefits they bring to society, and less about the provenance, then we have a much better chance of bringing people onside to support what we are doing.

Q94 Drew Hendry: Let me ask you one very quick follow-up question. Are the UK Government doing enough to explain the need for critical minerals for our industry to stakeholders and, indeed, to the public? Are they doing enough of that?

Paul Atherley: I would say no, because the UK Government are brilliant in behavioural economics, nudge theories and things. We have to get out there and have different voices from those of people like me—maybe young STEM students at university or young mothers—talking about the magic of this energy transition. It is going to change all our lives, and it is going to happen only because of these critical minerals that we are going to mine, process, produce and put into these products. Let's get somebody out there, via the Government, talking about this.

The UK can lead this. We can be right at the front of the electrochemical revolution. We have chemical parks, we have offshore wind, we have the power, we have the Government policies; we are just not translating that into something that says, "This is special and we can lead it."

Fiona Clouder: It is from within Government, but it is also about having a collective voice. It is about working with the industry and with communities. This is not just a message in the UK. As Paul has said, the UK can have a very powerful voice around the world, because these are challenges facing countries all around the world, particularly those with the very resources that are needed for the supply chains.

Part of the UK offer in building the partnerships can also be about building that public dialogue and looking at whole issues around community relations or social licence to operate.

Q95 Chair: Can I just challenge you on this a bit? I represent a former coalmining constituency. While it employed 160,000 men at its peak, an awful lot of people suffered. A lot of people were killed in the mines. There were poor standards of hygiene and lots of people had ongoing health conditions that lasted for many years. The end result is deprivation and poverty in an area of the country, which has been very difficult to overcome.

When we were in Chile, there were a lot of complaints from indigenous communities about lithium being extracted in a way that they did not think was sustainable.

Fiona Clouder: You are absolutely right in everything you have said. It is an issue of building back trust and showing a narrative on how this can be different in the future. It is very important that both Government and industry are realistic and honest about what has gone on in the past. Of course, there have been all sorts of terrible ecological disasters—one



thinks of the tailings dam in Brazil, for example. Historically, particularly in Latin America, mining is associated with social conflict with communities. What is interesting in Chile is that they are very conscious of this. They are trying to build better relations with communities at the start.

I was recently in a seminar with people from Canada, talking to the indigenous leaders there who held not only the land rights for mining resources, but a lot of knowledge about the land. They were saying how important it had been to be involved right from the start when a mining project is contemplated, turning this into a win-win for the community so that the community gains in terms of not just jobs, but social benefit.

Going back to Chile, for example, Antofagasta is generally perceived as not a great place to be. Apart from the heat, that is simply because it is not a city or town with great facilities. Many of the workers are just bussed or flown in and out as quickly as possible. There is something about developing mining projects, of which there needs to be an enormous expansion if we are to make the energy transition, but doing that in a way that benefits the communities and is sustainable in terms of nature and biodiversity, which is a whole other area of challenge.

Q96 **Chair:** Paul, when we asked in Chile whether any of this lithium was ever going to be recycled, they said that it was not very cost-effective. Are we just going to end up with a great big mountain of former lithium batteries?

Paul Atherley: Recycling is difficult, because lithium is used in the car industry, and the cars make products that are not designed to be taken apart.

I will give you two answers. One is that with many of the other metals, there is an increasing amount of recycling going on. I can give you an example from our rare earth processing facility in the UK. We are working with Equinor. The offshore wind turbines going into the North sea at Dogger Bank have 7 tonnes of permanent magnets. They are going to bring them down, take them apart, demagnetise them, give them to us, and then we are going to use the hydrogen that they produce to decrepitate them, turn them back into metal hydride and oxide, and recycle them.

The specific challenge in lithium is that lithium goes into batteries in cars. I would suggest to you that one of the things the car industry can do is to have legislation such that end-of-life vehicle usage directives specify that all the components of cars can come apart very easily. With lithium batteries, they get turned into a thing called black mass. They are basically crushed up, and then there are several processes to remove all the metals. I agree with you that we are not recycling as much as we could, but I would say that it is a design function, not a processing function.



Fiona Clouder: If I might add a comment, it will become more economic as the pressure grows on supply chains with the costs and difficulty of accessing materials. There are initiatives going on around the world that are starting to look more seriously at recycling, so some of the technology involved in that is also important. Again, expertise on how to do this sort of thing could be another part of the UK offer.

Q97 **Graham Stringer:** Following up on Chris's question, would taking out the built-in obsolescence of cars not help rather more if you extended their lifetime by two or three times, rather than three and a half or four years, as it is at the moment?

Paul Atherley: Yes, that would reduce the demand. The transition from internal combustion engines to electric vehicles is not just about cars. It is coming across all forms of motive power. When we talk about critical minerals, it is all of that. The longer the life you have, the better. An example would be these offshore wind turbines: they are typically designed for 10 or 15 years, but will last a lot longer.

Yes, that will remove the demand for us, but—if I can just pick up on that and go somewhere else with it very quickly—one of the things we have to do, which is what you are driving at, is to value these metals and minerals more. We have to stop treating them as commodities that are disposable. We have to say that they are worth paying for because of the properties upfront, but they are also worth recycling.

We have to make them more valuable rather than treating them as the lowest-cost denominator that they can be extracted out of the ground for. That is something that the UK can do. I will throw it back to you and say that we have done it with other commodities, such as fairtrade coffee and chocolate. We have done it through a range of other commodities where we have agreed to pay more for the product because we value it more. I would suggest to you that the best way we can treat these critical minerals to get them recycled is to put a value on them, put a brand around them, and make people pay more for them.

Q98 **Graham Stringer:** It is good to see your investment in rare earth processing in the north-east. What percentage of the worldwide industry of processing rare earths does that represent?

Paul Atherley: It is around 5%.

Q99 **Graham Stringer:** That is essentially from nothing. Do you think we should go the extra mile and start surveying and mining for rare earths in this country? The thing about rare earths is that they are not rare.

Paul Atherley: The short answer is no. There are other countries with a better geological endowment for all these critical minerals that we need to form partnerships with. As I mentioned, I have just come back from several trips to Australia. I will give you an example. Pilbara Minerals has a mine in the northern part of Western Australia. It announced its expansion earlier this year. That single expansion of that single mine is



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more than all the critical minerals that we can potentially develop in the UK.

Let us accept the fact that South America, Africa, Australia and North America, all of which have countries we can build strategic collaborations with, can provide all the supply we need. We need to focus on the bit where we can add value, which is chemical parks, bad weather and everything that Fiona is saying about applying the highest possible standards of life cycle analysis, REACH regulations, rules of origin and recycling, so that we create a product that is of higher value than a straight commodity. We therefore create longer life for them and people appreciate them more.

Q100 Graham Stringer: Has the UK made any progress, through the minerals security partnership, on improving the standards in critical mining worldwide?

Paul Atherley: Again, I will defer to Fiona's knowledge of what is happening in South America. I can speak more about Africa and Western Australia. There is absolutely no question but that the minerals security partnership has made countries aware of creating these realigned supply chains. A realigned supply chain means you need mines to be developed; you need infrastructure; you need finance. The US Government have been visiting countries in Africa that would normally be visited by China and saying, "We can help you develop your resources." The US has also been courting Australia very heavily through the Inflation Reduction Act.

The minerals security partnership has unquestionably created new supply chains or pathways for new supply chains. My question back to you is this. We are part of it, but we are not taking any lead in it. We are not doing the same thing.

Q101 Graham Stringer: Has it improved standards and governance?

Paul Atherley: Absolutely.

Q102 Graham Stringer: Can you give us some examples?

Paul Atherley: All the agencies that provide the money, such as the Department for Energy Security and Net Zero or UK Export Finance, have the highest standards of ESG requirement for you to draw down those loans and facilities. Anywhere where money comes through that channel, you cannot draw that money down until you meet those requirements.

Q103 Graham Stringer: I was looking more for figures, to take Chris's point—reduced accidents, reduced deaths, reduced chronic diseases and those sorts of areas in the mining industry.

Paul Atherley: It is possibly a little early to measure all those. I am very familiar with the coal industry stats in the UK. My father was the first professor of occupational health and safety in this country. When I was a student, I spent my time in the Birmingham central library looking up coalmining deaths and statistics, so I am familiar with those.



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I will pick up on Fiona's point. The best way to design a mine so that it is safe, sustainable, secure and provides all the things you would want is to design that in from the beginning. I would say to you, Graham, that we have not seen any evidence of that yet, but it is too early. If that comes with the money, then that is the best way to set it up.

Q104 Graham Stringer: I have one last question along these lines. China produces most of the rare earths that are in use, in what I am told are appalling conditions. Where should we prioritise our alliances to try to improve things? Should we stop buying Chinese rare earths? Should we prioritise our partnerships elsewhere?

Paul Atherley: I completely agree with the point. We should not be bringing any raw material into the UK or Europe that has been extracted unsustainably to be part of our energy transition. The way we do that is through a thing called life cycle analysis.

There are companies here in the UK. One is called Minviro. It goes out and does an audit of the supply chain from the mine to the magnet, or from the mine to the battery. It provides a report to the customer to say, "This has been sourced sustainably. Here is some quantification of the embedded carbon all the way through."

When you talk to car companies now, they talk to you about transparency, life cycle analysis or scope 1, scope 2 and scope 3 emissions. Finally, they want low embedded carbon. We should not be buying any products, particularly consumer-facing products, that do not have a life cycle analysis. That would simply stop at the doorstep materials that cannot provide that.

Q105 Graham Stringer: Specifically, would that stop us trading with China in rare earths?

Paul Atherley: The biggest issue with rare earths right now is that, as Global Witness reported, a lot of the specialist rare earths, the heavies, are coming from northern Myanmar. It is effectively a form of ecocide. The Chinese businesses are crossing the border and bringing these materials into China. They get lost in the Chinese supply chain and end up in our cars and wind turbines. Our argument is that every single mine and supplier should have a life cycle analysis audit before you can buy that product. When you buy that car or get electricity from that wind turbine, it is all certified.

I will give you a more detailed example of that. My company, Pensana, has signed a deal with Polestar 0. It has this moon-shot goal to produce the world's first climate-neutral electric vehicle by 2030. Every single bit of the raw material that goes into that car has a supply chain that is signed off. There is a very good precedent. Polestar is owned by Volvo. In the 1970s, Volvo created seatbelts and safety cages, and gave that to the world. What Polestar is doing now is saying, "This is how all cars should be."



It is up to us not to buy the products that cannot be validated, and to create those standards ourselves. It is something that the UK can do. Again, we have done it in other supply chains. We should not turn a blind eye to this in critical raw materials.

Q106 Graham Stringer: Can I ask Fiona one question? It goes back to the points you were making about partnerships and this country leading on climate change. China is creating more carbon dioxide. Germany is switching off its nuclear power and turning to coal. One can go through India and South Africa, where they are not really aiming for net zero by 2050. How does that fit in with any partnerships and alliances?

Fiona Clouder: You have hit the nail on the head. Certainly, the world is not meeting the commitments it made in Glasgow. The ramifications of that are very serious. The UN will be doing a global stocktake looking at how well or badly countries are doing on all those commitments.

One of my observations, which is perhaps very pertinent to this inquiry, is that the environmental, mining and energy worlds are all their own echo chambers. They are all conscious of this agenda and they are all working on different aspects of it, but they do not seem to talk to one another in an integrated way. Again, that is a real opportunity, because one of the things the UK is good at doing is acting as a convener and bringing together different sectors and countries.

Going back to where I started, if we are serious about these partnerships, it is about looking at this as a total issue. It is about looking at the contribution mining makes, and within that the contribution that the supply of critical minerals makes, but then asking, challenging and helping countries to address this as a broader issue.

On your point about ESG standards, this is something we can help countries on, particularly in Latin America. One of the big problems, and a kind of dilemma, is that we need a vast increase in mines and mining materials to make that energy transition.

A mine takes over a decade to go from discovery through to actual production; 16 years is the average. That is way too late to meet all these great commitments that have been made. A big part of that is addressing the environmental and other standards and the community consultation. The challenge is how you ensure that the rigour of those standards, which is so very important, is maintained while optimising that process. Some of that goes back to skills and capacity in the countries that have these resources. Again, that is a partnership opportunity for the UK.

Q107 Chair: Thank you very much, both of you. I am afraid time was always against us—you have just mentioned 16 years, but you have managed to crack through lots of answers that we need for our inquiry in just over 30 minutes, so well done. Thank you for your time.



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Examination of witness

Witness: Dr Marina Caparini.

Chair: Welcome to the second part of our inquiry on critical minerals this afternoon at the Foreign Affairs Committee. It is very good to have you with us, Dr Caparini. Can you tell us where you are?

Dr Caparini: Yes, I am speaking to you from Calgary, Canada.

Q108 **Chair:** How concerned do you think we should be about organised crime and private military groups moving into the area of critical minerals exploitation?

Dr Caparini: I focus on sub-Saharan Africa, and my background is in peacebuilding, peace and conflict. We have seen the increasing presence of private military and security companies, especially in conflict-affected areas of Africa. Of course, there are many resources concentrated in Africa, particularly in conflict-affected and fragile states. Congo is a particular case in point.

We have been seeing, particularly with Wagner's engagement in some of these conflict-affected states, arrangements whereby they provide their military services, often but not always combat services, in exchange for mineral resources and mining concessions, whether directly or through companies that are connected to Wagner through the Prigozhin network.

Q109 **Chair:** Stealing land or making advances into land, effectively expropriating it, seems to be part of the whole pattern. We have heard, in relation to Sudan, that part of the battle there is really about gold, which is not a critical mineral, although in one sense it is. Is that your perception as well?

Dr Caparini: Yes, absolutely. Gold seems to be the common denominator in most of these contexts, although there have been some analysts who are saying that Wagner looks to be diversifying. The nature of not only Wagner, but also organised crime groups is that as the demand for critical resources becomes more intense, prices go up and opportunity beckons. Yes, I would expect to see them moving into it.

Q110 **Chair:** What can we do? That is the sum total of the question: what can we do?

Dr Caparini: The geopolitical situation in Africa right now is not easy. There is the competition and rivalry that is playing out, in terms of deliberate efforts to whip up resentment against former colonial powers, particularly France. There are also broader patterns of armed conflict in sub-Saharan Africa. We have seen the uptick in internal armed conflict, but also internationalised internal armed conflicts involving one or more external actors. The internationalisation of these armed conflicts tends to make them more protracted, more dangerous and more prone to recurrence. The landscape is difficult. What can be done? That is the question.



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Q111 Chair: In the aftermath of the wars in former Yugoslavia, one of the things that the British Army was involved in, along with others in EUFOR, was trying to stop illegal logging, because that was driving a lot of criminality in the area. I just wonder how illegal sources of lumber, timber, gold and diamonds compare to critical minerals in this sphere.

Dr Caparini: To be frank, there is not a lot of information on organised crime involvement in the critical minerals sector, with the exception of conflict minerals, the 3TG: tin, tungsten, tantalum and gold. What we saw there was efforts to regulate the 3TG, also including conflict diamonds.

There have been several efforts, with a certain amount of success, through the Kimberley process, although there are flaws there. There was an effort by the United States through section 1502 of the Dodd-Frank Act, but that was quite counterproductive. They found that instead of encouraging a far higher rate of due diligence among companies that were sourcing the 3TG from conflict-affected countries around the great lakes—that is, the DRC and its neighbouring states—in effect it introduced a ban. Companies decided that the efforts of compliance were too high, so they simply shifted their procurement to other regions.

In terms of trying to keep these minerals from feeding armed conflict, it was proven through very robust research that it resulted in armed groups shifting production to other areas that were not being regulated by the legislation, increasing armed conflict and attacks on civilians, and resulting in massive destruction of livelihoods for Congolese involved in artisanal and small-scale mining.

A lot of experts on organised crime put illicit mining under organised environmental crime. In the future, I think that the critical minerals will come under this group. The thing about environmental organised crime is that it has become extremely lucrative because it is under-enforced. It poses the possibility of high returns and a relatively low risk of enforcement or penalties. It is perfect for organised crime.

Q112 Chair: I have one final question for you. Have you seen instances where countries that are rich in these resources have had leaderships that have been, for either their own personal gain or the gain of their friends, relatives, cronies or political parties, keen to turn a blind eye to illegal exploitation of these resources?

Dr Caparini: Yes, absolutely. It is not just organised crime groups; it is also about state-embedded actors. In DRC and many of the conflict-affected countries in that region, this is a key actor in illicit markets. It is very difficult to address, as you can imagine. Of course, at a state-to-state level, they want the focus to be on armed groups and illicit actors, but when it is part of the state apparatus—whether that is political leaders, party leaders or members of the state security forces—that makes it quite difficult to address.



Q113 **Chair:** This is a proceeding in Parliament, so you have legal protection. Is there anybody in particular you would want to name, or countries that you think are more at risk than others?

Dr Caparini: The most obvious one, I suppose, at least historically, would be the DRC, which is considered to have the worst problem of organised crime and a very significant problem of state-embedded actors involved in illicit markets. Um—yeah. *[Laughter.]*

Chair: I understand your reticence. Dr Caparini, this has been really helpful. Thank you very much for your time. It has been fairly brief, but it has added a completely different chapter to the work that we are doing on critical minerals, so we are very grateful to you. Thank you very much.

Dr Caparini: Good luck with your work.

Examination of witnesses

Witnesses: Professor Paul Monks, Tim Stern and Anne-Marie Trevelyan MP.

Q114 **Chair:** Welcome to the third part of this afternoon's Foreign Affairs Committee hearing on the issue of critical minerals. Minister, although we know who you are, do you want to briefly say who you and your colleagues are?

Anne-Marie Trevelyan: I am Anne-Marie Trevelyan. I am the Minister for the Indo-Pacific in the Foreign, Commonwealth and Development Office. Also, as of just a couple of weeks ago, I hold the portfolio on critical minerals, which is a great treat for me because I was involved in setting quite a lot of this work up when I was the Energy Minister two years ago. I have brought with me a gentleman who is still in DBT, Paul Monks, who is the chief scientific adviser, and Tim Stern, who is our energy director in FCDO.

Professor Monks: I am in the Department for Energy Security and Net Zero.

Anne-Marie Trevelyan: Apologies, I said the wrong one.

Chair: It is all going very badly already.

Anne-Marie Trevelyan: He was in BEIS when I was there, and now I get confused as to what we have all done.

Chair: Anyway, you are all experts, so we expect a very high quality of contribution.

Q115 **Henry Smith:** Welcome, Minister. Have the Government decided, within the broad range of the critical minerals strategy, where they are looking to focus efforts to safeguard critical minerals in terms of security and the



economic reality?

Anne-Marie Trevelyan: Yes. The first step when we published the critical minerals strategy last year was, after extensive work across all aspects of business and civil defence, understanding what that pipeline of need is now and what it is likely to look like as we move to a net-zero environment and a more congested supply chain world, with the impact that that is having. We launched that and set out a number of clear frameworks around which to work.

Then, a couple of months ago in March, we had a first iteration. We called it the refresh, which was in line with the integrated review refresh, which has tried to drill down on how we are getting to grips with this in our relationships with industry and those wider important supply chains.

Through covid, we were challenged to think about the supply chain criticality issues, and Project Defend was a cross-Whitehall effort to do that. We tested that. As we have looked at the refresh, we have been able to assess the investments that we have made into things such as the Faraday battery challenge or the Accelerate-to-Demonstrate facility, funded through the Ayrton fund, and just recently the new CLIMATES fund, which stands for circular critical materials supply chains. It is about the circularity of minerals, recycling and that sort of thing. There is £15 million to start looking at that.

From the broad picture of that strategy published last year, we are starting to drill down, working with industry very closely on where those key areas for it are going to be. This strategy is not for the good of our health; it is for our businesses and our industries to be able to meet, in large part, the net-zero challenge that we have set ourselves, and to assure the supply chains amidst and with our friends and allies, so that we can build that net-zero energy world together.

We are making good progress. As we progress this and we watch the movement of others and a lot of activity in the multilateral fora, we start to think about the challenges we will face. As businesses are challenged more and more, they are also starting to see what the projected paths are for their businesses, for their part of the sector and for so many new sectors that are just starting to grow as the technologies develop.

We are absolutely going in the right direction in that. Paul might want to add a domestic perspective on issues around automotive, offshore wind and so on—those crunchy, big sectors that we want to ensure can continue to be based in the UK and are key to our economy. At the same time, we are working on an international basis, building partnerships with countries that have similar issues or, indeed, countries where there are critical mineral resources that we want to assure for our own businesses.

Q116 **Henry Smith:** In answering, Paul, could you perhaps drill down on particular sectors, whether that be defence, automotive or wind turbines? Are the Government planning to publish that, and how will they support



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those aims as stated?

Professor Monks: Just to put the colour into what the Minister has just said, in the critical minerals strategy we had 53 priorities or policy interventions. When we did the critical mineral refresh, we took that down to 10. We asked, "What are the top 10 that we have to do?" The Minister has laid out some of those as part of that. I will not read the critical minerals refresh out to you, because I suspect you do not want that.

Henry Smith: We can manage 10.

Professor Monks: They are: helping British manufacturers secure their supplies; enabling domestic production of critical minerals; developing the UK's investment proposition; promoting a circular economy; supporting innovation; partnering with key countries; mobilising the UK's private sector globally to develop diverse supply chains; enhancing financial markets; supporting data and transparency; and boosting environmental, social and governance performance.

We took the big ones and, as I said, we looked to choose 10 priorities that we need to deliver over the next period of time. That is what we have chosen.

The question on sectors is a really good one. The view we took as we developed the critical minerals strategy looks across the whole value chain of critical minerals, from mining and refining through use to reuse and circularity. We felt that the strategy was too forward-loaded, in some senses, looking at how to produce.

The question you are asking is whether we have a strategy for refining and whether we understand the sectors piece of that as well. The answer is that we absolutely do. As part of the critical minerals refresh, we set up a task and finish group for what is called supply chain resilience. That is focused on making sure, as was said by Katherine Bennett from the High Value Manufacturing Catapult, that we have resilience in our supply chains.

As a country, we do not import a huge amount of the raw materials ourselves. Much of it comes in the products that we have. We have to make sure our supply chains are resilient for the sectors that you have mentioned, such as defence and wind. I can go through those sectors, but I will stop now, or else it will become a bit of a monologue.

Q117 **Chair:** Also, 53 priorities seems an awful lot of priorities. In what sense is anything a priority if there are 53 of them?

Professor Monks: I think I have answered your question, because I said 53 was too many and we had to get that down to 10.

Q118 **Chair:** Is there a priority of one?



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Professor Monks: Priority No. 1 is the biggest priority, which is to make sure that UK industry is supported in this and can secure its supplies. That is why it is the first priority.

Q119 **Chair:** Let me ask you about cars. We in the UK say that we are going to get rid of fossil fuel cars in seven years' time. We have just had experts telling us that a new mine takes 16 years from discovery to getting anything out of it, so is that realistic?

Anne-Marie Trevelyan: That was one of the commitments around automotive that the Government were very clear on early on. We have a very strong, very important automotive market for the UK, with huge export and domestic markets, so we wanted to assure that their transition to clean, net-zero-emission vehicles was one that they could do here and, to assure that supply chain, building those battery gigafactories, as we call them, was going to be part of that. That investment is progressing well.

When you or I buy our next car, it may or may not be a net-zero-emissions vehicle, but the next one will have to be in the UK. Without a doubt, that will be the case. We are all on that journey, and the challenge for our automotive companies is to assure their supply chain as much as possible. That is what they want to do. It should be UK-based so that they have control of their markets, but we are not expecting that to be all up and running and fully functioning by 2030.

The supply chains are moving and continuing to develop, and that is part of this enormous challenge, because it is not only for automotive that these materials are required; it is for many of the others too. We have made a very focused investment around automotive because it is such an important industry across so many parts of the UK.

Q120 **Chair:** The other thing we have just been told is that if you are going to talk about recycling, you have to somehow or other persuade car manufacturers to make their cars in such a way that you can take the lithium out again.

Anne-Marie Trevelyan: That is part of this £15 million fund that we are calling the CLIMATES fund. The work that is going on around the recycling of critical materials is a nascent part of that—that is the best word I can use.

Professor Monks: It is more than that, because we are consulting on waste regulations at the moment, through DEFRA, for the waste electrical and electronic equipment Act. That is absolutely focused on this question that you are pushing at.

There is a challenge to manufacturing around designing to recycle. There is an element of that. You will also see new business models developing for batteries. Will you buy your battery or will you loan it? We are very much going to see a changing set of economics around that, but the



recycling is very much encompassed in the new DEFRA waste electrical and electronic equipment Act.

Chair: I look forward to that debate.

Q121 **Henry Smith:** Coming back to the Foreign, Commonwealth and Development Office, what are the particular strategies and priorities that your Department is focusing on in terms of the wider delivery of the critical minerals strategy? We have heard a little more about how you are working with other Government Departments, but if you could expand on that, that would be appreciated.

Anne-Marie Trevelyan: As part of the FCDO's commitment to the domestic challenge, which has been working at pace, we have set all our posts some very clear direction on working with their in-country partners, to understand and think about how we can maximise that.

I was in Australia just a few weeks ago. You had Paul Atherley in front of you as a witness earlier on; we were both in Western Australia talking lithium. Indeed, I signed an MOU with Western Australia around critical minerals. Paul was the first to be able to build a relationship on the back of that, with a new lithium mine that is going to be started in the Pilbara, which was a lovely direct impact of this work that the Australian high commission, in that instance, has been doing to build relationships and understand in country how that country might want to think about changing its supply chain activity.

Presently, there is an almost entirely sold-to-China policy, which has been easy, but they want to make their supply chains more resilient and have more diversity. We are making sure that we are in the room with those countries. We have work going on across a number of countries, where already we have been making progress. A challenge across the globe, or across our network, is to think about how we can maximise that. Tim, you might want to add to that, as you are very closely involved with that work.

Tim Stern: There are different strands to our foreign policy and development policy interventions on this. Partly, there is multilateral work, so working through the G7 and G20 to get broad agreement. We work closely with the International Energy Agency on options around critical minerals stockpiling and on standards. There is the minerals security partnership, which the US launched and we are looking to host the ministerial meeting of this year. There is the extractive industries transparency initiative, which drives up transparency and standards around the extraction of raw materials, particularly in developing countries. There is a load of multilateral stuff.

There are bilateral partnerships with lots of key countries. The Minister mentioned that we have signed them with Saudi Arabia, Australia, Canada, Kazakhstan and South Africa. We will carry on doing that to make sure that there is a framework for talking to countries, as we do



with our traditional energy suppliers. We have dialogues for countries that supply oil and gas. Now we are going to need them for countries who are key parts of the critical minerals supply chain.

Then there is helping some of the fragile countries where these minerals come from up the value chain, so that they do not just have minerals taken out and sent to China with no development impact. We help them to develop the regulation, the skills and the standards so they can benefit from them in a safe, sustainable way.

Q122 Henry Smith: Minister, I was so impressed with the memorandum of understanding you signed with Western Australia that I tweeted about it around six weeks ago, which is high praise indeed. However, some other witnesses have said that the Treasury is simply not providing the level of finance to deliver the critical minerals strategy. What is the FCDO's take on that?

Anne-Marie Trevelyan: From the FCDO's perspective, a lot of the work that we are doing is creating, as Tim says, an enabling environment so that business can come and build those strong relationships within a reliable Government-to-Government framework. We can then provide the support, direction and work that might need doing in-country to help set the ESG standards that British businesses would want or, indeed, need to have, because they are going to sell into a British market and we are quite a demanding consumer group, which is a good thing. It drives up standards across the board. The FCDO's role in that is to work around those frameworks and bring in technical assistance in countries where that is appropriate.

On the wider question about how quickly the investments are flowing for the many different industries for which critical minerals are going to be a part, if one threw more money at it, would we get there more quickly? The reality is that the whole world is trying to get its head around how we do this. Countries are starting to think about not only the minerals that they might have and already extract, but holding that value chain where British business might want to be a key partner in-country.

Of course, we have some hugely successful global mining companies already, but that next level of midstream processing and so on is something that can only be done in stages. The challenge of the Treasury's input to helping UK business make those step changes is one that can be done, as in every country, as fast as possible, but the reality of the limitations sits far beyond just having more cash in the pocket.

Chair: That sounded like the subtlest bid for more money that I have ever heard.

Anne-Marie Trevelyan: Thank you very much.

Q123 Henry Smith: I was going to say "turning to China" but, probably more accurately, turning away from China: when would we expect less reliance



on China for processing needs?

Anne-Marie Trevelyan: At the moment, China is, of course, vital in the supply chain. It has been working in this arena for 20 or 30 years. It was prescient: it saw far ahead and was investing before we were in mining, refining and processing. The key point, of course, is that it holds a vast proportion of the processing capability at the moment.

The markets have to grow because the demand is going to be much greater. I cannot remember the figures; Paul will have them. There are enormous increases—tenfold or fortyfold—in the requirements for these as we move to electrification and the renewable tools that we are going to use to generate our clean electricity. These markets have to grow. We therefore all need to work to create that. Exactly to your point, that will, by definition, dilute the commanding hold that China has by virtue of growth elsewhere. That is the most important aspect to think about.

We can talk about turning away from China. What we need to do is help countries. I have always been very focused on helping countries to keep value in-country and, if they happen to have a mineral resource, giving them the opportunity to grow their midstream and processing quality, and to hold the value in-country so that they can invest in their own domestic priorities beyond that. That is something where the FCDO has a very good reputation and, indeed, something that we are focused on, but China is going to continue to be an important partner for many supply chains for a very long time to come.

The challenge we all have set ourselves is to provide assurance and, indeed, that breadth of supply. I remember studying business at O-level; I am that old.

Henry Smith: So am I, by the way.

Anne-Marie Trevelyan: No business should ever have one supplier or one customer. These are basic rules. The whole world got a bit lazy in thinking about that, and China has done a very good job of harnessing and developing those skills. Because the market is going to grow so enormously, as it needs to in order to sustain the net-zero agenda, we all have to lean in and do that. Businesses like Paul Atherley's are leading the pack in saying, "Let's get out there and think about where the processing skill and the mining is, then try to improve that."

There is a lot to do. My view is to see it very much as a broadening of the supply chain opportunities, so that every country has a chance to build its offshore wind, onshore wind and solar, moving towards hydrogen if it can, for which it will need those materials invested. We need a much broader supply chain.

Q124 **Henry Smith:** Finally, what role does the newly appointed director of resilience have in delivering and overseeing the strategy?



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Anne-Marie Trevelyan: That is a very good question. Who wants to answer the question? I am not sighted on the detail of their role yet.

Q125 **Chair:** Do you want to write to us?

Anne-Marie Trevelyan: I am happy to write to you.

Chair: You are allowed that once.

Anne-Marie Trevelyan: You have that letter, and then we have two more to go—how's that?

Chair: Fine.

Q126 **Drew Hendry:** You have mentioned breadth of supply. We have heard about some countries that you have looked into. Which other producer or resource-rich countries are the Government hoping to build relationships with to facilitate mineral access?

Anne-Marie Trevelyan: We are reaching widely at the moment. The minerals security partnership, led by the US, which a number of countries are now involved in, is giving us an opportunity to think about how we work together to build resilient supply chains across all those parts of the world where the mineral resources sit.

It depends on where you are and what you are going to do. Whether you are going to import it or make it at home depends on what minerals you want to have. There is an extraordinary rainbow of choices, but we are trying to work together through that minerals security partnership to map, if you like, so that we can make the best investments between us in country.

Tim mentioned some that we have in place already, such as South Africa and Kazakhstan. There are obvious ones. Indonesia is one. In fact, Nusrat Ghani was there just a couple of weeks ago, talking to Indonesians about nickel, which is obviously a really important one. Again, we are looking to set up that ME relationship and think about how we can do that. We are continuing to build on those.

Tim, how are we thinking about the broader picture and that next layer of the fan?

Tim Stern: For any country, particularly a resource-rich country, we would look at where we can partner with it, whether it is a formal public partnership or something less than that. We would also look at all the countries that are in the market, including G7 partners. As you will have seen, the Prime Minister has just announced that we are launching negotiations for a critical minerals agreement with the US, because it is a key part of the supply chain, and not necessarily because it is exporting raw materials. We would look at most G7 countries and most supply countries, but they may not all be official public MOUs.

Q127 **Drew Hendry:** Just to cut to the chase, what you are saying is that it is



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quite a big net. You do not have a stated list of countries where you have identified these particular critical minerals that you would look to engage with.

Anne-Marie Trevelyan: The five we have already done are, if you like, big, chunky parts of the whole supply chain, for obvious reasons. They provide lots of a particular mineral. Those are already there, but it is a very complex puzzle. We are not proposing to have everything tied up in a guarantee that we have every part here. As part of the multilateral conversation, we are working together with partners to ensure that we will have between us a really good reach into the many isms and idiums, and all those that we have.

Drew Hendry: You have talked about this very high-level list.

Anne-Marie Trevelyan: It is quite gritty.

Chair: Let's get gritty, then.

Anne-Marie Trevelyan: You have to talk to the experts.

Q128 **Drew Hendry:** Let's get gritty. Is the high-level list that you have talked about the obvious low-hanging fruit? Is that the target that you have just now because you have made an assessment of the cuts to official development assistance spending and you are perhaps not targeting those other countries where that might have made an impact?

Anne-Marie Trevelyan: No, that is not the direction.

Q129 **Drew Hendry:** Have you made an assessment of the cuts to official development assistance spending?

Anne-Marie Trevelyan: ODA is used for all sorts of different things. While not all of the funding that has come through the Ayrton fund is ODA, a lot of it has ODA capacity. We are coming at this in a much broader way. For instance, lithium is really important, and the relationship with Australia will in part be lithium, but there is this lithium triangle in South America—Argentina, Bolivia and Chile.

Chair: We have been there.

Anne-Marie Trevelyan: So I heard! How do we help them to develop and grow their value chain? Chile is very focused on that. Bolivia is not, at the moment; it does not want to mine. There are some really interesting bilateral relationships and conversations to think about how we can work together to help them grow their industries and, importantly for the UK, think about bringing the ESG standards, helping them to maximise the value and areas of taxation. There is a whole series of works among those countries where we will continue to work with them.

Q130 **Drew Hendry:** I understand that, Minister, but there has been no assessment in this context of the official development assistance cuts.



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Tim Stern: Maybe I could make one point. Many of our energy partnerships are not ODA-based, but trade-based and business-based. They are often led by the Department for Energy Security and Net Zero, so they are not heavily ODA-funded. In a particularly poor country, they might be, but in general they are not. They are about diplomatic relationships in trade and business.

Q131 **Drew Hendry:** So the answer is no?

Anne-Marie Trevelyan: That is not the driver, no.

Professor Monks: Just for clarity, are you asking whether we have made an assessment of who our international partners should be on the basis of the supply chains that we have? Is that the question?

Q132 **Drew Hendry:** That was the first part of the question. The second part was about the impact of the official development assistance spending cuts on that, and whether there had been an assessment made there.

I want to move on to some other questions. It is pretty clear that there has not been that assessment.

Professor Monks: We have an assessment on the first part of that question. We have made that assessment, and the task and finish group that I talked about is absolutely picking up that question alongside UK industry.

With respect to ODA, Tim can correct me if I am wrong, but we have made significant investments. We have invested £65 million in the Accelerate-to-Demonstrate programme around that, which is focused on making sure that we get in-country development around that. We also use the FCDO network quite extensively in order to use our soft power relationships alongside UK industry.

Q133 **Drew Hendry:** I will ask you to continue this, but it allows me to ask my next question. If you will excuse me interrupting you, just to park it, there has been no assessment of the cuts to the ODA, so we will move on from that. When will the Accelerate-to-Demonstrate project facility be made available? What is the FCDO's influence in getting that launched?

Tim Stern: The facility exists. It is under the Ayrton fund. It is a £1 billion fund for supporting research and innovation in the clean energy space. Part of that is specifically focused on innovations in the critical mineral supply chain in developing countries. Just over £65 million has been allocated. That is now available through our diplomatic network and through our development partnerships where there are project bids. I cannot say the exact status of project bids, who has put them in and who has not, but it is now out there. The money has been announced and made available.

Q134 **Drew Hendry:** You are confirming that it is available for use.



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Tim Stern: Unless someone shouts at me from the back row, yes, it is available for use.

Q135 **Drew Hendry:** Moving on to my next question, is maintaining our market-first approach in the critical minerals field realistic in the face of what some might describe as increasing protectionism in the US and China's market dominance?

Anne-Marie Trevelyan: The PM has been very clear. That is the approach that we are going to take but, in every sense, that is linked in through all our multilateral networks and things like the minerals security partnership, where we are working incredibly closely in building relationships with friends and allies to ensure that our businesses can have those flows.

For instance, as was announced in the Atlantic declaration last week, when the Prime Minister was in the US, looking at that new US-UK critical partnership agreement that we are going to work on to make sure that we are taking away some of those potential IR Act threats is going to be an important part of that. The Prime Minister is clear that we want to work on a market-based model, but using all the tools available to us.

Paul is working day to day and dealing with all our businesses that are out there looking to grow these new supply chains and to assure the existing ones. We are working in the same way that we do when I think about work in trade. When you come across a market access barrier, you work with the country in question to release it. We are constantly building these strengths and ensuring that the UK commitment to our own net-zero journey is one that brings investment, both public and private, to bear so that we can deliver it quickly for our own citizens.

Q136 **Drew Hendry:** You talked about overcoming barriers there. How can the UK realistically compete in the international market in the face of protectionist subsidies without very substantial Government intervention?

Anne-Marie Trevelyan: The Government have been making very substantial interventions in capital investment for a number of years in the net-zero arenas.

Q137 **Drew Hendry:** With respect, that is not at the scale of the US.

Anne-Marie Trevelyan: I always say that if you take the US and divide it by 10, that is roughly how we match up. In a scale sense, there have been tens of billions of pounds of investment from the UK Government in a number of ways—not all in what one might describe as protectionist cash handouts, but through the frameworks in terms of business development that the Chancellor has set out.

There are a whole series of tools available to help businesses invest and grow their own businesses for long-term future profit and shareholder value, and the Government are providing the environment to do that. Within the supply chain piece, we are ensuring that protected, secure



supply chain, which is vast and complex. You do not live in one country, get it out of the ground, process it and turn it into a car.

The multitude of the flows of our supply chains are such that we want to make sure that we have strong agreements between countries, that the international frameworks work and—importantly in the critical minerals space—that they are driving forward ESG, so that we are helping to address across the piece those environmental challenges that come from this industry as well.

Q138 Drew Hendry: Thank you for that answer. I do suspect that there is a bit of wishful thinking in that approach, but we will leave it at that.

I want to ask you about what progress has been made through ministerial forums towards globally accepted definitions and frameworks for responsible sourcing, aligned with ESG and sustainable development principles.

Tim Stern: There are a number of forums that we work through. There are UN guidelines on responsible sourcing and human rights, which we are all signed up to. There is the extractive industries transparency initiative, which looks to make sure that the revenues and the standards applied, particularly by developing countries that source raw materials, are fair, transparent and honest. We are a key member of the EITI, so we drive that with lots of partner countries, including across the G7.

We work through the International Energy Agency and the OECD, and we are agreeing high-level commitments through the G7 and G20 as well. There are a number of fora where we do this. Then there is also direct work at a bilateral level with countries to implement it.

Q139 Drew Hendry: Are the sustainable critical minerals alliance principles embedded in that work?

Tim Stern: Yes.

Q140 Drew Hendry: What steps have the Government taken to assess where they could help countries in developing processing and refining capacity?

Anne-Marie Trevelyan: To Tim's earlier point, as we work in-country and at post, we are thinking about how we can build those relationships. A lot of it is around technical assistance, the right education and working out what the realistic investment growth can be in the short, medium and long term for countries that have those natural resources within their own borders. That is a continuing puzzle that will grow. As this already enormous market grows and multiplies, the opportunity for countries to hold some of that value will become more realistic, but of course it is a changing pattern.

When we were in Western Australia, I was fascinated that lithium used to be discarded as a dirty side effect from the rest of the mining, but now it is where the value is. As the markets grow and settle, presumably alongside new technologies and new ways of creating, those markets will



develop as well. We want to be in-country and building those close relationships, wherever those minerals are, with those Governments, to try to assure their ability to maximise their value and to ensure those ESG principles. That is important to us in terms of our values, ensuring that corruption risk is reduced and that they can get a fair proportion of the value through taxation systems into wider economic benefit for their citizens.

Q141 Drew Hendry: I have one last question on this. Minister, you mentioned the puzzle. Part of that puzzle is interoperable data. What work is being undertaken through multilateral groups to co-ordinate that data on mineral resources and stocks?

Professor Monks: Do you want me to answer that one?

Anne-Marie Trevelyan: Yes, please. That is a very technical question.

Professor Monks: Alongside international partners, we are developing what is called EU CriMMIS, which is a critical minerals market information system. It is based on the agri-market information system. Why is that important? It is important because we want to be able to share information in these open and transparent markets. Critical minerals markets, of course, are quite opaque.

Recently, under the auspices of FCDO, we hosted an international conference at Wilton Park to have a look at how to put together an international critical minerals market information system. We are just about to publish some recommendations on that. I have to say that there was great willingness across industrial partners, state actors, the WTO and a number of international organisations to move to that. In order to enforce ESG standards, which everybody thinks is an important element of the future market, that market information system will be an important underpinning feature.

Drew Hendry: It is pretty critical, if you pardon the pun.

Professor Monks: So many things are critical.

Q142 Drew Hendry: It is pretty critical information, so what are the UK Government doing to set a deadline on making that operational?

Professor Monks: As in many of these sorts of areas when we are talking about the international piece, building international partnerships and international consensus is an important part of that. We see this as a key area. It is one of our 10 priorities to be able to deliver that sort of service. In Government terms, we are looking in the short term.

Drew Hendry: Right, so it could be any time. Thank you.

Q143 Chair: Can I take you to a bit more grit? Can you take me through Kazakhstan? Obviously, it is quite rich in resources, but there are lots of difficulties. It is next door to Russia, which is a problem in itself.



Historically, access would have been up through St Petersburg. That is not available any more, so we are talking about the Caspian sea. That is very complicated; I have another element of this question to ask in a moment. How is it going with Kazakhstan?

Tim Stern: We have recently had a Foreign Secretary visit to do engagement there, where we agreed a partnership on critical minerals. We said we would use our embassy and all the tools we have, such as trade visits, to make sure we have a good dialogue on critical minerals to understand what they can provide, so that they understand what we need, and so that we can use that diplomatic channel to make sure we have as strong a supply chain as possible.

Q144 **Chair:** When we were in Kazakhstan a few weeks ago, we had industry in particular saying to us that the real difficulty is that by this stage you should have lots of smaller actors sniffing around, but nobody is because they are worried about the investment background and the political uncertainty. Is that fair?

Tim Stern: There are concerns about the investment background and political uncertainty in Kazakhstan; that is definitely true, and that has been true as an oil and gas supplier as well as a critical minerals supplier. Yes, I would not disagree with that.

Q145 **Chair:** As we are doing a report on central Asia as well, Minister, how would you articulate the concerns around the political environment in Kazakhstan?

Anne-Marie Trevelyan: I am no expert on that—Minister Docherty holds that brief—but as we look at the central Asian countries that are keen to continue to grow their economies and are rich in natural resources, it is about working with partners across the region. To your point about trade routes, this is as old as the hills. It is about making sure that those transport routes can be maintained and perhaps about having a variety of choices. That is going to be the ongoing work to focus on. I am no expert; I am happy to get Mr Docherty's team to give you more information before or after you get to your report, but you may summon him yourselves.

Chair: I am sure we will have Mr Docherty along. This is a way of warning him.

Anne-Marie Trevelyan: I will tell him you are coming.

Q146 **Chair:** If you look at the history of extractive industries, there are quite often environmental degradation, corruption, abuse of monopoly, state intervention in a sometimes unhelpful way, and illegal actors. We have already heard that all this is also true of critical minerals. How can we clean that up?

Anne-Marie Trevelyan: That is where the work that is now very much at the heart of the multilateral networks around ESG is making progress.



More and more are committing to that being at the heart of the next generation of extraction. As you will have seen in Chile, there are challenges around water. There are questions around how water is used. The mining companies are looking to develop technology so that they can do the mining in a cleaner and less impactful way. There is starting to be more of that.

As I always bang on about and everyone knows, the consumer is a really powerful driver here. The work that the multilaterals are doing to set that bar higher helps to give investment into the private sector a reason to do that.

On the questions around corruption, we, the FCDO, in post and working with our friends and partners in-country, whichever countries those might be, need to be working together to support the Government to find better solutions. Often, that is around tools such as technical assistance around governance, and it is around taxation policy. It is about those sorts of issues.

We continue to work. As you will have found when you were in my role, I have yet to turn up in a country without finding seven or eight ambassadors with a real focus between them on working with the local Government to try to improve a project. We are seeing that everywhere. There is this continuing, growing commitment by many to make sure that countries that have the natural resources have a chance not just to get the value but also to do it in a better way, so that those who are working in those communities have a better quality of life.

Q147 Chair: If you have seven or eight countries sitting around a table in, for the sake of argument, Kazakhstan, Uzbekistan or wherever—a stan that does not even exist—the danger surely is that the countries will say, “We really want this licence. We really want this piece of business. We will not say anything about human rights. We will not say anything about environmental degradation. We are a cheaper option for you.”

Anne-Marie Trevelyan: That is always a risk and has been so in the past. The challenge we all have, as we try to set the bar higher in this space, is to work together. At a UK legislative level, and sitting within the domestic space, we set the bar on what is acceptable for UK businesses to use and they drive that through their supply chain.

We are seeing improvements on a rolling basis in the same way that, when we set the Bribery Act, it seemed like an impossible challenge to reach far down into supply chains, but over the years that has raised the bar across the piece. Our businesses lead the way and other countries have followed suit over the years to shift the bar. This is an arena where we are going to see similar change.

Paul, you are talking to the businesses day in, day out. They know that there is an expectation upon them to improve the nature of that.



Professor Monks: What is quite marked with many of the big OEMs, particularly in the auto and aero industry, is that they are very cognisant that their customers want those supply chains. They want that understanding that there has not been child exploitation or whatever involved in their mineral supply chains.

Back to the earlier question about data and transparency, they are bringing in, for their own supply chains, either direct offtake agreements with companies to make sure they can do the auditing standards, or making sure they are using things such as blockchain to provide the assurance around those sorts of minerals. There are new technologies around chemical fingerprinting to make sure that you can track that mineral through the supply chain. There is a great deal of consumer pressure driving enhanced ESG standards as part of that.

Also, as a Government, it is about supporting these OECD anti-bribery standards and pushing those angles out through the FCDO and places like that. There is an improving picture around that, but we have to be cognisant of it at all times and make sure they are improving. There will be people who will look to supply the lowest-quality minerals in terms of ethical standards into supply chains that are able to take that. We must work with partners to make sure that that is not an acceptable way out.

Q148 **Chair:** I love your optimism about it, and I want to boost that rather than undermine it, but I am just conscious of having visited La Colosa in Colombia, which is run by AngloGold Ashanti. It would be the largest gold mine in Latin America, and all the local community did not want it. There was a big row with the national Government. The national Government have now changed, so it may not be going to happen, but it felt as if the company, which is partly British, was not very interested in environmental degradation, human rights and the rights of indigenous communities in the area. I just wonder whether our belief in these things is not always translated when it comes to the bottom line.

Anne-Marie Trevelyan: We are seeing change with many corporations doing that. In particular, to your point about environmental damage, they are changing how they do their mining to try to reduce their impact on the area that they are mining. We will not fix it overnight, but we are shifting the dial. The consumer is very powerful. In terms of information, the reality that you can see what is going on from the other side of the planet shifts the dial on how easily a company that might want to have lower standards can get away with it. It is incumbent upon us all to drive that up and use all the tools at our disposal to help improve that situation.

Q149 **Chair:** Certainly, in relation to drinking water in central Asia, this was brought home to us time and again. If mines were taking water, then there was not going to be water for people to drink. There is a battle because the borders do not work tidily. If you dam this river here, it means people in another country do not have anything to irrigate their crops. We are all nodding, so I will not bother to make that into a



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question.

Can I just ask you about China? As Mr Hendry referred to, there are significant issues in relation to China's operations in this area. How often do we knock on their door and say, "Oi"?

Anne-Marie Trevelyan: Post covid, we are starting to be able to plan visits again and to get back into that normal discussion around things from financial discussions to JETCOs around trade issues. The Foreign Secretary is hoping to visit in the summer and, therefore, the opportunities to have those robust conversations will be back on the normal, day-to-day agenda with China.

China is a really important global trading partner, so we are very much looking forward to getting back into those normal discussions with it and supporting our businesses that want to have China in their supply chain. China is an important supply chain partner without a doubt, but we are ensuring that, whatever those challenges are, they are taken and thought through fully. We are in a post-covid, getting back to normal stage, and are looking forward to being able to support our businesses as they continue their business relationships.

Q150 **Chair:** I do not know whether colleagues would agree, but yesterday when we had the Foreign Secretary before us, we felt that there was a desire, in relation to China, just to get back to business as usual. That worried us. It sounds a bit like that is what you were saying now.

Anne-Marie Trevelyan: It is business as usual, as in the ability to have an interactive relationship once again because everything has been closed for three years. That is important, but we have very much changed our view. We have brought in our National Security and Investment Act. We are thinking about how we protect ourselves from external actors who wish to show threatening behaviour towards the UK, and we have changed our position on that.

Very importantly, we want to engage with China because it is an important partner, as I say. That is not in question, and only by having those engagements will we be able to raise the issues of concern that we have, as we do with any number of other countries in our bilateral engagements around questions of forced labour or suchlike. It is only by having the engagement back at a level of normality, so that we visit each other and talk about the things that are good or bad, where we want to work together and where we have issues, that we can get on with making progress. He is very clear on that.

We have a better framework around how we look after ourselves domestically from an investment perspective and so on. Working with allies to call out where things are wrong is something that we are now all doing in a much more thoughtful and considered way than we were a few years ago.

Q151 **Chair:** I remember having to make similar arguments about dealing with



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Silvio Berlusconi a few years ago, though you could argue that genocide in China is rather more dramatic.

Anyway, we were going to ask you about exploitation and the deep seabed licences, but it was already answered at Foreign Affairs questions, so there is absolutely no reason to ask you about that.

So I am going to abuse your presence, because you are also the Minister for Sanctions. I just have a few questions, and I am happy for others to ask questions as well.

First, we seem to be quite a long way behind in the sanctions list on Sudan compared with the United States of America, the EU and others. I am not asking you to comment on any specific individuals, but I just wonder whether that is an area of work you are engaged in.

Anne-Marie Trevelyan: Yes.

Chair: So it is “Watch this space”?

Anne-Marie Trevelyan: As ever, we do not comment on sanctions and all that. It is a very interesting one. Just to place this on the record, when I was Trade Secretary I was looking at all the trade sanctions and working very specifically on prohibitions around iron and steel for Russia. These were very specific things, but there is now a broader framework of sanctions policy that we have around human rights and corruption, and of course now our Russia sanctions. We have more than doubled the team—sadly, that is thanks to the Russian sanctions challenge, but it is affording us a huge increase in incredibly talented people into the team. We are therefore able to grow with both the pace and, indeed, the resource requirements to ensure that we are doing the sanctions that we want and need to do alongside partners.

I was talking to a number of EU partners last week at OECD. The co-ordination relationships we now have, sadly because of Russia, between the US, UK, the EU and member states is incredibly powerful. While we do not necessarily all do all of them at any point, because of different legal frameworks and so on, the ability to push these through in a co-ordinated way in order to have the most impact is something that we are really making huge strides on.

Q152 **Chair:** That sounds like another Treasury bid there to me.

Anne-Marie Trevelyan: We already did: we got £50 million, thank you.

Q153 **Chair:** Yes, and I think you would like it to be doubled. Degrading Russia’s economy is a really important part of what we are trying to do, so that it cannot fight the war in Ukraine. As I understand it, 32% of all Russia’s oil and gas exports, when they are on ships in particular, are insured by British companies. Is that not enabling Russia to make a living?

Anne-Marie Trevelyan: I do not want to give you false information, but I will get back to you on that. A lot of work was done early on last year in



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that arena, and one of the other tools we have used, of course, multilaterally with our partners, has been the oil price cap.

Chair: I am about to come on to that.

Anne-Marie Trevelyan: Clearly, while Europeans and the US are not buying Russian oil and gas any more, others still are, but we have effectively taken the profit out of any sales. Therefore, to your point about reducing its ability to fund the war, that has continued to degrade its ability to generate income from its oil and gas reserves.

Q154 **Chair:** It is set at \$60 at the moment. Would it not be better if it were \$30?

Anne-Marie Trevelyan: It would if that were to be negotiated between all parties, but \$60 is where we are at the moment.

Q155 **Chair:** I know, but it was set at that because it was meant to be just shaving a bit off profitability. At the moment, the price of extraction is \$15, and they are selling it at \$60 because we are allowing them to. That is a pretty hefty profit. Could we not get it down to \$30? You might want to write to us; you have that kind of face on.

Anne-Marie Trevelyan: I will do that.

Q156 **Chair:** There is one other thing that I am going to ask you about. I asked you in the Chamber, so this is really abuse of being in the Chair today because Alicia is not here, but I asked the Committee whether I could do it and they said it was okay.

There are British businesses that are still doing a lot of business in Russia. Unilever still sells Magnums on the basis that they are an essential item—Magnum the ice cream, not guns or anything. Aftershave from British companies is still regularly sold—that is apparently an essential item—as are Boss suits.

All sorts of different companies are still engaging in Russia. I hear what you said in the Chamber earlier about how lots of companies have been great. Lots of companies have been, and there have been difficulties for some in the disinvestment process. They have had to take a financial hit, though they always knew that they were in a difficult market with corruption and all the risks that that entails in a capitalist enterprise. I just wonder whether we need a new round of, "Right, folks, let's all get our shoulders to the wheel, because frankly otherwise you are complicit in war crimes in Ukraine."

Anne-Marie Trevelyan: May I suggest, to all those out there who would like to, that they provide me with clear pictures of where those are? Then we can consider the situation. As ever, it has been a rolling series of sanctions and changes over the course of the year.

Chair: These are not sanctioned.



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Anne-Marie Trevelyan: No, but in terms of prohibitions and all those different tools available to us, this is multi-layered. We did not do everything on day one, not only because we did not have all the teams to do it and to ensure the legals were robust, but because it takes time to see the landscape. It takes time to see which businesses pull out of their own accord, where we needed to draw that for businesses to understand their supply chains and so on, so this is a rolling programme.

As you know, Chair, the team and I are always happy to take any suggestions in any arena. We will go away and look at them.

Q157 **Chair:** And you will come back to us?

Anne-Marie Trevelyan: I am happy to.

Chair: Brilliant. Thank you very much.

I promised you that we would finish at 4 pm, and it is bang on 4 o'clock. Minister and team, we are very grateful for your time this afternoon. It has been very helpful.