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Environmental Audit Committee

Sub-Committee on Polar Research

Oral evidence: The UK and the Antarctic Environment, HC 381

Monday 26 February 2024

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[Watch the meeting](#)

Members present: James Gray (Chair); Philip Dunne; Clive Lewis; Caroline Lucas; Jerome Mayhew; Anna McMorrin.

Questions 140 - 197

Witnesses

I: Dr Kim Crosbie, Chair, Noble Caledonia Ltd, Camilla Nichol, Chief Executive, UK Antarctic Heritage Trust, Dr Christy Hehir, Senior Lecturer, School of Hospitality and Tourism Management, University of Surrey, and Amanda Lynnes, Director of Environment and Science Coordination, International Association of Antarctica Tour Operators (IAATO).

II: Mark Brownlow, Creative Director, Natural History, Plimsoll Productions, and Dr Elizabeth White, Executive Producer, BBC Studios The Natural History Unit.

Written evidence from witnesses:

[UK Antarctic Heritage Trust](#)

[Dr Christy Hehir](#)

[Dr Kim Crosbie](#)



Examination of witnesses

Witnesses: Dr Kim Crosbie, Dr Christy Hehir, Amanda Lynnes and Camilla Nichol.

Q140 **Chair:** Welcome, all of you, to this meeting of the Environmental Audit Committee Sub-Committee inquiring into Britain's relationship with Antarctica. I welcome our distinguished panel, who have a particular interest in the question of tourism and a particular relationship with Antarctica and what we can and should do about it.

Perhaps it would be easiest if you introduced yourselves for the record, and then we will take it from there, perhaps starting with our witness in the room, Camilla Nichol.

Camilla Nichol: Thank you very much. My name is Camilla Nichol, and I am the chief executive of the UK Antarctic Heritage Trust. It is a pleasure to be here.

Dr Crosbie: I am Dr Kim Crosbie. I am the chair of Noble Caledonia Ltd, a small travel company that operates in Antarctica and the rest of the world. I have a long history in Antarctic tourism management, both research and applied, and also policy development with IAATO, the industry adviser to the UK delegation to the treaty meeting.

Dr Hehir: I am Christy Hehir. I am an environmental psychologist with a PhD on how tourism can better aid conservation.

Amanda Lynnes: Hello. Thank you very much for having me here today. I am Amanda Lynnes. I am the director of environment and science co-ordination for the International Association of Antarctica Tour Operators, IAATO.

Chair: We come to the inquiry having just returned from Antarctica and seen significant evidence of tourism on the peninsula, so many members of the Committee will have all sorts of interesting things to ask you about. Can I ask what might sound like a stupid question? Perhaps Dr Hehir, in particular, might have something to say about it. Why would anybody want to be a tourist in Antarctica? What is the attraction?

Dr Hehir: Tourists are motivated to visit by remoteness, the cold, the wildlife, the icebergs and the exclusivity of travelling to the world's last wilderness. Also, the heritage, for sure, is a key element of the UK's offering in Antarctica.

Q141 **Chair:** Let me pick you up on two of those things. You say exclusivity and wilderness, but that does not work if there are 50 cruise vessels hanging around the Antarctic peninsula, does it? It is no longer exclusive because loads of you are doing it and some of those ships have 3,000 people on board. Nor is Antarctica a wilderness, because the tourists are messing up the very thing they have gone to see.

Dr Hehir: Right now, self-regulation does enable keeping some element of exclusivity and wilderness. If self-regulation does not do that, the operators will be shooting themselves in the foot with their product.



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Q142 **Chair:** All right. Noble Caledonia has exclusive, very small ships—they are very expensive, which keeps your exclusivity going—but your people want to go there and be there on their own, see the icebergs and see the penguins; they do not want to see loads of other tourists. Is that correct?

Dr Crosbie: Yes, of course. They want to visit the wilderness and have that experience. I am sure that all of you who visited Antarctica quite recently would have had that experience. It takes quite an effort to get there and to plough your way down through the Drake Passage and whatever it throws at you. Then, one morning, you wake up and it is like pushing through the wardrobe into Narnia and you are in this incredible place. With no disrespect to your next session with witnesses from the BBC and so on, I do not think any film, book or photograph does justice to the humbling experience you get when you are there, which I think happens no matter what.

I have been working down there for over 30 years and I have seen the number of ships visiting rise in that time. The operators make a huge effort to co-ordinate, to try to limit how much they see or have any contact with other vessels. There are hotspots of course, but generally the, if you want to call it this, illusion of wilderness is maintained simply through that ability to co-ordinate and work together as a fleet. That is pretty unusual, but there is a lot about the Antarctic and how it is managed and regulated that is unusual. One thing that is quite effective is that, on the whole, operators—all these competitors—work as a fleet once they are south, to try to maintain that sense of wilderness.

Q143 **Chair:** That wonderfulness of the wilderness implies that as many people as want to go there should be allowed to go there, and we cannot have something exclusive, where we say certain people can go but others cannot. Are you saying that it is so wonderful—you wake up and you have gone through the wardrobe as you described it—that we should allow as many people to come as want to, be that 1 million people a year or something like that? Is that right or wrong?

Dr Crosbie: In a controlled fashion; I think there is an argument for that. I assume that, later on in this discussion we will get on to how the system currently works, where the weaknesses in it are, what the strengths are, and where the gaps are, to try to achieve a stronger system in future.

At the moment, there is capacity for those who wish to come. That is a fairly self-selecting group, and I am sure you have had this experience at cocktail parties, or wherever, when you tell people you are off to the Antarctic, and half of them go, "Wow," and the other half go, "Why?" It is not for everybody, by any stretch of the imagination. So the system works at the moment, but there is definitely a word-of-mouth thing going on, partly facilitated through social media and technology, about just how special it is to visit this place.

Q144 **Chair:** I think some go "Wow" and some go "Why?" but a significant number say, "Oh yes? I went down there last year on a cruise"—it



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depends what kind of cocktail party you are at.

Let me ask this. Several of you make money out of tourists—certainly Noble Caledonia does, but even the UK Antarctic Heritage Trust does, because Port Lockroy and other venues would not work unless you had people there buying postcards. Is there a limit to how many people can visit the UK Antarctic Heritage Trust sites?

Camilla Nichol: Yes, there is. You are absolutely right that we generate income—vital income, actually—and if we did earn that income at Port Lockroy, we would find it very difficult to do the conservation work that we do at all six of the sites we look after.

Yes, there are limits. There are limits to the number of people who can land each day at every site and limits to the number of people who can land at any one time. If you can start doing the maths, there is a limit—an utter limit—to the number of people who can land at Port Lockroy. That is limited still further because there are limits on the hours in the day, and the season creates a bell curve as well. You have a peak season in late January to February, but it is much quieter in the shoulders.

We do end up with a self-limiting number of visitors, and we monitor that very carefully because, of course, it is a penguin colony, but it is also a heritage site. With any heritage site in the world you want to be careful about the number of people traipsing over your wooden floors, touching your artefacts and that sort of thing. Numbers are very controlled.

Q145 **Chair:** How do you control them? Let's imagine that a 10,000-person vessel pulls in, as is perfectly possible these days, or will be soon. How do you prevent all 10,000 people from coming ashore in one go?

Camilla Nichol: Alas, they are not allowed to land. Vessels of more than 500 passengers cannot land passengers. All they can do is cruise and look at the icebergs and the historic sites as they sail by. Only the smaller vessels—the expedition vessels—can land. The much larger ones, which are fewer and further between in the Antarctic community, can only visit for a short time and just look.

Q146 **Chair:** Is that 500-person rule laid down by IAATO, the Antarctic treaty system or something else?

Camilla Nichol: By the Antarctic treaty system, yes, but it is, of course, enforced and applied by IAATO members. It applies to all vessels.

Q147 **Chair:** So they can anchor off and drive around in RIBs if they want to, can't they?

Camilla Nichol: I will pass to Amanda Lynnes on that one because she has the rules on all that.

Amanda Lynnes: Thank you, Camilla. Yes, Camilla is absolutely right. Measure 15 (2009) under the ATCM limits passengers disembarking from vessels with 500 or more passengers, and that includes getting off the main vessel and sightseeing in small boats.



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IAATO attends the Antarctic treaty consultative meeting annually, and we have done since the early 1990s. We attend as an invited expert, and our purpose there is to facilitate discussions on human activity in Antarctica.

There is an area where we could do with treaty party help, if you like—I know we will get on to self-regulation a bit later. Something we constantly say to the parties about measure 15 (2009) on managing passenger numbers and so on, and another measure about liability and safety, is that, because these two measures have not been ratified by all parties, we encourage all parties to bring them into force. IAATO and its members honour those two measures, but if you are not an IAATO member and are not aware of them, you may not.

Q148 Chair: We will come back to that in a moment. I still want to focus on the question of who is allowed to go to Antarctica and in what numbers. You are telling me that small, exclusive ships can go—they are presumably the very expensive ones, with well-educated and intelligent people who go with Noble Caledonia and similar organisations—but that mass tourists, who like to go on 10,000-person vessels, are not allowed to go. Is that what it boils down to?

Amanda Lynnes: Not exactly—

Chair: If that is right, is that sustainable, because mass tourism is huge now? In the Arctic, vast ships trundle through the western sea route, don't they?

Amanda Lynnes: For Antarctica, we have vessels that are termed "cruise-only vessels". I think about eight of them visited Antarctica, not this season but last season. They can sail in. They have to have a permit. They can sail and they can view Antarctica and its splendour, but they cannot offload passengers. Vessels carrying 500 or fewer people can sail into Antarctica and can land visitors at visitor sites.

Q149 Chair: Yes, I got that. But isn't that unreasonably exclusive? Aren't you reserving this great wilderness for only a small group of people who can pay to go on very small ships? General tourists are therefore not allowed to do the same things. Is that reasonable? Also, what happens in South Georgia?

Amanda Lynnes: Similar procedures apply in South Georgia. I do get your point about exclusivity. IAATO funds an annual fellowship every year for early-career researchers, and some research that has come out of that shows that there are broadly four groups of people who like to visit Antarctica. Some love to learn and experience more, and they go as part of a family trip—a bonding experience. For some people, it is the trip of a lifetime. They might have saved for their whole lives to visit Antarctica. Others might be going for other reasons to do with adventure. There are different types of people and, yes, there is exclusivity involved, but it has been shown that most people are focused on Antarctica, are keen to learn, and come away with a sense of wanting to foster environmental stewardship or increasing awareness of environmental concerns.



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Q150 **Chair:** That is great, but am I not right in thinking that an awful lot of them want to do other things, like heli-skiing, climbing on icebergs, diving or other interesting and exciting things of that kind? Surely those are the reasons why large groups of the very rich, in particular, want to go to Antarctica. Is that not a reasonable point?

Amanda Lynnes: They may, but any operator worth its salt would get a permit or authorisation from a national competent authority, through a treaty party. As part of that process, they would have to undergo an environmental impact assessment and show that their activity would have no more than a minor or transitory impact, before being allowed to proceed. They would have to have a permit or authorisation.

IAATO can ban certain activities, and we have done so. For example, we have banned the recreational use of drones and surfing. However, it is important to note that, once an activity has been permitted by a national competent authority, it is very difficult to ban it. Another call that we have for the treaty parties and competent authorities is to harmonise the permitting and authorisation process so that operators refused permission for an activity by one competent authority cannot go to another competent authority to try to get approval. It is not the case that extreme activities can happen in Antarctica without an environmental risk assessment.

Q151 **Chair:** I recognise that. We are still dealing with why people want to go to Antarctica, and my impression is that a lot of people want to go there because they want to do extreme things that they would not be able to do elsewhere.

One little question that I do not know the answer to is, do these regulations apply to internal tourism—in other words, to those who go on to the continent or to the pole itself? Do these kinds of restrictions apply there as well, or do they apply purely around the coast?

Amanda Lynnes: No. IAATO has five deep-field operators. They also have to have permits or authorisations from a national competent authority.

Q152 **Chair:** Constraints on numbers and what they do?

Amanda Lynnes: Not so much constraints on numbers, but in terms of the activities that they undertake. They, again, have to go through an environmental impact assessment before being allowed to proceed.

Q153 **Chair:** Finally from me, how would you react to the thesis that this is the last great wilderness, a fantastic place for biodiversity and wildlife, and a wonderful, wonderful place; that a single tourist who sets foot on it is, to some degree, desecrating it; and that, if we believe it is such a wonderful place, surely we should ban all tourism and preserve it for all time as it is, without a single tourist going anywhere near it? Is that an entirely foolish thesis?

Amanda Lynnes: I don't think it is a foolish thesis. However, when I first went to Antarctica in the 1990s as a scientist, I travelled to Port



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Lockroy, the heritage site, which Camilla can talk about. That was the first time that I met tourists in Antarctica, and I realised that they had the same visceral pull as I had for protecting the continent. I am with IAATO now, but I do subscribe to the principle that any travel or tourism is a force for good. When it is managed responsibly, it can be a wonderful thing, and I do think that the people who are travelling there and coming back can do a lot to boost our understanding of how important that continent is and why it matters.

Q154 **Chair:** A noble aspiration, but we will see. Does that make sense to you, Christy or others? I presume you would all be in favour of maintaining tourism as it is.

Camilla Nichol: The way we should look at tourism is that it is a privilege, but it must also have a purpose. Any pair of feet that visits Antarctica must have a beneficial purpose for Antarctica. It is not just like going to the Costa del Sol or going on a cruise to the Bahamas. Travel to Antarctica must be enriching and beneficial. There needs to be a net good, and there are myriad ways that that can happen. But that is how it, as a sector, needs to be considered.

Q155 **Chair:** But how would you possibly ensure that that was the case? If someone turns up in a Nobel Caledonia ship at Port Lockroy and gets off, how can you possibly judge what their motivation for doing that is?

Camilla Nichol: I think it goes higher up than that. I think it is within the treaty system and about what tourism is for and how it is regulated and managed. Then, it is about operators and how the permitting systems that are run through national programmes and national competent authorities are enacted. When you are applying for your permit to take your ship to the Antarctic, why are you going? What will you be offering on board? What activity will you be undertaking? What are your net zero goals? All those things need to be taken into account. They are taken into account pretty well at the moment, but there is always room for improvement.

Dr Hehir: I concur with what the others are saying in terms of thinking about travel with purpose—or, as I like to think of it, purpose with travel. Maybe shifting those words around and putting the purpose first is the way to look at it.

Chair: I hope you are right. These are very noble aspirations. I am going to try my best to find someone who hates Antarctica and get them to go there and prove you are wrong.

Q156 **Anna McMorris:** Research has shown that each visitor to Antarctica effectively contributes to the melting of 83 tonnes of snow. As we have just heard, Antarctica is becoming increasingly accessible to tourism. Given its fragile ecosystem, is that justifiable, or should we be saying no to more tourism?

Dr Crosbie: I am well aware of the paper you are referring to and the implications, but I have several points to make.



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First, and this touches a little on the previous round of questioning, there are advantages as well. It is not just about tourism; there are four big industries in the Antarctic: research, logistics supporting research, the fishing industry and tourism. Those are the four main activities, and each of them, out of necessity and because of where Antarctica is and how you need to get there, requires a lot of energy and effort.

I come back to the previous point about defining purpose and making sure that there is a benefit. There have been some concrete benefits. In the early days of tourism, it was tourists that persuaded McMurdo—I will pick on the Americans here—to clean up their base and stop leaving trash on the sea ice and so on. There have also been more recent examples. Just the other week, HMS Protector cleaned up a site that had been reported by an IAATO member. So there is an advantage in having other sets of eyes on the place.

Additionally, there is an obligation. I think all of us in this room who have been south—I certainly know that, like me, the others on the panel are all committed Antarcticans—have been so privileged to work down there and be part of it. You come back from there with a real sense of responsibility that goes with that level of privilege.

There is genuine commitment among the operators to make sure that, as they take people south, they take with them historians to talk about the heritage, and geologists and oceanographers to talk about what is happening with the glaciers and the ocean. It is a very effective way to get the message across about what is going on down south.

I was there in November with an extraordinary group of female leaders in STEM. We had a group of them on board. Already, after they all came back, it is absolutely incredible to see the efforts they are making in their work to promote the importance of Antarctica and to make sure that that is taken forward. There are other groups like that. There is a Canadian company called Students on Ice that takes students down there. It is a mix of people who go, but probably even with the most committed diehards—questioning climate change and so on—when you see it up close and personal, you cannot help but have robust discussions at least and raise the profile of Antarctica.

I do think there is value to tourism. Does it affect every single person who visits? No, of course not. That would be unrealistic, but I think a very good number of visitors come back inspired and humbled by what they have seen.

Dr Hehir: I would like to add to Kim's comments. I have been doing a piece of work that looks at the social identity of participants, particularly after an expedition. It is about encouraging tourists to be part of an active alumni group such as Homeward Bound or Students on Ice—Students on Ice is actually where my own journey started. Belonging to an alumni group gives individuals greater confidence to act pro-environmentally when they come back, as they are acting on behalf of a bigger group, and not just individually.



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Best practice here, for example, could be tourists signing up for IAATO's ambassadorship programme. The recommendation here is to further these programmes to realise and recognise the power of tourists continuing conversations and actions when they get home. Being part of these groups is a powerful way to keep the momentum of tourists' experience going.

Anna McMorris: Can I turn to the Antarctic Heritage Trust? What role do you feel the trust plays in protecting Antarctica and its environment in the future, particularly using stories from the past to help shape the future and to protect Antarctica as it is now from runaway climate change and from that tipping point? What role do you think you play in telling stories about the people who were there 60 years ago? For example, my dad was at Stonington for two years 60 years ago. What role do you feel you play in telling those stories? Although those people were not scientists back then, and they were not carrying out scientific work, because we did not have the science then that we have now, they provided the early-warning signs of what was to come. They were mapping, and they were surveying the land. My father, for example, was there surveying and mapping the Larsen ice shelf, which is now completely gone. Tell me how you, as an organisation, play your part in shaping the future.

Camilla Nichol: Simply, the trust is the most visible UK activity in Antarctica. We have 18,000 people visit Port Lockroy each season; people from 30 nationalities will visit Lockroy and see my team working there for five months of the year. That is very powerful. It is UK soft power. It is really valuable advocacy for the UK and what we do in Antarctica.

What is particularly special about the sites we look after—it is amazing that your father worked at Stonington base—is that they tell a story of the history of science. This is the birthplace, the cradle, of the climate science that we rely on today. Understanding where that comes from is super important.

The UK's cultural heritage is so important to us—it is who we are. It speaks to everything here in the UK and the wonderful room we are sat in today. But it is also about what we have done in Antarctica in the past. We were involved in its first discovery. In the 1770s, Captain Cook was trying to find Antarctica. Our Antarctic heritage and history are so strong and powerful, and it is respected. We have been important players in Antarctica since people were first thinking about it.

Today, we have what is known as the Penguin Post Office, which always gets lots of press at this time of the year when we start advertising jobs. The trust's activity is a great way of helping people, in a soft way, to understand this place in a way that is human. Climate change can feel very terrifying and scientific and hard, whereas the human stories of the men sledging in the 1960s or my team working there now and handling 80,000 items of mail—this human contact—is so powerful.



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Anecdotally, we find that when visitors come to the Antarctic, it is for all the reasons that Christy was talking about—the amazing wilderness, the wildlife. But when they step into the heritage site and see the tins of Oxo and Colman’s mustard and that sort of thing, it transports them. It is an effective way of communicating some very important things about Antarctica in a very tangible way.

Q157 Anna McMorris: How well do you think that that transfers to people understanding its importance in the UK? It is all very well for visitors to go there and see those things—very few visitors and tourists go and see it—but how do you make it real? How do you make what happened and our British history in Antarctica, as you have just described, real for British people and also in terms of protecting Antarctica and its environment?

Camilla Nichol: Heritage comes under the environmental protocol. It is all part of the environment. We are protecting wildlife, the landscape and the heritage. It is all part of the same family, if you like. Getting that story across here in the UK builds on our amazing and illustrious history—the heroics of Shackleton, Scott and so on. What we do in Antarctica touches on British pride.

Telling those stories virtually is a very important way to do it. We have just developed a VR experience of the bases, and I would love to show that to you sometime. It is about how we bring that to life. I feel very strongly that people who visit should leave having been moved by it and moved to act. Also, people who will never get to visit should have the opportunity to experience it somehow. We do a lot of public engagement and outreach for that very reason, right down to kids at school and people joining us on webinars from around the world.

Communication—that storytelling—can be so powerful. One of the things I notice is that I now have four trustees on my board, all of whom were British visitors to Antarctica. It was their experience of going south that motivated them to say, “I want to do something. How can I get involved? How can I help?” and they have joined our board of trustees. That is a real translation of the impact of the experience to taking action.

Anna McMorris: Thank you. Does anyone else want to comment on that? No? Okay.

Q158 Chair: Can I have one very quick supplementary before I pass to Jerome Mayhew? This is with particular regard to the Antarctic Heritage Trust. Your outreach is brilliant—the material we get in emails and the events that you have in the UK are all absolutely fantastic—but that would happen whether or not tourists went to Port Lockroy.

Camilla Nichol: Arguably not, because most of our income is derived from tourist spend—although we do get a grant each year from the Foreign Office and the British Antarctic Territory—and that is income earned from the sale of stamps at Port Lockroy. A lot of our other income is inspired by people down south buying souvenirs and sending postcards, or by what they have done there and the fundraising we are



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able to do on the strength of that. We do not have any core support from the Government for the work that we do, so if there were no tourists, we would find it very difficult to raise money to do the work we do.

Q159 **Chair:** How much money do you raise at Port Lockroy?

Camilla Nichol: Just short of £1 million.

Q160 **Chair:** Okay. Out of a total budget for the Antarctic Heritage Trust of?

Camilla Nichol: About £1.5 million

Chair: Oh, I see. So the bulk of your money comes from there.

Q161 **Jerome Mayhew:** We have heard about some of the benefits, particularly for you, just there in that most recent answer, and about some of the benefits of tourism in Antarctica. But we also have to be cognisant of costs, and there are some, which we will hear a little bit more about in a moment. If you were balancing the positives and negatives of tourism—I will put this to Amanda Lynnes first, as the industry body representative—where do you think the balance currently lies between the positives and negatives of tourism?

Amanda Lynnes: In terms of the balance between positives and negatives, I think we have just heard an awful lot about the positives, and I think there is a lot of justification for why people want to travel to Antarctica and benefits that they can take away.

We have already mentioned the snow melting and we have discussed, or at least mentioned, climate change here as well. I suppose 98% of visitors at the moment go to the peninsula, which also has 200 years of human history. Looking at negative impacts, it can be quite hard to untangle the impacts of tourism on the peninsula, for example, where there are already some overlapping activities, such as fishing and science.

But compounding that impact is climate change, we all know that the peninsula is changing under a changing climate. In any management strategy going forward, we have to be very sensitive to that. IAATO, our body of members, certainly recognises the threat of climate change on the planet, and Antarctica plays a key role in that. We do increasingly have our operators asking questions about it, but we also have the people who travel there asking about the impacts that they are having on the environment.

The Antarctic treaty system has a process, tools and a framework for managing human activity. IAATO tries to fill in the spaces between those tools that are on offer by developing procedures and policies and ensuring that the level of impact in Antarctica is as low as it can be, but also by talking openly about some of the challenges we face and some of the impacts that people can have on the environment.

It comes back to some of the comments that previous speakers have made. You really have to make every visit and every experience count. I



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talked a bit earlier about the environmental impact assessments. As part of that process, tourism must have an educational component. Camilla mentioned heritage, and that can be surprising for a lot of people who go and really appreciate that heritage component.

Q162 Jerome Mayhew: A lot of your answer has been about the management of the risks and the costs, but my question was primarily focused on how you enhance the positives. Could you pivot your answer towards further work that can be done to increase the positives, rather than just more effective management of the negatives?

Amanda Lynnes: I see. I was talking about the educational component. For guests and people going south, it is enshrined in our bylaws that we have an educational component. But alongside that, we do carry a lot of scientists into the field to do important monitoring work, which includes vessel-based and deep-field, and they, in turn, support national Antarctic programmes. There is a lot of scientific and logistical support, because we believe that science needs to be supported in Antarctica.

Then, there are other far-reaching ways of supporting science. I mentioned the IAATO fellowship to boost science.

Q163 Jerome Mayhew: Coming to you, Christy, it is really the same question: do you have a particular take on what more could be done to enhance the benefits, as opposed to managing the risks of the current level of tourism? Also, the level of tourism is forecast to increase quite substantially, so how can we make that a net positive?

Dr Hehir: A key thing to think about here is where behaviour change comes from. What moment in a tourist experience snaps in people's heads and makes them think differently? Often it is the connection to nature that they get in Antarctica. Their connection might not just be to Antarctica; it might be to wider nature and the world in general.

I have done work that looks at how tourism can connect or reconnect tourists to nature. Examples I can give include allowing people to explore on their own, enabling time for self-reflection, which enables these more memorable experiences; using operators to give people glimpses of something rare or endangered, and we should remember that landscapes can be endangered too; and telling visitors why things are rare and special, which encourages people to want to preserve them.

Getting closer to nature is also important. Often, we talk about learning, and of course that is important; you can absolutely learn lots more about Antarctica when you are there. But it can be quite a hostile environment, so how can we get tourists to absorb that environment so that they are able to connect to it? I am a real fan of the heritage and the arts; whatever you are passionate about at home, in your home life, take that to Antarctica, whether that is music, art, poetry writing or keeping a journal. These elements enable people to absorb these new environments and connect with them, and that is when they start to care for them and start to make change.



Q164 **Jerome Mayhew:** Thank you. Kim, you operate vessels in the area. First, do you carry scientists on your vessels? If so, what percentage of your total is expressly scientific? Secondly, if you do not do that, do you get involved in citizen science, and how important a part of your activity is that? Should it be a greater part?

Dr Crosbie: A good question. We have given lifts to scientists to here, there and everywhere. Let's say we have about 100 passengers—it is usually slightly fewer. We also have 12 field staff who go with them. Going to your first question, about how we can accentuate the positive, the field staff tend to be very highly educated—most of them have PhDs or some sort of tertiary-level education—and they are very passionate about the place. Most of them have a scientific background, so they will be very informative and good at the translation, as you would expect and hope for.

We do take part in citizen science. A number of projects are set up or promoted through IAATO, but we also have our own and we have done some work through a group called ORCA to do with whale monitoring and watching. We have developed a whale-plotting amendment paper, which is worldwide, as well being in the Antarctic. I don't know if you have come across Happywhale, but it is one of the best names for a citizen science project because everyone remembers it. It is a way for people to take photographs of the underside of a humpback whale, which is distinctive—every one is unique to that character. It gets loaded in, and then everyone can go and have a look at it afterwards.

There have been other projects that have come and gone, depending on the lifespan of the project—for instance, FerryBoxes that will monitor sea surface temperatures and so on, just as part of the routine ship operation. We take part in lots of ongoing projects like that.

Q165 **Jerome Mayhew:** Christy, we have heard evidence today about the impact visiting Antarctica can have on tourists and how they bring back changed perceptions and become ambassadors for Antarctica. What evidence have you seen that those changes are long-lasting, as opposed to being ephemeral and lasting as long as people ask to see the photographs of their holiday? Does it lead to a longer-term change in attitudes?

Dr Hehir: I think it can, and the examples from the panel here today show that, particularly if we look at how tourists can get self-determination or at what tour operators can do to boost tourists' self-determination while they are there. There are three key elements to self-determination. One is autonomy—not just learning about the science, but using the experience to learn about themselves. Things like polar plunges really take people out of their comfort zone and make them believe, "Actually, I can do this. Perhaps I can do something different when I get home."

I have mentioned connectedness to nature, but equally there is connectedness to the expedition team and the other passengers; that



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social relatedness is also important for boosting self-determination so that people can make those changes when they get home.

The third one is competence, or skill development—learning in the field from experts, hearing from the storytellers. Tourists think in moments; they do not often think in science or statistics. Going back to Camilla's comments, it is important to tell those stories; those are what bring things to life and what people remember year after year, and they are what make people want to change not just their daily behaviours but some bigger lifestyle behaviours, career choices and so on when they return home.

Q166 **Chair:** Can I be a bit intentionally provocative? Do not interpret my question as being something that I believe, but nevertheless I would like to hear you rebut it. What you describe in this first section of our inquiry today is a potentially small group of people on small ships paying a very large amount of money to go to an exclusive resort. You justify that by saying, "Oh, that is because they learn all about the environment, they broaden their horizons and do worthwhile things. They bring that back and become advocates for Antarctica." You could argue, if you were that way inclined, that this is all greenwashing and that, actually, this is a highly exclusive tourist industry for a very small group of very rich people, in which case it is much less justifiable than the ways that you have been trying to justify it. Please do not think that I actually think that but, none the less, some people might, so I will ask the question. Let's ask the Antarctic Heritage Trust first.

Camilla Nichol: I will turn that around and ask whether you think it is right that a whole continent of our planet should be closed to ordinary people—I say "ordinary" in inverted commas. You would be closing it so that the only people who can go are scientists, the military and fishing. Is that okay?

Chair: No.

Camilla Nichol: I would say not. So, yes, I think tourism is a legitimate activity. Yes, it is exclusive, but the very nature of this activity—the distance, the complexity, the danger and other things, and therefore the amount of safety, the types of ships and the types of people needed to facilitate it—means that it is a £10,000 ticket instead of a £150 ticket.

Yes, it is a self-selecting, exclusive type of activity, but if it is made to be a force for good, surely it can be an equivalent activity to other things that go on, as long as it is managed carefully. As I said before, every pair of feet that enters Antarctica does good in some way. I agree, as some people have said today, that there will be a proportion of tourists who will say, "That was great. I've ticked off my seventh continent," and that is it. But for every five of those, there will be someone who wants to join the board of the UKAHT or who will want to do something in their lives that will benefit Antarctica because they were so moved by it. So many people who are members of UKHT—we are a membership organisation, but they are friends, if you like—reflect their experience back to me. They may



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have gone 20 years ago, but it is so real to them and so powerful that it has changed their lives in some way.

Q167 **Chair:** That is a noble aspiration. Finally, on this one, looking into the interior, a very large number of people now are doing the seven highest mountains on the seven continents and they are climbing Mount Vinson. Do you think that people who pay an enormous amount of money to fly to the Union glacier and then climb Mount Vinson are doing that for environmentally worthwhile reasons or because they are bagging a summit?

Camilla Nichol: I am sure it is the latter; I will defer to my colleagues who work directly in tourism, but I am sure it is the latter. However, if what wraps around that is good—the amount of money they spend and the messaging around it—and if the footprints they leave are mitigated in some way, surely that is okay. A lot of people summiting like this will shout about it on social media afterwards, and if you can feed them messages around, “I conquered Mount Vinson, but what I saw was that the glaciers have retreated. We have to do something,” a lot of people will be so motivated and touched by that. It is that whole thing: if you see it for yourself, you will want to do something about it.

Chair: It is a noble aspiration, but Caroline wants to ask about how we make sure we regulate it.

Q168 **Caroline Lucas:** Yes. It sounds slightly as though, with a wing and a prayer and a few tweets, we will make sure that tourism is not damaging, and I am not sure that that quite stands up.

If I might, I will ask questions of Dr Kim Crosbie and Amanda first. When it comes to ensuring that we have a good system of regulation, how well does the system of industry self-regulation through IAATO actually work, especially in the face of increasing pressure from a growing number of tourists and operators?

In particular, I want to reflect back to you some of the evidence that the Committee has already heard. Professor Klaus Dodds said that he thinks that there is “no collective will to regulate tourism” under IAATO or the Antarctic treaty. We also heard from WWF, which said that “there are no rules about how and when new sites can be chosen, no systematic conservation planning for the Antarctic peninsula, and no mandatory rules for visitor behaviour.” Given that, do you think that self-regulation is enough? I will come to Kim first.

Dr Crosbie: You have to put it in the context of this unique web of regulation, legislation and international governance that sits around the Antarctic. It goes back to the Antarctic treaty system, which works on the basis of consensus. It has done a superb and brilliant job at creating this continent that is a reserve for peace and science. It says that tourism is a legitimate activity, and it works incredibly well at providing big, broad aims.

Every one of those big broad aims or agreements that it manages to achieve under consensus then gets interpreted into each party's national



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legislation, and the success of the Antarctic treaty, arguably, is because it has been so vague. I think that Professor Dodds answered that brilliantly when he pointed out that it managed to answer the difficult question by not answering the difficult question. When you look at the basis of the treaty, and even the environmental protocol and so on, you can see that it is written in such a way that all these different parties can go away and interpret it in their own legislation according to their own interpretation.

Caroline Lucas: Does that bring risks, though?

Dr Crosbie: Sorry, I am coming to the question. Consequently, when you bring that down to legal regulation of Antarctic tourism, different countries have different permitting requirements, for example. As Amanda alluded to earlier, measure 15 (2009) has not been formally adopted, so it is vague.

When those seven companies first started it in 1991, IAATO had to come in to create a level playing field so that the operators could go, "Okay, we understand the principle. Let's do this because we do not want to damage what we are selling." They were all very passionate Antarcticans as well, so it was easy at that point. The system is built on that. Is it perfect? No, far from it. It is not perfect, and there are gaps, but it works and has worked so far.

Q169 **Caroline Lucas:** What are the gaps? Can I just interrupt you on two things? First, what about the fact that there is an increasing number of non-IAATO operators in the region? However well IAATO might or might not be working, it does not cover them. You also talk about some gaps. What are the gaps, and how would you suggest closing them?

Dr Crosbie: The non-IAATO operators are principally yachts. This is one of the real weak areas. I do not think there are any cruise companies now—this last season, anyway, but maybe Amanda will correct me. There may be one—*[Interruption.]* Two—okay. But, generally, it tends to be the smaller yacht operators. They have to find some route back to a treaty party, whether it is their flag state, or the port of departure—Argentina or whatever. If the treaty party cannot follow up with these bad actors and have some meaningful penalty against them, why do they care?

There is a classic example of a Norwegian who went south on a yacht called Berserk, or whatever it was, 10 or so years ago. The Norwegians worked hard to try to take him to task over it, take him to court and so on. Eventually, it distilled through, and I think that he got a \$10,000 fine for operating in Antarctica without a permit. At the same time, he got a \$1 million contract for a TV thing.

Q170 **Caroline Lucas:** The sanctions need to be much stronger and with better enforcement, yes?

Dr Crosbie: That would be a huge achievement. We have been calling for that in the treaty for a long time. It is difficult for them. We do understand that.



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Q171 **Caroline Lucas:** I will come to Amanda, but I want to add in another question before you answer. With the Antarctic treaty system, in particular, what could the UK Government do to foster international collaboration to address the challenges presented by growing tourism, particularly in the context of whether we need stronger international regulation of tourism?

Amanda Lynnes: Kim mentioned some good points about competent authorities and sanctioning bad actors. I think that the UK plays a fantastic role within the ATCM in supporting strong engagement with all stakeholders. Continuing to promote that would be hugely beneficial for us as an industry.

Kim talked about some of the gaps. IAATO itself does not promote tourism, but we do advocate for safe, environmentally responsible tourism. Of course, we work closely with the Antarctic treaty system to do that, but we have limitations, some of which I have already discussed. Kim mentioned the sanctioning of the bad actors and considering unintended consequences. These bad actors can undermine the treaty system.

The UK steering a framework for sustainable management is helpful. As Kim said, the current system works really well, and I think it should be strengthened and nurtured. But it is important to keep up international collaboration and stakeholder engagement so that there is an understanding of what is actually happening in the field that comes back from the operators to the national competent authorities and to the treaty parties. Whatever framework is developed, or whatever management is decided on, there should be space within that to allow operators to set procedures that are necessary for practical implementation of sustainable tourism in the field.

Q172 **Caroline Lucas:** I am still not clear exactly what proposals the UK Government could push to close some of these gaps. I am looking for a clearer recommendation. I hear what you are saying—that it is working well and that we should not go overboard—but I still recognise that there are gaps here. As I say, we have heard from WWF, which has pointed out a set of areas where there are no rules. If we are to write a report that is designed to put pressure on the UK Government, I am still not clear what we are asking them to do.

Dr Crosbie: May I chip in first? Then Amanda can say what I meant to say. There is a big piece of work bubbling away in the background right now to try to develop a new framework. This proposal will go to the next treaty meeting in India in May. Of course, it is caught up at the moment in the process, the legality, how it would sit and so on. Within that, however, there are a number of hardcore discussion points about how things could change in order to accommodate more visitors or more ships, if that is what the future holds, or to manage the system a little better.



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There are two things for the UK Government specifically to do. This is my personal view, but one of the problems with the way the framework is being developed at the moment is that it is being done by a group who are very like-minded, and they are doing it in a way that is isolating and that will not build consensus. There is a real polarisation going on—yes, of course it is a slightly complicated geopolitical field at the moment.

In terms of what the treaty is missing at the moment, the US used to fill a role, about 10 years or so ago, as the honest broker. They do not do that any more; that does not seem to be their role now. I think that the UK has a very strong position to be able to do that, because you have the longevity of the individuals, which counts for a lot in that forum. Because of that longevity, the UK is in a better position than most to try to build a consensus around the room. I hope that that is one of the things that the UK could try to do.

The second thing—moving slightly away from the ATCM and more into the CEP—is going back to the concept of looking at the management of the area as a whole. One of the challenges that everybody has at every level, whether it is IAATO, the treaty or the competent authorities, is being able to come up with a number of tourists who can go to the Antarctic safely and doing a limit. Everybody is struggling with that, for very good reasons. The way it works at the moment—it is slightly haphazard but incredibly successful—is by limiting how many people can go ashore to specific landing sites in a day. It is still only 100 at any one time. However, putting limits on specific areas and setting up these sites has not been achieved or looked at in a strategic way, and that is the WWF point. To be fair, the information has not been there for the CEP or whoever to step back and say, “This is the hole we are looking at. This is how we should carve it out.”

Q173 Caroline Lucas: I am just going to stop you there, because I am mindful of time. That is helpful, but here is one last bit I need to ask about. I want to come to Camilla for a second. Do you think that the Government should consider any further measures as part of its permitting processes for tourism operators?

Camilla Nichol: I will start by saying that our permitting regime is very good and the standards are very high. That is reflected in the kind of operators that the UK permits and the new ones who are coming to the UK for permits in the near future. That is very good.

The UK Government could exert greater influence in thinking about environmental impact assessments. They are very rigorous. The Foreign Office works closely with British Antarctic Survey on all of that, so it is super rigorous. I think that that needs to be encouraged and put into a new framework across the treaty system.

Also, we could push on how we look at visitor sites. The principal area for tourism is the Antarctic peninsula, which is two and a half to three times the size of the United Kingdom. Forty-five ships can get lost pretty quickly in that area, but the number of places they visit is finite, and the



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area of that is smaller still. How we understand the impact on those sites, and how numbers to those sites are managed, as Kim mentioned, is important.

We need a holistic view and a framework to help manage that. This is about managing existing sites, and maybe turning them on and off, but also about looking at potential new sites. The Antarctic is a dynamic place, and different sites are opening up. We need a consistent regime, driven by the UK—why not?—for how these sites can be looked at.

So there is a lot that can still be done. The standards are already high. We have a strong heritage and a leadership role in this, as we always have had, so we should trade on that and do more of it. All power to the relevant elbows in that direction.

Chair: Can I thank our four witnesses for your brilliant performance this afternoon? I hope you feel stretched and challenged. If you do not, we have failed in our task. Our four witnesses were Camilla Nichol, chief executive of UK Antarctic Heritage Trust, who is fresh from a very good performance on the “Today” programme this morning, if I may say so; Dr Kim Crosbie, chair of Noble Caledonia Ltd; Dr Christy Hehir, senior lecturer in the School of Hospitality and Tourism Management at the University of Surrey; and Amanda Lynnes, director of environmental science co-ordination at IAATO, the International Association of Antarctic Tour Operators. Thank you all very much indeed.

Can I just say that tourism—its future and its impact—will no doubt form a central part of our report? If you think of other things that you would like to have said but that you did not get a chance to say, please do feed in to us. After this meeting, we will happily consider whatever you might have to say and we will be glad to have it. Meanwhile, thank you very much for your time, your effort and your evidence.

Examination of witnesses

Witnesses: Mark Brownlow and Dr Elizabeth White.

Chair: Welcome to Mark Brownlow, who is creative director of natural history for Plimsoll Productions, and Elizabeth White, who is executive producer at the Natural History Unit in Bristol, I think. You are presumably based in Bristol.

Dr White: Correct.

Q174 **Chair:** Can I welcome you and thank you for coming? We heard in the earlier session—I think you were here for at least part of it—about the potential damage and the potential benefits that tourism brings to Antarctica. We now move on to considering the way in which people such as yourselves make use of Antarctica in the production of brilliant programmes such as “Frozen Planet”. Is there not an argument that you can do all of that by using library footage and that taking a huge crew down there with vast quantities of equipment, breaching places that are otherwise virgin and that have never been visited before, is actually



environmentally damaging?

Mark Brownlow: I was fortunate and privileged enough to be the showrunner of “Blue Planet II”, and we know that that series had a fundamental impact on public opinion around single-use plastics. We know that, when we get our shows right, they can have a huge impact that affects change for the positive.

“Frozen Planet II” was made 10 years after the original “Frozen Planet”. So, yes, you are absolutely right that there is a bank of archive to lean into, but a lot has changed in those 10 years. Climate change has had a radical impact, particularly on the peninsula. It is affecting the lives of the animals. So we felt that it was absolutely fundamental to tell the story of what is happening right here, right now in Antarctica, which you cannot do through stock footage. We wanted to tell the current story of life in Antarctica and how it is reacting to all the changes unfolding around it.

We try to mitigate our environmental footprint as far as we can whenever we go to film. We sometimes collaborate with other crews to do shoot shares to lower our carbon footprint. We try to use locals outside Antarctica—obviously, there are not many locals in Antarctica. We are very conscious of lowering our carbon footprint while telling that contemporary story, which can only be captured with new technology, like drones, which did not exist 10 years ago, and all sorts of other advancements in camera technology. That will enable us to present new stories, built up on 10 years of new science, that will give that new, fresh perspective, which will hopefully engage a new audience.

Q175 **Chair:** I agree with you there. I think that they were both extremely influential. A lot of the change in public attitude is thanks to the “Frozen Planet” series. However, I say to you again that the risk is that you would be accused of some kind of Antarctic adventurism and that you did not need to go there. Your answer to that allegation was that you are comparing 10 years later with 10 years before. How much footage did you use from the first “Frozen Planet” series in the second one?

Dr White: None—nothing from the first.

Q176 **Chair:** So it was not comparing. In order to compare, you would have to show what it was like 10 years ago and what it is like today, but you did not use any of that footage, so you were not comparing.

Dr White: In terms of the science stories we were telling, we were telling a contemporary story using scientists to speak for what is happening right not. No, I guess that we were not doing a direct comparison from one to the next. We definitely nodded back to the position of glaciers 30 years ago and so on. We did not directly compare from one to the other, but we did bring that new message to that new generation.

Q177 **Chair:** You can see what I mean. My question was why you had to physically be there to do the filming. I can understand that if you were filming a glacier that has now retreated 100 metres from 10 years ago, and you then showed your film from 10 years ago and where it is today,



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that would seem to justify physically being there. But if all you are doing is saying, “We are very worried about the retreat of sea ice,” or, “We are worried about the retreat of glaciers,” there must be vast libraries full of footage on those things that Sir David could have easily commented on without actually going there.

Clive Lewis: You could have done stood in front of a green screen.

Dr White: I think that it would be hard to engage a new audience if you just constantly used the same footage. We know very much that our audiences come to the programmes because they feel they see something new, they want to learn something and they want to feel that they have had a new experience by coming to one of these series. We know that the series have longevity. We know that people still go back to “Frozen Planet I” and still go back to the original “Planet Earth”. Those shows are still airing and being used in schools and so on.

One might argue that you are putting a mark in the sand and saying, “We will never go and film these things again.” If you do not go back and revisit these places, you will never have that new record, which of course we will then use as archive in other programmes. Certainly, for us, the making of “Frozen Planet II” had to feel as if it was new, different and telling a new story in order to capture a new audience’s imagination.

Q178 **Chair:** Tell me how easy it was to do it. You had to get a large quantity of equipment and people there. How did you physically achieve that?

Dr White: I should clarify this. The series was not just filmed in Antarctica. The series was filmed across—

Q179 **Chair:** I know, but I am talking about the Antarctic bit.

Dr White: Just the Antarctic section was one episode of the six, plus some sequences in our opening show and our final film, which is about science in the polar regions. Across those Antarctic elements, we undertook 14 different shoots to tell all of those pieces. We were also able to use some other footage from scientists in the field. For example, a team from the British Antarctic Survey went and put a camera in position for us alongside their own cameras. In a situation like that, we did not send in a team. We kindly sent them a camera many months in advance, which they took down on the ship.

Our new endeavour in Antarctica was around 14 different independent shoots across the whole of that region from South Georgia and working with different scientists from different sectors.

Q180 **Chair:** Sure. Fourteen different places. How many people was that, and how much equipment? And how did it get there?

Dr White: There was a real variety. In most cases, it would be flown somewhere, to the gateway. Sometimes it would be—

Q181 **Chair:** Flown to Rothera, or flown to where?

Mark Brownlow: Ushuaia or—



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Dr White: It depends. For example, operating on the Antarctic peninsula, if we were operating with our own private chartered vessel, as we did in some cases, we would effectively charter a small yacht to take our own crew. We tend to operate on the smallest crew we can. We have to have enough people to make it safe, and we work with very experienced skippers and so on, but we try to keep the crews themselves small.

Q182 **Chair:** All right. For your 14 different locations, or 14 different bits of filming in Antarctica, how many people did that involve and how much equipment?

Mark Brownlow: It typically involved 10 people.

Dr White: It would depend. Each shoot is quite different. We have a number where we were embedding them with scientists. Literally, one self-shooting camera operator would go in with the British Antarctic Survey team, say to Thwaites, and that one operator would stay for about four or five weeks with them on the ice to shoot that sequence. In another situation, you might have four camera crew going in—two camera operators, a director and a researcher—but also working with a ship's crew, so there may be seven different people. Across all 14 shoots—

Q183 **Chair:** You are going by ship, presumably, or flying to where?

Dr White: A mixture. Sometimes it was by ship—for example, to the Antarctic peninsula. But we also worked with the Germans at Neumayer base to film emperor penguins. That would have been flying in with those scientists and being based with their base logistics. We did a shoot with the Australian Antarctic Division, which was again ship-based. We flew in to join their ship and put a two-man crew onboard their ship. We worked with the British Antarctic Survey on a trip. Again, that would have been a two-person crew.

It is hard to standardise. We look at where the stories are that we feel compelled to tell, whether that be natural history, which involves quite a small crew but for a long period of time, or a science story, where perhaps you can put in a single camera operator to spend time with the scientists. It is hard to generalise because each one is its own little, unique—

Q184 **Chair:** Sure. I understand that, but you understand the thrust of my questioning, and I would not want to be accused of being hypocritical, because we ourselves were in Antarctica recently. The thrust of my questioning is that a significant amount of activity by film crews of one sort or another took place in Antarctica, and that would have had some degree of environmental consequence. How did you minimise that consequence, and how do you feel about that consequence? Or how do you feel about your viewers who are concerned about climate change thinking, "Actually, the BBC must have made a contribution themselves to the problems that exist in Antarctica"? What is your general approach to environmental conservation and damage?



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Mark Brownlow: That is very much at the forefront of our minds whenever we launch a shoot. If we can row back, at the beginning of production, we try to green our production—from the development phase, the research phase and even before we enter into the filming phase. That is just in terms of local good practice in the UK.

When it comes to being on location, we try to minimise the amount of equipment and personnel we take with us but, as Liz says, we have to do things safely. If we are going all the way there, we have to film it in such a way that it will feel fresh, original and groundbreaking. In order to justify the means, we want to engage as large an audience as possible. We had 10 million viewers on repeat on BBC catch-up iPlayer for episode 1 of “Frozen Planet II”. It is being seen worldwide. I do not have precise metrics, but if it is anything like “Blue Planet II”, it is on the way to half a billion people. In China, when “Blue Planet” went out and was downloaded by 250 million people, it reportedly slowed down the internet. You hope that a series like this, which is underpinned by the message of climate change, will strike a chord with at least some of the audience.

Going backwards, to answer your first question in more detail, you asked, “Why go back again?” Ten years ago, when “Frozen Planet” was made, man-made climate change was still in discussion, in terms of whether it was human-born or not. This time, rather than telling amusing stories of a chick’s daily stone-stealing, we went back—yes, we have to have humour, again to appeal to the audience—and told the story of how fluffy chicks are dying from hypothermia. It is hard-hitting stuff. We also did photographic comparisons showing the disappearance of ice over time from on the ground. As Liz said, we installed cameras at Rothera with BAS to do a historic time study of the degree of melt taking place on our watch. We even engaged with satellite companies to chart that change over 50 years.

Q185 **Chair:** Please do not misunderstand me. I think that the work you did was fantastic. We just need to consider the environmental consequences of doing it.

Dr White: Do you also want to talk about the on-the-ground logistics regarding minimising the environmental impact?

Chair: Yes, please.

Dr White: From our point of view, reputationally we want to go in and have minimal impact. In order to film on the Antarctic peninsula or South Georgia, you have to get all the right permitting in place, which means proving that you are a responsible organisation and that you are well aware. You have a people risk assessment to show whether you can get your people back out by medevac and so on, which for many reasons means that you often have to have a vessel there to get you out, should you need it.



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There is also a big environmental impact process to go through, especially if you wish to fly a drone, go anywhere near an endangered penguin colony or work around cetaceans. There are different layers of permitting, depending on who you are working with and which sector of Antarctica you are working in. From my experience of 20 years of working with the BBC Studios Natural History Unit, the permitting process work in Antarctica is the most rigorous. Offshore islands and rare islands in other places also have some—

Q186 Chair: Before I hand over, that triggers off one further question in my mind. I am sure that that is the case. Knowing the BBC and the people who work for you very well, I am certain that you apply the highest possible standards. But are you not concerned about people—perhaps from other countries around the world or even from elsewhere in Britain—who might be much less responsible seeing the success of the “Frozen Planet” series and saying, “Well, I am going to do that too. I am going to shoot down there, charter a yacht and go to film emperor penguins”? Is that a concern?

Mark Brownlow: There is rigorous permitting around access to bases. For example, the British Antarctic Survey only issues three media permits to access Thwaites glacier, which featured in our finale. We have to go through an awful lot of process to be allowed that one place, which could go to any film crew from any country. From our perspective—and we applaud it—there are limited places available, so I do not foresee that it could be a free-for-all.

Dr White: Yes, it is interesting. I think there was a reference in the previous panel to the Berserk yacht, and obviously there is a wider issue. If people can go down there and just take any old person—you do anecdotally hear of stories where people have just taken a boat off to Antarctica—obviously that is an issue. I think it is very unusual that that sort of situation happens, because it is fundamentally a very difficult place to work. The skippers we have employed to take us across the Drake Passage in a small yacht really do have to have a lot of experience, because you would not trust your life with most people. I think it is a very, very difficult terrain to work in. Hopefully, most people are sensible and pragmatic and realise that you need to go in with the support of organisations, so that you yourself are safe when you are operating there.

Q187 Philip Dunne: Picking up on the segue from that last set of questions, you were talking, Mark, about the inspiration for “Frozen Planet II”. I would just like to move on to the content and why you decided to focus it in the way that you did. Perhaps you could set out what the inspiration was for coming back to it 10 years later. Was it to tell the climate change impact story? Was it to follow the natural history of what is happening to the flora and fauna that you discovered there?

Mark Brownlow: A decade on, so much changes in scientific understanding, which equates to opportunities to film groundbreaking new stories. There are advancements in camera technologies; 10 years



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ago we would never have believed that you could fly a miniaturised drone to film a completely new perspective of a wave-washing killer whale. Previously you would have had to hire a large helicopter at vast expense and with a large carbon footprint. So it is about new technology and new stories with new science.

There is also the imperative we feel as film makers to tell the story of the changes that are taking place in Antarctica. As we know, it is one of the fastest changing parts of the planet, along with the Arctic. Without diverting too much away from the original series, we wanted to expand the narrative. The original series focused solely on life at the poles. We broke out to cover stories, including the entire frozen quarter of the planet. So we also filmed in the high peaks of the Himalayas and in the frozen forests of Siberia. We wanted, in one massive piece of television, to tell the story of this massively changing part of the world that is inhabited by magical creatures that are, of course, adapted to the cold but that are having to cope with this new norm.

Antarctica is the superlative of all the stories. It is the coldest, the biggest, the windiest and also the most changeable, so it is the most extreme of the cold, frozen regions. Without a doubt, Antarctica was the highlight of the series. But we also wanted at the end of the series, in programme 6, which was our science episode, to relate it back to each and every one of us. That was the ambition: to land that these are not remote, faraway worlds and that the changes taking place in them will come back to impact all of us.

Q188 Philip Dunne: Focusing on the Antarctic, which is what we are interested in in this inquiry, how did you assess what was scientifically valid, as opposed to what was curious that you came across? How representative of what is happening across the continent was the edited output that you eventually showed?

Dr White: In many ways, a lot of the Antarctic episode itself focuses on individual pieces of animal behaviour. When we are focusing on a species level, obviously we are making sure that the behaviour we are showing is representative of that species. To do that, we work with scientific consultants. We work with scientists throughout the process.

To find the stories in the first place, when the series is first commissioned, in the first six months to a year our team of researchers speak to all the scientists in the field that they can about pieces of behaviour they are observing—"Do you have any new discoveries? What sort of topics could we cover?" Through that, we do a shakedown to find stories that we feel are going to be representative and that will have a parallel role in making a nice, mixed programme. We have to make a film that is going to work as a whole; we cannot have 12 penguin stories, for example. So we do a lot of distilling and working out which stories we feel will make a balanced programme for the audience.

On climate change specifically, we are obviously running everything we do through those scientific advisers. That happens at the research phase.



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Often it happens when we are in the field, because sometimes they come with us in the field. Sometimes it is through sending footage to them to say, "Do you think this is an unusual thing, or is this normal?" Then it comes down to the final fact-checking phase. When films are in the edit, we again work with scientists who are experts in the field. That may be the scientists we initially spoke to, but we often send things out to other scientists to, effectively, peer review pieces of behaviour that we see, to make sure that what we are depicting in that final episode is accurate.

Q189 Philip Dunne: Was the British Antarctic Survey your main source of science giving advice here? Who else did you talk to? How helpful was the BAS in relation to others?

Dr White: We work very well with the British Antarctic Survey. I have been with the BBC Studios Natural History Unit for 20 years. I worked with the original "Frozen Planet" series, and I have worked on some intermediate series where I have come in to help with polar shoots because that is my background. Most recently, I was the series producer on "Frozen Planet II". I have always found the British Antarctic Survey scientists absolutely fantastic. They are very helpful, be that just for phoning up for information or for support in the field. Sometimes, we go in and work with them logistically, based in a study site or actually going in on the ground to do science with them.

However, we cannot just focus on the areas where the British Antarctic Survey works, so we do absolutely work across the global community. In this particular show, we did a number of sequences with the National Science Foundation from America, based out of McMurdo and Palmer station. We worked with the Australian Antarctic Division on a ship-based study they were doing on blue whales. We worked with the German RV, which allowed us access to its emperor penguin base.

By nature of the fact that we are doing a global landmark, and we want to be representative of the whole continent, we do absolutely have to find stories from beyond just the British bases, but we do also find the British Antarctic Survey very helpful, including in terms of contacts. In many ways that is very true of the whole of Antarctica: it feels as if it is a place that is very connected because of its very remoteness and the fact that people do have to collaborate in order to do their science.

Q190 Philip Dunne: Mark, you just said that the programme was viewed by half a billion people around the planet.

Mark Brownlow: That is true for "Blue planet II". I do not have the precise metrics for "Frozen Planet II" for the international distribution, but we can get back to you on that if that is helpful.

Q191 Philip Dunne: Would it be fair to say that this is one of the most successful natural history programmes or series that the BBC has ever made?

Dr White: Yes. The original "Blue Planet", "Planet Earth" and "Frozen Planet" series were very successful, which is part of the reason for



revisiting those through “Planet Earth II” and “Blue Planet II”. This series was actually commissioned at the end of 2017, just as “Blue Planet II” was airing. The response to “Blue Planet” was fantastic. It was picked up by families and schools, so it got a very warm reception. That was part of the reason for thinking, “We think ‘Frozen’ would be a great topic.” We knew that the environmental interest in “Blue Planet II” was strong and, therefore, a story that also had climate change at its heart felt as if it would be the right sort of story for the audience at this time. When we aired, it was the No. 1 factual show for the BBC for 2022.

Philip Dunne: “Frozen Planet II”?

Dr White: “Frozen Planet II”. The audience was very strong. Despite the fact that the timing was a few days after the passing of the Queen, and we actually had no publicity for the first two weeks of the run because of the national period of mourning. But audience figures still came, and we know that, obviously, an element of that is that they love Sir David. But people also love the cinematography. BBC Studios carried out audience research after the series aired, and the landscapes and climate change, or the environmental message, featured very, very strongly as something that people enjoyed. They felt that they wanted to know about the environmental messages, whether or not they enjoyed them—I mean, we are not offering solutions in the film. The audience skewed particularly well to the younger, 16 to 34 demographic, which is a demographic that says they are particularly interested in things going on with the planet. They want to know more about the environment, and they are motivated to do things by watching shows like this.

Q192 **Philip Dunne:** In the original series, there were some constraints over the messaging and its ability to be sold into certain markets, particularly the US, or so I understand it. Did you come across similar constraints with “Frozen Planet II” or have you been able to air it in its entirety wherever you could sell it?

Dr White: Yes.

Mark Brownlow: I believe so. I do not think there have been any constraints based on political concerns or messaging, no.

Philip Dunne: For “II”?

Mark Brownlow: Yes, for “II”.

Philip Dunne: And for the original series, or was that a misinterpretation?

Dr White: There might have been an element of misinterpretation. There were news stories about the American market, but I do not know whether the information was accurate or not. I think there was an element of news around it, which I am not actually sure was accurate. Certainly, for “Frozen Planet II”, the series has climate change stories at its heart within every single episode. There was never any way that anybody was going to take the series without having that message and, certainly, we



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do not know of anybody who has tried to—

Q193 **Philip Dunne:** My final question is whether it has been such an enormous commercial success—I endorse what the Chair said, and I think it has been a very enjoyable and interesting programme—that that puts the BBC under the pressure or expectation to create “Frozen Planet III”, just to keep the progression going?

Mark Brownlow: That is at the discretion of the controllers within the BBC public service sector rather than BBC Studios. We are the makers, rather than the commissioners. There were 10 years of clear water between the two. I suspect it will probably be another 10 years to generate equally compelling, fresh new stories and to have new advancements in technologies that enable us to deliver a completely fresh proposition.

Q194 **Chair:** Before I pass on to Clive, can I pick you up on the fascinating fact that your viewers are in the 16 to 34 year group? That is quite contrary to what I had imagined, which is people like me—old fogies hot off “Antiques Roadshow” and then straight on to—

Dr White: No, it is very, very broad. It is BBC One; it is a very broad age group who watch, from families with very small children. We know that the schools pick it up. We get invited to do school STEM talks or cub scout groups. So you know that there are lots of families watching. Absolutely, every age group watches it. You have people who are retired people watching. But for that slot, for that sort of programme, there is often a big skew towards 16 to 34.

Chair: Which is very encouraging. It means that the younger generation are taking these things extremely seriously; it is not just the old folks like me. Talking of old folks, Clive Lewis.

Q195 **Clive Lewis:** Thank you. I want to follow on from Philip’s questioning. You had “Frozen Planet” and then you had less “Frozen Planet II”, and possibly there will be “Frozen Planet III”. I am really interested by the fact that, politically, you have shifted, you would say, as the science has progressed. I am just trying to work out how much you were shaping the politics and how much you feel you were responding to the politics.

I want to give you a quote about the first “Frozen Planet”: “Whilst the series was broadcast in full in the UK, the BBC chose to make the series’ seventh episode, which focuses on climate change, optional for syndication in order to aid sales of the show in countries where the issue is politically sensitive”—that is the US. In the following 10 years, you decided that, no, the actual programme itself would be more about climatic change. So something has happened in that 10 years. Where do you see yourself slotting into that? Were you following the politics between “I” and “II”, or were you driving the politics?

Mark Brownlow: That is a fascinating question. I can go only on experience from “Blue Planet II”, where, for the first time, we embedded environmental storytelling within the main body of the blue-chip



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episodes. Through emotionally charged, character-driven stories, we told an environmental story—in this case, the issue with ocean plastics. Off the back of that, there was political and behavioural change, both in the UK and internationally.

With “Frozen Planet II” it is much harder to gauge behavioural change. It is a bit more of a subjective concept. Are people going to reduce their meat consumption or their air miles? It is a very hard one to put your finger on. As film makers, I think we feel emboldened to tackle environmental storytelling much more overtly, whereas in the past perhaps there were concerns that it would be a bit of a turn-off to the audience—it got a bit heavy.

I think the onus is on us to make it engaging, perhaps by embedding those environmental stories within character-driven stories, so that you really root for an individual and care about their outcome. That is quite a potent way of tackling environmental storytelling. Based on audience feedback and numbers, we feel we have the licence now to be much more overt in our environmental storytelling, and we believe people will come and watch it.

Q196 Clive Lewis: Yes, I can follow that up with a question. If you look at the likely European Union elections, it is highly likely that the European Parliament will move towards becoming more climate-sceptic; it will not be overtly climate-sceptic, but it will move to a more climate-sceptic composition. In the US, we can see a Trump administration, which is increasingly climate-sceptic. Thinking ahead to “Frozen III”; sorry, “Frozen Planet III”—I am thinking of my five-year-old daughter, who I am sure would like “Frozen III”. Do you feel that, in the next 10 years, you can maintain the trajectory, given the political direction of travel across the world? The science is not going to change but politics might, and you are not immune from that.

Mark Brownlow: We are all experiencing extreme weather. One of the hardest challenges is to care about something that is taking place in these faraway, remote worlds like Antarctica. When you consider that the UK or even the US is experiencing the hottest summers, the biggest hurricanes and the greatest flooding or storm events in history, I think it is landing with the audience internationally that there is something afoot here. You could argue that these series are becoming more and more relevant, as people are looking to make sense of it all—particularly through a trusted broadcaster like the BBC—and to find a way through it. I would hope that “Frozen Planet III” would be relevant and a draw to the audience.

Clive Lewis: On this trajectory, you will be blaming capitalism for all the ills of the Antarctic, possibly—I joke now.

Dr White: To clarify, “Frozen Planet III” has not been commissioned.

Q197 Clive Lewis: Oh, I am playing.

Just to move things on slightly, to what extent do you feel that the



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"Frozen Planet" series has influenced tourism to the region? Do you think it has increased it?

Dr White: We do not have access to figures. I think everyone who watches it says, "I wish I could go there." We know it is watched by a really broad swathe of the British population, but we could not translate that into how many would have the funds or the real desire to spend the money to go.

We try to give people the armchair experience. I think that is particularly important when it comes to, say, children and scout groups. People who would not be able to afford to go themselves—perhaps they really cannot because they are a child—can watch it and can get under the skin of a penguin and understand what makes it biologically tick.

We do spin-off things as well, which are accessible to others. For example, we did a collaboration with the Minecraft computer game, where children—or adults, if they wish—could play an educational, free-to-download version of the game. They could play the penguin from "Frozen Planet II" and live the challenges, with information about climate change and so on. So they could experience being a researcher in Antarctica through this computer game.

We try to give viewers an armchair experience, but we would not easily be able to say whether that impacts people actually buying a ticket to go there. We would like to hope that fewer go, because they watch the show and feel they have been.

Chair: Can I thank you both very much? I would not want you to think that our line of questioning proved anything other than massive support for the work you have done. The series have been superb, and their influence on public opinion has been great. You must not think that we were being negative; we were just questioning.

Can I thank you both very much for taking the time and trouble to come this afternoon. Mark Brownlow, creative director for natural history at Plimsoll Productions, and Dr Elizabeth White, executive producer at the BBC Studios Natural History Unit, thank you both very much indeed.