



## Environmental Audit Committee

### Oral evidence: Environmental impact of microplastics, HC 179

Wednesday 29 June 2016

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Written evidence from witnesses:

– [L'Oréal](#)

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Members present: Mary Creagh (Chair), Peter Aldous, Caroline Ansell, Jo Churchill, Zac Goldsmith, Margaret Greenwood, Peter Heaton-Jones, John McNally, Rebecca Pow.

Questions 401 – 511

*Witnesses:* **Dr Laurent Gilbert**, Director for International Development of Advanced Research at L'Oréal, **Ian Malcomber**, Science Director at Unilever, and **Dr Patrick Masscheleyn**, Director R&D Beauty Care and Global Product Stewardship, Procter & Gamble, gave evidence.

**Q401 Chair:** I call the Committee to attention and welcome our guests here today. Would you introduce yourselves, from left to right, for the public record and for the Committee's benefit, please?

**Dr Gilbert:** I am Laurent Gilbert, working at L'Oréal in research where I am a scientist by training. I have been working with L'Oréal for the past 14 years in research. More specifically, today I am in charge of the implementation of our sustainability strategy from a research perspective. The programme is named Sharing Beauty with All—so this strategy for research—and in charge of a lab in terms of research on environmental science.

**Dr Masscheleyn:** Good afternoon. I am Patrick Masscheleyn. I have a PhD in Oceanography and Coastal Sciences from Louisiana State University. Part of my Bachelor and Masters degrees I did in Belgium, where I obtained a degree in Agricultural Chemistry Engineering. I am currently Director of Product Stewardship at Procter & Gamble. I have responsibility globally for the Beauty Care category and the Shave Care category.

**Ian Malcomber:** Ian Malcomber. I work for Unilever in the Safety Environmental Assurance Centre, which is Unilever's global centre for safety and sustainability science. My background is in environmental science and I am educated in ecotoxicology. I have

been working for Unilever for 13 years. My title is Director of Science for Chemical Safety.

**Q402 Chair:** Great. Thank you. A very distinguished panel. We are glad to have you here today. Can I begin by asking you all what took you so long to appear before the Committee? Why the reluctance from your companies to come and talk to us as MPs?

**Ian Malcomber:** I think when you first contacted Unilever we decided that a technical person would be the best person to come along and answer your questions. Unfortunately—

**Q403 Chair:** No, your reply was that you were not going to come and that the cosmetics Europe and the toiletry association would represent you and you sent us a written response.

**Ian Malcomber:** Sure. We decided a technical person. Unfortunately, I was unable to attend but we were reassured that the CTPA and Cosmetics Europe could represent industry views. Certainly when you contacted us again to say that you wanted to speak to us, I am very happy to be here and answer any questions.

**Dr Gilbert:** I would say along the same lines. From my understanding, when we were asked to come we were represented by the CTPA and Cosmetics Europe. That is the reason why I have not attended. It is not easy for me to travel from France to come, which is something that we did and when—

**Chair:** You are travelling from France?

**Dr Gilbert:** Yes. I came specifically from Paris for this meeting. I am sorry if sometimes my accent is not the best.

**Chair:** That is fine. We do have Committee members who travel over six or eight hours to be with us every week.

**Dr Gilbert:** I understand that perfectly but just to say that, when we understood that you were really willing to see us, it was a pleasure for us to come and to respond to your questions and to the technical questions.

**Q404 Chair:** *Dr Masscheleyn, we had to ask three times for Procter & Gamble to come.*

**Dr Masscheleyn:** You make a very valid point and we take note of that. My attendance here today is also to confirm the public commitment we have already made to be out of plastic microbeads by 2017 across our entire portfolio. I really welcome the opportunity today to provide any perspective that the hearing may want to have.

**Q405 Chair:** One of the weaknesses from the presentation of the associations who you presumably pay to represent you—I assume you are all part of this industry association, and I presume there is a membership fee—was the issue around labelling, and the fact that you need an electron microscope to read the labels and a PhD in oceanographic sciences to understand what all the different chemical ingredients mean. One of our Committee

colleagues asked Dr Flower, from the Cosmetic, Toiletry and Perfumery Association—which is the British Association—how we could raise consumer awareness about microbeads, and how unfair it was that consumers who want to do the right thing for the environment did not know. His answer was that the only way to do that by labelling a product that contained microbeads would be, effectively, to post an advert saying, "Do not buy my product". Isn't it a problem for you that this is now an issue, and it is an issue of market share and competitiveness for each of your three companies, and that telling people what is in the product by clearly labelling it is a problem?

**Dr Masscheleyn:** We follow the regulation, and one of the requirements is to label according to the international nomenclature for cosmetic ingredients. Plastic microbeads are described as polyethylene. The products that contain plastic microbeads have clearly labelled on the back "polyethylene".

**Q406 Chair:** We also heard from the Association that sometimes the formulation could change, and so there was a concern that polyethylene could be removed but the barcode would be the same. In terms of consumers who may have an app on their phone, who want to know, the barcode remains the same but the formulation has changed.

**Dr Masscheleyn:** If I can speak for Procter & Gamble. I committed and we are on track to remove all plastic microbeads from our products by the end of this calendar year, so we are just a few months away from total elimination. Putting a sticker on now is an undue burden on us. Maybe the perspective I can add, if it is allowed. I think a sticker is not a symbol. We have a high manufacturing line with high speed. The sticker needs to be added retrospectively to the pack and it is important that it does not obstruct any regulatory requirements for labelling, because the majority of the current label is mandated by regulation. For my own company, which has committed to be out of plastic microbeads and to put in resources to accelerate our plan as much as we can, therefore, I do not see a need to label.

**Q407 Chair:** Your trade association said that empowering consumers to know what they were purchasing would damage sales. That is right, isn't it? He is right.

**Ian Malcomber:** Can I add the Unilever view? We have completed our phase out. We committed to the phase out in 2012. We were one of the first companies to do that. We gave ourselves a two-year deadline to do that and we completed that at the end of 2014. So, as far as we are concerned, the labelling of "containing microplastics" does not really apply to us. I think we are very public on our website of our commitment to get out of microplastic beads and we have succeeded in that.

**Q408 Chair:** You make Dove, am I right?

**Ian Malcomber:** Yes.

**Q409 Chair:** On your Dove website there is an original antiperspirant deodorant stick that contains polyethylene. They are microbeads. Is that right?

**Ian Malcomber:** There is a lot of confusion around the terminology here because there are solid plastic particles, which is the concern around microplastics in the environment. The

issue that has been raised is the contribution to marine debris, which is then causing argued physical effects to organisms in the environment.

**Chair:** Is this correct, first of all?

**Ian Malcomber:** Not in a plastic form. Not a solid particle.

**Chair:** What form is this plastic?

**Ian Malcomber:** It is in a liquid form, which would not have the same concerns as a plastic bead.

**Q410 Chair:** Right. We will come on to some of that. We cannot understand the label, can we, because we need you sitting in front of us to explain the label to us because some polyethylene is bad and some polyethylene is good, is that right?

**Ian Malcomber:** The labelling is covered by law. It is the INCI labels, or the International Nomenclature of Cosmetic Ingredients. That is required by law.

**Q411 Chair:** We understand that but, if one label says polyethylene covers microbeads, and you are saying you are microbead free but you are not polyethylene free, how is the consumer to know what is a microbead and what is a liquid plastic form?

**Ian Malcomber:** As I say, on our website we mention that we are free from microplastic beads and we have been since the end of 2014.

**Q412 Chair:** But you are not polyethylene free, so if I want to look at your labels I will find polyethylene plastic in my consumer care products. This is one of the issues that Fauna & Flora International are concerned about in terms of: what does this ban mean? We are going to come on to that. Dr Gilbert, I would like you to respond please.

**Dr Gilbert:** Coming back to the very beginning of your question regarding market share and those kinds of situation, clearly I am not the person able to answer that. I will come back more on the technical aspects of it. Just to reinforce what has been said by my two colleagues, and the fact that on the labelling of cosmetics we have full ingredient labelling where every—

**Chair:** Yes, we have had that explained. We understand.

**Dr Gilbert:** You understand that. The point is that, along with Unilever and P&G, at L'Oréal we have made a commitment to phase out polyethylene microbeads by the end of 2017. All the reformulation will be completed by the end of this year, which means that we are ahead of schedule compared to our commitment. By the middle of next year no more productions will contain those kinds of microbeads. Therefore, if we look at the products on the market, it means that very soon no product with microbeads will be on the market. From that perspective, labelling—and I won't come back to what was explained by my colleagues regarding the complexity of labelling and the meaning of labelling—is something that is probably not needed, having regard to the fact that, by the end of this year, all the work of reformulation on our side will be done.



**Q413 Chair:** Will polyethylene still be present in that Dove deodorant stick, going forward?

**Ian Malcomber:** polyethylene in its liquid form; in its soluble form.

**Q414 Chair:** So, when Fauna & Flora International want a comprehensive microplastic phase out with no lower size limit for the particle being phased out, will you be in compliance with that or not?

**Ian Malcomber:** It is important to go back to the original issue that has been raised here. The issue around microplastics is all about its contribution to marine debris and marine litter.

**Zac Goldsmith:** It is not just debris it is pollution.

**Ian Malcomber:** Sure. But the concerns that have been raised, particularly around 2010, 2012, was the potential for those plastic particles to cause physical effects on organisms in the environment. That is the main concern. When you have water soluble polymers that will be a lot more degradable and will not have the same physical effects, the issue is not the same.

**Q415 Chair:** Do you know because you are talking about a biodegradable plastic but the answer is: we don't know what the effect of biodegradable plastics are, do we?

**Ian Malcomber:** As I say, the polyethylene would not be in plastic form. Plastic is a particular definition around the OECD. It is available in a solid form, in soluble solid form, that is what has been argued is causing the potential physical effects on organisms in the environment.

**Q416 Zac Goldsmith:** Can I get some clarity on that? I am confused by that and I think you are as well. It has the same properties as plastic but it is in liquid form.

**Ian Malcomber:** No, it does not have the same—

**Zac Goldsmith:** What are the properties? If you were to break down your—

**Ian Malcomber:** It would be a liquid. It would not be a solid.

**Zac Goldsmith:** A liquid what?

**Ian Malcomber:** Well, it is not plastic. It would be a polymer. All plastics are polymers but not all polymers are plastic.

**Q417 Zac Goldsmith:** When it breaks down then what does it become?

**Ian Malcomber:** It will break down into CO<sub>2</sub> and water, the same as anything else that is based on carbon.

**Chair:** We will seek further advice on that. You see, this is why we wanted you here.

**Q418 John McNally:** Mr Malcomber, I believe Unilever committed to phasing out your plastic scrub beads from personal care products in 2013. You achieved that in 2014-15.

*Ian Malcomber:* Yes.

**Q419 John McNally:** You also claim you have completed the removal of microplastics from your products, and I think the Chair mentioned Dove and Sure deodorants. However, we heard from Fauna & Flora International that these products are still available for purpose, and they contain the polyethylene we have just been speaking about. I don't know if you have tried to explain that to the Committee or not but I am still a bit confused on that. Could you go over that again for us please—these particular products that I have mentioned?

*Ian Malcomber:* The original concerns around microplastics in the environment, I think from my perspective really started to emerge around the 1990s. There was a real focus, first of all, on marine debris, marine littering based on macro plastics, so large pieces of plastic that are in the environment. From our perspective, around 2010 we started seeing a greater focus on smaller pieces of plastic in the environment that were potentially causing an impact. The studies that were done at the time were laboratory-based studies, using high concentrations of particulate plastics in the lab causing potential physical effects on organisms. The concerns that were raised then were: these effects that we are seeing in the lab at these high dose levels, are they going to be replicated in the environment? There was then a lot more focus on microplastics particularly from the cosmetics industry, the microplastic exfoliating beads.

At the time I think it was recognised—and I think you have heard in this Committee as well—that the contributions of the cosmetics industry was very low compared to the other sources of microplastics in the environment. However, cosmetics companies have taken the responsible step of removing those microplastics from their products as a responsible thing to do.

**Q420 John McNally:** I understand that your commitment to remove the microbeads was made at a time—as you have just said—when knowledge was not as good as it is now; substantially lower than it is now. Are you confident the commitment is specific enough, in the light of the new evidence, and do the voluntary commitments made by your company, in particular, need to be updated or reviewed? I am aware that a lot of biodegradable plastics are formulated so that they need to be broken down in an industrial composter at a temperature of something like 70 degrees centigrade. If these products get into the environment I don't know of many marine temperatures that get to that. That is certainly another slant on it, and that causes us great concern. Can you reassure us that this has now been phased out completely in any shape or form or any new formulation that might be planned?

*Ian Malcomber:* If I can just answer for Unilever.

**John McNally:** I hope you can understand me.

*Ian Malcomber:* Sure. When we decided to phase out in 2012 we had 400 cosmetic products on the market in the UK but only seven contained microplastic beads. We reformulated five of those products. We delisted two of those products because they were no longer commercially viable. Consumers did not want them. So we reformulated five. We reformulated those into silica, which is effectively the same as quartz, a mineral that you would find in the environment.



**John McNally:** Quartz?

**Ian Malcomber:** It is a major component of sand. The other alternatives we moved into was ground walnut shells and cornmeal in our products. The biodegradable plastics: Unilever has not taken that decision to replace microplastic beads with biodegradable plastic beads. It has moved into silica, walnut shell and cornmeal.

**Q421 Rebecca Pow:** Out of interest, can we just ask what those five products were? Were they all facial scrubs or—

**Ian Malcomber:** They were face and body scrubs.

**Q422 Peter Aldous:** I want to explore more to make sure I am absolutely clear about the commitments that your organisations made and where we are up to with the meeting of those targets. If I can start at the far end from me. Dr Gilbert, what was the commitment made by L'Oréal regarding the removal of microbeads? What is the target and how close are you to meeting it?

**Dr Gilbert:** Our commitment was to eliminate microbeads by 2017 in our formulas, which are used as exfoliating agents in the corresponding products. Today we have reformulated up to 80% of the formulae that were containing those microbeads. As I said earlier, we will have completed our reformulation by the end of this year, meaning that every product will be reformulated. That means by mid-2017, at the latest, we won't have any more production of those kinds of formula containing microbeads. If we are conservative we can say that it will be a little bit longer but if we are realistic the product will not be on the shelves anymore by the end of 2017. That means we are absolutely on the target that we established and that we have committed to.

**Q423 Peter Aldous:** How are you achieving that? As we have heard from Dr Malcomber, are you replacing microbeads with alternatives? Are you removing products from the market altogether? How are you doing what you are doing?

**Dr Gilbert:** Most of it is by reformulation. We have eliminated some references as explained by Ian Malcomber, but most of it is by reformulation. The types of substitutes with exfoliation properties for these types of product could be silica—that is one alternative—and general minerals, clays and this type of product would be another alternative, as well as kernel powders from various plants. I see that the Committee has mentioned apricot kernels, which could be one solution.

Let me elaborate a little bit on that because it is not as simple as taking one product to substitute with another one. When you are looking at the cosmetics formulations this is a complex association of ingredients that could lead to some physical chemical properties, which you look at. The density of the particles you are using is quite important for that as well as their exfoliating properties, depending on what you are looking at. That means that for each type of product and each type of substitute you are looking at, you have to rebalance the formula, to reassess the stability of the formula and things like that, so it is not something that can be done just like that so that you can replace with kernel powders or things like that.

**Q424 Peter Aldous:** *Dr Masscheleyn, I think P&G has a very similar timescale to Dr Gilbert?*

**Dr Masscheleyn:** Exactly, by 2017. If I look at the UK market we have two categories that fall under that commitment, toothpaste and facial cleansers. P&G does not market any Toothpaste product with plastic microbeads in the UK so we have done that. With facial cleansers we still have four products on the market today and that production will stop in the fall.

**Q425 Peter Aldous:** Can you name the products specifically?

**Dr Masscheleyn:** It is our facial cleansers and we have one major brand, which is Olay. Olay is the brand that P&G markets. We have four facial cleansers in that category that contain microbeads. Again, our commitment is to remove microbeads also from that category by the end of 2017. We will stop production this fall, 2016, so by the end of the calendar year it will no longer be on the shelves.

**Q426 Peter Aldous:** Are you planning to label those Olay products in such a way that the consumer knows that they do still contain microbeads?

**Dr Masscheleyn:** We had an extensive programme to look at the right replacement. I can echo what my colleague says. We also need to look at consumer acceptance, so first and foremost the skin because facial skin is quite sensitive. We have opted for hydrated silica.

**Q427 Peter Aldous:** Yes. Excuse me I don't detect an answer to the question. Are you planning to label the Olay products that still contain microbeads to say that they still contain microbeads?

**Dr Masscheleyn:** They will be labelled with hydrated silica, which is the ingredient that we will have in place of the polyethylene.

**Q428 Peter Aldous:** Yes. But until you have that new ingredient they will contain microbeads.

**Dr Masscheleyn:** That is correct.

**Peter Aldous:** Will you be labelling them in the interim period to make clear that they still contain microbeads?

**Dr Masscheleyn:** They are labelled currently with polyethylene, which is the common name, the INKI name for microbeads.

**Q429 Peter Aldous:** Mr Malcomber, Unilever, you have already phased them out?

**Ian Malcomber:** Yes. We made the decision around 2012, based on the emerging concerns that were being published in the scientific literature. We always listen to our consumers and other stakeholders and they were saying that they would prefer that we did not use these, so we took the decision at the end of 2012 to move out and we completed that within our two-year deadline of the end of 2014.



**Q430 Peter Aldous:** Let me ask this carefully: there is no semantics going on here. When you say that you have phased out microbeads you really have phased out microbeads? You haven't redefined a microbead as something else?

**Ian Malcomber:** No.

**Q431 Peter Aldous:** Define for me a microbead.

**Ian Malcomber:** A microbead would be a solid insoluble plastic particle that would be there for exfoliating and cleansing. That type of thing.

**Q432 Peter Aldous:** They have all gone from your products?

**Ian Malcomber:** They have all gone from our products. We only had them—

**Q433 Chair:** But you still have polyethylene in your products. I think that is what is confusing. If you are looking at the back of a product and you are looking at your Olay scrub and it is a polyethylene, and that is a microbead polyethylene, and then, looking at your Dove deodorant and that is polyethylene but it is not a microbead, you know we don't all have PhDs in Oceanography and chemical plastics do we? How is the consumer meant to know the difference between? Are you not just doing the same risk with the environment with your polyethylene in liquid form in a solid stick? Are we going to be back here in five years with you saying, "Oh, we didn't know what the effects on the marine environment of that were", or are you saying it is not entering the marine environment because it gets sweated off?

**Ian Malcomber:** It will get degraded before it gets in there. I think the—

**Q434 Chair:** Do you know that or is that just a hypothesis?

**Ian Malcomber:** There will be degradation but there will be places that are close to the marine environment, so I cannot say it will not get into the marine environment. What I would say is that the plastic particles and the issue that has emerged—and I think Professor Thompson talked about the science still being in its infancy—around a particular concern around the physical effects. Unilever and other companies will do robust safety assessments that are based on chemical toxicity, and that is quite different from physical toxicity.

**Q435 Chair:** We have had emerging science now talking about chemical effects as well, in terms of the plastics accumulating, toxicities and the potential for the bioaccumulations in humans. That is also what our Committee has covered.

Can I go back to Dr Gilbert? You talked about 80% of your lines, so 20% of your lines still contain microbeads. Can you break that down by sales volume, please?

**Dr Gilbert:** I do not have the answer to that question. If you want a specific answer to that question, I think that to protect the confidentiality of the information we can respond in writing to you.

**Q436 Chair:** I would be grateful. But if you respond in writing you have to be aware that anything that we receive could be published. If your product that you sell 1 million units



of a week is the one with microbeads in then I think we deserve to know, which is why you are here.

**Dr Gilbert:** Okay. Forgive me maybe I misunderstood your question, because I do not have the real figures. The way we did it, in terms of progressing the substitution, we started with the larger volume sites. That means those ones have already been done, because the way to do it is clearly to start with the big volumes and to go down to the low volumes. The big volumes are already done, so what remains are the lower volumes, which by the way are important in the product line but which are the lowest volumes on the market.

**Q437 Chair:** Are they also the highest end and most expensive ones?

**Dr Gilbert:** It depends because at L'Oréal we have a large range of brands, which are for the mass market or more premium brands. In the product lines for body exfoliation or face exfoliation, you can have two or three different products depending on the level of exfoliation that you want, which depends on many aspects. The highest volumes could be different from one category to another one. So, obviously, the mass market has higher volumes than the more premium brands. That does not mean that we have not removed microbeads from some of our premium brands as well. You are aware that our brand Biotherm completed the elimination by 2015. That means that some brands have already done it and communicated that.

**Q438 Chair:** Does anyone have Vichy?

**Dr Gilbert:** Vichy is a specific brand that is sold but I cannot answer specifically on Vichy.

**Q439 Chair:** Is it your brand, is it?

**Dr Gilbert:** It is one of our brands but I won't be able to—

**Chair:** That contains microplastics because I have just put one of their facial scrubs in the bin in my house.

**Dr Gilbert:** I will respond to that.

**Q440 Chair:** That is a premium brand, isn't it?

**Dr Gilbert:** Yes, that is one of our brands.

**Chair:** Pay more and get microplastics.

**Dr Gilbert:** I will let you know specifically on this one because I do not have the answer.

**Chair:** I am telling you because I binned it. I bought it and I have binned it, so it is in there.

**Dr Gilbert:** Maybe it is a product that has been reformulated and maybe the one you bought was produced before the reformulation was completed.

**Chair:** I would be grateful if you could write to me about it.

**Dr Gilbert:** Yes. I will let you know about your Vichy.



**Q441 Rebecca Pow:** On a similar point, Dr *Masscheleyn*, you mentioned there were only four products that contained microbeads and you are working on phasing them out. One of them was Olay. What proportion of the market did that have because I believe that is very popular?

*Dr Masscheleyn:* Olay is a big brand.

**Rebecca Pow:** Because it was four products it does not mean to say it wasn't much. Could you just expand on that?

*Dr Masscheleyn:* I do not have the specific data. Facial cleansers are a part of the market. We have hydration, sun screen protection, aging and a small segment of our category is facial cleansers. The four products in the UK that we have not yet removed are in the facial cleansers. However, as of October we will start producing—

**Q442 Rebecca Pow:** How many products would there be? It would be quite nice to get an impression about how many things we have had on the market. Is it a few thousand a year or is it millions?

*Dr Masscheleyn:* I am hesitant to give you an answer because I would be speculating, but I can come back certainly on what the exact number is.

**Chair:** All of this is market information that is available on Mintel.

*Dr Masscheleyn:* Yes, exactly, but I do not want to give you the wrong number. I do not exactly know how—

**Rebecca Pow:** It is in context really.

**Chair:** We are interested in the volumes. I think that is the thrust of the Committee in terms of amounts that are still sitting on the shelves, in customers' houses, and how many are going to be sold given that you are not phasing out until the fall.

*Dr Masscheleyn:* I will continue my reply. As of October the volume will be zero. As of October, the fall, we will no longer manufacture—

**Q443 Jo Churchill:** The volume that is manufactured may be zero but that doesn't account for the stuff within the market?

*Dr Masscheleyn:* The product that is on the shelf is of course on the shelf.

**Chair:** Yes. So you will carry on selling them and distributing the stuff that you have already made?

*Dr Masscheleyn:* Which is currently in the distribution channels but we will not make any new product as of October.

**Chair:** Thank you.

**Q444 Rebecca Pow:** In the evidence that you have submitted you suggest that it was consumer pressure that pushed you to do something about the microbeads, so I would like your views, one by one please. Do you believe there is an environmental impact?

**Ian Malcomber:** Certainly in the science there were emerging concerns around 2010 and 2012. The science talks about the effects they had seen in the laboratory. I think Professor Thompson mentioned this himself that the science around the actual impact on the environment is in its infancy. Around microplastics—

**Q445 Rebecca Pow:** It is interesting, though, because you are a specialist in ecotoxicology and environmental risk assessment, so one wonders why, when you are involved in manufacturing products, you don't think about where they are going to end up and what the effects might be. I am sure you do. Did none of this occur to you?

**Ian Malcomber:** Yes. As I mentioned before, the safety assessments are around the chemical toxicity that could potentially occur with ingredients in products. The physical effects were certainly something that wasn't expected, particularly the low contributions that were put into the environment. I think our industry representatives talked about the industry contribution to a wider issue of microplastic to being around 1% or even less than 1% of the total contribution. Based on that low contribution, I think based on the science or the studies weren't exactly telling us that there were physical effects. Those were the science that was coming to the fore around 2010, 2012. At the same time our consumers became concerned around this issue. As a consequence, we took that proactive precautionary action to phase them out of our products.

**Dr Masscheleyn:** NGOs presented us with their preference for having microbead free products. This happened around 2013, first and foremost. We of course reassured ourselves about the safety of our products. If you look at human health, polyethylene is an approved food additive. The FDA approves polyethylene in foods like chewing gum and others. So on human health we are reassured because it is an approved food additive.

Preliminary experiments at the time showed—and I can build on what my colleague from Unilever is saying—that from a toxicity effect it is an inert material. It does not provide any inherent toxicity itself. That is again confirmed by an FDA statement that it is approved as a food additive. From a removability point of view, in the sewage treatment plants, the physical properties of the particle can lead to an assumption that it can be removed similarly to other particles. So we were assured first and foremost about the safety of our products.

**Q446 Rebecca Pow:** But a lot of it cannot be removed at all. We have heard evidence at this Committee that actually these are not removed. Are you not aware of that?

**Dr Masscheleyn:** There is conflicting evidence in the literature but, nevertheless, we listened to the preference of the stakeholders, which in this case were the NGOs and we formulated our policy to remove microbeads from all of our products by 2017. We have followed that course and, as I communicated earlier, we have committed and we stand by that commitment to remove microbeads from all of our products by 2017.

**Q447 Rebecca Pow:** Dr Gilbert, it seems that all the companies are driven by consumer preference rather than initially by the environmental impact. Would that be true of L'Oréal as well?

**Dr Gilbert:** I will not deny that consumer preference is clearly something that is important. However, the reason we made the decision was not because of consumer preference. The reason we made the decision was based on some scientific work, which—even though we

can debate about some of the evidence and some aspects of it—was bringing some new data, some new information. Based on that, if we are looking at our commitment regarding the environmental impact and improving the environmental impact of our product, it was a decision to make looking at the precautionary principle and those new elements that were developed by the scientific community. So the environmental aspect of it was clearly important in our decision on the commitment that we have, and that we are reinforcing, to make sure that we improve the environmental profile of our product.

**Q448 Rebecca Pow:** One might suggest that you have been a bit slow in that, given that your specialism is environmental research and sustainable development—and you are a massive company—and 20% of your products still contain the microbeads and you did not look at it until the consumers pushed you to it.

**Dr Gilbert:** In fact, we can say that we have been pretty quick and we made the decision in 2013. As I explained earlier, to substitute is not to substitute one by one. It is not a one by one substitution, so that is quite a complex process. However, we say that when you start to work on it, it is getting quicker and quicker because you are learning from the first experience. But you have to redo some research. So, just to share with you that the standard time to develop a product is between 12 to 18 months, which is the standard timeframe when you have to redo everything regarding the stability of the product, regarding the microbiology protection of the product, compatibility with the packaging and so on. Those are all the aspects that have to be taken into consideration to do it, so it has been pretty quick in terms of reformulation.

**Q449 Rebecca Pow:** Can I clarify that you are phasing out not just the polyethylene but all the microbeads? There are six plastics, aren't there?

**Dr Gilbert:** All the microbeads. It was mainly polyethylene that we had. That was the very large majority because almost none of the other ones—

**Q450 Rebecca Pow:** The others are saying all six?

**Ian Malcomber:** Yes, the microplastic beads, yes.

**Q451 Rebecca Pow:** Just to finish, one would assume that you do all talk to each other with your scientific knowledge, or are you rivals and you won't share? Would it speed you up if you all shared data and knowledge, because obviously you are way ahead at Unilever?

**Ian Malcomber:** There are things that clearly we cannot share because of commercial confidentiality, but we do work through the trade association around the concerns that would be emerging. I guess it would be very difficult for us to comment on a P&G or a L'Oréal formulation, because each formulation needs to be taken on its own merits as to how they reformulate. As Dr Gilbert talked about, the reformulation process is quite an extensive process.

I think one of the key areas that I would pull out is that there are lots of very important steps but the stability testing step is very important, where you need to make sure that the product that you put on the shelf is stable. The exfoliating particle in our case is mostly silica. That particle actually stays suspended within the product. We would not want



consumers to buy products where all the exfoliating active has then dropped to the bottom of the product. That is something that takes time and there is no way to accelerate that. That is something that is a significant chunk of that reformulation time.

**Q452 Zac Goldsmith:** Dr Gilbert, we were surprised in this inquiry—I was amazed actually—to discover that some of your environmentally friendly brands, like the Body Shop, included microbeads until very recently. Given that the Body Shop is known more than anything else for its environmental credentials, I am just interested to know how and why L'Oréal ever thought it was appropriate to include an environmental pollutant in Body Shop products. What was the thought process behind that?

*Dr Gilbert:* You have probably listened to that in a previous discussion. When this type of microbead became popular at the very beginning of the 1990s, there were many reasons for those ingredients to be used when we were looking at the ease and versatility of formulations and so on. At that time, as has already been said, the marine pollution with plastics and so on was already known but questions regarding microbeads were not there, even though there was some discussion regarding retention in waste water treatment stations. We can debate that because, depending on the waste water treatment station, microbeads could be retained to a large extent. When we are looking at the properties of those ingredients, and when we are studying them from an environmental standpoint, we are looking at three parameters that are the three parameters that are classically used. I would say those parameters were not bad regarding those ingredients, specifically, when you are looking at the fact that some data was available, and the retention in waste water stations. When it was introduced in the Body Shop I am sure that it was done—

**Q453 Zac Goldsmith:** Were microbeads used in Body Shop products before L'Oréal bought the company?

*Dr Gilbert:* It is highly probable. I do not have any certitude. You know that L'Oréal bought the Body Shop in 2006. What exactly was the status of the products in 2006? Honestly, we should dig a little bit to find out and respond properly to your question.

**Q454 Zac Goldsmith:** You would accept that adding unnecessary plastic particles and pollution to products has never been considered okay environmentally? The standard is applied to L'Oréal as a company, but it is hard imagine that would ever be deemed okay for a company with the kind of reputation that the Body Shop had.

*Dr Gilbert:* Your point makes the assumption that in fact there was some production. That is not the way we look at it. The way that we—

**Q455 Zac Goldsmith:** No, but it is plastic beads. No one has ever thought it was okay to put plastic in the ocean.

*Dr Gilbert:* I understand what you are saying, but the point is we were looking at the environmental profile, and if you start from the fact that it should be retained by waste water treatment stations and it should not go into the environment. This is where today, if in fact it is not retained—and today there is still some work on that, and there is some work being done showing some new scientific elements—it is something to be considered.

**Q456 Zac Goldsmith:** As a point of clarity, can you tell me at what point—if you could give me a date or a month or a year—did the company officially accept that microbeads are an environmental problem?

**Dr Gilbert:** We started to look at the work that had been done in 2010 and beyond, which has been published, regarding what could be the potential effect of microplastic on the environment; microplastic coming from various sources and there are many sources of microplastic in the environment. We were following that work very carefully and in 2012-13, when we came to the point where we considered that, even though there is some debate on the scientific work and even though there are some questions, we were willing to apply the precautionary principle to go and remove and to get out of microbeads. That is the background. That is the standard way we work, so we are following scientific research and in some cases we are collaborating and doing some research on our own. Where there are enough elements—even though there is no complete scientific evidence but enough elements to make a decision—we are making the decision.

**Q457 Zac Goldsmith:** I know we have covered this partially but I want to press you again. You have a very wide product range and it would be useful to know which products are included in your commitments to remove microbeads and which, if any, are exempted. Could you provide clarity on that?

**Dr Gilbert:** All L'Oréal products that contain microbeads.

**Zac Goldsmith:** All products?

**Dr Gilbert:** All products, every one; all the products that contain microbeads.

**Zac Goldsmith:** No exemptions at all?

**Dr Gilbert:** No exemptions.

**Q458 Zac Goldsmith:** That is also true with Unilever?

**Dr Masscheleyn:** Yes.

**Zac Goldsmith:** And Procter & Gamble?

**Ian Malcomber:** Every product in every market in which we operate.

**Q459 Zac Goldsmith:** It is the case that after you have met your commitments 2017 or before, from that point consumers will not need to read the labels in order to be confident that they are not adding plastic to the marine environment or to their bodies?

**Dr Masscheleyn:** On every basis.

**Q460 Zac Goldsmith:** I just have one further question. We have had a lot of evidence from Fauna & Flora. They tell us that despite voluntary ingredients—and they have randomly tested very large numbers of products—they have found microplastic ingredients in products from 11 of the top 20 global beauty companies. This was one of the first bits of evidence we heard, and my question to you is: are there inconsistencies in the way the NGOs

and the companies view what types of microbeads are or should be phased out? Are you on the same page as the NGOs in terms of the understanding of the problem and the solution?

**Dr Gilbert:** That is quite a difficult question to answer because we should discuss with all the NGOs on this subject.

**Zac Goldsmith:** This was Fauna & Flora—

**Dr Gilbert:** I am not aware that we have talked to them. We would welcome a discussion with them to make sure that we are on the same page.

**Q461 Zac Goldsmith:** The commitment that they have laid down, I will read you what their commitment is. They say that, “In order for a commitment on microbeads to fully prevent products becoming sources of microplastic pollution it must involve the phase out of all solid plastic ingredients from all products that go down the drain, in all markets those products are sold to, in all future formulations of those products to all brands within the company’s portfolio”. Are you happy that you are able to meet all those commitments?

**Dr Gilbert:** I read through this proposal. We are happy, and I speak for L’Oréal. We are happy with everything except one point that I would like to mention, which is the biodegradable plastic. This also gives me the opportunity to come back on biodegradability that has been mentioned. Today in these kinds of solid plastics there is no biodegradable plastic, to make it very, very clear. We don’t know what the future will be. If we are taking the definition of biodegradability, which is the one that is used at the European level, which is according to OECD tests, which is easily biodegradable meaning that it is fully and entirely degraded by microorganisms, okay, this is something that we could debate. Is it something that is acceptable—

**Zac Goldsmith:** I would love to ask you about this but I have a feeling someone else is going to be asking about biodegradable alternatives, so I will stop you there.

**Q462 Chair:** Are you saying there are no other solid plastics in your products going forward under any other Latin names?

**Dr Masscheleyn:** Why Latin names?

**Chair:** Scientific names. It is all in Latin, isn’t it? I don’t know if Latin invented polyethylene. We have focused on microbeads. Are there any other form of solid plastics in your products?

**Ian Malcomber:** There is no form of solid plastics that is contributing to the marine littering issue, so, no, I don’t believe so.

**Chair:** No other forms of solid plastic?

**Dr Masscheleyn:** No solid plastic.

**Q463 Chair:** We don’t know the range of its contribution. You mentioned 1%. Defra has told us it could be up to 4% and the number from the scientist is 680 tonnes a year into the UK, 4,500 tonnes across the EU, so that is a not inconsiderable problem given that it is





completely under our control in the way that perhaps plastic bags or things from ships are not under our control. Would you agree?

*Dr Masscheleyn:* Yes.

**Chair:** Right. We will move along.

**Q464 Margaret Greenwood:** If the UK were to effect a unilateral ban on microbeads, which was not replicated in Europe, would this affect the availability of your product range in the UK?

*Dr Masscheleyn:* My understanding is that, if the UK put a ban forward, it would be on the manufacturing of products in the UK. Is that a correct understanding?

**Q465 Margaret Greenwood:** Actually I haven't asked a question as to where they are manufactured. It is whether or not your product range would still be available in the UK?

*Dr Masscheleyn:* Our product range would still be available in the UK but without microplastics.

**Margaret Greenwood:** You would be able to manage that?

*Dr Masscheleyn:* Yes, without microplastics, correct.

*Dr Gilbert:* The answer is very simple. As we are moving out and it will be done, our products will not contain them any more.

**Q466 Margaret Greenwood:** Given the cross-border nature of marine pollution, would you view national or international action as the most effective way to address issues around microbeads, just generally based on your knowledge of what you have had to do yourselves?

*Dr Gilbert:* As I am a scientist I am probably not the right person to answer this question on behalf of L'Oréal. You have heard about the cosmetic industry's position last time. Honestly, I am not the right person to answer this question.

*Dr Masscheleyn:* Could you please repeat the question?

**Q467 Margaret Greenwood:** Given that marine pollution is an issue cross-border in nature, do you view national or international action as the most effective way to address issues such as this?

*Dr Masscheleyn:* From our point of view, we will be phasing out our microbeads globally—internationally.

*Ian Malcomber:* The same situation. We have phased out globally, in every market we operate in.

**Q468 Chair:** A ban obviously has the advantage of ensuring consistency of approach and we heard from the Cosmetic, Toiletry and Fragrance Association that companies could be undercut by rivals who do not take action, or from imports from outside the EU that don't

conform to a voluntary ban. Are you individually and collectively pressing the European Union for a microbead ban and what have you done to ensure that that happens? Has there been any representation or lobbying at the EU level from Unilever?

**Ian Malcomber:** Not from Unilever. We are in favour of industry taking responsibility, so we are in favour of an industry-led action through our trade association. We were one of the first to get out and I am quite pleased that our industry colleagues are following on that. I think we would hope that a legislative ban would not be required but, ultimately, I think—

**Chair:** Why not if you are doing it anyway?

**Ian Malcomber:** I would hope that the industry would take responsibility and would complete a phase out. Ultimately, a legislative ban is obviously up to the UK Government if you wanted to do that.

**Chair:** Or the EU Government.

**Ian Malcomber:** Yes, EU.

**Chair:** Or the EU, not that it has a Government. Yes, okay, and Dr Masscheleyn?

**Dr Masscheleyn:** We are certainly not opposing a ban. It will not impact us. We will be free of microbeads production by 2017. If there is a ban to come, as a global company we would prefer a global ban.

**Dr Gilbert:** I would do the same also. As I say, I am probably not the most qualified. You know the position of the cosmetics industry, which has been presented. We are taking global action at L'Oréal. Our commitment is global, so clearly it is important that everything that is going on is global.

**Q469 Jo Churchill:** I was interested, Dr Gilbert, in your answer to an earlier question about the trust element around one of your brands, Body Shop, in particular. During the 1980s they used *adzuki beans, rice, bromelain—the enzyme contained within pineapples—natural sources that would be more than sufficient to use within your products, rather than using something that isn't degradable like plastics. Looking at the evidence, the two reasons, it seems to me, you would have opted for it are shelf life and the fact that it is cheap. I suppose the question is: we have heard that you have been using microbeads more commonly; synthetic microbeads. Manufacturers used to use these natural abrasive materials. You referred to apricot kernels and so on, but there are numerous others. Why did you move to plastic in the first place?*

**Dr Gilbert:** In fact, the reason is the versatility of this kind of product in terms of formulation. Let me explain a little bit what it means. Those kinds of microbeads have various densities. They can have different hardness, giving some different kind of exfoliation. They are much more producible in terms of particulate size and exfoliation properties than the kernel powders that we used before, so that is the reason why and availability was also something that was important. That is the reason why they became popular starting from the 1990s. It was really about their physical chemical properties, their versatility and the fact that you can formulate them in many different textured products without any difficulty. That is much more complex with kernel products.

**Q470 Jo Churchill:** So the trust issue, which was alluded to earlier, that if something is bought being environmentally friendly as part of your purchase, which is why one might seek to choose something that has that fundamental underpinning—like a Body Shop product—that actually was irrelevant because, as you have said in the answer to that question, the principle: if you don't know the harm that you are doing by using something you can still put it in. You are selling environmentally acceptable products with no known environmentally harmful issues in it, surely, by taking the thought process one step further?

**Dr Gilbert:** That was not what I said. Maybe I have not expressed it in the correct way, but what I said is that, when you are applying the principle of environmental evaluation to those particles—and just stepping back to the 1990s—the environmental evaluation was favourable. That is what I am saying. Probably doing the same evaluation today would not arrive at the same result, but it was the case in the 1990s. I am sure that, when the scientist who made the switch from the traditional kernel to those products, they clearly looked at the environmental aspect of it, the humanness aspect of it as every aspect of it, and concluded that it was okay to do it.

**Q471 Jo Churchill:** So, as you have said, they clearly looked at the environmental impact. Could you tell me what particular evaluations all three of your firms took out to ensure that that was the case?

**Dr Gilbert:** What we are doing, in terms of environmental evaluation for every ingredient that we are using, is looking at three parameters. Those are the three standard parameters that are looked at in terms of environmental evaluation, the first one being biodegradability—the ability of the substance to be degraded and to totally degrade in the environment. The second parameter is the bioaccumulation potential: does the ingredient have the potential to accumulate along the food chain? The third one is the toxicity for the environment, and for either terrestrial or aquatic species. Those three parameters are evaluated for each of the ingredients we are using in our products.

**Q472 Jo Churchill:** You are telling me that something that now appears to be questionable as far as its biodegradability, and in particular its bioaccumulation, you found acceptable in your evaluation at the time?

**Dr Gilbert:** When you are looking at those three parameters, clearly those products were not biodegradable, were not bioaccumulative and not toxic for the environment. They did not pose any question of toxicity for the environment at the time when we did the evaluation. In turn, when we are looking globally, the scientific agreement at that time was clearly that this was something that was not a problem.

**Ian Malcomber:** I have a very similar answer. It goes back to the difference between a chemical toxicity and a physical effect. The studies that were coming around 2010 were around the potential for organisms to eat these particles, from whatever source, whether it be from cosmetic products or from broken down macro plastics or the different sorts, the organisms swallowing those and then compromising themselves in some way by perhaps not being able to feed properly. Those are quite unusual effects—not chemical toxicity but physical effects. Certainly that was not anticipated in the 1990s when the industry as a whole started using them.

Again, I will come back to the contribution. I think the contribution was considered to be quite low. Rightly or wrongly that was the belief at that time. But I think since that time, as the science has emerged, high dose studies where the level of particles you would have in the laboratory would be much, much higher than what you would actually get in the environment, were seeing these effects. As a consequence of that, concerns were raised, and companies like us and our colleagues took the precautionary action to phase out.

Microplastic in the marine environment is a big issue. It is something that as a society we need to address, and I am pleased that Unilever and other companies are taking their responsibility in avoiding their use of these materials.

**Q473 Jo Churchill:** The final question, and if we let Patrick go first with that one and then if you want to add to it: what do you have in place now to ensure that this new age of products that we are not going to see with microplastics in it, that you have done full environmental impact studies on those products—and I have not heard in any of this that you are doing something that I would prefer; I quite like the fact that apricot kernels aren't all regular and completely the same and things like that—what are you doing to ensure that we are not just sat here in 15 years' time with the same problem but with a different chemical compound list on the back of your products?

**Dr Masscheleyn:** The replacement we identified is hydrated silica. The chemical identity of sand is silica. I could call it purified sand. I have to be careful because it is sand that is cleaned up to provide the right properties for face cleaning because we all have very sensitive skin. So sand is removed at the sewage treatment plant. Sand is inert and if something would enter the environment you would add more sand to the ocean or to the river bottoms. It is really putting back a natural material, a mineral material into the environment. We have assessed this in a similar way.

The other aspect is human health. Hydrated silica again is an approved food additive as an anti-caking agent. We assessed environmental properties, toxicity, it is inert, and removability and at the same time the potential indirect effect on humans. That relates back to it being an approved food additive. The assessments, based on the science and the knowledge today, are very tough.

**Q474 Jo Churchill:** Looking at this, it has been widely used in food because that would infer that it would have entered the water streams and so on and then we would know whether there is a direct effect as we have seen with microbeads with the change?

**Dr Masscheleyn:** I believe that silica has been used for quite a while, let's say, in toothpaste. There is ample evidence over the years of a history of safe use, both for human health and environment.

**Q475 Chair:** Have you spoken to waste water treatment companies about the biodegradability of hydrated silica? Clearly the microbeads were not biodegradable and yet they were still included because they were cheap and uniform. Dr Gilbert said that there was an assumption that the microbeads would be removed from waste water treatment plants, and the evidence we have had from the water companies is that very few are removed. Only in the best, newest facilities are they removed and then you are left with the problem of plastic sludge which then gets spread on fields, which then enters the environment. Isn't the issue



that, in terms of formulating these products, you are concerned about the consumer, you are concerned with following the law but you are not thinking of the whole lifecycle of the product, where it goes, out the end? Wasn't it foreseeable that there would be an issue with a non-biodegradable product going down into the water system, and isn't that the same problem with Pampers and baby wipes and toilet wipes that are macro plastics that have films of plastics on them? That also causes problems for water treatment companies. You make it and then it is someone else's problem once it is in the consumer's home. Can I ask Dr Masscheleyn to answer the question around the silica? Have you spoken to any water companies about the hydrated silica or are you just saying, "We think that is the case?"

**Dr Masscheleyn:** There is a general acceptance and knowledge.

**Chair:** Have you spoken to a single water company?

**Dr Masscheleyn:** Personally, we have not addressed the water companies.

**Q476 Chair:** Have any of the companies spoken to a water company about it?

**Ian Malcomber:** No, there is no known issue effectively around sand.

**Q477 Chair:** But if it is sand that is accumulating in Victorian sewers that are dealing with floodwater then that is a problem.

**Ian Malcomber:** These will be very low levels indeed. I think—

**Q478 Chair:** There are 680 tonnes a year of plastics which are now being replaced with 680 tonnes of hydrated silica. We know what the levels are: 680 tonnes. Have you asked the water companies whether their sewers can deal with that?

**Dr Gilbert:** If I can say one word to come back on what you said. Silica is not biodegradable, in the sense that when you go to the beach the sand is not biodegradable. Okay, the discussion is really about natural products and—

**Q479 Chair:** No, the discussion is about the biodegradability. You are replacing one non-biodegradable product, which causes problems in the ocean and water courses, with another non-biodegradable product. My question is: have you done an assessment or spoken to a water company about that?

**Dr Gilbert:** I will come back to the second part of your question. I was just saying on silica the fact that biodegradability applied to organic products, products that are carbonated products and not silica. To come to your point, yes, we have discussed with water treatment companies and we are willing to—

**Chair:** In the UK or in France?

**Dr Gilbert:** In France.

**Chair:** We have a different system here.

**Dr Gilbert:** Probably we should do the same in the UK. So, we are discussing with well known companies that deal with water treatment because—you are absolutely right—the way to do that is, first of all, to look at it in our plans and this is what we are doing. In

most of our work plans, not all of them, we have waste water treatment stations so we can already assess the treatment. The other aspect that is very important is to collaborate with waste water treatment companies. We did it in France, because we are based there and it is easier for us to discuss it with them, to understand the consequences and, as you said, the way we want to look at it is on a global lifecycle assessment of the product from the very beginning of the production to the end of the life of the product, what happens at the end.

**Q480 Chair:** What was the upshot? What did they say?

**Dr Gilbert:** The replacement that we have today, they have no concern about the replacement that we are using.

**Chair:** Hydrated silica?

**Dr Gilbert:** We are not using hydrated silica. They have no concern with hydrated silica as it is. So for hydrated silica it was not on this subject but we discussed about hydrated silica.

**Q481 Chair:** You discussed a different replacement?

**Dr Gilbert:** We discussed a different replacement with them, so—

**Chair:** Is that commercially sensitive?

**Dr Gilbert:** Yes, so I won't disclose that today.

**Chair:** Now we are excited. We are going to move on.

**Q482 Rebecca Pow:** Thank you for letting me come in. It is a wider question. I know we are talking about cosmetics today but am I right that Unilever do you make other products not cosmetics, like cleaning products and things, and have you transferred all this knowledge of what you are doing in cosmetics over to all of those as well and, similarly, Procter & Gamble?

**Ian Malcomber:** We sell household cleaning products.

**Rebecca Pow:** Yes. So are you getting rid of microbeads in all of them?

**Ian Malcomber:** We did not use those—

**Rebecca Pow:** You did not use any?

**Ian Malcomber:** Yes, any Unilever product across all of our categories.

**Dr Masscheleyn:** I can confirm the same for Procter & Gamble. We did not use and we have never used any plastic microbeads in our detergents and cleaning products, and we are doing cosmetic.

**Chair:** You use it nowhere else, okay. Right, we are going to move on.

**Q483 Peter Aldous:** Are you planning to include alternatives to plastic microbeads in your products?

**Ian Malcomber:** The alternatives will be silica that we have discussed and walnut shells and cornmeal in just a few products.

**Dr Masscheleyn:** We will use the hydrated silica as I explained.

**Dr Gilbert:** As I explained, we are using a different type of mineral and a different kind of kernel powder.

**Q484 Peter Aldous:** We have had evidence that in looking at these alternatives there is no certainty that they do degrade in the marine environment. Have you carried out any tests? Are you completely satisfied that these are alternatives that have been sourced sustainably?

**Dr Gilbert:** There are two different questions. The first one is when it is about minerals they do not degrade in the environment because they are minerals. They stay as minerals in the environment and they are not causing any problems. That is the discussion we just had.

When it is about kernel powders, if we are looking at the definition of readily biodegradable, they are not readily biodegradable but they are degraded in the environment. It is a classical process that is a little bit longer than the readily biodegradable that has to be very quick, but they are totally degraded in the environment. We name that an informed substitution so that when we are substituting one ingredient by another one we are doing a full assessment of the replacement. It takes a little bit of time.

The second part of your question was about sourcing. Sustainable sourcing is a part of our policy, the way we are doing it. We have a commitment to have all the ingredients from natural origin that we are using sustainably sourced. What does it mean? It means four aspects. The first one is trustability, knowing where it is coming from, making sure that it is done in compliance with all the local and global regulations along the supply chain; we know it from the very beginning to the end, which is obvious but needs to be said; that we are addressing the most important and all the sustainability states. It could be environmental on the place where we are taking them, but it could also be the social aspect of it and social local development when it is not coming from developed countries. The last aspect is that it has to be accountable, meaning that it has to be validated by an external third party. We have made this commitment for all our ingredients from renewable origin by 2020, because we are using quite a lot of them and classically we are doing exactly that for the kernel powders we are using.

**Dr Masscheleyn:** In our industry we have a very similar policy around sustainability reflecting the parameters that my colleague identified, and we continue to apply those to any alternatives that we look for. The alternative for Procter & Gamble, as I mentioned before, will come in our products before the end of the calendar year, certainly in the UK.

**Ian Malcomber:** A similar response, I guess, but picking up on the sustainable sourcing comment, a very similar response in that around 2010 Unilever produced a Unilever sustainable living plan, which is a set of sustainability commitments across a number of

areas. That does include sustainable sourcing as well. Certainly, around that area we have targets and ambitions that we want to achieve in that regard as well.

**Q485 Peter Aldous:** I think it was UNEP who said that biodegradable plastics are not the answer to marine litter and that prevention at source was the best principle to pursue. Would you agree with that?

*Dr Masscheleyn:* Yes, I agree that prevention at source is a key measure. That is again why we have committed publicly that we will be removing the microbeads.

**Q486 Peter Aldous:** During our first hearing, I think it was Dr van Sebille who said that producing alternatives to microbeads is not necessarily a cost issue but more a shelf life issue. What will the impact on shelf life and supply chain of these alternatives be?

*Ian Malcomber:* If I can just comment on the cost one, certainly when we have moved away from microplastic beads into the alternatives, it was cost neutral. Cost was not really an issue for that.

Shelf life, I do not really recognise that concern. When we go through the reformulation process, we talked earlier around the different steps that would go through the reformulation. One of those key things is to make sure that that product would remain safe on the shelf for microbiological contamination or other things. That would be part of the process that we would go through, so I do not really recognise the concern around shelf life. We would reformulate in order to make sure that it met the right shelf life.

*Dr Masscheleyn:* The only extra that I would provide is that in order to determine the correct shelf life there is some time needed. We need to do auxiliary stability tests, which of course we do as we qualify each of the alternatives, which we have done for the replacement that we will put in our products.

*Dr Gilbert:* Exactly the same. I think that I do not see the point with shelf life. What I would say is the viability of texture that we are using, for which we need to develop many solutions, is probably more of the issue than anything else.

**Q487 Peter Aldous:** It does occur to me that through a rather tortuous journey we are reaching an acceptable place but which poses the question, looking at these alternatives, why they were not used in the first place instead of microbeads.

*Ian Malcomber:* In the 1990s when the industry as a whole moved to microplastics, I think there were some benefits at the time around them, around how they could be used as a more refined exfoliating performance. It is difficult to comment as to why that happened then, but certainly as the concerns were being raised, the scientific literature, the studies that were coming out, Unilever as a company decided to take that precautionary action and move away. The alternative products we are confident in. We are confident both in their safety and in their performance as well, which is backed up through the reformulation process where we would do consumer testing and so on. We have confidence in the alternative materials.



**Q488 Peter Aldous:** You referred to the precautionary approach. Perhaps such an approach might not have been pursued in the 1990s. Can we be confident that it is being pursued now?

**Ian Malcomber:** I think you can be confident in that when the concerns were being raised around the microplastic beads that Unilever as a company were one of the first to recognise and listen to our consumers and stakeholders and remove them from our products.

**Dr Masscheleyn:** I have to give a similar answer. As a responsible company, we interact with a multi-stakeholder approach. We were presented with the preference of non-plastic microbeads by NGOs and we reacted by an internal policy, then later followed by the public commitment that we will be removing all of the plastic microbeads by the end of this calendar year.

**Dr Gilbert:** I think that I already gave some elements why it has been used in the past, so I will not come back on what we already said about the commitment and so on and what has already been said by my colleagues.

I will just say that a precautionary principle or precautionary approach is taken very seriously and the Warsaw commitment to sustainability and improving the environmental profile is taken very seriously. What is also very important is to follow the scientific work because science is progressing, scientists are working. We are following that very carefully to understand the progress and discussing it with stakeholders because discussing with stakeholders is also very important to understand where the concerns are and why there are those concerns, to be able to react.

**Q489 John McNally:** I might have missed some of this. Just to press you a wee bit further, are there any specific products that are proving difficult to replace with microbeads?

**Dr Gilbert:** Specific products?

**John McNally:** Specific products in anything that you are manufacturing at this moment in time? Is there anything proving difficult to replace?

**Dr Gilbert:** In fact, today it is solved but in the course of the replacement we have selected some substitutes that were not appropriate where we were not able to produce. The answer to your question is now on our side—and I will speak to L'Oréal—things are on their way and that is why it will be completed by the end of the year in terms of reformulation. We have had some difficulty with some substitutes that we have selected, which we were not able to produce for many reasons. Yes, this is not something that has been an easy ride, I would say.

**Q490 Peter Heaton-Jones:** We have pretty much covered this ground already. Are you all of the unanimous opinion then that no outright legal ban by the UK Government is now necessary?

**Ian Malcomber:** I think it is a ban that would be up to the UK Government to decide upon.

**Peter Heaton-Jones:** Yes, it would, but what is your view?



**Ian Malcomber:** My view is that I would hope that it would not be needed. My hope would be that the industry as a whole would take responsibility and take industry-led action. I think industry has an important role to play in society and that is to listen to the concerns and to take action, so I would hope that it would not be required. I think if the UK Government did decide to take action, then I would encourage the cosmetics industry to work with the UK Government to put something appropriate in place.

**Q491 Peter Heaton-Jones:** Dr Masscheleyn?

**Dr Masscheleyn:** We are not opposing a ban.

**Peter Heaton-Jones:** You are not opposing a ban?

**Dr Masscheleyn:** We are not opposing a ban. From the Procter & Gamble company, we will be moving out by the end of the calendar year, so a ban will not impact our company. That said, I can repeat the final decision is, of course, by the policymakers. We have some knowledge that we are happy to share in the process based on the scope, the definitions and things like that, so we are certainly willing to co-operate in case needed.

**Q492 Peter Heaton-Jones:** Dr Gilbert?

**Dr Gilbert:** As I already said, I am probably not the right person to answer this question because as a scientist I am working on science. You know the position of Cosmetics Europe, so I just refer to that because personally I am not the right person to answer the question.

**Q493 Peter Heaton-Jones:** We had some problems with the position that was given to us by the umbrella organisations who we took evidence from before, which seemed to be more about public relations than anything else, if I am honest, when it came to our questioning about whether or not a ban was necessary and what the view of a ban would be of the individual cosmetics organisations. You can only speak, obviously, for your companies that you represent, but let's accept what you have told us about the advances that you are making when it comes to ridding your products of microbeads. There are many hundreds of different cosmetics companies. Some of them are SMEs, small and medium-sized enterprises. Not all of them will be as far-thinking as you are in doing what you have done. Do you not accept that there may come a time when there will be no alternative but for the UK Government to impose a ban because the voluntary code will only go a certain way?

**Ian Malcomber:** I hope it would go all the way. I would encourage all Cosmetics Europe members and members of the national associations to do what other companies have done and what Unilever has done, which is taking action as soon as possible, not waiting for the 2020 deadline, and to phase these out as soon as possible.

**Q494 Peter Heaton-Jones:** A final one then: if the UK Government was to say in a year, 18 months' time, "We can quite clearly see, sadly, that the 2020 target date is not going to be achieved on a voluntary basis across the cosmetics industry; therefore, we do need to consider a ban", would your three companies be willing to work with the policymakers to formulate the right sort of ban and to make it work?

**Dr Gilbert:** Yes.



**Dr Masscheleyn:** Yes.

**Ian Malcomber:** With Cosmetics Europe doing their survey of use and volumes as well, I think that will give us a good indication as to how the wider industry is doing in progressing around the phase-out. That is a good action that they are taking, and I understand from our Cosmetics Europe colleagues that the results of the survey that is currently being conducted will be available later on this year. That will give us a good indication as to the progress that has been made so far. Certainly, if the UK Government did decide to legislate in this area, we would be more than happy to work with the Government in formulating appropriate measures.

**Q495 Chair:** Can I just talk you through some names? I would like you to be very clear about different plastic names. I just want to be very clear, seeing as we have you here. Polypropylene, PET, PTFE, PMMA and nylon, these are all types of plastics, are they not?

**Dr Gilbert:** Yes.

**Q496 Chair:** Is there any definitional issue I should know about with that?

**Dr Gilbert:** Those are names of materials, polymers, that would be on the plastic form.

**Q497 Chair:** Thank you, that is helpful. Are you all committed to having none of those materials that appear in a plastic or polymer form in your products? My understanding is that Gillette has PTFE in it.

**Dr Masscheleyn:** PTFE is actually a lubricant. It is different from a solid polymer. Nevertheless, we have decided to remove the polytetrafluoroethylene, which is PTFE's full name. We will be removing PTFE before the end of the calendar year, very similar to our larger policy on microbeads.

**Q498 Chair:** Is that captured in your microbead policy or is it in addition to?

**Dr Masscheleyn:** It is not a microbead, but our internal policy captures it.

**Q499 Chair:** It is a microplastic?

**Dr Masscheleyn:** That is where we come back to the definitions. Currently, a microbead has been determined as a solid, insoluble material, intentionally added, lower than 5 millimetres, and it stays solid during its entire lifecycle. PTFE does not qualify that definition.

**Q500 Chair:** Is that the same with your polypropylene in your stick or is that a different thing?

**Ian Malcomber:** No, it is polyethylene. It comes back to the soluble liquid form.

**Q501 Chair:** You are not removing your polyethylene?

**Ian Malcomber:** Because it is not a plastic.

**Chair:** But Procter & Gamble are.

*Ian Malcomber:* I cannot speak for why they are making that decision.

**Q502 Chair:** PTFE is a liquid form of plastic?

*Dr Masscheleyn:* It also has a fully different function. It is not exfoliating. It is basically helping gliding on the skin, which is a lubricant.

**Q503 Chair:** Okay. What we are interested in is products that are personal care products and that are in your range. What we are trying to get to is the microbead issue gives you the ability to say that you are banning microbeads, but then you say that you are not banning things that are different types of lubrication or glidification or sweatification. Do you see what I mean? Do you see why the consumer is confused?

*Ian Malcomber:* It comes down to the original concerns, which were around the marine debris, the marine littering, plastics in the environment. All plastics are polymers but not all polymers are plastic. It comes back to what I was saying earlier around liquid soluble polymers. They would not have the same concerns as—

**Q504 Chair:** Isn't that just because we do not know what their biodegradability and biotoxicity is in the marine environment? Given that we now know after 15 years of putting tons of this stuff into our waterways and marine environment that they can be damaging and they can accumulate in seafood and shellfish and they can be consumed by humans and then there may or may not be chemical bioaccumulations in those bioplastics, isn't the precautionary principle to say we are not going to do any of these things as Procter & Gamble appear to be doing with PTFE?

*Ian Malcomber:* The concerns around the plastics in the environment are around those physical effects. It is the physical effects of an organism eating a plastic bead and having those physical effects. There is then the argument that those plastic beads could soak up, let's say, pollutants within the environment and there is an argument that that could then increase the exposure to an organism for those pollutants.

**Q505 Chair:** But you do not know what the accumulations of polyethylene in that liquid form are, do you?

*Ian Malcomber:* Yes, we do. Because it is not a solid particle, you do not have the same issues.

**Q506 Chair:** Fine, okay. L'Oréal, your Lancôme range of lipsticks, of which I am a large fan, contain nylon and PTFE. Are you going to take them out?

*Dr Gilbert:* No. I will say that I think the answer that has been made regarding those is those are materials or polymers but those are not microbeads, so that is clearly not within the scope of our commitment. It is not some product that is going down the drain and that has also a different environmental behaviour, so clearly those kinds of materials today we have not committed to eliminating.

**Q507 Chair:** But you do not define them as microplastics?

**Dr Gilbert:** They are not microbeads. They are not microplastics in the general definition that has been said. They are materials, they are polymers.

**Q508 Chair:** Dr Masscheleyn, can you explain your decision to remove PTFE from Gillette shaving gel if it is not a problem? What are your concerns about it as a scientist?

**Dr Masscheleyn:** As a scientist, I have no concerns with the use of the PTFE material. They have been assessed. They are safe both for the environment and for human health.

**Q509 Chair:** Why are you removing it then?

**Dr Masscheleyn:** I would call it an anticipatory issue. It is part of our stewardship. We feel that as we are presented by the preference of NGOs to remove in general polyethylene microbeads, for us it would make sense in our internal policy to take a similar approach. It is as simple as that.

**Q510 Chair:** You are saying it is consumer and NGO pressure that has led you to do the PTFE issue but there are substitutes for the gliding properties?

**Dr Masscheleyn:** Yes. The only qualification I would like to make is specifically on that product we have no NGO pressure and we have a lot of—

**Chair:** On PTFE?

**Dr Masscheleyn:** Yes, and we have a lot of consumer preference. People like the product. They ask for it but, of course, we are going to make sure that people get the same quality product as they had before.

**Q511 Chair:** Can I ask Dr Gilbert and Mr Malcomber why you are not doing the anticipatory precautionary principle on it?

**Ian Malcomber:** On PTFE?

**Chair:** Yes.

**Ian Malcomber:** I am not sure to what extent we use it, to be perfectly honest.

**Chair:** Okay.

**Dr Gilbert:** It is the same for us. I am not absolutely sure that we are using PTFE.

**Chair:** You are in Lancôme lipsticks.

**Dr Gilbert:** No, it should not be PTFE. It should be PET.

**Chair:** And nylon.

**Dr Gilbert:** Nylon and PET, not PTFE.

**Chair:** No, I have PTFE as my information.

**Dr Gilbert:** PTFE?



## HOUSE OF COMMONS

**Chair:** PTFE.

***Dr Gilbert:*** Okay. I will look at it.

**Chair:** Finally, which products actually work? That is a joke. We have concluded the session. Thank you all very much.